# 5 The Futures Literacy Laboratory-Novelty (FLL-N) case studies

*Edited by Stefan Bergheim*

## Case 1: Cultural heritage research and the future

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Efforts to recognise and preserve cultural heritage, in all its forms, are fundamentally linked to views of the past, present and future. As a result, the anticipatory assumptions that form the foundation for imagining the future play a determinant role in understanding what cultural heritage is, which aspects are deemed worth preserving and how to attempt to assure durability or continuity. In keeping with the general design principles for Futures Literacy Laboratories (FLL) and the specific targets of the Future Literacy Laboratory-Novel (FLL-N), as detailed in Chapter 4, the co-creation of the process for this customised lab needed to take into account the specific nature of the link between anticipation and cultural heritage.

This led to a re-articulation of the topic to ensure that both the identification of cultural heritage and its temporal dimensions were amenable to being understood from an anticipatory perspective. This specification of the topic, the approach to reframing and the type of questions all facilitated the surfacing of intra- and extra-systemic anticipatory assumptions. This, in turn, allowed participants to sense and make-sense of distinct strategic perspectives and ensuing implications for their research agenda. Senior researchers participating in this FLL, according to feedback collected during and after the event, found the process was exceptionally effective at revealing both key assumptions and new directions that might shape the selection of strategic research priorities in the field of cultural heritage preservation. The design lessons from this case study provide insights into how FLL can assist researchers working in a highly technical and specific field to both better understand and invent items for their strategic agenda.

This FLL-N was organised as part of a larger project sponsored by the European Commission's Joint Programming Initiative on Cultural Heritage and Global Change: a New Challenge for Europe. The goal of the overall project was to develop a Strategic Research Agenda (SRA) for the field of cultural heritage, with a horizon of 10–20 years. Futures methods were widely used throughout the project (Miller, 2007a), including the FLL-N described below as a case study in using the future. Two other approaches for thinking about the future were also

used: a drivers meta-analysis covering scientific and grey literature; and a real-time Delphi Study that explored the views of cultural heritage experts on drivers and potential changes in the field/impacting on the field.

The aim of the FLL-N was to push the boundaries of conventional thinking, with the hope of revealing and inventing innovative strategic policy choices in the area of cultural heritage research. The FLL-N methodology was chosen on the grounds that it was designed to go beyond the parameters of traditional futures exercises – to explore novelty as defined by the Futures Literacy Framework (FLF) presented in Chapter 1. A collaborative design process was undertaken, following the general design principles for FLL and specifically for a FLL-N as outlined in Chapter 4. By the end of the design phase it was clear that the aim of this FLL-N was to mobilise the collective intelligence of a group of cultural heritage research experts to push the boundaries of strategic thinking about their field, paying particular attention to the challenges facing Europe.

This case study summarises the three-phase FLL-N process followed by participants and concludes with overall comments on how an enhanced understanding of the potential of the present that surfaced in the discussions reveals strategic issues and choices for cultural heritage research. The richness and subtlety of the discussions that occur during an action-learning collective intelligence knowledge creation process, like the FLL-N, makes it challenging to fully record and describe what occurred. The following summary offers highlights of the conversations that took place during this FLL-N with an emphasis on the research priorities of the UNESCO FL Project and the goals of this specific exercise on the future of cultural heritage research.

Participants were selected on the basis of their contributions to the Scientific Committee of the Joint Programming Initiative and represented interests across the field of cultural heritage research. Most of the 17 participants were well established and senior researchers, with affiliations to national and international scientific communities. The participants were drawn from ten European Union countries.

### Workshop programme and methodology

The FLL-N methodology was used to co-design and facilitate a two-day lab in November 2012, with a strong emphasis on the FLL-N action-learning/research approach. The participants were divided into two groups and worked through the three FLL-N phases, with plenary feedback and discussion after each level. The group work was facilitated by Dr Martin Rhisiart and Mr Meirion Thomas. The plenary sessions were facilitated by Dr Riel Miller. A customised FLL workbook was distributed to participants that included materials intended to encourage a more open and creative discussion. In particular, there were some initial thoughts on re-defining the meaning of the key term *preservation* within cultural heritage research. Questioning such a basic concept was meant to provoke reflection on how contemporary societies engage with the continuous processes of cultural re-production, including through digital means.

*Phase 1: The future of cultural heritage research: values and expectations*

Participants spent approximately one and a half hours discussing their values and expectations for cultural heritage research in 2032. The two breakout groups were asked to discuss their views regarding the probable future of cultural heritage research in 2032. As per the standard FLL design, the main objective in Phase 1 of the process is to identify expectations (what people think *will probably* happen), and hopes and preferences (what they would *like to see* happen by 2032). One of a number of aspects customised for this FLL-N, in light of the participants' high level of technical knowledge, was to start the group work with an initial invitation to question some of the basic terms used to discuss cultural heritage research.

The first question for group discussion was: what is research? In response to the question, participants stated that knowledge creation in society is changing, and that the validity and role of the research process will be different. The enquiry process or practice of research is changing and in some cases, the validity of research is also changing. One other important perspective raised was the difference between science and research. It was noted that in several countries, the focus is primarily on natural and not social sciences and humanities. This leads to a lack of integration; the arts need to be tied to science to get recognition and funding.

DEFINITIONS

**Group 1**: Cultural heritage can be many different things – including memory, skills, materials, and technologies. It is about 'dealing with old stuff' – evoking the passage of time between past and present.

**Group 2**: Cultural heritage institutions have several roles: to collect; to research; to preserve; to disseminate. It was emphasised that 'what is not functional is lost'; part of the role is to give function to the artefact.

EXPECTATIONS FOR 2032

**Group 1**: Cultural heritage research will be more interdisciplinary but practice will remain ahead of structures and institutions. This will cause a continued lag in support for interdisciplinary funding.

Europe will be more multicultural: a challenge for cultural heritage research is to better reflect that diversity and what it means for individuals. Cultural heritage research will have a positive role as a bridge between diversity and social identities. Relevance will be a critical challenge: cultural heritage research needs to reflect diversity or there will be declines in funding and in relevance. It is unclear whether problems of funding cycles will be overcome; this will depend on progress in educating decision-makers. The economic situation further undermines prospects for continuity of funding.

**Group 2**: The task of cultural heritage curators will be to decide what stays and what goes. However, the role will be redefined – to make intelligent linkages (maybe digital more than physical). The paradigmatic shifts ensuing from globalisation (e.g. China; Islam) will force reinterpretation of cultural heritage. There will be an open science of cultural heritage research, with greater participation from citizens and consumers; cultural heritage research will be more integrated into society.

PREFERRED 2032 FOR CULTURAL HERITAGE RESEARCH

**Group 1**: There will be recognition of the need for funding, and increased recognition, awareness and interest from the public. Cultural heritage research should be closer to the people; it should be more decentralised and networked. Cultural heritage research has the capacity to empower individuals to participate in cultural heritage; education and awareness across society will be central to this vision. This preferred vision brings the public into the process, partially because it will be a necessity since professional resources (e.g. conservation) will not be sufficient. The boundary between the digital and the physical in cultural heritage research will disappear. Cultural heritage research should become a continuous act of creation as opposed to a static stand-alone effort at preservation. Careers in cultural heritage research should become more entrepreneurial – embracing a portfolio approach that combines periods in the private, public and philanthropic sectors.

**Group 2**: In the preferred future cultural heritage research will be depoliticised and unifying. It will not be driven by political correctness but rather by academic freedom. Funding for cultural heritage research will be evaluated more effectively. It will be valued more generally socially and economically. There will be less 'Tivolisation' – less akin to a theme park attraction. Cultural heritage research should be recognised as a discipline.

PRESENTATIONS OF RECENT DEVELOPMENTS IN FORESIGHT AND FL

Following Phase 1 group work and plenary presentations, participants were provided with an overview of recent developments in the field of foresight, its role in national research prioritisation and in addressing grand challenges in the European Union. They were then introduced to the idea of FL in general and the Learning Intensive Society reframing tool that they would use in Phase 2 of the FLL-N.

*Phase 2: Reframing cultural heritage research*

Using the Learning Intensive Society (LIS) as a model for imagining cultural heritage research in 2032, the groups were challenged to describe their work under a different set of framework conditions – social, economic and cultural. Participants had approximately three hours during the afternoon of the first day

and the morning of the second day to complete Phase 2. The objective of the Phase 2 discussions was to produce a 2032 scenario for cultural heritage research. In accordance with the typical FLL-N design their task was to provide a snapshot of how the knowledge production and scientific enquiry process functioned under an alternative set of boundaries and conditions.

From the perspective of design and facilitation, participants were asked to consider the economic, social and cultural dimensions of this transition. What could be the new nature, purpose and direction of research? How could this move beyond Mode 1 and Mode 2 research (Gibbons *et al.*, 1994)? This might move towards an open, distributed research and knowledge production system. What might be the implications of a shift from private ownership to collective availability for institutions and infrastructure? How could cultural heritage research become a more dynamic field, where there is real-time reflexivity and interpretation? What do culture, heritage and preservation mean in a LIS 2032 world?

The following brief scenario summaries convey some of the main aspects of cultural heritage research in 2032 as imagined by the groups. Although the groups followed a common facilitation process, the outputs reflect the dynamics of each group. It is interesting that the two scenarios are different, although both share common elements.

GROUP 1: ATHENA SCENARIO

Athena is our friend – 30 years old – with a lot of skills and ambition. She is a practitioner, a craftsperson and an aspiring researcher. She would like to get into more research – in a LIS, the main value is exchange of knowledge as part of the social fabric. Cultural heritage is an important feature in her society where old and new are both valued. The old brings accumulation of knowledge and experience and can inform new knowledge so cultural heritage is a representation of knowledge. Athena is a questioner and is looking for new horizons. Craft knowledge and high-end research are equally valued and allow for different and varied career development opportunities.

Government is the guarantor of knowledge and institutions, and the ability to acquire and develop knowledge, including high level knowledge through universities. But Athena is not sure that she wants to be in this realm. Athena asks questions and becomes part of the team as a researcher; however, she is not embedded within institutions. Society allows her to do both pure and applied research – knowledge is the prime value creator and people are valued by their portfolio of knowledge. People can pick and choose. Education is a mix of science and the arts to develop a palette of skills; practice is open to research and research is open to practice.

Shared value is mediated through collective appreciation of the worth of knowledge. When people retire, their knowledge is not dispersed; they can still bring their knowledge into the economy and society. Society supports Athena to learn and practise; she will be supported if and when she has children. Society values her knowledge and skills and will support her to fulfil her learning ambitions. Cultural heritage research is more fluid – Athena can enter the field at various

stages as suits her circumstances and ambitions. Open access to knowledge and national institutions will act as mediators of that knowledge.

GROUP 2: CULTURAL DIVERSITY IN EUROPE EVENT SCENARIO

We are a researcher in a digital hub centre focusing on 2012 heritage and we are organising an exhibition/conference 'Cultural Diversity in Europe'. The context for the event is that cultural rights are enacted and 'work' well; there is a strong focus in cultural research on global connections among cultural groups, and the drive in cultural heritage research is to find unifying concepts. For the conference, machine translation is a key tool to allow Chinese etc. translation. This is a virtual exhibition based around digital technologies challenging the virtual realities for cultural heritage and research – what is the role of the *original*? The event is strongly participatory – participants use ambient computing that enables them to see, feel, smell and experience the exhibits.

Knowledge is a commodity of value so in the world of 2032 cultural heritage research is a generalised activity: 'Everyone is a researcher now'. People do their own research and produce learning intensive products. Virtual experiences and participatory cultural heritage research mean that paradoxically, there is enhanced meaning and value assigned to original artefacts. There is an increased role for validation and reference points – cultural heritage institutions that curate – and for cultural heritage institutions as intermediaries between knowledge and private funders. Institutions are strongly educational, entertainment-focused and demonstrative – enabling touching, feeling and experiencing.

*Phase 3: Rethinking cultural heritage research*

In the Level 3 discussions, the groups reassessed anticipatory assumptions surfaced in Phases 1 and 2. In particular, the group work was guided by the following question: What are the anticipatory assumptions around cultural heritage research – and the social, economic, cultural conditions that frame them? Participants had approximately two hours to do Phase 3.

GROUP 1

*How cultural heritage is valued more broadly*
In the current situation, there is an assumption that cultural heritage is valued in policy because there may be an economic value – cultural enterprise, creative industries, etc. There is a separation of researchers and users/consumers and producer; they are independent of one another. Much but not all 'engagement' is on the basis of dissemination of results once research has been completed, that is, post-hoc engagement.

*Empowerment and democratisation*
**How can cultural heritage research support empowerment?** One dimension where people feel more comfortable is intra-systemic empowerment, where

constraints are removed within the research community to enable cross disciplinary working. This is a process of collaboration and reform.

**How can cultural heritage research support empowerment on a social level?** What would this really mean? It seems that there are two dimensions. The first is the removal of constraints – the permission to act. The second is ownership of the creating process.

**How can cultural heritage research support and anticipate policy discussions?** How can cultural heritage research be ahead of the game in respect of economic instrumentality?

**Creating new structures and infrastructure** – there could be better, shared ownership of infrastructure across institutions, which would also facilitate cross-disciplinary working.

*Intrinsic role and value of cultural heritage in society*
In order to realise the potential of cultural heritage at a societal level, a lot of progress needs to be made in – and through – education. A more holistic and personalised approach to education would help to remove false choices between sciences and arts.

GROUP 2

**Cultural heritage matters to society at large** – this is the fundamental and underlying assumption. Increasing participation beyond passive forms of 'consumption' is good.

**Everyone is a researcher now** – how developed is that? How much of that is already apparent in programmes and activities now? There are some good signs in the present, e.g. programmes have requirements for dissemination plans and for digital distribution of outputs.

**Knowledge is a commodity with value** – this has implications for evaluation and funding of research in cultural heritage. Evaluation of knowledge and artefacts needs to improve. Evaluation of research outputs and decisions on research funding need to be on 'net new content' – new, original and valuable content – rather than simply looking at citations.

**Important role of technology** – digital technologies and access, but materiality also matters, alongside the digital and the intangible.

**Cultural heritage research helps integration of communities and societies** – enables further understanding and is a unifying factor. A precondition to this is the first assumption – that cultural heritage is valued by society at large.

**Producers/consumers drive cultural heritage research** – society establishes key strategies for cultural heritage – undertaken from a broad political and cultural context, but also responds to problems such as natural environment. Consumers also become producers; everybody becomes a researcher, and increasingly they will drive cultural heritage research.

### Conclusions

In concluding the workshop – particularly drawing on the points made during the third phase of the process – the final plenary session focused on insights and implications for strategic policy choices for cultural heritage research. This part of the workshop lasted approximately one hour. Four key considerations for developing a strategic research agenda emerged.

**Empowerment** – how can cultural heritage research support empowerment and democratisation within society? There are two distinct dimensions to the social empowerment question from a cultural heritage research/practice perspective. The first is giving people permission to act by removing constraints, e.g. allowing people to access artefacts/conservation. The second is enabling ownership in the research process.

**Co-creation** – how can policy be designed in a way that genuinely uses the knowledge and capacity distributed in society? This is a large question for research policy more broadly, and one in which cultural heritage research may be able to lead the way. Engagement in this sense is not disseminating the results of closed research processes after they have finished but rather co-creating research and knowledge through a distributed and participatory model of enquiry and practice.

**Importance of values** – the crucial role of values in cultural heritage research was recognised. First, cultural heritage research should be reflective of values in society. Second, values should be explicitly addressed in judgements on what is worth preserving/how to make the choice of what is preserving. Without societal recognition and valuing of cultural heritage, discussions on options for cultural heritage research will be largely futile. Cultural heritage research needs to address the intrinsic value of cultural heritage in society generally – touching on issues of continuity, discontinuity and identity.

**Valuing knowledge and the allocation of resources** – new methods of evaluating research are needed, which will serve as the basis of allocating resources. Evaluation of research outputs and decisions on research funding need to be done on the basis of producing net new content/knowledge rather than simply looking at citations.

As outlined in the introductory section to this case study, this FLL-N was part of a Joint Programming Initiative (JPI) to support the development of a Strategic Research Agenda (SRA) for Cultural Heritage Research in Europe. The results

of the FLL-N and the other elements of the Foresight study (Joint Programming Initiative (JPI) on Cultural Heritage, 2013), directly informed the shape and content of the SRA report, published in June 2014 (JPI on Cultural Heritage and Global Change, 2014). The SRA highlights the four strategic considerations for cultural heritage research policy that flowed directly from the FL workshop: empowerment; co-creation; the importance of values; and valuing knowledge and the allocation of resources. In this case, one objective for the FLL-N – to elicit fresh policy-oriented thinking and options – was realised through the subsequent work of the SRA. This is due in large part to the collective endeavour and commitment of the participating institutions. One of the interesting results of the workshop is the shaping of institutional goals and the allocation of resources towards cultural heritage research in the years to come.

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## Case 2: The future of science in society

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What is science? What is knowledge creation? There are many answers. The aim of this Futures Literacy Lab-Novelty (FLL-N) on the future of science and society was not to debate definitions but to find starting points for collaborative exploration of how our ideas about the future influence our understanding of the present. The working definition, proposed to serve as a basis for starting conversations, was science as a set of specific methods and relationships that enable humans to continuously negotiate their understanding of the world around them (see for example, Understanding Science 2017; Anon 2017a, Anon 2017b). Sense making and making sense is a key pillar of knowledge creation that encompasses a learning process, both internal and external, which produces knowing in all its forms. The way the future is used in science defines which science and its place in society.

Hence, we need to dig into the assumptions embedded in knowledge creation and in our capacity to invent novelty.

This also relates to decision making. Making decisions to embrace complexity and treating uncertainty as a resource for exploration of new possibilities calls for a significantly enhanced comprehension to use the future to understand the present. Building this greater capacity rests on bringing anticipation out into the open as the way the future exists in the present. Doing so makes clear that conscious human search and choice deploy a range of different anticipatory systems to invent and apply the future to practical decision making. An applied anticipatory systems approach to using the future provides policy and decision makers as well as individuals with an enhanced capacity to both question and invent the anticipatory assumptions that inform their choices.

The above is in line with the Centre for Strategic Studies and Management's (CGEE) mission to promote Science, Technology and Innovation (STI) to advance economic growth, competitiveness and wellbeing in Brazil. It does so by carrying out foresight and strategic evaluation studies in combination with information and knowledge management approaches and systems. At the core of its activities is its position and ability to articulate and coordinate diverse actors within the Brazilian National Innovation System (NIS). One of the CGEE's institutional objectives linked to its mission is to lead foresight studies that generate anticipatory intelligence for both the Brazilian NIS and the STI Ministry and its agencies.

During the past five years, CGEE has been changing its approach to developing and addressing new strategic questions and in recognising new issues which deserve further investigation via systemic and systematic observations and dialogue. It is doing so to evolve its foresight practice to combine generations one to five of foresight development (Georghiou, 2001, 2007; Johnston, 2002, 2007; Cuhls, 2003) as well as foresight modes 1 (Eriksson and Weber, 2006; Havas, Schartinger and Weber, 2007) and 2 (Da Costa *et al.*, 2008), and to enable its results to be better positioned to support reorienting the Brazilian NIS. The aim is to move from a normative and prescriptive approach to one that embraces complexity, emergence and novelty. Such a move is being sought by fostering an improvement in CGEE's capability to use systematic approaches and to develop recommendations for policy design and implementation based on shared insights and perceptions as well as evidence. Several tools and approaches are being explored to enable CGEE to advance in this direction and to use the future to inspire and expand collective imagination and understanding of the present. Ultimately, the aim of foresight at CGEE is to balance contextualised design with systemic and systematic qualitative and quantitative approaches, and to welcome unknowability and uncertainty as sources of novelty, thus also providing an invitation to creativity and improvisation.

In this context, this specific FLL-N was designed to assist the participants to collectively identify and invent new anticipatory assumptions. Anticipatory assumptions cover a range of different elements that enable conscious thought to allow us to imagine the future and make choices in the present. Our conversation

in the FLL was contextually specific, not only because we were a distinctive group of people, meeting in a particular place and at given moment in time, but also because from a wide range of perspectives, the idea and practice of science was evolving.

Movement towards new forms and relationships of knowledge creation, spanning efforts to redesign societal innovation systems and embrace unknowability are altering, reconfiguring and inventing new ways of thinking and doing science. This all points towards the importance of opening up what we imagine to be the future of science as one of the ways to assist with a fuller appreciation of the potential of the present. The workshop was carefully designed to achieve this objective.

During the workshop, participants went through a FLL-N process. This experience enabled them to more fully explore the potential of the present and thereby advance their capacity to make strategic decisions in contexts of ambiguity. This ensured that diversity and complexity could serve as sources of inspiration; a way to embrace the dazzling heterogeneity of the world as well as to respect the creative spontaneity of freedom and serendipity.

### The workshop: imagine the future of science in society

*The Future of Science in Society* workshop, co-organised by CGEE and what was then called the UNESCO Foresight Unit, took place as a satellite event of the World Science Forum in Rio de Janeiro on 28 and 29 November 2013. The workshop had three primary goals: (1) guide participants through a learning-by-doing process that challenged the implicit and explicit anticipatory assumptions they use to think about the future; (2) test and refine the Futures Literacy methodology being globally shaped through the UNESCO project 'Networking to Improve Global/Local Anticipatory Capacities – A Scoping Exercise'; and (3) support CGEE in changing its approach to developing and addressing new strategic questions, recognising new issues that merit further investigation via systemic and systematic observations and dialogue, and transforming its way of designing, organising, implementing, managing and evaluating its foresight and strategic studies.

Participants in this FLL-N workshop included representatives from government, industry, academy and youth. They were selected to represent a wide range of viewpoints in their understanding of science and its roles in society. Overall, the 25 participants varied in age from 20 to 60+ years old and represented a number of different organisations, including: CGEE, UNESCO, UNIDO, Department of Economic and Social Affairs of the United Nations Secretariat, University of North Carolina, Academy of Sciences of both Hungary and Cuba, Max Planck Institute, Embraer, Petrobras, Vale, Association of Professional Futurists, Millennium Project, Getúlio Vargas Foundation, Pontifícia Universidade Católica do Rio de Janeiro, Institute of Pure and Applied Mathematics, Faculdade Latino-Americana de Ciências Sociais, Secretariat of Strategic Matters of the Brazilian Presidency, and Ministry of Science, Technology and Innovation.

Participants were divided into four working groups, each with a facilitator and an observer whose role was to back up the facilitator, support the organisation of group discussions into Post-its and/or flip charts and to take notes on the process and its main results. Despite having similar guidelines on how to operate in each of the three main workshop phases, working groups had the freedom and flexibility to adapt group dynamics, since the idea was to experiment with different moderation approaches and test what might work best for each context. Each phase took roughly two and a half hours plus an hour for reporting back in plenary sessions and discussions.

*Phase 1: Reveal*

The exercise started by asking participants to think about their predictions about and hopes for the different roles of science in society. The main objective was to build temporal and situational awareness. Self-awareness is related to experience. For pedagogical purposes, the design placed these experiences in a frame through shifting both expectations/predictions and values/hopes from tacit to explicit. This took place via a facilitated group discussion about the future of science in society in 2040.

Generally, participants' main assumptions centred on the relationship of science to technological development. Within this science-technology nexus they tended to focus on how, in the future, science-technology would resolve a vast range of existing challenges and problems and enable knowledge sharing that empowered individuals and societies. In this phase, the work and results were quite conventional. They did not find it too surprising, thrilling, or shocking. Their imaginations were engaged and they built well on each other's ideas, having fun, learning together, showing respect, and playing along.

During the exercise, many participants found that some anticipated changes had both positive and negative aspects. For instance, more open access to data might produce innovations and new security and privacy risks. Participants were challenged by the facilitator to think beyond an extrapolation of 'business as usual', noting concerns with progress and growth paradigms, which made them build more negative outcomes and contingencies but not radically different scenarios. They looked backward and agreed that the future is not the present anymore, but remained anchored in present experiences and ways of framing them.

In the second segment on desired futures (hopes and dreams for 2040), many participants took the positives from their expectations and built on them, which they called 'new frontiers' for science. Education, health, environment and technological breakthroughs would open new opportunities. In terms of risks such as the military and cyber-security, they explored solutions and contingencies for overcoming possible problems.

Even though participants were well versed in cutting-edge topics like transhumanism, the singularity, environmental issues and other technological futures, the discussion did not stray far from what they already saw as likely outcomes. This kind of extrapolation changed substantially by the time the process reached Phase 3.

The main outcomes of Phase 1 for all four groups were similar in terms of overall assumptions regarding participants' expectations and desires related to the future roles of science in society. Outcomes were summarised as follows.

**Science as technology fix** – the main attributes being:

- biotechnology and information and communication technologies are pervasive across all realms of society;
- clean energy (e.g. nuclear fusion) becomes more affordable to all as it does for health systems (cancer solved; nanotechnology, genetic and bionic medicine, etc.), water and all other means necessary for societies' quality of life;
- science can address all global challenges (the reach of a sustainable world with the Millennium Goals achieved and businesses competing for remaining garbage) and to bring about greater social justice, as well as to enable global peace and quality of life through new innovations (STI breakthroughs), knowledge at new frontiers and unknown technologies;
- STI controlling nature leading to a bridge between machines, humans and nature;
- extension of human life through reengineering of cells and genetic enhancements;
- first child born in space and ability to travel to neighbouring galaxies; and
- more productivity, efficiency and access to services.

**Science/knowledge empowering individuals and societies** – the main attributes being:

- integration between science and society leads to empowerment of citizens and greater democracy;
- science becomes international, transdisciplinary and collaborative and is embedded early in education with equal access and opportunities for all;
- science serving and responding to social needs as well as an input to policy and decision making – policy informed by scientific evidence with political systems accountable to scientific decisions and public judgement/outreach;
- gender equality and balance as well as recognition making scientific careers of greater interest (considering youth needs and expectations) and leveraging overall investments in research (the EU applies 5 per cent of GDP on R&D investments);
- citizens become more informed making better decisions individually and collectively (thinking globally, acting locally); all citizens are scientifically literate;
- the scientific method is pervasive for individuals in their daily life and at all educational levels, bringing about a new kind of spirituality, with new values and ethics (e.g. no more science for war), as well as leading to both admiration and fear of science and its achievements;
- human and social values become means of exchange, and diversity becomes the main driver for innovation;

- borderless world governance and increased communication, with fewer corporations and more networks globally leading to open and free access to and sharing of knowledge;
- conflict between marketing and government as regulators, driving scientific developments – either way there are risks of manipulation to overcome due to hidden agendas;
- conflict between indigenous and scientific knowledge and cyberterrorism remain unresolved; and
- 'Big Brother' as STI controls data and information of all individuals.

### Phase 2: Reframe

Phase 2, in keeping with the standard FLL-N design, calls for a reframing exercise that uses 'rigorous imagining' in order to take on two distinct challenges: inspiring participants to imagine anticipatory assumptions that are outside the boundaries of their existing frameworks and deploying a systematic creative procedure that generates awareness of anticipatory assumptions. To meet these challenges participants engage with a disruptive tool that invites them to articulate detailed descriptions of a reframed imaginary future society. Participants were provided with an adapted reframing model – a version of the Learning Intensive Society discussed in Chapter 4 – that they could use as inspiration for describing a disruptive or systemically discontinuous imaginary future. The Learning Intensive Society is a societal model that embraces novel, emergent complexity and treats uncertainty as a resource not a threat. This model was designed without reference to probability or desirability. There was no suggestion that this alternative future is likely to happen or is even desirable; the point was to experience the power of our anticipatory assumptions in shaping the futures we imagine, and the potential to address the creative challenge of inventing paradigmatically different futures. Participants engaged in a rigorous imagining process that enabled the development of systemically discontinuous but operationally detailed descriptions of organisations/functions.

The point of the reframing model is to give participants a few descriptive variables and functional relationships that depart from existing dominant societal attributes and organisational forms. The model is designed to equip participants with new or unfamiliar elements for describing the future and provides inspiration for creative thinking about the nature, role and organisation of knowledge production in general and scientific activities. The main assumptions of this alternative future world are that the conditions for fluid communication, rapid sense-making, spontaneous innovation and unique creation make organisational and governance systems more open, diverse and dynamic, thus open for renewal, birth and death.

Groups moved differently through the process. One group determined collectively that a new reputation process could replace some current institutional barriers, eventually working beyond objections from entrenched systems. They likened it to a clearly defined, open-edge network. Networks were seen more like mountain peaks and valleys with concentrations of high activity across an otherwise flat landscape. Exploring this potential, they soon had a Facebook-like network

for science where access and players were continually evolving, reputations based on peer-acknowledged contributions, and co-creating innovations. Participants imagined a new work/life relationship described as 'productive leisure'. While they would perhaps enjoy more free time, they would never be completely away from work due to mobile interconnectivity. Under the rubric of uncertainties, data would be open to all for both access and input, thus potentially subject to malicious meddling. Ethics would be impossible to manage due to different sensibilities and a lack of responsibility among amateurs: 'not everybody is good' was a comment from one scientist inferring that ethics could be difficult to control in an open shared new system. In what the group defined as a 'new frontier' scenario, qualifications and resources faced unknown pressures and needed new systems for continuous sorting. New avenues and new players would be constants, which is, in effect, saying that change is constant. Finally, the metaphor 'open Olympics in science' explains the scenario where it would be possible to identify outstanding persons at an early age and/or in isolated places.

A second group decided to re-think some of the dimensions and descriptions of variables of the Learning Intensive Society model. Their scenario model was called 'Creative Society, Science and Arts – Bridging the Gap: Scientific Culture, Artistic Culture'. It included the following aspects: activities organised for life; flexible networks; interchange of knowledge; zero material differences; open clusters; cooperative work; cognitive capability identity; no money but human values; and no corporations. Science is associated with spirituality and education: Spirituality, Education and Science. Social dynamism was based on freedom and the capacity of ethical responsibility, transactional exchange-relations was flexible, new universal rights for living and non-living beings (human, animal, plants, post-human); there is no need for gender issues. In terms of governance dynamism, some of the highlights were: individual values based on social contribution; culture of individual and collective rights; no state, only alliances; and open data for government participation.

In another group, participants engaged in a very energetic discussion about the specificities of the Learning Intensive Society model. They started thinking about systemic reforms for achieving better science within the model's framework, including specific, rigorous proposals for building less formal, more project-oriented, international teams composed of individual researchers and sponsors of research, thanks to technology-enhanced networks of research cooperation. One particularly interesting feature of this proposition was to move from using universities and institutes as brokers to facilitating ad hoc networks of scientists and financing institutions. Still, threats for the scientific community in terms of maintaining their prestige and social status were highlighted, and a certain sense of ambiguity about educational priorities to be redefined in the future indicated hesitation about the changes from the status quo that would stem from a potential future expansion of a Learning Intensive Society in the real world. One person also noted that the Learning Intensive Society was, at least to a certain extent, and in given aspects of the model, already in place. The metaphor chosen by the group however, one of 'crossing

the mirror and following the white rabbit', clearly indicated the exploratory conscience of the group in the reframing phase.

In yet another group, all participants were excited to either contribute to the Learning Intensive Society or to go against it by anchoring their ideas in how they were seeing the present. Their scenario included the following aspects: humans would be able to connect to their inner voice and to nature; there would be no expectations about what needs to be done as reality unfolds with no need for control; and everything would be interconnected, so what materialises would be exactly what would be needed at each particular moment in time. Physical spaces would be designed for multiple purposes and uses, and communications would happen 'on the go' via telepathy or an avatar. Technology would be pervasive and embedded, interconnecting everything (i.e. ambient intelligence). There would be no need for life in biological terms as there would be many forms of being alive with no waste of energy in connecting people and things. A repository of thoughts and emotions in a sort of cloud connected to everything would allow people to refrain from storing 'facts' as all knowledge would be automatically accessible to anyone at any time. Individuals would be able to live-the-present since there would exist no attachment to past or future. Everyone would be immortal since mind, thoughts and emotions would somehow survive forever in the cloud. Hence, a physical or material space as well as body would not be a constraint. Systems would be flexible, self-organising and self-governing with no central control or organisation according to the needs of the moment. Physical systems would manifest as other systems self-organise and everything is embedded with intelligence. The human body would exist for leisure, experimentation and dreaming; dreams which would be automatically prototyped in personal printers and then produced as a customised unique creation for everyone. In this context, identity would be defined both by history and interactions with one another, and with the environment in the present. Good or bad would cease to exist as experimentation and interactions become the only important activity. Ethics would be embedded in everyone since we would only exist in interaction with the system and others, which brings to the fore mutual respect, trust and appreciation. Wealth would be measured by creativity in interaction, which would lead to unique creation.

Overall assumptions identified in Phase 2 can be summarised as follows.

Networked life and science with embedded technology:

- spontaneous innovation is co-created in interaction with others and unique creation is linked to individual customisation of any product stemming automatically from individuals' dreams;
- productive leisure linked to continual work, experimentation and dreams that become physical reality at any given moment and are designed for multiple purposes and needs;
- seamless communication with no waste of energy and with knowledge automatically accessible to anyone at any time;
- life beyond biology for repository of minds, thoughts and emotions.

**Self-organised and self-governing systems** – the main attributes being:

- change is constant, life and science are complex, and systems are flexible, able to self-organise and self-govern according to needs of the moment;
- ethics embedded in every interaction, bringing to the fore mutual respect, trust and appreciation, and leading to peer-acknowledged contributions and reputation.

### Phase 3: Rethink

Phase 3 is the natural conclusion of the process. The aim was to allow participants to appropriate for themselves key ideas from the overall experience and learning process.

Generally, groups departed from either an operational problem in the present to understand the ways in which this would be operationalised in their developed scenarios, or from a few questions which became relevant only after going through Phases 1 and 2, and that had to be analysed in the scenarios. The two previous phases were steps in the process rather than outcomes. In Phase 3 we searched for a shift in participants' understanding of their use of the future.

Participants identified new questions, especially those which might have been considered unimportant or incomprehensible without going through the process. These included questions around the role and identity of scientists, their way of working and their beliefs, the ways in which science is performed, evaluated and communicated, the ways in which science and constant learning/education can become ambient and evolve towards capacity-based systems, as well as the roles and configurations of government and countries.

During the exercise, one group discussed the opportunities and responsibilities for future generations, individualised laboratory and access systems to resources, new avenues and new images, and working as entrepreneurs, peer to peer rather than at jobs in organisations. Scientists could grow beyond research, innovation and education to more public functions as diplomats and change agents. In summary, participants moved from exploring content in Phase 1 and external abstraction, to living the future in Phase 3: "How will this future affect me, what do I think about it, and what will I do now about it?"

Another group started the debate by identifying questions that apparently had no relevance before going through Phases 1 and 2. These were: (1) What and who is a scientist? (2) How is science performed? (3) How is science evaluated or how to ensure quality? and (4) How is science and its results communicated and to whom? The group then debated these questions and tried to find answers in the developed scenario. It is interesting that the third group was divided with half of the participants trying to look for answers anchored in the present and with what they felt comfortable.

Participants were asked to look back at the whole process (Phases 1 to 3) and to once again identify questions that might have been considered unimportant or incomprehensible at the beginning of the workshop, and that now they thought

would be relevant if they were asked to look at the future role of science in society today. New questions started emerging:

- How to democratise science?
- How to evolve from a diploma to a capability-based system?
- Will the educational system as we know it survive?
- How to include informal learning into the current or a new system?
- How will continuous education be provided and made available to all and at any age?
- Is there a need for choice between different or parallel evaluation systems?
- What will be the role and configuration of government and countries to ensure free access and use of information?

In another case, participants engaged in a discussion around the fundamentals of defining the scientific method and the profession of a scientist, and some assumptions from Phases 1 and 2 were also revisited. The subject of the interface between industry and science was also discussed energetically before the group could agree on a common vision of how the corporate world responds to global challenges and encourages/discourages innovation. Crowdsourcing and scientific-sourcing proved to be important axes of discussion about the changing conditions of scientific research and the redefinition of research vocation. Peer-review models were also challenged in the discussion. The group expressed a number of different perspectives without arriving at a consensus. Some thought that there would be different possibilities for transcending the current paradigm, while others were less sure. Everyone recognised that the shortcomings of current approaches would require significant shifts in the science/society relationship, at a minimum because of the unprecedented growth in numbers of the research community. Unexpected outlier results were also presented, such as one participant representing a governmental institution suggesting they would design and experiment with implementing a participatory budgeting project for research financing, an initiative inspired by the workshop.

Another group chose to further explore the ways in which the society imagined in Phase 2 could be operationalised. They presented a short documentary as a prototype to show through images the evolution of life on earth: a self-organised world with no central power and with flexible organisation. Participants made explicit their assumptions: complete capillarity; complete personalisation; complete freedom. The core ideas were: no nations; no boundaries; universal respect for human and non-human values; the whole-net, instead of the internet; and a flexible society. Instead of the philosophy of 'use it and throw it away' they proposed 'pick and use it': shared goods; shared transportation; shared housing, organised through sharing platforms. This is a society of freelancing where the most common job types they imagined would be platforms to share completeness. They realised the need to reframe human behaviour and change mindsets towards a society functioning in networks. They also proposed reframing the nature and the role of science, including social sciences, into a knowledge and cultural creative activity.

The description of Phase 3, with outcomes of a different nature from the previous two phases, highlights the new questions identified by participants after moving through the three phases. These may be relevant for anyone interested in better understanding possible roles of science in society as well as that of knowledge creation and exploitation. The new questions are organised around the role and identity of scientists, their way of working and their beliefs, the ways in which science is performed, evaluated and communicated, the ways in which science and continuous education can be democratised and evolve towards capacity-based systems, as well as the roles and configurations of government and countries.

### On the facilitation process

Simultaneous processes were taking place during this particular FLL-N – the experiential and cognitive processes of learning, and ones associated with different levels of interaction of individuals. As a group, these processes followed the three phases in the universal group dynamics cycle with a start, middle and end, and its three stages – orientation, conflict and cohesion – with different relative weights in each phase. The learning curve sequence was intended to ease the engagement of the participants in the experiential and cognitive learning process (experience, reflection, conceptualisation, experimentation).

Every group was a system, where four interdependent levels of experience interacted: individual, interpersonal, subgroup and group. During the FLL, the facilitator respected the frontiers of these levels and avoided being invasive. The aim was to ease the process for participants with facilitators 'lighting the phenomena', rather than working with individuals or interpreting the contents directly.

Facilitators also had to be alert to the fact that change and resistance are not two conflicting aspects; instead, they are determined and necessary to each other. All change involves a preservation strategy and respect for the resistance. Bearing this in mind reminded facilitators to be careful to not intervene directly in the group process, instead intervening closer to the borders when resistance arose. Welcoming the resistance was essential to generate a confident environment, an essential step for participants engaging with the process of change.

The facilitator supports the process with the objective of maintaining interaction and co-participation in knowledge creation in accordance with the general design principles of FLL. The aim was to conduct small group exercises following a research protocol while ensuring that the group could perform the task. It was not the objective of the facilitators to intervene in content generation but to observe and take note of results.

Different approaches and tools were used during the process to move knowledge from tacit to explicit and for inventing new hypotheses, variables and models. One of the approaches used to deepen and broaden the content of the structured conversations working with assumptions in Phases 1 and 2 was the Causal Layered Analysis (CLA) method (Inayatullah, 2004) which is a powerful tool for helping participants to make sense of their narratives by organising

and communicating attributes of the imaginary futures they described during the workshop. Other methods, such as role-playing, storytelling and using different media for communicating results, were also used in both breakout groups and plenary sessions, allowing for experiments with different kinds of group dynamics and imaginative processes. Such diversity in the design of the knowledge laboratory processes was key to sparking creativity within the groups. Beyond increasing creativity, this approach also made the workshop more pleasant and helped to energise the process. Ensuring that individuals can make personal contributions in an interactive, shared sense-making context is critical for tapping into the collective intelligence of the group and required a strong emphasis on customising the FLL-N design in advance and ensuring that during the process there was a capacity to engage in real-time facilitation of the group dynamics.

### Follow-up

The experience of this FLL-N has enabled CGEE to adapt the process and dynamics to undertake several Labs. In 2014, the organisation rethought its strategy and market position with its collaborators through a process involving 12 short and lively encounters of around two hours each. This built directly on both the methodological insights and content generated by the Future of Science FLL-N.

In 2015, CGEE applied the FLL approach to a project looking at the future of sustainable cities commissioned by the Brazilian STI Ministry (MSTI). The FLL workshop brought together people with divergent points of view from research, industry and government, as well as students, religious groups, NGOs and people from different societal groups. In parallel, a discussion took place with children from 6 to 16 years during the Science and Technology Week that is organised every year by MSTI for all schools in cities across the country. The results were combined, exposing the similarities and differences that these two groups (i.e. pupils and adults) expect for liveable and sustainable cities in Brazil. There was convergence in themes such as water, education, energy, mobility, green areas, food systems and health. However, in two themes – governance and security – expectations and proposed actions were quite divergent. Options for innovation policy were then developed for MSTI, to both provide a positive environment for discussion related to the converging themes and to offer a policy mix required to dig deeper into identified issues, thus generating more understanding among stakeholders and coordinating actions with different Ministries. CGEE foresees using and adapting the FLL approach from 2017 onwards in several projects dealing both with sustainability and innovation in cities and regions.

Finally, it is important to highlight that going through several FL Labs has enabled CGEE to test the approach and unlock specific methods which are continually embedded in the ongoing development of foresight methods and applications at CGEE. It has also assisted the institution to disrupt an entrenched top-down approach to making internal decisions. By bringing all staff together,

mutual learning has become possible. The discovery of both similar and opposing assumptions and expectations was a very powerful instrument to bring about an open in-house dialogue, which exposed personal biases and expanded the possibility of moving towards a jointly developed vision of what CGEE as an institution wants to be in the future. In a nutshell, it did put in motion a collective change regarding the ways in which the institution relates to its clients and carries out its projects and strategic studies.

As a result, it has been moving from a normative and prescriptive approach alone to one that aims to embrace complexity, emergence and novelty (Cagnin, 2017). This implies developing the ability to 'walk on two legs': improve or optimise the current system at the same time as it moves towards new and/or disruptive system configurations. Being able to operate both in known systems (inside-in, inside-out, and outside-in), with more efficiency and efficacy, as well as to operate in unknown systems (outside-out), will support the institution in crafting strategic questions for itself and its clients. In other words, looking outside systems that we are familiar with will support not only developing and addressing new strategic questions, but also in recognising new issues (e.g. challenges, technologies, social transformations, among others) through systematic observations and dialogue, and selecting those which are worth investigating further in order to identify new opportunities.

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## Case 3: Using the future for local labor markets

*Kacper Nosarzewski and Lydia Garrido Luzardo*

The Futures Literacy Laboratory-Novelty (FLL-N) on Using the Future for Local Labor Markets was conducted on November 25–26, 2013, in Bogotá, Republic of Colombia, with a group of 28 participants from Regional Labor Observatories (Red de Observatorios Regionales de Mercado de Trabajo, RED ORMET), the Ministry of Labor, the National Apprenticeship Service (SENA), and the United Nations Development Program (UNDP). The event was designed as a 'knowledge laboratory,' a learning-by-doing process that engages the collective intelligence of the participants to generate new knowledge. For reasons of effectiveness and efficiency in achieving the participants' goals the future was used as the main reference point for structuring the conversations. When used in the context of a knowledge laboratory, the future is a particularly powerful tool for revealing underlying systemic assumptions and providing new analytical insights, often beyond existing frameworks.

Participants in this FLL-N were able to analyze and question the methods and goals that inform their current on-the-ground efforts to assist with allocation of investments, sharing of information and coordination of organizational activities in local labor markets. Participants also started to increase their own capacity to both use the future and conduct scientific research by gaining practical familiarity with the Discipline of Anticipation and FLL-N design and practice. Lastly, in the context of ongoing action research being conducted by UNESCO, this event contributed to the advancement of innovative approaches to both knowledge creation and the use of the future to formulate collective choices.

The design of the event, with a clear training objective and foresight theme, was prepared by an international group of Future Studies experts: Dr. Riel Miller, Head of Foresight at UNESCO, Paris; Mrs. Lydia Garrido Luzardo, Head of The Millennium Project Uruguayan Node, Montevideo; Mr. Kacper Nosarzewski, Partner at 4CF sp. z o. o., Warsaw, in close collaboration with Mr. Javier García

Estevéz of UNDP Colombia and with important inputs from the regional labor observatories and Ministry of Labor in Colombia. The event was hosted by the Ministry of Labor and UNDP at Grand House Hotel Bogotá.

### The transformation of labor markets

A new series of emergent global political, economic and social phenomena are currently generating new categories of value-creation, altering the nature and organization of work, enlarging the role of learning, changing the meaning and practice of age-based landmarks like retirement, and diversifying the objectives of, and means for making investments. Part of this moving landscape involves changes in the conception and construction of collective efforts to understand and influence the world around us.

Today the field of labor policy is being transformed by changes taking place in the nature of work, the systems for organizing the allocation of time to value-creating activities, and the methods used to understand and share the meaning of changes in the distribution of human activity in daily life. Such innovations call for new research methods as well as a capacity to explore new avenues for expressing and organizing human agency. Disruptive changes, ones that signal the inadequacy of existing paradigms, also mark the emergence of new ones. This means that government policy and policy makers are faced with a dual challenge – improving the old and inventing the new.

With respect to labor market foresight that attempts to discern the future of employment and skills, the old can be understood as processes that extrapolate economic change with sufficient detail and sufficient accuracy to undertake supply side planning and demand side adaptation. However, as decades of experience have demonstrated, medium and long-run labor market forecasting is not a particularly useful way to think about the future of work. This is not only because of significant lags in training systems and technical difficulties in meeting rigorous data and modeling specifications, but is also and more importantly due to the fundamentally complex evolutionary nature of economic systems. Recognition of this reality partly accounted for the shift away from labor market planning to framework-type policies in the 1980s and 1990s for OECD countries. Currently the expansion or catch-up/convergence of industrializing countries and the crisis of de-industrialization of developed countries makes it tempting to return to old planning illusions – using forecasting approaches to think about the future nature and structure of human work activity, while at the same time suggesting that something more is needed.

### Designing the experience

This two-day FLL-N was designed to assist participants with making sense of the changes taking place around them as well as helping them to see that they

can use the future in new ways. Through learning-by-doing knowledge creation, an action research approach to understanding local labor markets, participants recognized: (1) the developments taking place that influence the way the future is integrated into efforts to understand the world today, and (2) the emergence of new approaches to the mutual design and creation of knowledge and work. Participants expanded the range of their analysis without abandoning important and still significant tools for thinking about the future and informing policies that can make existing systems work better.

Through the FLL-N participants enhanced their capacity to detect and make sense of repetition and difference, the old and the new, which are at the core of policy making. At the end of the process participants were better able to 'walk on two legs,' understanding the difference between closed and open systems thinking, between efforts to improve or optimize already existing systems and efforts to perceive and invent new and/or disruptive system configurations. This FLL-N focused the collective intelligence of participants and made their anticipatory assumptions explicit. They came to see how these assumptions play a key role in defining systemic boundaries, thereby shaping the ability to be able to distinguish between endogenous and exogenous continuity and change. By deepening and enlarging participants' capacity to use the future and generate time-place specific knowledge, this FLL-N enabled policy makers to be innovative and context sensitive.

Participating in the FLL-N also provided an opportunity to learn about anticipatory systems and how to use the future, by considering an important topic – the future of local labor markets in Colombia. The FLL-N followed a learning curve sequence intended to engage the collective intelligence of participants. Through this conversational process information is revealed, new meanings and even phenomena discovered and shared sense-making emerges – which is not the same as consensus or agreement; indeed, there can be a clarification of disagreement. Of course, this search process is incomplete and biased in many ways, but since it is collective it is also more diverse, at a minimum in terms of different points of view due to age or gender or personal history, and it offers the potential of making explicit specific, time-place unique information that participants carry with them into the conversation. This is why the creation of knowledge through collective intelligence knowledge creation (CIKC) processes such as in the general FLL design is one of the main ways to research the anticipatory assumptions that we use to imagine the future.

The design of this specific FLL-N agenda involved both learning by doing and learning by viewing techniques, with intertwining lectures and workshop exercises in groups, and with emphasis on the practical dimension of foresight applied to labor market studies and labor policy. Exploring developments taking place in the Discipline of Anticipation and how such advances can be applied to labor market policy analysis and implementation was a key result of this Futures Literacy development process.

### *Aims of the FLL-N*

The FLL-N covered four specific objectives:

- develop participants' practical capability to use anticipatory systems to identify and analyze today's emergent phenomena for policy purposes;
- gain a deeper understanding of the latest development in the field of foresight, including the different tools and networks that are advancing the field;
- address current pressing policy issues through a hands-on foresight process;
- invent, design and discuss prototype anticipatory systems projects for Colombia.

Both English and Spanish languages were used during the event with the support of simultaneous interpretation provided by the host.

On the morning of the workshop, the FLL-N design was customized in real-time in order to incorporate insights regarding the participants' context and goals. These specifics were provided by the Vice-Minister for Employment & Pensions, Hon. Juan Carlos Cortés González, the Director of Regional Labor Markets, Mrs. Juana Paola Bustamante, and Mr. Javier García Estevéz of UNDP Colombia.

### *Lead-up to Phase 1*

Based on prior desk research and first-hand research into anticipatory systems and frameworks that had been the benchmark for future-oriented activities of labor market observatories and labor policy-making in Colombia, the team designing and implementing the lab decided to dedicate a substantial portion of the first day to pre-FL activities. The apparent uniformity of local participants revealed in fact a deep disparity of background and experience, with participants bridging the social sciences ranging from economists to social policy analysts to public management specialists. However, the formal homogeneity of the group and relatively flat hierarchical distribution demanded a special effort at appreciative inquiry to prepare the group to explore its anticipatory assumptions.

Starting the FLL-N with a set of introductory lectures was intended to assist the participants in connecting the dots linking their own futures research and forecasting knowledge and the big picture, state-of-the-art thinking about the Discipline of Anticipation and Futures Literacy. At the outset Riel Miller gave a lecture on recent developments in the field of Future Studies and lessons learned from the latest research into the Discipline of Anticipation, Futures Literacy and complexity studies. Next Lydia Garrido Luzardo gave a presentation on the epistemology and ontology of futures work. Then Kacper Nosarzewski provided a review of foresight tools, from probabilistic forecasting to scenario thinking, to early warning systems, and rigorous imagining. These introductory talks were seen as a context-relevant approach to laying down important reference points for the participants and an effective way to set a stage that would be inviting for participants being asked to engage in a challenging collective intelligence process.

*Phase 1: Reveal*

The standard general FLL-N Phase 1 started with group work focused on the futures of the labor market in Colombia. Participants were invited to speak Spanish in their groups, with report back to plenary simultaneously translated into English to allow for the international facilitation team to discuss and investigate the lab work as it progressed. Phase 1 followed the usual expectations and hopes pattern to revealing anticipatory assumptions. The report back collected evidence of a wide consensus on the place and meaning of notions such as informal economy, labor supply and demand drivers, unemployment taxonomy and relations between policy and workforce. Participants also revealed a set of shared anticipatory assumptions underpinning the futures they imagined related to causality and agency in labor-market analysis and policy-making. Analysis of the imaginary futures created using the Causal Layered Analysis (CLA) method, facilitated by the international team, produced contrasting pictures. On one side the participants displayed considerable consensus on how the economy and labor markets work in general or from an abstract 'economists' point of view. On the other side, particularly when exploring imaginary futures related to the *metaphor* and *headline* layers of CLA, participants depicted the future outside of the 'standard-model,' recognizing the significance of local and regional specificity. These latter images did not coincide with the conventional picture of labor markets based on generalizing and extrapolating a framework derived ex-post from the experiences of already 'developed' countries. The design decision to use Causal Layered Analysis for structuring within group imaging and facilitate meaningful reporting back turned out to be appropriate. As the discussions unfolded the facilitators and observers witnessed strong sensing and sense-making collaboration within the groups as well as learning by doing.

*Phase 2: Reframe*

The basic FLL-N design was used to conduct the reframing exercise, involving a discontinuous scenario aimed at creating a disruptive context for imagining the future. First, participants were presented with an adaptation of the OECD Learning Intensive Society (LIS) (Miller, 2006) model used for the purpose of stretching beyond the business-as-usual horizon and to question assumptions and incumbent models. Questions about the model and clarifications of its iso-probabilistic nature followed. As was typically the case, the biggest challenge for the groups is to grasp the model as a tool rather than a prediction. With this risk in mind this FLL-N was designed to ensure an opportunity for discussions in plenary and in groups in order to get beyond the idea that the LIS was a solution or forecast. To assist the group in tackling this key hurdle the presentation of the reframing model was followed by a case study of Anticipatory Governance theory presented by Kacper Nosarzewski. The anticipatory administration concept, as laid out by Fuerth and Faber (2012), enables endogenous reframing for innovation within a closed system. The differences between closed and open systems in the

context of governance and public administration was further deepened to allow participants to operationalize nuances of the LIS with its important meta-level characteristics as both a model and as a tool. Closed systems are not a favorable environment for exploratory activities from within and often do not allow change unless under strict control and without questioning systemic assumptions. That is why it is a challenging task to get policy makers to recognize and then start to invent anticipatory assumptions that are not just aimed at planning and begin to embrace complexity, including novelty. Once these two presentations were concluded and further debated over lunch, the actual Phase 2 took place over a two-hour session.

Phase 2 was typically framed as learning-by-doing exercises: Prototype and Test, but customized to this specific context. In this FLL-N groups were assigned the task of writing a report from the future to UNESCO about the role of the Observatories in the LIS in Colombia. Effort was devoted to describing specific anticipatory processes/projects to pursue strategic objectives for Colombia and its regions in the present. The aim was to develop prototypes that illustrate and test an anticipatory systems approach. Plenary presentations, reflections and discussions provided a platform for scoping the results of Phase 2. As it turned out, the assignment was not perfectly suited to the analysis and communication habits of most of the participants. Writing a report to UNESCO was interpreted either as a showcase activity or a request for help, with less focus on producing new knowledge and more on attractive framing of current challenges extrapolated into the future or quasi-promotional messages using LIS as a tool, but not as reframing. Only a few participants successfully identified anticipatory assumptions and explicitly presented a reframed vision.

As a consequence, to enable an effective Phase 3 exercise, the facilitation team addressed the challenges and limitations of each group's deliverable, unwrapping and debating specific pieces of knowledge, assumptions and predictions with the participants. This turned out to be a worthwhile activity, leveling up the general understanding of futures literacy and helping participants to confront received ideas about the methods and narrative frameworks for using the future.

*Phase 3: Rethink*

Due to the extra time invested in debate and clarification after Phase 2, the third phase of FLL was limited to a 45-minute slot and focused on receiving and processing feedback. Participants discussed their improved understanding of the potential of anticipation to enhance the capacity of policy makers to reach societal objectives. Individual testimonies and take-away ideas were presented by willing participants. In general, the evidence of a greater focus on specificity and complexity in relation to local and regional labor markets was gathered and noted. Several participants thought that this kind of FLL-N could be used as a participatory tool for engaging local employers and employees in the work of the Labor Market Observatories. This approach could provide both new sources for analyzing the specific labor market issues in their community and for rethinking practice.

An overview of key application issues and follow-through learning was given by Riel Miller. An open discussion followed for half an hour providing feedback and follow-up ideas. The idea of deploying Futures Literacy task groups to regions throughout Colombia to train additional trainers and local champions was considered a worthy follow-up activity.

### Main outcomes and findings

The participants, working at the local level on labor market challenges in Colombia, and the event's sponsors, the UNDP in Colombia and the Ministry of Labor, are all concerned with advancing socio-economic development, and were able to leave the FLL with important conclusions.

First, they received clear confirmation of the intuition that led them to invest in this event – that there was indeed a need to assess and enrich the tools being used to formulate and implement labor market policies by gaining a deeper understanding of how to use the future.

Second, there was important recognition, directly related to existing activities and practices, that to achieve local labor market objectives as well as broader regional and national aspirations it is necessary to acquire new capabilities throughout the community, including for policy makers and researchers. In particular, there is a need to cultivate the capacity to use the future and collective intelligence processes that are efficient in generating locally specific knowledge that enables the invention and deployment of new methods for formulating and implementing collective action.

Third, there are clear and readily available methods for enhancing the practical capacity to use anticipatory systems to identify and analyze today's emergent phenomena for policy purposes through learning-by-doing processes such as the FLL-N.

In summary, participants in this FLL-N acquired both new skills and a new understanding of their current activities that will enable them to move forward in applying the latest developments in the field of foresight to the challenges they face. The experiment, as intended, provided context specific meaning for the newest policy-oriented foresight techniques. Participants gained an appreciation of the role of the future and collective intelligence action-research in producing the sense-making necessary for collective action – the new approach to creating and enacting public policy.

Current pressing policy issues were identified through this FLL-N. Key elements of the RED ORMET (Red de Observatorios Regionales de Mercado de Trabajo) epistemic landscape took on new meaning and became sources of inspiration for new questions and potentially new solutions. Participants were able to reconsider such central issues as the relationship between formal and informal activities, exogenous and endogenous growth, education-employment planning, and knowledge-sharing processes/content among diverse actors at all levels – local, regional and national. The ensemble of methods, carefully designed as a learning voyage, allowed participants to discover and appreciate the repetitions

and differences that characterize the emergent and evolving context for value creation at the local, national and global levels. Participants started a process of developing new goals and capabilities for sense making, data processing, analysis and reporting.

Prototype anticipatory systems projects for Colombian labor market observatories were tested during the last session exercise. This exercise offered an opportunity to display new vantage points that had been provoked by the reframing process and reflected the creative dynamic among groups and individual participants. Participants called into question existing definitions and organizational forms of welfare-provision, examining the biases introduced by conceptual and organizational frameworks that reflect paternalism and the eternal dominance of the supply–demand dualism. Participants also started to seek new systemic solutions, pushing the frontiers of the RED ORMET current theory and practice.

Some of the collectively built outputs with strategic implications were:

- building the capacity to generate real-time profiles of productive activity – enhancing the quality of information available for both initiating new value-added activity and improving the efficiency of existing activities/recruitment/networking;
- redefining the expected and operational relationship between the so-called skill supply side in education, and the demand side, beyond the narrow job market definitions in order to escape from a planning approach to the creation and deployment of wealth-creating capacity in contexts dominated by informal work;
- engaging and making sense of cultural assets, the locally specific knowledge and traditions that generate in-situ meaning, in order to enhance the efficiency of information sharing for creating wealth;
- giving a clearer productive meaning to human and social rights, including transparency and openness;
- finding ways of giving local meaning to global connectivity, of all kinds;
- empowering local self-organization and self-management;
- building new bases, crafted out of jointly invented aspirations and collective intelligence based understanding, for cross boundary partnerships, for instance between workers and employees;
- enabling new information-creation processes and places – building time, space and permission for the articulation and negotiation of sense making amongst diverse actors, public, private and social across communities at all levels;
- building up new infrastructure that enables real-time information creation and access beyond current barriers and conflicts.

The notions of temporality, multiple futures, reframing, desirable and probable futures, plausibility, ontological status of present and future, optimization, contingency, novelty, exploratory approaches were all evoked and discussed through a hands-on deliberative process. Participants were able to express and debate a

range of strongly held systemic perspectives, providing a large conceptual space for thinking about the ongoing transformation of socio-economic models.

The group was very cooperative and participated in the assignments in a disciplined manner, also asking questions about the details of tasks freely. Much of the process was conducted in the local language and when there were terminological or translation questions there were sufficient resources available to successfully arrive at shared understandings. Cooperation within groups was enthusiastic, with different participants taking turns in presenting and changing roles within the teams.

Regional economic and cultural identity (e.g. impact of the coffee industry) and regional specificity of the observatories played an important role in discussions, demonstrating the ability to evoke and give meaning to specificity in a broader, often international discussion. Spontaneous feedback from participants was collected, including inquiries into technical aspects of exploratory foresight methods and practical upgrades to the existing methodology employed by the RED ORMET members. Some of the participants were able to make direct connections between what they were learning in the workshop and their existing models and knowledge creation systems, i.e. macroeconomics, regional development, etc.

Finally, a clear desire was expressed by participants and sponsors to further develop Futures Literacy and apply the Discipline of Anticipation to the work they are doing at both the local level and at national/global levels. Interest was also expressed in finding ways to design and implement advanced anticipatory processes such as the FLL-N for specific sectors. Subsequent to the event a set of follow-up options were developed and were subject to detailed implementation discussion with the Ministry of Labor.

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## Case 4: Using the future for innovation policy learning in Norway

*Per M. Koch*

This case study was part of Innovation Norway's effort to introduce advanced methods for thinking about the future into national innovation policy learning. The report reflects the work undertaken between 2013 and 2017. Innovation Norway collaborated with UNESCO, using the Futures Literacy approach to engage in policy learning and policy development.

Innovation Norway is Norway's central agency for encouraging industrial innovation and entrepreneurship. The company also functions as a policy adviser for its owners, the Ministry of Innovation and Trade, and the counties, and for Norwegian society at large. Because of this the institution has to develop efficient arenas for policy learning and policy communication. In this case study, I will look at how Innovation Norway enhanced its capacity to use-the-future by taking a Futures Literacy approach.

### *Learning potential*

Innovation Norway has some 700 employees, distributed between the Oslo headquarters, 15 county offices and 35 offices abroad. Given employees' close contact with industry, and the fact that Innovation Norway has extensive regional, national and international networks, the institution should be uniquely positioned to generate economic, industrial and social intelligence for both policy makers and industry.

Even if the system generates relevant data and knowledge regarding existing policy instruments and challenges that Norwegian individual companies are facing right now, this does not automatically lead to insights into (1) how the instruments and services interact, (2) a broad-based analysis of the innovation system as a whole, and (3) ideas about future challenges and opportunities, both for Norwegian society as a whole and for Innovation Norway.

### *Policy learning about how to 'use-the-future' as anticipation*

In the latest white paper on industrial policy Innovation Norway and the Industrial Development Corporation of Norway (SIVA) underlined Innovation Norway's role as a policy adviser (The Norwegian Ministry of Industry and Trade, 2012, p. 87; The Research Council of Norway, 2017) and also emphasized the role of Innovation Norway as a listening post vis-à-vis industrial development and international opportunities.

If advice is to be provided on innovation policy, one has to have ideas about how imaginary futures are influencing what people see and do in the present. In this context, the point is not to predict the future, as that is impossible, but to identify the kinds of anticipatory assumptions that are being used, including social, political, economic, technological and environmental factors and trends. Decision-makers are using these assumptions to imagine changes in the rules of the game and how companies and policy institutions may need to adapt at tactical and strategic levels.

### *Societal challenges and sustainability*

Policy makers in the field of innovation policy have for a long time made use of the future in their policy discussions. Norwegian policy makers in this field make active use of economic predictions and mapping of emerging technologies.

But both approaches are limited in the sense that they are anchored in current social, political and economic structures. By taking part in the UNESCO Future Literacy Laboratory network, Innovation Norway has tried to achieve two important objectives: (1) to widen the scope of factors and phenomena included when imagining different futures; and (2) to make participants consciously aware of why and how the future is being used and can be used.

One example of a widening of scope is the move from a simplistic technology *push* approach to innovation, where research and technology deliver new inventions and society accepts them uncritically, to a societal *pull* approach, where stakeholders identify global challenges to sustainability and try to develop technical, social and cultural solutions while taking possible negative effects of innovation into consideration. These developments are reflected, for instance, in the EU Horizon 2020 programme for research and innovation, which is targeting several societal challenges facing Europe and the world, including health, demographic change, food security, climate action and more.

In other words, there is a shift taking place from yesterday's dominant approach in which research and innovation agencies were meant to focus exclusively on providing generic policy instruments potentially beneficial to all companies, such as a bottom-up approach where the agencies do not 'pick winners' or judge the social value of projects. Now there seems to be a turn underway towards an approach where ministries and agencies do provide some top-down strategic direction and align public investments to reinforce these choices.

Over the last couple of years, Innovation Norway has gradually shifted its practice and its policy advice in a more challenge-oriented and sustainable direction. Innovation Norway has discussed an innovation policy that will help Norway transform its economy, partly to respond to global challenges and the market opportunities they represent, and partly to replace the current oil and gas dependency with new, future-oriented and sustainable activities. The use of the Futures Literacy Lab methodology is partly in response to this development. These changes are part of why Innovation Norway has pursued new and innovative methods for understanding why and how the future enters into decision-making.

### Learning from Futures Literacy

In 2013 Innovation Norway started a new project on the development of the organization as an innovation policy adviser. As part of this project, Innovation Norway decided to test Futures Literacy (FL) as an approach to policy learning, at both national and regional levels. Innovation Norway decided to work collaboratively with UNESCO's FL Project in order to take advantage of the project's cutting-edge research, networking and experimentation around the world.

The process started with a two-day workshop in Oslo on 21 and 22 October 2013, with Riel Miller, members of the UNESCO futures literacy expert group, and representatives of Innovation Norway, the Research Council of Norway and the Norwegian Board of Technology.

We had some intense and fruitful discussions on the use of the future in research and innovation policy development. At this workshop, the participants also tested the Futures Literacy Laboratories (FLL) methodology, specifically the FLL-Novelty (FLL-N), designed to introduce participants to a range of anticipatory systems and knowledge creation practices, as outlined in Chapters 1 and 4 of this book.

Subsequently, after the experiment in developing FL and testing the FLL-N methodology, Innovation Norway produced a specially tailored version for deployment in Norway. The main difference between the FLL-N run in Oslo and the version used across Norway is in the time-span for running the exercise. Participation in a two- or three-day laboratory was unlikely given the dominance of existing ways of generating insights and the tight agendas of Innovation Norway employees and its business partners. Working from the basic design principles of FLL it was decided to put together a five- to six-hour process. There was considerable awareness of the risks involved with such an approach, not least being the lack of time for a more fundamental reframing of the topic at hand.

### FLL-Innovation Norway (FLL-IN)

We arranged six FLL-IN in 2013 and 2014, testing out different types of challenges, industry areas and participation.

26 November 2013: Internal alpha-test of methodology, Oslo headquarters.

○  *Topic: Future opportunities and challenges for Norwegian industry.*

28 January 2014: The County of Sogn and Fjordane on the West Coast of Norway.

○  *Topic: To identify possible future challenges and opportunities for local industry.*

21 March 2014: Internal workshop on Innovation Norway as a policy adviser.

○  *Topic: Generating ideas regarding the future organization of Innovation Norway's policy adviser function.*

23 and 24 April 2014: The South-East Asia regional group of Innovation Norway, meeting in Bangkok, Thailand.

○  *Topic: Energy, including energy production, transport and efficiency: What can Norwegian industry achieve in South East Asia?*

26 November 2014: Fremtidsmat (Future Food), Mathallen, Oslo.

○  *Fremtidsmat is a regional collaboration aimed at developing sustainable food production and products. An implicit goal was to prepare the ground for an application for cluster support from Innovation Norway.*
○  *Topic: Future opportunities for the development, production and sale of food and beverages in the Oslo Fjord region.*

10 June 2014: The fruit and berry cluster around the Oslo Fjord, Drammen.

○   *This workshop was part of an attempt at establishing formal collabo-ration between fruit and berry producers around the Oslo Fjord. The workshop was to identify future potential and challenges regarding the use of their products.*

We were very careful to introduce a wide variety of social, economic, technological and environmental factors into the discussions, in order to avoid 'lock in' into existing technologies, policies or cultural paradigms.

Participants were asked to see the world from the year 2030. Longer time spans were considered as they encourage participants to imagine more radically different scenarios but in the end, we decided to go for the middle ground: the distance into the future was far enough for us to be able to introduce serious shifts in framework conditions, while at the same time close enough to make participants see the relevance to their present tasks.

## Structure

We learned that the following workshop structure, which is very similar to the FLL-N sequence, functions well. In general, the workshops had some 15 to 20 participants, facilitators included, which allowed us to establish three break-out groups at each event.

### INTRODUCTION

The facilitators presented the purpose of the workshop as well as the procedure in a plenary session. The participants were then divided into groups, each with its own facilitator.

### HOPE

Using Post-it notes, participants were asked to illustrate their hopes for the future, answering the request: "Give us stories, headlines, quotes and/or concepts from the year 2030." We underlined that these hopes did not have to be realistic. The point was to reveal their dreams and visions for the future, stopping them from being caught up in realistic expectations of what might happen. By asking participants to present their Post-it notes, everyone was included in the discussion.

### REALISTIC EXPECTATIONS

Session 2 was similar to Session 1, the only difference being that this time the participants were asked to express their expectations as to what they truly believed would or could happen. In this way, they were able to map their preconceptions, and make themselves aware of these preconceptions. This is what Riel Miller calls "shifting knowledge from tacit to the explicit form" (Miller, 2007).

Including informal and open networking and discussion.

REFRAMING

The facilitators prepared several alternative radical scenarios, which were all designed to force the participants to cope with the unexpected and think outside their safety zone. The facilitators presented one of these reframing scenarios, using elements from the hopes and expectations discussion to help inspire creativity and open thinking. The groups then used the Post-it note process, as in the previous sessions, to generate snap-shot descriptions of the reframed world.

PLENARY SESSION

Given the time limitations of a five- to six-hour workshop it was not possible to get the groups to present their results in plenary session. Instead the facilitators, who had followed the group discussions, brought up some critical points for debate.

## Results

Given the condensed timeframe for this kind of collective intelligence knowledge creation process the groups could not really develop highly detailed and coherent scenarios for the year 2030. However, they did manage to sufficiently describe different attributes of their imaginary futures in order to begin posing new questions and exploring innovative perspectives on their current situation. They also started to consider how it might be useful to think further about their imaginary futures, including what it means for location- and industry-specific collaboration and policy.

The fact that all participants were required to present their Post-it notes in the groups meant that we managed to engage them all, including those who were shy and sceptical. In the two first workshops, we started with the expectations session and followed up with the hope session. We realized that the realism of the first restricted their ability to think freely and more positively in the hope session, so we decided to move the hope session to the beginning of the workshops. Many of the participants reported that they found the possibility to dream freely both liberating and useful.

In the standard FLL-N design, quite some time is spent developing and then presenting an alternative, coherent, vision of the future that is radically different from what the participants are accustomed to. Doing this invited participants to adopt a new frame of mind, where it is not only permitted to question assumptions – they are forced to do so. This helps participants come up with new and more radical ideas outside the box. Again, this is not done to predict the future, but to give participants new concepts and ideas they can use in their own learning and strategy development.

The main problem with reducing the length of the workshops to five or six hours is that there is not enough time to explain such a radically different future. Instead we decided to change some of the most essential variables in the relevant innovation system (i.e. factors related to trade, economics, technology, culture, policy or institutional setting).

In the fruit and berry workshop (Oslo Fjord, Drammen) we described a 2030 scenario where the big supermarket-chains had replaced their products with imports. This worked well as participants came up with many ideas for new export-oriented products, green and ecological branding and new sales channels, and they were able to put these innovations into the framework of a different kind of Norwegian and global society.

The counter-factual scenario at the workshop in Sogn and Fjordane did not work equally well. We took two of the main local industries out of the equation: salmon aquaculture had collapsed due to disease and local aluminium production had been moved out of the county. In this case, a local culture characterized by optimism and self-confidence made the participants dismiss these problems as minor nuisances. Instead they continued discussing ideas from Sessions 1 and 2 or, in the terms used in Chapters 1 and 4, they stayed at the FLL-N Phase 1 level, anticipation for the future. These were useful discussions, but not the radical rethinking that was planned.

Our experience from using this short version of the FLL-N methodology is that it works very well as a tool for making participants aware of anticipatory assumptions. In all our workshops, it generated a lot of enthusiasm and energy, and brought up many ideas that were new to participants. The workshops did lead to learning and networking both internally and in the clusters or groups taking part in the exercises. They definitely contributed to Innovation Norway's own strategic thinking by identifying potential challenges and opportunities for Norwegian industry and society and for Innovation Norway. Given the time span allotted it was, however, not always possible to shift the fundamental framework of the participants' thinking in a more radical way.

### The dream commitment

Innovation Norway also made use of the experience gained from running these customised FLL-N when carrying out the so-called 'Dream Commitment' (*Drømmeløftet*) in the spring of 2015. Drømmeløftet was in itself a radical innovation for Innovation Norway, a process proposed and initiated by the CEO, Anita Krohn Traaseth. The objective of the exercise was to bring people from Norwegian industry, public sector and civil life together to brainstorm around the need for change, both in reference to societal challenges and the need for moving the Norwegian economy away from its oil and gas dependency.

There was little time for preparations, so we went for a 'lean and mean' organization, asking regional offices and the units abroad to arrange at least one workshop, meeting or conference on a topic of relevance for the future of Norwegian industry and society in a changing global context. Other companies

and institutions were also invited to arrange their own Drømmeløftet events, and many did. In total, there were more than 80 different events with more than 3,500 participants, generating many ideas about future challenges and opportunities. Results were published on a separate website, as were several reports based on the process (Innovation Norway, 2016).

These events also gave us valuable insight into current shifts in how participants understand the role of industry in society. We noted, for instance, that many company representatives now expressed great concern for the future of the country and the planet, and argued for a more strategic approach towards a sustainable future. This strengthened Innovation Norway's resolve to make sustainability an integrated part of everything we do. The project led to a mobilization for the future and a challenge-oriented innovation policy, engaging the most important stakeholders, including strong media interest.

With no common methodology for carrying out the events, there was no way we could ensure a more radical reframing of perceptions and ideas in all of them. That being said, the exercise did lead to some radical rethinking. The most important deliverable was, however, that the need for a reorientation of policy development towards the future is now seen as self-evident.

### Futures Literacy Lab used in Innovation Norway's own strategic processes

In December 2016 and January 2017 Innovation Norway used the agency's version of the Futures Literacy Labs methodology to stimulate a rethink of future challenges and opportunities among upper and middle managers, as well as by the Board. The processes were designed to help participants reframe their assumptions about the future of Norwegian industry and society on the one hand and the innovation policy system on the other.

The following exercises took place:

> 6 December 2016: the Leadership Group (including the CEO and the leaders of the divisions);
>
> 17 January 2017: the heads of Innovation Norway's regional offices;
>
> 19 January 2017: all members of the Board of Innovation Norway.

Having three exercises with three different groups helped us triangulate assumptions as well as ideas about the future. The labs revealed that there is some uncertainty about the identity of Innovation Norway. Many of the participants found it hard to present a common narrative about what kind of organization Innovation Norway is and what it wants to achieve. There was also uncertainty about the division of labour in the Norwegian innovation policy system, including the relationship to other agencies and institutions and the ministerial level.

The processes generated some intense discussion on future challenges and opportunities and the main drivers involved. Many of the visions presented were quite radical compared to the present. This also applied to ideas about the future organization of Norway's innovation policy system and the role of Innovation Norway. Many participants envisaged futures where Innovation Norway had changed dramatically or where the organization had been replaced by other instruments.

In general, we have found that the Futures Literacy Lab model represents an efficient tool for policy learning. It generates a lot of interest and enthusiasm, and has helped us change the way we think and work as an organization. We see a strong awareness of the need to include the future in the development of instruments as well as for a more strategic, forward-looking, innovation policy.

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## Case 5: Imagining the future of the transition from 'youth' to 'adult' in Sierra Leone

*Kewulay Kamara*

### Introduction

Young people represent the majority of the population in Sierra Leone. Yet, as this Futures Literacy Laboratory-Novelty (FLL-N) demonstrated, they are struggling to find meaning and identity. They are having trouble constructing the social relationships, inter-dependencies and responsibilities that give substance to adulthood. By using the future to examine the present the participants in this FLL-N were able to look at the potential around them with new eyes and tell stories that identify pathways to hope. In Freetown the means for engaging participants' collective intelligence pass through forms of expression and inter-action that are deeply rooted in the specific realities of Sierra Leone today.

The FLL-N offered a privileged and contextualized space for negotiating shared meaning by using the open, imaginary and imaginative future to reflect on

the assumptions and questions that underpin policies and expectations. Building on design insights provided by an FLL-N on the same topic run with young people in Paris the week before, the experience in Sierra Leone demonstrated how a diverse group of people can at once develop their capacity to use the future, discover and invent rich stories about the past, present and future, and provide policy relevant analysis pointing to new initiatives and next steps.

### *The participants, the design and implementation*

The Freetown FLL-N was held on 20–21 January 2014 at the Hill Valley Hotel in Freetown and was facilitated by Mr Kewulay Kamara. The FLL-N participants were seven young participants all under the age of 30, none of whom earns a regular salary: one college graduate (male), one college student (male), one drummer and traditional performance artist from the Sierra Leone National Dance Troupe (male), one singer-actress (female), one model and youth leader (female), one journalist and social entrepreneur (female), and one visual artist (male); the remaining participants were adults: one junior secondary school principal and social service worker (male), one former director of the American International School of Freetown and current director of an NGO (SELI) dedicated to teaching writing in English and indigenous languages in several districts in Sierra Leone (female), one participating observer from UNESCO Regional Office in Abuja, Nigeria (male), one facilitator (male), one reporter from the Sierra Leone Broadcasting Corporation; and four student observers from the Capstone Program at the Wagner School, New York University (all female).

The FLL-N was structured around introducing foresight tools, working with these tools in groups, presenting group work to the workshop, and discussions. Each day opened with a ritual of libation-infused music, poetry and dance to maintain excitement and participation, but also to validate the relevance of local traditions for sense-making in the workshop. Abundant use was made of storytelling which included: personal stories; stories about the myths of 'youth' and 'adult' that underlie teenage out-of-wedlock pregnancies and anti-social behaviours; and stories (myths) about country (economy, government and society), ethnicity, ethnic conflicts, rural-urban migration and education. The design of the FLL-N and the facilitation rested on a collaborative approach to learning, collective intelligence knowledge creation and 'using-the-future'. The direction taken by discussions reflected the views and knowledge of the participants.

An important part of public ceremony in Sierra Leone involves conducting a prayer ritual at the outset, usually following Muslim or Christian traditions. However, undertaking a libation as an opening ritual is also rooted in many African traditions. Such calling on the ancestral spirits is still an important practice in families and communities in Sierra Leone today. This traditional libation is an offering that brings together the three essential elements of storytelling. It begins by identifying the community and its ancestors (history); it proceeds to a discussion of the present; and then looks towards the future. The intimacy of the exercise builds trust. A facilitator, possibly a traditional community 'storyteller',

strives for maximum participation of all who gather in the circle. Underlying the ritual is an appreciation of the power of words to create and transform reality, a salient part of African philosophical and religious traditions.

In Sierra Leone the design of the FLL-N process was customized to reflect local culture and practices, as well as the specific attributes of the actual participants and the topic under consideration. The entire process started with a questionnaire given to participants to assess their awareness of future methods and to set the stage for thinking about the future. Immediately after the survey participants were introduced to the libation. Next a series of futures methods, each prefaced by an appropriately chosen story, poem, song or music, was used to engage the collective intelligence of the group in deepening, inventing and articulating descriptions of the future. The process concluded with a conversation around metaphors that captured the richness of the imagined futures and a final, closing libation to the future.

This design of a FLL-N uses storytelling as the key heuristic for the knowledge creation process (KCP) that is at the heart of a collective intelligence knowledge laboratory. The selection of a storytelling approach to meeting the FLL-N design principles reflected the specific participants and topic: the 'Youth' to 'Adult' Transition in Sierra Leone. The libation was followed by an exercise using the Futures Triangle (Inayatullah, 2008), which extends the exploration, already initiated by the libation, of the past, present and future. Work on the Futures Triangle was followed by an exercise using the Futures Wheel (Glenn and Gordon, 2009). The Futures Wheel had the advantage of opening participants up to seeing how individual stories are interrelated but with disparate outcomes for individuals and groups. At this point, the group was ready to engage in a Causal Layered Analysis (CLA) (Inayatullah, 1998) exercise.

CLA is important for further deepening the participant's understanding of the present and demonstrating the power of words by revealing the relationship between inner metaphors, individual and group actions, and societal outcomes. This enables the group to begin to see the link between different futures and metaphors. Imagining alternative futures helps build awareness of anticipatory assumptions. By making explicit different scenarios, including the least to the most preferred, old local metaphors and new metaphors rooted in the local culture began to emerge. Participants started to tell new future stories as they began to distinguish 'colonized' and 'discarded' futures. In reframing the original stories participants engaged in a developmental process that facilitated the articulation of stories that past colonialist and future colonizing lenses obscured or distorted. A flood of new local and international stories about the imaginary future enabled the participants – personally and collectively – to see the present with different eyes.

*The governing myth*

As a result, participants engaged in lengthy discussions of the history of Sierra Leone, including the nature of corruption over time. Stories were told that revealed the ambiguities that call into question familiar hierarchies such as age and status

as well as the stifling effect of gender discrimination in the current context. The intangible yet governing myths of family, responsibility and rights combined with these hierarchies seem to perpetuate existing institutions, pervasive dependency and legitimize 'corruption'.

According to participants corruption is not confined to business and politics. Corruption can also be of cultural values such as those of the extended family which oblige the more fortunate to shoulder responsibility for the perpetuation of 'traditions' that exploit others: less fortunate relatives could be subject to near servitude in the name of 'helping to raise' them, and invasive practices that traumatize young girls so that they expect little more than exploitation from men are carried out in the name of protecting chastity. Rituals such as circumcision, which once occurred in the context of a learning process that spanned many years, are now reduced to children being awoken in the night and whisked away for circumcision. Not long ago, circumcision for men and women represented the final stage of 'adulthood' training. Not any more. Some are obliged to 'carry the basket' of the practice of 'circumciser' as the family tradition is passed down from mother to daughter largely because of the material rewards it brings.

### 'Youth': a moving target

Efforts by participants to imagine the future spurred much reflection and discussion of the conditions of post-civil-war youth. In fact it was noted that the contemporary meaning of the concept of youth in Sierra Leone had been significantly shaped through neighbourhood watch activities during the war. Back then many of the unemployed were teenage and twenty-somethings who are now in their 30s and 40s. Some were combatants. Many are now still unemployed or marginally employed. They still continue to be regarded as 'youth'. In a country where adulthood has come to be subtly defined by the ability to gain independent sustenance, the span of youth has effectively been extended. While some younger people might have reached responsible 'adulthood' because they can provide for themselves, other much older individuals are still regarded as youth because they cannot 'provide', while others might believe that they express their manhood by being 'a baby father'. And young girls subtly internalize the culture of dependence for survival: i.e. they get impregnated by a man so he can take responsibility for them.

Telling all of these stories within the group, as part of imagining the future, helped to develop a deeper understanding of the present challenges facing this youthful population. By mingling the future and stories of individuals and groups in Sierra Leone and throughout Africa the group were inspired to innovate and invent. Reflecting on their stories the participants gained a greater appreciation of the capacity for ritual, storytelling traditions and imaginary futures to deepen our understanding of issues and create new knowledge. The process made clear the transformative power of using the future to reframe the stories and myths that help people sense and make-sense of their world. Participants also gained an appreciation for the diversity of stories that are told about governance, individual responsibility and awareness-raising. Many of these points were dramatized in skits created and performed by workshop groups.

A set of recurring stories related to the relationship between food security and unemployment. Many pointed out that the price of domestically produced rice is so low that farmers prefer to sell their produce to the Republic of Guinea and Liberia. They cannot compete with imported rice, or food aid. Yet others pointed to the poor road infrastructure and food shortages in the cities, and low incentives for agriculture. In these stories, the state of the agricultural sector is related to rural-urban migration, unemployment and prostitution and other anti-social activities that were seen as being exacerbated by the social media. The same analysis suggested that the alarming exploitation of youth in the mining sector is also related to the poor state of agriculture in combination with government action or inaction and the deeper metaphors that govern people's lives.

### The old metaphors

Three interlocking sets of myths/metaphors seem to define the current malaise. One myth revolves around the people in authority as family members, 'Pa' and 'Mamy', as providers who are presumed to act in the best interest of the people around them. They 'take care' of their dependents. Their mere position elevates them to an unquestionable pedestal with little need for accountability. Those who are less well off often give their children to be educated by relatives that exploit these children in every way with impunity. All members of the family turn to the Pa to solve his/her immediate, usually financial, problems. Pa is expected to put the family, which could extend to the clan and 'tribe', above the interest of the public in general. This provides a perfect segue into the next interrelated and enabling metaphor for corruption: 'wherever you tie a cow, that is where it will graze.' So the public official uses his/her office to 'take care' of his own with impunity. All these factors interact to perpetuate a culture of dependence. To complete the circle of metaphors, the 'adult' as 'provider', at the very least, provides for themselves regardless of age or means. What happens when a younger person in the family is the 'provider?' The tables are turned. Just as they were turned during the war when the young had access to guns and power and can command their elders. You are a 'youth' if you do not provide for yourself and others. In this evolving culture wealth trumps age, supported by the globalized consumer society and social media's bypassing of old channels of power and communication. As a result, respect for age and other cultural values formerly vested in the community and family fall by the wayside.

### The new metaphors

Writing about the results to this approach, Ronald Kayanja writes:

> Probably most striking was how the young people freely expressed themselves with such passion and tears. It showed some deep-seated need for them to 'explode' and understand themselves before they can reconstruct their reality. This is crucial in a society still reeling from the bloody conflict that shocked the world.

While the early part of the workshop exposed different preconceptions of different ethnic groups, of men and women, the unfolding of the processes enabled the emergence of personal stories that carried messages of commonalty, interrelationships, and relief. There are indeed parallel, alternative metaphors buried under the surface. One of the metaphors says in Krio, the lingua franca of Sierra Leone: "we all na wan", or "we are all one". Looking forward, the workshop considered myths such 'we all are one', which promotes unity in the face of ethnic, religious, and social diversity. These conversations and the reframed images of the future produced through the group's collective intelligence began to deconstruct so called 'wicked problems'. Participants evoked the potential of new 'communities of interest' to build alliances and shared understanding. They started to explore avenues for redefining the basic terms and dynamics of the standard versions of the 'youth to adult transition'. Participants were able to ask new questions, redefining the problems, opening up horizons for entirely new solutions.

During and after the workshop there was considerable print and broadcast media attention.

*Reflections on storytelling and ritual: observations from the Sierra Leone Futures Literacy Laboratory-Novelty experience*

Ronald Kayanja, an observer from the UNESCO Regional office in Abuja, Nigeria, summed up the workshop thus:

> The workshop followed a participatory approach, with the facilitator using what the young people know and are passionate about to enable them to reflect on their personal lives and their country. The discussions brought out issues that concern them most: adulthood and how the war impacted on the definition (with child soldiers and teenage parents etc); youth unemployment; teenage sexual activity and the consequences; challenges of urbanization; trauma from the war; and the challenge of inclusion. Those issues were discussed in depth, with the young people providing causes, effects and possible solutions.

It is easy to imagine that the experience can be adapted to other localities. The experience focused on storytelling as an important tool. Storytelling taps the inner need to tell our story. Telling stories opens us up to conversations that help us make sense of our situation. It builds bonds amongst participants. Storytelling helps transcend different backgrounds and training. A person who creates and tells their story is exploring their past and setting the stage for seeing the importance of anticipation. Stories that tell of the past reveal more about the present, the filter for making sense of past events. Therefore, a storytelling session in any community can be used to reveal how people of that community are 'using-the-future' to understand the past.

People live the present through the myths and legends that frame their world, even when recounted as history and biography. This is layered on to current concerns and states of mind when people start telling their stories. Using storytelling

as a heuristic for collective intelligence knowledge creation elicits all of these elements of context as well as the limits created by depictions of the past and imaginary futures. Storytelling sessions also expose underlying tensions and limitations of our understanding of the past and future in the current context. Stories guide our lives, in part by imposing limits and in part by taking us outside those limits. Stories can bring the future into the present.

At the heart of most rituals and ceremonies are stories. These rituals can add weight to the stories that are told in ways that go well beyond the advantages due to the ease of communicating through a process that has a familiar structure and often a strong 'entertainment value'. In this way rituals help participants in FLL-N to appreciate the importance and role of moving their story from tacit to explicit, of sharing their story. They experience the power of their knowledge for the success of an exercise aimed at negotiating shared meaning and the development of their own capabilities, including improving their capacity to 'use-the-future'. Clearly the rituals need to be rooted in the local culture in order to inspire authentic engagement and deep resonance with the community's experiences.

The libation ritual used in the Sierra Leone FLL-N is a good example of this type of local ritual that invites very specific aspects of a community's past to be part of an exploration of why and how to 'use-the-future'. In Sierra Leone the libation created a spirit for the exercise. On the one hand, it opened up participants to tell stories that made them comfortable. On the other hand, these stories were sufficiently familiar to also make participants uncomfortable. When the FLL-N puts such heavy emphasis on storytelling it is important to balance the desire of every participant to tell their story and the need to move the agenda along as the collective learning process unfolds. To make this work it really helps if, as was the case in Sierra Leone, the facilitator loves stories.

### Next steps

#### Sierra Leone foresight network

At the conclusion of the second day, participants expressed interest in 'spreading the word' to other youth throughout the country. Aware of the plethora of NGOs and 'youth organizations' that have sprung up in response to the variety of problems, but without much positive impact so far, the participants decided not to create a new body but to continue their work through a local foresight network in association with UNESCO and Baden Partners in Sierra Leone. This network could provide the structure for spreading knowledge about Futures Literacy and new ways of 'using-the future' to build foresight capacity throughout Sierra Leone with specific attention to youth in transition.

#### Partners

Both Mr Konneh, Commissioner, Sierra Leone National Commission on UNESCO, and Mr Koroma, Commissioner, Sierra Leone Youth Commission, expressed regret that they could not attend but reaffirmed their willingness to

continue to work together with UNESCO to 'use-the-future' to build local capacity and empower specific solutions. Part of the follow-through from this first event involves Mr Kewulay Kamara working with Mr Konneh and Mr Koroma to draft a proposal for a foresight conference and FLL-N throughout the country to be funded by the government of Sierra Leone through its Ministry of Finance and Economic Development.

### Materials

Some participants noted the absence of audio/visual tools. Futures Literacy Laboratories could greatly benefit from multi-media technology. Such materials in conjunction with the refined rituals could enhance the quality of the experience. The current members of the evolving Sierra Leone Foresight Network could develop such materials.

### Sharing the Sierra Leone experience

Mr Ronald Kayanja of the UNESCO Regional Office in Abuja voiced the possibility that the experience of the FLL in Sierra Leone might help with healing and rehabilitation in other post-conflict zones in Africa.

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## Case 6: Imagining the future of sports

*Jean-Jacques Gouguet*

The Executive Master in European Sport Governance (MESGO) was created by the Center for the Law and Economics of Sport (CDES) in Limoges, with the support of UEFA. The MESGO aims to fill a gap in training options offered to the sports movement. Specifically designed for senior managers in the sports sector, the MESGO brings together representatives of the main stakeholders in European sports to consider the critical challenges it faces and to reflect on regulatory measures that could be put in place to ensure European sport's future prosperity. Jointly organized by five internationally renowned universities and research centres and supported by six major European and international team sport federations, the MESGO is based on a multidisciplinary approach and uses practice-oriented teaching methods to combine academic background information, knowledge sharing and networking.

   The MESGO aims to encourage strategic thinking among participants who already occupy or are going to take on high-level positions within sport governing

bodies, and to provide them with a framework for reflection and some tools which may help them to address complex change as it emerges. Today, the political, economic, societal and ecological complexity in Europe and the world means that leaders of the European sports sector must seek concerted and sustainable decisions in collaboration with their main stakeholders. Finding innovative solutions and building sustainable governance calls for global collaboration and ethics.

The MESGO's programme is composed of nine sessions of one week each. The final session is dedicated to the future of sport governance. The aim of this workshop is to explore different sets of assumptions about the nature and functioning of sport in the future. What might the sport organization of 2040 be like? What kind of rules regulate global sports and with what kind of enforcement systems? With this session in mind the organisers of the MESGO decided to join forces with UNESCO to co-design a Futures Literacy (FL) approach to this final phase. The MESGO Futures Literacy Lab-Novelty (FLL-N) was custom designed for the specific context of the course. Following the basic FLL-N design, as discussed in Chapters 1 and 4, the process invited participants to take part in structured conversation and reflection in order to collectively identify and invent their anticipatory assumptions and become more futures literate.

For the first time in 2014, the final session of the MESGO programme was divided into two parts. The first part involved traditional-style presentations of recent thinking on the topic of the future of sport and the second part was dedicated to the FLL-N. As usual FLL-N was co-designed in order to ensure appropriate customisation. This tailoring of the process took into account the fact that although participants in the course had been working together for the past 18 months they were nevertheless a highly diverse group: 14 nationalities with a range of employers' structures, sports backgrounds and positions held. The key to the design was to ensure that the individuals, belonging to radically different cultures, compared their visions of the future of sports in a challenging yet exciting exercise.

The FLL-N design, which included a strong level of real-time facilitation, succeeded in generating rich content, more than can be described in this short case-study summary. With brevity in mind, the reporting of this FLL-N has been narrowed down to a description of the work of only one of the three break-out groups. This group offers a reasonable window on the kind of action-learning that occurred during this FLL-N. After a consideration of this sample of the discussion, there is a brief section looking at key lessons from the overall process.

### The sport FLL-N

The FLL-N started with a detailed description by Riel Miller of the FL approach and the collective intelligence methodology that underpinned the design of the process. The three phases were presented as follows.

**Phase 1**: Definition of a possible future for sports through the predictions and hopes of the group members. Predictions are about what you think is most likely

to take place, a snapshot of sport in the long-run future. Hopes are about values. For instance, would you like to see changes in how sport is integrated and organized in the society around us?

**Phase 2**: Development of a model to conceptualize the future of sports. The point is to first liberate our imaginations from the constraints of prediction and current norms by playing with paradigmatically discontinuous futures and second, to experience more fully the power of our anticipatory assumptions in shaping not only the futures we imagine but our perceptions of the present.

**Phase 3**: Thinking about changing the current vision on the basis of questioning anticipatory assumptions: what are the implications of changing the imagined future of sports?

*Phase 1: Reveal – sport in 2040?*

This exercise in collective intelligence knowledge creation involved working through a modified Causal Layered Analysis (CLA) process where each participant's ideas about the future of sport were captured as future media headlines, stakeholder perspectives, institutional set-ups and underlying societal myths. In the working group of eight students, each participant wrote a Post-it note about what they imagined as being most likely for sport in the future. Then, in a round-table, each person presented their ideas before the group discussion. The same procedure was applied to deal with key aspects of a desired future for sport.

It is difficult to synthesize very different visions, but the following themes were consistently mentioned:

- the importance of amateur sport;
- the need for access to sport for all;
- the need to strike a balance between competition, performance and the higher values that are a constitutive element of sport;
- the end of the cult of performance at all costs, the end of the heroic model;
- the importance of defending the integrity of competition;
- revising the institutional sports pyramid.

On this basis, the group agreed on the following representation of the future of sport.

**F**ear: the future is uncertain and controversial but many experts agree that current global problems are threatening the very survival of the human species. These phenomena will inevitably have consequences for the organization of sport.

**U**niversality: sport has become global to the point that one wonders if it cannot be viewed as a global public good such as health, safety or the environment. From this perspective, there then arises the problem of global governance of such a public good.

**T**echnology: technical progress is deeply ambivalent, it may be the best and the worst thing. Sport does not escape such a risk with, for example, the use of

biotechnology leading to the enhanced human and more, to cyber-athletes, mixing man, animal and machine.

Ubiquity: we live at a time of a widespread mobile society, just-in-time long distance humans, goods, capital. Similarly, sport is now present everywhere on the planet, even in traditional societies which were little affected until recently.

Responsibility: in the face of global risks that threaten the very survival of humanity, everyone must ask what he or she is responsible for, in particular, for future generations. Sport cannot escape such a reflection both on its responsibilities in the current global crisis and in the solutions it can provide as a vector of values compatible with sustainable development.

Environment: the central question is whether we are going to reach the thresholds of irreversibility due to the limits of the planet, given that it is man who is the cause of all these global problems (the Anthropocene). In this perspective, the organization of major sporting events must be rethought as both factors contributing to and victims of the degradation of the planet's resources.

These are all external factors that will influence the organization of sport in years to come. In terms of factors internal to sport, the group agreed on the following:

Social Values: sport fulfils many social functions that are beginning to be recognized (health, education, social links, citizenship, etc). It will be interesting to know how, in the future, these features will complement the search for performance through sports competition.

Professional/Passion: one of the main characteristics of sport is the passion and professionalism that inspire practitioners. These fundamental values must be defended.

Organization: the sports organization model will oscillate between US closed leagues and European open leagues. Work is still required on the effectiveness of control instruments to promote one or other of the two models.

Responsibility: the integrity of sporting competition is threatened by numerous abuses: match fixing, betting, doping, money laundering, corruption, etc. It is the responsibility of sports authorities to eradicate such abuses to maintain the image of sport that can serve as a model for respect for the values at the heart of sports ethics.

Trends: the place of sport in society is constantly changing. We must be able to anticipate what will be the place of sport in the society of tomorrow to be able to adapt today.

Finally, we cannot forget an element common to both external and internal trends: conflicts of interest. This is, of course, the state of the balance of power between all stakeholders that determines the nature and extent of the mentioned phenomena.

*Phase 2: Reframe: how to make sense of the imaginary futures?*

Based on the presentation of a reframing context, participants then worked for over two hours on building a model for imagining a 'discontinuous' tomorrow. They opted for the model of the tree and the forest as a visual way of presenting their findings.

- First, the tree has roots, a trunk, branches and leaves. The roots are the values such as solidarity, integrity and respect that sustain sports. The trunk represents each stakeholder, branches and leaves are the products, including the functions performed by sports. Cycles can be introduced as seasons: in the autumn the leaves fall, and in the spring the leaves return.
- Second, there is the forest as a system; that is, all the trees are interacting, communicating and developing synergies.
- Third, the forest is still in a precarious dynamic equilibrium and may experience crises in terms of its ability to adapt to external shocks (resilience).

Such a model allows us to think about the design and need for a global governance of the sport systems in response to external threats, such as those described above, that may disturb the overall balance.

- **Attacks on the integrity of competition**. Various cheats (money laundering, match fixing, betting, corrupt referees, doping, etc.) maintain a suspicion that ultimately may seriously question the existence of the sporting spectacle. This is a problem of confidence in the integrity of the competition. If that integrity disappears, it creates a risk of public and sponsor disaffection vis-à-vis an activity that is not morally credible. From there, two scenarios for the future of the sporting spectacle can be considered: a scenario of the systematic use of scientifically assisted performance; and a scenario of the death of the sporting spectacle and the renewal of the game.
- **Cult of performance at all costs**. Could we imagine today a professional sport without the systematic search for performance improvement, despite the fact we eventually get to the edge of human limits? That would risk depriving sport of its supporters, sponsors and media access. Thanks to science and technology, we can always push the limits of sport performance and records. Could we avoid turning sport into circus games as a result of inevitable abuses linked to economic, financial, political pressures from the world spectacle that it has become?
- **Ignoring the limits of the planet.** In an absolute impossible context of infinite growth in a finite world, new principles of social organization should be developed and applied in a phase of ecological transition. This questioning of infinite growth will inevitably lead to the questioning of a sport without limits. Faced with the gigantic nature of major sports events, combined with rushing ahead in overcoming human limitations, consideration should be given to the rehabilitation of 'authentic' sports.

Only concerted collective action will provide solutions.

*Phase 3: Rethink: how to use new visions of sport?*

In the end, the future visions of sports generated by the participants could be seen as influencing their present visions and their concerns regarding local and

systemic sustainability. Their vision of sports can be summarized around four pillars of sustainable development.

- **Economy: sport for development**. It is known that sport can be an engine of economic development, a factor creating jobs and added value for urban and rural areas. Hosting regular or occasional sporting events delivers short-term economic benefits but can also leave a longer-term legacy on hosting territories.
- **Social: sport at the service of society**. With so many externalities linked to its practice, sport can generate considerable social benefits. One of the best ways to evaluate this contribution is to calculate the avoided social disutility such as the decrease in delinquency, consumption and drug traffic, improved school results, etc. We should consider incentive systems to promote sport in ways that bring benefits from these externalities.
- **Ecological: sport in the service of environmental protection**. It is difficult to anticipate the way our societies will develop but whatever the strategy is, our lifestyles are likely to be deeply transformed. Sport will not escape such challenges and sports institutions and public actors must prepare for this kind of societal change. It appears especially that sport can be part of the eco-friendly activities that do not contribute to the degradation of the planet.
- **Culture: sport for all**. What might be the consequences of increasing insecurity for entire layers of society? Will we see a reduction in supervised sport? What does it take to attract vulnerable social categories? Are we going to see a segmentation of practitioners? A real issue is to improve accessibility to sport for people who are deprived: the disabled, women, immigrants, seniors, young people from deprived areas, etc.

For sports to play these roles and serve the general interest it will be essential to consider the underlying principles of transparency, accountability, democracy and sustainability. These are the principles that must be implemented today to prepare sport for tomorrow.

### Main observations

Three observations summarize the results of this Futures Literacy exercise. First, it is important to consider how the characteristics of the participants affect the functioning of the laboratory. Second, there are important theoretical underpinnings to the process, and third, what makes this process an effective approach to understanding sports systems and policies.

### A diversity of sport cultures

The workshop's participants belonged to different cultures because of their nationality. This resulted in a difference of opinions relating to their values, administrative culture, and history. This diversity was particularly felt in the

difficulties experienced in reaching common views on sports. Two themes that illustrate these differences are:

- divisions regarding the merits and demerits of centralized decisions versus decentralized, and authoritarian versus democratic organization and processes; and
- divisions regarding the demarcation of amateurs as distinguished from professionals – is there a continuity or rupture between these two segments of sport? Which is more important?

The first theme specifically, provoked deep divisions among the participants. In particular, given the trends that they believe may threaten our societies in the future, it is essential to reflect on the defence of democracy. It is too tempting, in difficult times, to advocate the use of authoritarian methods.

*Relevance of results*

It is very difficult to summarize the wealth of all the discussions, but an important conclusion is that the students succeeded in identifying fundamental questions. All points of contention in sports today seem to have been addressed: the impact of new technologies, the social value of sport, the integrity of competition, and democratization between amateur and professional sports for all, etc.

These issues reflect the general theoretical analyses that were presented in the first two days of the course, when priority was given to consideration of analytical approaches to thinking about the future of sport. In particular, the manner in which regulation theory distinguishes long-run changes in historical context from specific adaptations, successful or not, of sports institutions. The potential for this disconnect between long-run historical changes and institutional adaptation helps to explain why today's systems enter crisis:

- historical long-term trends are known; they are related to demographics, technology, globalization and the environment;
- sporting institutions and systems are struggling to adapt given legacy characteristics such as bureaucratic structures, lack of transparency and democracy, problems with integrity, etc.

Emerging out of these discussions two points require further consideration. First, the issue of competition, the starting point for most abuses in sports through striving for victory and high performance at any cost. Participants concluded that it was difficult to find a balance between competition and respect for the fundamental values of sport.

Second was the question of the dominant economic system. What is capitalism in the future? Can it survive or is there a need to establish another, less destructive system for the planet? The group did not reach any conclusions on this subject.

*Efficiency of the method*

The exercise was completed to the satisfaction of all participants due to the very high efficiency of the method. If properly facilitated, it is possible to generate a very creative collective intelligence exercise. The experience for participants was evaluated as follows.

- They all played the game, even if they were surprised in the beginning;
- They all enjoyed the exercise, despite being a little unsettled sometimes as they were not familiar with projecting into the future or developing an analytical model;
- They would have preferred a less extensive theme than the future of sports;
- They greatly appreciated the opportunity to consider recommendations. They were however, somewhat frustrated by the lack of time to deepen this part of the process. Indeed, they expressed a desire to add a work session. The goal should have been to develop a charter for the future of sports by students in this second promotion of MESGO programme.

In conclusion, this prospective exercise is well suited to generating questions that will challenge the sports sector in coming years, and thus is useful for efforts to adapt sport institutions to changing historical circumstances.

## Case 7: All Africa Futures Forum: transforming Africa's futures

*Geci Karuri-Sebina and Riel Miller*[1]

A three-day 'collective intelligence knowledge laboratory' was convened in Johannesburg to address the question of how people think about Africa's future, and how this might relate to prospects for Africa's transformation. It was titled the 'All Africa Futures Forum' and themed 'Transforming Africa's Futures'. The convening built upon two prior international Futures Forums held in 2013 in Paris by the UNESCO Foresight Unit with linkages to some of the same African partners. The Forums were entitled: 'Imagining Africa's Future #1: Beyond Models of Catch-up and Convergence', and 'Imagining Africa's Future #2: Decolonizing African Futures'. This third forum was aimed specifically at bringing together a range of leading African futures thinkers and practitioners to explore developments in the Discipline of Anticipation and its implications for imagining African futures (SAMPNODE, 2014; UNESCO, 2014).

### Impetus for the Forum

A fundamental change is taking place in the way people look at the world around them as they strive to embrace complexity, foster their capacity to be free and appreciate the important strengths and weaknesses that make up the legacy

systems around them. Their complicated and sometimes painful histories can often incite impatience and urgency for change that can make quick-fixes and old means seem more responsive and promising. There is however, in many cases, the recognition that things may not be quite that simple. The desire to explore these changing ideas and ideals served as inspiration for the All Africa Futures Forum.

In the 1960s in Africa, like elsewhere, there was considerable enthusiasm for long-term thinking. Arguably, in the African case the enthusiasms of post-colonial construction and the rapid economic growth occurring in many parts of the world fuelled a particular set of expectations, many of which are today seen in a different light due to so much disappointment. This history ought to serve as a cautionary tale about the dangers of extrapolation for those who try to think about the future today. The previous Africa Future Forum on 'Decolonizing African Futures: Exploring and Realigning Alternative Systems' in Paris examined the narrowness of the approaches to the future that simply try to colonise tomorrow with today's ideas. The speakers and ensuing discussions at that forum in Paris made clear that efforts to think about the future of Africa must encompass a range of anticipatory systems and processes capable of not only cultivating the strength of local cultures that use the future in a diversity of different ways, but also moving beyond dominant ideas and models of industrial catch-up and convergence.

One of the keys to inviting a renewal and reinvention of the capacity to use the future to foster societal change rooted in African experiences and aspirations is getting beyond state-centric and elite-driven visions. Both elements – the need to diversify ways of using the future, and finding ways of fostering greater capacity – informed the design of the Johannesburg All Africa Futures Forum with a wide range of participants from different parts of Africa. The design of the All Africa Futures Forum started with an understanding that futures thinking is not new to the continent and that many of the efforts in the recent past were often modelled on dominant global approaches to thinking about the future. The designers of the Forum recognised that the challenge of getting beyond the conventional frameworks for imagining the future called for significant investment in developing African capabilities. Developing capabilities thus became the main aim of the Forum and the primary challenge for the design of the different activities at the Forum.

Using a co-creation approach to the design of the Forum the different organisers decided to privilege learning-by-doing as much as possible. This meant engaging Africans in processes where they could articulate and question a range of imaginary futures, including predictive, normative and novel. Forum participants would be invited to respect and find inspiration in their own history through carefully designed efforts to break out of the dominant anticipatory assumptions, like extrapolation-based conventional economic growth. The challenge was to find ways to take the knowledge creation at the Forum beyond simply invoking transformation to walking-the-talk. The Forum design took the need for creativity and inventing the attributes of transformation as the starting point. By design the Forum's learning-by-doing activities would engage

participants' capacities in ways that not only nourish the richness of imagined futures but also enable less instrumental and arrogant approaches to human agency in a complex emerging world.

The objectives of the Transforming Africa's Future Forum were to:

- explore innovative foresight concepts, tools and planning methods that are transforming Africa's future;
- strengthen the anticipatory capabilities of African policy makers, practitioners and planners;
- allow the private, public and civil society sector to input, debate and interrogate the thinking, application and potentials for partnerships; and
- enable the establishment of an African network of foresight practitioners.

The Forum was designed to foster the discussion of these issues from a variety of angles and perspectives. A process for negotiating shared meanings was devised as a way to invite collective intelligence knowledge creation through which participants could build up a common yet diversified understanding of anticipation.

### *Structure*

The Forum was convened through a multi-institutional arrangement that leveraged the significantly different perspectives on why and how to use the future to produce a creative design for the conference. Among the different perspectives were those who see:

- **futures study as a way to emancipate and empower Africa** – the concern from this perspective was about the agency of foresight and planning as a means to correct or reinvent Africa's future away from what were termed 'used' futures – imposed on the continent by colonial and neo-colonial elite influences;
- **the future as being a distraction from the now** – the argument being for realism and a recognition of the emergent, whereas a concern for the future might be perceived as a distancing abstraction;
- **the future itself as freedom** – a perspective about the future presenting a more open terrain not to be colonised by our assumptions and plans, but as evolving and empowering;
- and more.

As such, the programme for the Forum was structured so that participants could engage with different ways of 'using-the-future'. By working together participants could make explicit their varying initial positions on the future and how to transform Africa. This sharing and learning-by-doing together was deemed particularly important in light of the need to take advantage of diversity and willingness to learn as a way to spark the creative thinking about the urgent and decisive action to change Africa's trajectory. The Forum was crafted to take into

account the anxiety and hope, strong motivating pressures for all participants, without falling into the trap of believing that there is only one 'right or wrong way'. Rather the approach taken sought to contextualise, critique and advance the discipline through authentic learning, meant to move beyond being satisfied with just hearing many different voices.

The Forum structure was designed to take participants on a 'collective intelligence knowledge creation' style learning voyage over three days, with each day targeting a specific level of inter-action and reflection.

> **Day 1 Conceptualisation**: The focus of questioning on Day 1 was on how African futures are being conceptualised, by whom, for whom, with what outcomes, and in whose interests.
>
> **Day 2 Methodologies**: Day 2 was designed to take advantage of the fact that there are various methodologies and methods used to think about the future. A series of activities enabled participants to engage with these different perspectives and discuss the choices and underlying reasons for applying these methodologies to imagining Africa's future.
>
> **Day 3 Planning**: Given a high level of demand for agency and change on the continent, the discussions on Day 3 targeted the question of what 'owning' African futures could mean (if not equated to 'colonising'), and what the implications might be for rethinking planning and governance across sectors.

The second day (Methodologies) in particular was designed to recognise different ways of thinking about the future, with three parallel sessions for capacity building employing various methodological approaches applied to a thematic area. One of these sessions was a full-fledged simulation of a Futures Literacy Lab-Novelty (FLL-N) carefully co-designed with members of the Forum organising committee. This simulation was aimed at equipping participants with a basic understanding of anticipatory systems thinking and the action-learning collective intelligence knowledge creation design for developing Futures Literacy. The FLL-N involved about a third of the Forum participants, some 30 people, who self-selected to participate in the Lab. The plenary facilitator was from UNESCO, and the three break-out group facilitators were from East, West and South Africa. The diversity and preparation of the facilitators was important to the success of the process. It enabled a rich, inclusive, and creative learning process among the participants, who came from diverse backgrounds – international organisations, ministries, universities, private firms, non-governmental organisations, etc.

### Engagement

The Future Forum succeeded in its effort to enlarge the scope of participants' understanding of what it means to 'use-the-future' to include both closed and open anticipatory systems and processes. On Day 3, as the different threads were being drawn together, the conversation demonstrated a shared understanding of

the fundamental anticipatory systems that span everything from a tree that sheds its leaves to humans that deploy a wide spectrum of conscious approaches to imagining tomorrow. As participants exchanged views about how Africans might change the way they 'use-the-future' it became clear that conscious imagining of the future serves many distinct purposes, from shaping perceptions and priorities in the present to creating the shared visions upon which hope depends. Participants grasped the importance of 'using-the-future' in a more rigorous, futures literate fashion, and the critical role of collective intelligence processes – able to draw on specific, locally rooted experiences and points-of-view.

Many of the discussions and speakers made reference to the conventional ways of depicting Africa's tremendous potential and the commonly expressed expectations that Africa would grow rapidly over the coming decades, follow- ing in the footsteps of the Asian Tigers, China and even India. There was also an acute awareness of the challenges faced by the continent, from the difficulties in the food and agriculture sector and extreme poverty (even in the most success- ful countries) to a lack of resilience of the social and governance fabric when hit by powerful disruptive forces like violence and epidemics. The scourge of human insecurity is still too important in rural life, often pushing people to live in very difficult conditions in the shantytowns within cities. Overall participants expressed frustration with the narrow models of the future being used to under- stand the Africa of today and tomorrow. There was a desire to find new ways of using-the-future and to imagine the future in new ways.

Important references were made to futures past, or the way the future of Africa had been imagined in the past. For instance, at the Berlin Conference in 1884 (Gates and Appiah, 2010), Africa was referred to as a 'geological scandal' that could not be left unattended, assuming that Africa was simply a place to be mined and exploited for its natural resources. Europeans imagined futures in which the existing powers of the time remain in hegemonic roles. Given these futures the tasks were for soldiers, merchants and missionaries to conquer the continent. The futures imagined by others and different ways of imagining the future were not granted much credence or authority, even if many other views and ways of think- ing existed. After World War II, decolonisation began and a range of different anticipatory systems also started to develop, based largely on the then dominant planning paradigms of the Cold War era, from Soviet and Maoist five-year plans to World Bank and Manhattan Project-style critical path planning. However, as is evident from the images of the future and the methods that are still being used today, it is not easy to replace the dominant paradigms of industrialisation from either the East or the West.

### Results

The Forum produced a number of key observations. For one, it was argued that African universities and think tanks potentially have a significant role to play in the development and diffusion of different approaches to anticipation. As some participants pointed out however, it is important to bear in mind that universities

(in Africa or not) are largely dominated by ways of using the future that fail to encompass a diversity of anticipatory systems and processes. Additionally, much academic research is confined to the grand narratives of industrial societies. Diversifying thinking about the future should therefore not be restricted to universities and government departments steeped in academic orthodoxy. A broader, more bottom-up and heterodox approach was seen as necessary, one that touches villages and enterprises, and creates a new more futures literate context for researchers and policy makers when they 'use-the-future'.

A strong consensus emerged that the design of such capacity building investments needs to take into account the specifics and immense diversity of African culture and history of 'using-the-future'. Connecting innovative approaches to imagining the future to people's local traditions is fundamental for realising the potential of what is too often an undervalued resource and an essential ingredient to understanding the past, present and future in deep ways. Cultivating African Futures Literacy was seen as one mechanism for fostering identity precisely because it depends on a meaningful consciousness of heritage. This was considered of particular importance in light of how today's growing connectivity and interdependency can offer an enriched sense of identity, but also the disempowerment and insufficiency of links that do not provide enough meaning or autonomy.

Participants in the Forum noted that many young people are yearning to be creative and may feel less encumbered by existing ways of perceiving the world, but they can also demonstrate an ignorance of the origins and nature of the stories they tell. Here Africa's strong traditions of storytelling and artistic expression offer an important resource for generating the creativity and innovation needed to combine endogenous and global dialogue on using the future in new ways.

One of the strongest messages to emerge was that Africa is rich with change-makers. More and more people in Africa are creating change, taking the initiative in their communities, acting to identify and take advantage of the opportunities around them. In theory and practice, the African narrative is being transformed from a conventional story of growth through industrialisation and catch-up to a story of local economic and cultural empowerment. Participants in the Future Forum refused to be simply 'Afro-pessimist' or 'Afro-optimist', asking instead: "What does it mean to be African in the 21st century?"

The sense of urgency expressed by the scholars, practitioners and activists in the Forum was tempered with a cautionary call to calm down and be more considered in our eagerness and boldness to rush about trying to create a different future. One speaker reminded participants of an old African proverb: "The times are urgent; it is time to slow down".

### Lessons and ways forward

The All Africa Futures Forum provided an important opportunity to consolidate some key insights arising from the Africa Future Forum series and pointed to a number of directions for next steps.

The overarching conclusion was two-fold: first, that more investment needs to be made in developing the capacity in Africa to use the future in ways that suit the needs of the continent; and second, that the way to do this is by conducting learning-by-doing processes that build capacity involving diverse populations. In effect, the main idea was that more Africa Future Forums should be organised, with a strong emphasis on action learning collective intelligence methodologies that 'use-the-future' to address issues of critical concern at a local level while generating rigorous research and actionable agendas.

The Forum's discussions provide the following insights for efforts to design next steps.

- When tackling the challenge of cultivating and connecting people's capacity to 'use-the-future' it is important to take into account that anticipation is a universal attribute of our universe and is embedded in all systems and processes in one way or another. Being aware that conscious human anticipation is just one sub-set of anticipatory systems and processes connects directly to many African perspectives. Renewal and innovation in how people 'use-the-future' could play a central role in changing what we see and do. Working throughout Africa to gain a better understanding of how to use the future has the potential to improve people's capacity to understand complex emergent reality and make choices with respect to that reality.
- The future cannot be a source of freedom without a critique of dominant narratives; the following quote by Gaston Berger was mentioned in this regard: "The purpose of looking at the future is to disturb the present" (Berger, 1958).
- Current approaches to using the future are too narrow, excluding both alternative imaginable futures and alternative ways of using the future. These approaches tend to treat uncertainty as the enemy, even though it is not only a permanent and unavoidable attribute of reality, but also the source of the novelty that underpins the capacity to be free.
- Decision-makers and planners in particular need to become more able to understand and use a wide range of anticipatory systems and processes. Being able to think in multiple temporal horizons and invent alternative scenarios is a minimum requirement. Being able to integrate complexity is equally critical, as well as recognising that the capacity to sense and make-sense of novelty calls for being able to 'use-the-future' in different ways.
- Scenarios or stories of imaginary futures should be understood as heuristic devices to help in policy dialogue and decision-making in both open and closed frameworks. At times, a scenario gets locked in, the assumptions underlying it accepted, at least for the time being, and then it serves as a target-based framework for prediction, choice, and risk assessment. But scenarios can also be open and disposable; sources of continuously changing non-predictive, non-normative descriptions of the imaginary future that assist in re-perceiving the present and making it easier to integrate unknown unknowns. This particular point raises a challenge to the orthodox

approaches of many decision-makers in most of the dominant institutions in the contemporary African context, creating an opportunity to take some of the approaches used by the Africa Future Forum in Johannesburg as a way to begin diversifying 'use-of-the-future' in Africa.

• Our capacity to imagine meaningful futures is limited, even if the future is fundamentally open and infinite in its potential variations. Yet, it is important to push the envelope of our thinking and find creative and disruptive models for imagining tomorrow that go beyond trend extrapolations and dominant paradigms.

The Forum offered a strong message: that getting better at 'using-the-future' can help to create synergies among actors from different backgrounds, and to capture emergence in ways that take advantage of novelty. The Forum showed that open and pluralist discussions that 'use-the-future' differently can serve to engage traditional and 'other' points-of-view in rethinking governance systems. Nurturing Futures Literacy renews and inspires the sources of hope within and across diverse communities. Such hope is essential for empowering people to find common interests and shared investments, in other words fostering the capacity for people to build their own meaningful and sustainable communities, which is exactly the aspiration for Africa's future today.

### Note

1  With thanks to Jacques Plouin for his contributions to this text.

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## Case 8: Overcoming fragmentation in Ecuador: the *Manabí Será* initiative

*Orazio Bellettini Cedeño and Adriana Arellano*

### Background

Grupo FARO is an Ecuadorian, non-partisan, independent, plural, and secular think-and-do tank. The overarching aim of Grupo FARO is to advance the development of Ecuador by addressing the problems of geographic, social, political

and economic fragmentation. Grupo FARO works to create a shared understanding of the country's challenges. By strengthening the capacity of all segments of Ecuadorian society to use the future to diagnose problems, hopes and policies, Grupo FARO is cultivating a broader base for decision-making processes and enlarging people's understanding of different development models as well as the generation of shared responsibilities to face the country´s challenges.

From its inception, Grupo FARO has sought to use collective intelligence methods to tackle directly social and political fragmentation that can inhibit innovation and change. Building a shared base for seeing and doing for individuals, organizations and communities is what fosters both the pluralism of actors and systems of mutual open accountability that are crucial for Ecuador's development.

In 2011, Grupo FARO organized *Ecuador Será*, (Ecuador will be), an initiative focused on prospective research aimed at identifying trends and strategies to transform Ecuador into a knowledge society in which creativity and innovation are the drivers of development. In 2012, Grupo FARO explored the topic of sustainability and the ways in which Ecuador could become a model of effective natural resource management. The initiative had the support of five allied organizations and ten financial supporters, reflecting the capacity of Grupo FARO's initiatives dealing with the future to promote multi-sectoral collaboration.

Despite its capacity to promote a dialogue among different sectors, *Ecuador Será* followed a top-down process meant to generate images of likely or probable futures. In addition, the event was not designed to generate action plans that connect visions of the future to concrete steps to change the present. From this perspective, there were several aspects of the process that Grupo FARO wanted to change when presented with the opportunity to experiment with the design principles being tested by UNESCO to promote an action-learning approach.

Grupo FARO decided to take the initiative to the local level and chose Manabí, a northern province on the coast of Ecuador, to promote a process that enabled citizens to create a shared vision of the future for this province. The initiative was called *Manabí Será* (Manabí will be) and its methodological design as a Futures Literacy Lab (FLL) was carried out at the UNESCO Foresight Unit in Paris with participation from professionals with a diversity of perspectives to assure a holistic approach.

The *Manabí Será* case study gathered evidence of the application of FLL design principles as a way of exploring anticipatory systems and processes in Manabí, cultivating Futures Literacy (FL) in Ecuador, and advancing citizen engagement with the challenges facing their communities.

## Manabí Será *(Manabí will be): using the future to change the present at the local level*

The province of Manabí is located in the northern part of the Ecuadorean coast. Manabí's economy is based heavily on natural resources and agriculture products that include cacao, bananas, cotton and seafood. Its cuisine is recognized as the most diverse and rich in Ecuador. In addition, its industrial sector is based on tuna, high quality tobacco, and *agua ardiente* (Spanish whisky) production.

Local products include Montecristi hats (also known as Panama hats) and furniture. Finally, tourism, as an economic resource for the Manabí province, has been growing in recent years since there are natural, cultural and landscape attractions that make it a favourite place for tourists.

Manabí's population is 1.3 million inhabitants, which makes it the third most populated Ecuadorian province. Manabí, with 22 counties (cantones) is the only province in Ecuador that has several important cities, which creates the possibility of a more diversified development model and multi-polar governance. Even though there is a shared pride of being Manabita, because different cantones have different historical roots and their own productive characteristics, it has been difficult to identify a shared development project that motivates Manabí's population and institutions to work for a common goal.

Grupo FARO believed that a conversation about the future could create a space to build the common ground that enables different sectors of society to meet and find spaces for collaboration and a more resilient development model for the province. With that aim, Grupo FARO implemented the *Manabí Será* initiative in alliance with UNESCO, four universities, civil society organizations and private companies.

### Design specifics

There were several design differences that distinguish the *Ecuador Será* process from *Manabí Será*.

#### Selection principles

Unlike *Ecuador Será*, participants in *Manabí Será* were not selected primarily on the basis of being experts in a particular field. The selection process was designed to incorporate mechanisms to promote citizen participation and a broader cross-section of stakeholders. This choice was consistent with two FLL design principles: (1) that participants were selected on the basis of their tacit as well as explicit knowledge about the subject so that the collective intelligence process can tap into a wide range of information, and (2) the participants needed to both care about the subject and have roughly equal knowledge of the subject as a whole, even if each participant has their own specific experience.

#### Anticipatory systems principles

The design of the *Manabí Será* process stressed the importance of developing a greater awareness of anticipatory assumptions underlying people's imaginary futures and starting the learning process related to Futures Literacy. Unlike *Ecuador Será*, which focused on generating scenarios based on probable futures, the *Manabí Será* initiative used the discussion of probable futures to build an awareness of the importance of the models used to describe imaginary futures. Grupo FARO, working with UNESCO and the FLL community of practice, was able to design and implement *Manabí Será* in ways that targeted the use of the future for a range of objectives, in particular as a way to change the province's present.

### FLL objectives

The *Manabí Será* initiative had the following objectives:

- promoting citizen engagement and knowledge sharing by thinking together about the future of Manabí;
- bringing together diverse actors to build a shared vision for the future of the province;
- contributing to the development of long-term policies for provincial development; and
- promoting futures literacy among citizens and key stakeholders in Manabí, as the capacity to understand and deploy anticipatory systems and processes for different aims and on the basis of appropriate tools.

### FLL process

The *Manabí Será* initiative was implemented in three phases: Phase 1, in which the initiative was presented to citizens in public forums; Phase 2 in which Futures Laboratories gathered key actors in the province and produced three visions of future for the province; and Phase 3, when a shared vision was selected from the three options and then presented to authorities and citizens at a public event. This last phase continues as actors in the province are following through with discussions on how each sector can contribute to Manabí's future and operationalize its shared vision.

#### Phase 1: Collecting individual visions of the future

The first phase concentrated on disseminating the objectives of *Manabí Será*, raising awareness among citizens of the different uses of the future as well as collecting individual visions of the province's future.

To achieve these goals we conducted these efforts in citizen forums held in universities around the province. To accomplish this goal, we developed compelling and powerful narratives, hoping to break with participants' traditional ways of thinking about the future.

For this purpose, the following materials were developed.

- **A visual metaphor that clearly communicated the existence of plural futures**. The metaphor was made up of two images, an initial image of a room that looked outside, in which people could see through the window frame (the framing in our present) and a road leading away outside of the room (the future). The second image presented the landscape as if the room's wall and window had been torn apart, and now with a full view people could see that outside of the room there where two roads leading away (futures) and not only one road that was visible initially through the window. Additional materials are available at the *Manabí Será* website (Grupo FARO, 2017).

- **A case study of the distortion of future thinking presented in the paper** End of History Illusion (Quoidbach, Gilbert and Wilson, 2013). We used questions posed by the researchers which invited people to think how much they had changed in terms of friends, music tastes, interests, etc. in the past 20 years and then to imagine how much they would change in the future. This exercise helped us make the point of how easy it is for humans to reconstruct the past while it is challenging to construct futures and imagine scenarios of change.
- **An example of another territory in Latin America**, **the Antioquia Department in Colombia**. Antioquia suffered greatly from violence generated by the Medellín Cartel in the 1990s. People were filled with fear and lost their ability to dream about the future. Nonetheless, a group of leaders decided something needed to change so they worked to transform fear into hope by investing in education. They developed the vision *Antioquia la más educada*. With this vision uniting and inspiring the Department, people from all sectors of society worked together to identify potential projects that used science and technology to enable innovation throughout Antioquia. This enabled us to share with people from Manabí how a shared vision enabled different sectors to collaborate to turn the vision into a reality.

One of the challenges for the Manabí Será project was to prepare participants prior to the FLL face-to-face events to help them to embrace a more open and pluralistic approach to using the future. To set the scene, an on-line engagement process designed to harvest people's existing visions of Manabí's future was initiated. The intention was to offer an easy and enticing way for people to become sensitive to the fact that they are obliged to use their imaginations and that their expectations and vocabulary for using the future are caught up with probability. Grupo FARO worked closely with UNESCO's Futures Literacy team to design and implement a survey approach to revealing how the future is used (awareness, discovery and choice). A simple format was made available through the Manabí Será website (Grupo FARO, 2017) enabling online participation. Participants were asked the following questions.

1  What is good about being *Manabita*? This question aimed at connecting people with their emotions towards Manabí.
2  How does it look when you imagine Manabí in 2033? What makes it unique? These questions aimed at challenging people to use their imagination and propose a vision that goes beyond a projection of the present.
3  Provide a detailed description of Manabí in 2033. Here we hoped to invite participants to connect deeply with their imagined vision.
4  Complete the phrase (with a maximum of three words): Manabí will be . . . This final question aimed at condensing people's imagined futures of Manabí in a powerful vision statement, revealing the metaphors and myths that underpin these futures.

The first phase gathered more than 500 visions of citizens and, in an effort to engage and promote participation by young people, we included the presentation of children's visions for Manabí in pictures through collaborative work with local schools. This phase was useful to understand the difficulties that arise when citizens start thinking about the future. Although we sought to stimulate citizens' futures literacy, it was clear that this process could not get beyond the basic level of awareness (Miller, 2007). Most visions of the future proposed by citizens were based on a continuation of the past and present into the future. They focused on what they knew in terms of already prominent aspects of the province: tourism, nature, and its gastronomy.

As expected, when we designed this first phase, the development of futures literacy and of more imaginative futures was relatively limited. However, as hoped, this phase did bring a greater awareness of the importance of thinking about the future of the province and raised interest and support for the project among diverse actors. In fact, this phase generated financial support from private sector actors in the province.

### Phase 2: Implementing three FLLs

These action-learning workshops followed the design principles for collective intelligence knowledge creation that use the future as developed by UNESCO as part of scoping anticipatory systems around the world. The FLLs were conducted in universities in Calceta, Bahía de Caráquez and Manta on 28, 29 and 30 April 2014. One hundred stakeholders from different sectors and counties in the province including political representatives, professors and high-level directors from local universities, journalists and media representatives, civil social organization members and private business entrepreneurs participated in the laboratories. Workshops were conducted by Lydia Garrido Luzardo, Orazio Bellettini Cedeño and Adriana Arellano.

The aim of the workshops was to guide participants through a learning-by-doing process that challenged the implicit and explicit anticipatory assumptions they use to think about the future. This, in turn, was meant to advance the participants' awareness of why and how they use the future, introducing them to thinking about the future in different ways, and generating inputs into the development of a shared vision of the future of Manabí. The goal of the exercise was not building a utopian vision of the future or coming up with predictions; our goal was to identify and question current assumptions about the future to be able to expand the understanding of the present and pose new questions.

In this phase, we attempted to spark some 'rigorous imagining' by inviting participants to leave behind probable and desirable futures in order to experiment with a discontinuous framework. Consistent with the FLL design principles we did not suggest that these alternative futures were likely to happen or were even desirable; the point of the exercise was to experience the power of anticipatory

assumptions in shaping the futures we imagine and the potential to address the creative challenge of inventing paradigmatically different futures.

This was the steep part of the learning curve – the reframing phase. For this phase we used the framework shift to a Natural Knowledge Society (Bound, 2008).

### Phase 3: Selecting a shared vision of the province

During this phase, we focused on questions that arose from rethinking the visions participants shared in Phase 1. Participants started to explore the implications for the present of alternative and even discontinuous scenarios of the future. The innovative ideas that emerged motivated the participants to realize the array and diversity of possibilities in the present. Some of the ideas discussed were:

• promoting Manabí as a territory of innovation;
• developing a set of interconnected ecological cities;
• Manabí as a province that promotes and uses renewable energy;
• consolidating Manabí as a province that pursues sustainable development;
• Manabí, a land that rescues the best of its traditions;
• a territory with education according to its reality, needs and potentialities;
• Manabí, a province working together; and
• a land whose cuisine is appreciated globally.

From the inputs that emerged during the FLLs and that were collected in the initial phase of Manabí Será, Grupo FARO developed three new visions for the province of Manabí.

#### MANABÍ, A LAND COMMITTED TO PROSPERITY THROUGH DIVERSITY

One of the greatest strengths of Manabí is that it is the only province in Ecuador that has several important cities and therefore the power, wealth and capabilities are spread over several poles of development. The challenge is to find a shared vision that take advantage of the different cultures, ecosystems and traditions that coexist in Manabí. The vision: a land committed to prosperity through diversity means that the citizens of Manabí are unified by a passion and commitment to achieving the prosperity of its people and to sharing it with those who find in Manabí a land of opportunity.

#### MANABÍ, INNOVATION INSPIRED BY IDENTITY

*Manabitas* are proud of their traditions, their history and their customs. These are their greatest strengths but also pose the challenge of getting trapped in past glories. The challenge is to use the past as a source of innovation and progress. The creativity of Manabí's pre-Columbian culture can be found in the objects that allowed them to connect with the spiritual world and as the cradle

of Ecuador's liberal revolution that contributed to the construction of a modern society. Manabí's identity has in fact been built around the concept of change and renewal. This vision invites *Manabitas* to recognize that the province's identity is deeply rooted in championing transformation and innovation.

MANABÍ, INNOVATION INSPIRED BY NATURE

Places that combine abundant natural resources with low levels of industrialization are often associated with socio-economic under-development. Sometimes it is even argued that knowledge can only be generated in the industrialized societies. At the same time, there is a growing recognition of the importance of developing knowledge and technologies that allow for sustainable and innovative post-industrial ways of managing energy, food, water and housing. The abundance and diversity of resources in Manabí and its pride for its gastronomy, its fields and beaches, make it fertile grounds for a different development paradigm. For Manabí, the challenge is to learn how to use existing resources wisely and to promote the generation of new knowledge that allows the province to take advantage of its history. In this vision, *Manabitas* add knowledge to the province's richness, focusing on the talent of the community, the commitment of politicians and the entrepreneurial energy of its people.

Finally, the three visions outlined above were submitted to a vote by citizens of Manabí. With the support of 125 university students, votes were collected in public places in seven districts of the province. We received voting results from approximately 2,700 citizens. The results were unveiled at a concluding event in Portoviejo, the capital of the province. The vision both created and selected by the people of Manabí to inspire the province's present was: 'Manabí, innovation inspired by identity'. The design of this closing event of the *Manabí Será* project included a collective art-making process aimed at reinforcing how collaboration in the elaboration of a shared vision inspires collective action in the present.

### Preliminary conclusions

The *Manabí Será* initiative was born from *Ecuador Será,* an initiative focused on the views of academic experts that attempted to predict the future. However, as we connected with the territory of Manabí, its challenges and opportunities, we grappled with the question: should the future or futures be imagined top-down or bottom-up, in predictive mode or in an exploratory creative framework? Our experience in *Manabí Será* offers a convincing case that richer images of the future can be developed if different aims and methods for using the future are combined. The design principles of Futures Literacy enabled us to conceive and implement a process that allowed stakeholders to enlarge their images of the future beyond expected futures. Being able to propose visions not constrained by efforts to ensure high levels of probability created space for conversations that made explicit and invented futures and provided a different way of looking at the present. Furthermore, tapping directly into people's visions in Phase 1 of the *Manabí*

*Será* project and then soliciting their judgements in Phase 3 provided important local context for the visions. The outcomes were both more multi-dimensional and legitimate in terms of local knowledge and preferences.

As with any process of this kind there were several difficulties, particularly with respect to specifying and agreeing on visions for Manabí. The challenges included:

- framing the project with the title Manabí *will be. . .* (*Manabí Será. . .*) suggested to some people that Manabí *was not*, in the present; this challenged some sectors and actors to recognize and assume limitations in the present that were not always comfortable or accepted;
- capturing the diversity of interests and visions in a fragmented province presented a challenge; the FLL allowed us to sit at the same table as leaders from different sectors and cantones from Manabí and enabled them to express the diversity of visions of the future existing in the province, while recognizing common challenges and opportunities that can create a vision shared for all the people of Manabí; and
- developing a dynamic vision that incorporates continuous change and evolution was a challenge since people often fixated on static images.

In the end, inputs provided by citizens in Phase 1 and key stakeholders' ideas provided in Phase 3 gave the team the elements necessary to develop visions for the future of Manabí that incorporated diversity and permanent evolution. Moreover, the vision 'Manabí, innovation inspired by identity', has proven to be a compelling vision that is engaging different sectors and promoting concrete activities and initiatives for change.

### Next steps: using Manabí's vision of the future to change the present

Since the final event of the *Manabí Será* initiative, Grupo FARO has continued efforts to promote the dialogue about ways in which each sector can contribute to implement the shared vision, in which innovation is born from the territory's identity. At present, and after a series of editorials in the local newspaper, interest has risen again and new ideas for next steps are being discussed and implemented and local authorities in Portoviejo, the capital of the province, are organizing a conference to discuss ways to promote innovation in the territory.

On 16 April 2016, an earthquake of 7.8 Mw magnitude hit Manabí. Almost 700 people died and more than 80,000 people were displaced. The Ecuadorean government has estimated infrastructure damage at USD 4,000 million, and first evaluations reveal that at least USD 3,500 million will be required to finish the first reconstruction phase. This disaster also affected the main productive sectors of Manabí, such as tourism, agriculture and aquaculture.

Despite these many challenges, tragedy can become an opportunity for the people of Manabí. This difficult moment may be a chance for *Manabitas* to collaborate for a common project that promotes a new mindset with refreshed ethics

for local relations and strong institutions that encourage learning, creativity and innovation. This will allow not only infrastructure reconstruction, but also social fabric renovation and the creation of new opportunities. A group of young leaders from the province is using the vision developed in the *Manabí Será* initiative to promote innovation and opportunities for people and communities affected by the earthquake while rescuing local traditions through research, capacity development and seed funding.

The plan is to continue implementing actions that enable political, social and business leaders as well as ordinary citizens in Manabí to use what was generated at the FLLs to understand the present, creating new opportunities for people to act in ways that are consistent with their values and hopes. The use of the future in Manabí is mobilizing people in this province and inspiring the country to overcome fragmentation and work together. The challenge is to continuously re-imagine the future, not as a place we are going to, but one we are creating today.

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## Case 9: Young citizens for a sustainable planet

*Matthew Giuseppe Marasco, Jennifer Rudkin, Geci Karuri-Sebina and a conclusion by Bayo Akomolafe*

### Introduction

Every two years since 1999 young people from around the world have gathered together at the UNESCO Youth Forum to share their hopes and fears, aspirations and advice for a better tomorrow. The Forum generates recommendations that are transmitted to UNESCO's highest decision-making body, the General Conference, which also meets every two years. The stated ambition of the UNESCO Youth Forum is to contribute in a constructive and significant way to the deliberations and decisions of the General Conference and UNESCO's mission in general. Pursuit of this goal plays a central role in the design of the Youth Forum, influencing all aspects, from who is invited to attend and the topics discussed to the structure of the agenda and the forms the messages take. Explicit factors, like the issues that have already been chosen as central for the General Conference and official policies like making 'youth' a priority, shape the design of each Forum.

Implicit factors also play a role, such as the assumption that the young people attending the Forum will conform to the agendas already set out by the organisers of the Forum, the General Conference and, often, the governments in power in the young person's home country. The inherent virtues of participation, democratic procedures and belonging to a particular age group form unquestioned, largely tacit foundations for everyone involved.

The 9th UNESCO Youth Forum (UNESCO, 2015a) was held in Paris, from 26 to 28 October 2015. The challenges of climate change and the post-2015 Sustainable Development Agenda were identified as the most salient topics for this version of the Youth Forum, as it was scheduled to take place one month after the United Nations Summit convened in New York to deliberate and adopt the post-2015 Development Agenda and one month before the United Nations Climate Change Conference (COP 21) in Paris. Subsequently the results of the deliberations at the 9th UNESCO Youth Forum were presented to the UNESCO General Conference (COP21), the Conference of Youth 2015 (COY 11), and the Commonwealth Youth Forum 2015 (The Commonwealth, 2015). At all these events the recommendations from the 9th Youth Forum were received and acknowledged. What is less clear is the extent to which the 9th Youth Forum recommendations played a role in these global political events, particularly in light of the fact that in most cases the agendas and resolutions had already been negotiated well in advance.

Many other questions about the content and effectiveness of UNESCO's Youth Forums preceded the design and implementation of the 9th version. Although this case study is not the place to examine the political rationales and effectiveness of this type of 20th-century institution, it is worth noting that part of the motivation to undertake a more innovative approach for the 9th Youth Forum was a general sense that the historical context had changed. In particular, there were concerns about the selection processes that determined who participated in the Forum and how the basic impact of the Forum on the world was conceived. To make a long story short, the challenge – at least for some of the designers and organisers of the Forum – was how to get beyond the conventional, conformist and largely tokenistic content of the topics, agenda, processes and outcomes, while at the same time safeguarding the obviously valuable experiential aspects of an event that brings together hundreds of strangers from all around the world to deliberate and learn. No one pretended that there was a magic solution or that there was some way to cut through the inertia of an international system, gummed up by the parochialism and tensions of national perspectives, to liberate the creativity and power of any group of people, let alone inexperienced young people largely selected or self-selected on the basis of their conformism and enthusiasm.

Given these factors, and many more, a decision was made to experiment with an innovative approach meant to leverage the learning potential of this type of global gathering and seek new ways for their deliberations and exuberance to have an impact on the world around them. Based on UNESCO's in-house capabilities to design Futures Literacy Laboratories (FLL) and the ongoing UNESCO Futures Literacy Project, there was an agreement to collaborate across two units of the

Social and Human Sciences Sector (SHS) to design and implement a FLL-Novelty exercise as a part of the 9th UNESCO Youth Forum. The FLL-N segment of the Forum agenda was tailored to introduce and engage some 500 young people from 159 Member States with an action-learning collective intelligence knowledge creation process that used the future to explore novelty. For one and a half days out of the Forum's three-day running time these young people plunged into a specially designed FLL-N, building on the standard design discussed in Chapter 4. This 9th Youth Forum FLL-N is by far the largest single experiment so far and called for extensive preparation, adaptation and improvisation.

*Design considerations*

In light of the very large scale of the event a series of preparatory initiatives were undertaken in order to respect the co-creation criteria for FLL-N and ensure sufficient real-time expertise to accompany the expected and desired improvisation as the process unfolded. A global team of experienced and futures literate facilitators was assembled. They collaborated in the design of the overall FLL-N and contributed to the development of an innovative social-networking process that used a cutting-edge internet platform, Timescape (2015). This social-networking tool was deployed a few weeks before the event and served to 'prime-the-pump' for the FLL-N processes and heuristics.

A couple of days prior to the Forum the international group of experienced FL designers and facilitators convened in Paris to rehearse each step of the FLL-N and prepare a training process to be run in advance for the eight plenary peer-facilitators and the 60 break-out group peer-facilitators. The eight plenary peer-facilitators were selected from participants in the Youth Forum who had already gained some initial experience with FL. The break-out group peer-facilitators were invited to volunteer through an on-line process using the social-networking tools set up for the Forum. The plenary facilitators were given an in-depth, experiential initiation into FL, through a compressed FLL-N process that tested the design for the Youth Forum. The volunteer peer-facilitator also got a chance to experience some FL-related action-learning and to work their way through the detailed scripts prepared to assist them in their task of animating break-out groups of approximately six to eight participants. In addition, some of the peer-facilitators volunteered to take on the role of rapporteurs with the responsibility of reporting the group discussions to the sub-plenary summary sessions and of sub-plenary sessions to the full plenary. The break-out groups were designated in advance, on the basis of the full participants list, and were composed so as to ensure the gender and geographic diversity that encourages rich and creative conversations.

As per the standard FLL-N design, participants were invited to move through the three action-learning phases, called here: Reveal, Reframe and Rethink. Quite a few participants had been primed for Phase 1 through their involvement with the Timescape platform that had invited them to 'take a voyage into the future' by submitting contributions on-line. This consisted of a series of requests that participants capture images of sustainability in 2040 within their own community

and share them with the other participants across the world by publishing them on the interactive Timescape map. This step sensitised participants to their anticipatory assumptions and provided raw material for Phase 1 discussions of expectations and hopes. The general use of social networking platforms also established preliminary contact between organisers and participants as well as across the far-flung participants themselves. Timescape was also used throughout the workshop. Six volunteer 'Timescapers', trained prior to the start of the FLL-N, updated the input of all 60-plus working groups to the Timescape maps as each step in the process unfolded.

The three-day 9th UNESCO Youth Forum also included several traditional passive plenary sessions, networking opportunities, capacity building workshops and other extra-curricular activities over the course of the event. This case study focuses predominantly on Day One of the Youth Forum and provides some highlights of the FLL-N process, particularly the first two phases. Phase 1, Reveal, asked young people to explore their expectations and hopes for 2040. Phase 2, Reframe, focused on breaking away from the anticipatory assumptions of Phase 1. This second phase encouraged participants to look beyond the parameters set by the narrow confines of possible futures, inviting them to discover and invent their own imaginary worlds in the form of a temporary sculpture, crafted from 'left-over' office supplies. The following account provides a few selected windows on what happened during the FLL-N process.

### Glimpses of what happened during the 9th UNESCO Youth Forum FLL-N

The Forum's catchphrase was 'Young Global Citizens for a Sustainable Planet'. While facilitators prompted participants to explore this theme through the lens of technology, culture, ecology and economics, they also encouraged them to consider how sustainability might be looked at through personal, inter-personal and emotional lenses. This allowed the participants to not only place themselves as a protagonist in the future, but also provided the opportunity to create a narrative about their presence in 2040. The overall group of some 500 was divided into six sub-plenaries covering the following themes: Rights, Freedoms and Responsibilities; Diversity and Identity; Learning, Personal Development and Sustainability; Knowledge, Awareness and Media; Local Practices, Biodiversity and Prevention of Natural Disasters; and Capture the Energy of Youth. These six topics were loosely adapted from a pre-event effort to discover the different interests of participants. Such analytically unstructured and semantically ambiguous data can still serve to identify key words and trendy slogans that can catalyse a Phase 1-type CIKC exercise that shift participants' anticipatory assumptions from tacit to explicit.

Concurrent conversations involving 500 young people across some 60 breakout groups created an opportunity to generate vast amounts of information very quickly. The peer-facilitators encouraged a focused yet agile exchange within their group in order to ensure that they could cover the different phases of the process

within the time constraints of the Forum. There were no evident gender barriers or language limitations with multiple groups speaking in English or French. The summary offered below is only impressionistic, culled from one or two specific break-out group discussions and a few snippets from the sub-theme and then overall plenary sessions; a more detailed program is available (UNESCO, 2015b).

*Phase 1: Reveal (hopes and expectations)*

The following questions about the world in 2040 were asked to prompt group discussion:

- What does work look like?
- What is it like for wildlife and nature?
- What is the weather generally like?
- What is new and hopeful in your community?
- What is new and worrying in your community?

Participants were reminded that a prediction was about something likely to happen. In other words, something you would bet money on. This task initiated passionate conversations that examined contemporary moral, social and political issues. Exploring the imaginary futures of people living in Sub-Saharan Africa or China may look completely different from those in Sweden or Australia. Discussions revolved around issues like future voting rights – what age was appropriate or whether voting would be allowed at all. For some participants, the nature of democracy in the future was not self-evident, so they had difficulty choosing one likely future. Others were unsure about the future of education and unwilling to predict the price one might have to pay for tertiary qualifications. Some viewed the prospects for gender equality optimistically, contending that today's pay gap would become obsolete. They also projected that more women will lead countries and occupy a higher proportion of executive roles and girls from developing countries will have equal access to education in 2040.

Facilitators underscored that there are no right or wrong answers, but that participants should try to focus on what they really think is probable. Not all predicted futures were optimistic, some participants believed that in 2040 the world would be facing serious scarcity. Other participants argued for a more positive future in which today's efforts to tackle climate change, gender equality and the political turmoil will have paid off. As is typical of Phase 1, the discussion centred on today's prevalent problems, even if some of the expectations simply flipped them on their head. Of course, this primary phase did not call for innovation, but was rather created for participants to appreciate the way in which they use the future. The next task explored an alternative technique that provided participants with an opportunity to wear their heart on their sleeve by imagining their preferred future. For some participants, this was an extension of their predicted futures, simply projecting the achievement of the United Nation's Sustainable Development Goals. Participants expressed the hope for a future without hunger and poverty, a world

without borders and with open access education for all. Other participants seized the opportunity to create much more distinctive or eccentric ideas. For instance, the following idea was shared in one of the break-out groups:

> *In 2040, armed drones will perpetually orbit the globe with cognitive capabilities of identifying and eradicating terrorists.*

This hope, that there will be a 'moral philosopher in the sky', was contentious but paved the way for others to be a bit more creative. A number of participants thought that this image of the future also has something in common with visions of open access education and an end to poverty. Still the visions of 2040 continued to resemble the problems today. For instance, troubles such as the threat of terrorism loomed large, even if it was hoped that in the future development of aviation technology and cognitive robotics would solve the problem. Some participants had difficulty imagining that today's dilemmas would look much different in 25 years. Still, in most groups the effort to grapple with 'utopian' narratives provided participants with an opportunity to realise that imagining the future, even hopeful ones, required making some pretty important assumptions. This in turn provoked a few participants to resist the game, arguing that imagining hoped-for futures was delusional or too luxurious to even consider. All of which contributes to the process of uncovering and challenging participants' assumptions about the future.

*Phase 2: Reframe (discontinuity assumptions and a sculpture)*

Phase 2 was a pared-down reframing exercise, since there was little time and insufficient shared framing across the full group to propose a specific detailed alternative paradigm for participants to play with. Instead for the 9th UNESCO Youth Forum the point of departure for reframing was the elimination or 'disappearance' of some key attributes of the expected and desired futures elaborated in Phase 1. Peer facilitators assisted their groups in adding or removing elements from their expectations and hopes. The following questions were used to prompt discussion:

- Is there an important part of your image or headline that you can remove?
- Is there something missing from the headline or image that you could add?
- How would your headline or image change if one of the big problems or big solutions that you included initially did not happen?
- What would the opposite headline or image look like?

This discussion provided a significant step forward to reimaging the future by making participants more aware of their assumptions and initiating the process of inventing new ones. Reframing, as usual, proved to be an arduous process and gave rise to very animated exchanges. Peer facilitators encouraged the identification of specific aspects of a reframed world in 2040 in each of the sub-theme fields – assisting the groups to focus on key terms and topics. Some groups

imagined a future where carbon emissions are still on the rise or a world where there is no shortage of water as a way to challenge their assumptions and began to explore discontinuous futures. One participant shared the opposite of her hoped-for future: a vision of 2040 where climate change was still on the political agenda. Participants tended to agree with this position and believed that any future without global warming is very unrealistic. Therefore, the following reimagined headline was proposed:

> *In 2040, drones will perpetually orbit the globe with capabilities of identifying carbon emissions in urbanity.*

Other participants asked: what implications would a world without terrorism imply? Does this mean that societies have eradicated fundamentalism or religion itself? How might our cities look if biodiversity was able to thrive in the cities that many of us call home? And what might a world look like without scarcity? Or without gender or social strata or nationalities? Some argued that the elimination of these central characteristics could in turn eliminate personal identity. Others said that it could create egalitarian societies that treat individuals as equals. These controversial headlines underscored the difference between the anticipatory assumptions that prevailed in the Phase 1 effort to think about predictions and preferences.

   With these alternative headlines and images in mind, each group constructed a physical model that was meant to provide a symbolic representation of this reframed imaginary world. The challenge of this materialisation step is to use constrained and limited types of material to give shape to a 3D image of the group's imagined future. The difficulty lies in building a shared symbolic representation of the scenarios discussed by the group. The creation of a model of an imaginary future generates new insights and unpacks meaning. Building a 3D representation of a discontinuous future provided the opportunity for participants to first articulate their anticipatory assumptions to themselves and then to negotiate shared meanings while explaining their idea to the group. The groups thereby engaged in a collective process for defining the nature and significance of their imaginary future. Through this process they exposed the boundaries of their thinking, the box for their imaginations, and also started to challenge those limits.

   Building a 3D representation of their imaginary future also entailed grappling with how to communicate what their model represented, further adding to the details and dimensions of a different 2040. With these 3D models participants had a chance to go beyond an individual assembling a lone vision to express a collective idea of tomorrow and the assumptions underlying these visions. Creating images of different futures opened up a space for a critical dialogue and the analysis of a different landscape from the perspective of different cultures. Each group gave their 3D prototype a title that represented their understanding of a transformed world order. At the end of the session each break-out group's sculpture was digitally photographed and then projected on screen to the full sub-plenary.

*Phase 3: Rethink (proposing an activity)*

With the aim of anchoring the enthusiasm of participants to 'make a difference' in their own context and the local conditions for taking action this session targeted the expression of personal projects. Building on the discussions from the earlier phases participants were invited to work with their groups to identify micro and macro actions to be undertaken at a global, regional, national or individual level. Actions were then uploaded by the Timescape team on site to the online platform, Timescape Phase 3 (Timescape, 2015). This map records individual commitments, with a photograph of each participant and their location around the globe. The Youth Forum concluded with a final presentation where all working groups and facilitators came together to present the Youth Forum's global recommended actions (UNESCO Youth Forum, 2015c).

The experience of the participants in going through these stages was transformational, as has been the experience with the other FLL-N. The initial excitement about expressing predictions and hopes was quickly transformed into a new energy – initially challenging, but ultimately captivating – as participants started to think outside the box. In all the usually structured and traditional spaces at UNESCO there was an incongruous buzz of creativity, exploration, interaction and experimentation. The effectiveness of Phases 2 and 3, the reflective and creative presentation of the results by the designated leaders to the Forum plenary, and the evaluative comments from the participants showed how the process encouraged participants to reconsider what it means to 'use-the-future'. Their understanding of thinking about the future moved from the expectation that such activities are regimented, formal and elite plan-generating processes oriented to finding solutions, to searching to understand the assumptions behind the images of the future that shape what people see and do. Participants took a step towards becoming futures literate and becoming more appreciative and hopeful about the complexity of the world around them.

### Living it: a personal perspective as concluding observation on the 9th UNESCO Youth Forum

Bayo Akomolafe, Expert Futures Literacy Facilitator, Nigeria.

As I negotiated my way through the aisles of seats in the spacious bunker-like hall, strolling past the intense stares of some young people – some of whom were dressed in smarter suits than the UNESCO officials that hovered around them, I recalled a fascinating quantum physics experiment called the dual slit experiment. I'll skip the intricate details. Perhaps it might suffice to know that the popular experiment is a mind-boggling endeavour with a cautionary moral-of-the-story ending: things do not have pre-set values or features, and only benefit those within relationships. As such, there are no 'things' outside of context, and the way we define or understand the phenomenon is part of the phenomenon. In the very process of measuring a 'thing', the thing comes to be – and not prior to that moment.

I looked around. 'Youth.' Five hundred restless bodies of every colour and hue. The typical expectation of a 'Youth Forum' is that if young people are gathered together, their voices will provide a creative burst of freshness in otherwise run-of-the-mill contexts where adults do all the talking. Nothing less than 'the future' itself is at stake. And these young people are supposed to conjure remedies to any and all of the inadvertently barbaric deviations that may be creeping maliciously into the vaunted trajectories charted by their parents. They are supposed to right the ship and deliver coordinates to the preferred future of global imagination. And what inspires confidence that they can pull off such a feat? Their youth.

Given the heavy investments we make in youthfulness, I silently wondered about the particular ways it was being performed. How it was being measured. My impression was that the impressive concrete walls, bright lights, flashy slogans, loud mics, prestige of UNESCO, and the surreptitious promise that those who did well enough would have the chance to shine before the important people, all conspired to create a particular iteration of 'youthfulness' that – I feared – served more to clone the prevalent assumptions about the future than contest them. In short, this 'youthfulness' was manufactured – and very much a part of a larger apparatus that included big money, big money shots, a fixed notion of the future, the transhumanist aspirations for techno-economic development and progress, and a bureaucratic funnel process that made sure only the 'right' things to say or conclude made it to the top. In spite of this Youth Forum's commendable resolve to address critical challenges by expanding the thinking pool, the whole setup was akin to asking 500 'youth' to write their own answers to mathematical equations for achieving the Sustainable Development Goals, while the correct 'approved' answers were behind the book the whole time.

Forget the unctuousness of the word itself – 'youth' (a more ambiguous or ambitious word has never been contrived: is youthfulness of the heart or of bones? Who gets to be part of the gang? At what point does youth stop being youth?); a more critical look at this 'youth priority' business suggests a labour paradigm of sorts, wherein a careful selection of deserving ones make the cut, and are enlisted to be the faces within structures adults have built and continue to maintain. Much like the emotion emojis on a Facebook post that silently manages feelings, many institutionalised platforms collectively predefine the range of expression and spectrum of responsivity, thereby training the next generation to think in the same ways as the previous one. What is left out, what is excluded from the youth apparatus, what doesn't make the cut is the disruptiveness, angst, spontaneity, disenchantedness and redeeming foolishness of being young. But it is exactly those qualities that are needed in these times when climate discourse is fixated on carbon reductionism, when poverty is seen through the keyhole of GDP, and when the Future is just another app or USB port away from the obsolete.

As a young black kid growing up in West Africa, I was already used to the antics of politicians who promised change and transformation, while lining their pockets with the sweat and toil of the downtrodden. I knew a certain cynicism and despair when I heard seasoned activists and operators of civil society platforms speak regretfully about the slow pace of development in Africa – painfully

oblivious to the terrible costs of progress and the deep colonial imperatives it served. I had watched promising heroes turn into the enemies they once fought. Why would anyone trust that youth – conditioned, schooled and bred in the same contexts and institutions as their parents before them – had anything to offer but slightly different iterations of the same?

Acutely aware of this largely invisible framework of conformism, *I negotiated my way through the aisles of seats in the spacious bunker-like hall, strolling past the intense stares of some young people – some of whom were dressed in smarter suits than the UNESCO officials that hovered around them.* The initial stages of the FLL-N process were underway. In one group, in response to a prompt asking the participants to imagine some distant future, some of the delegates were speaking glowingly about a future where phones would be engrafted in bodies. Others later spoke about flying cars, green technologies, climate stability, and peace on earth.

I leaned in, and engaged one of the delegates: "Yes, this is all fine and dandy," I said. "But whose future is this? Whose future do you see when you close your eyes and claim to imagine a different world? Whose future are you unwittingly perpetuating?" The young man stared back at me, perhaps wondering what other future there was to salvage except the one – *the one Future* – that contained self-driven cars, neon-lit neighbourhoods and a universal humanism convenient to commercial interests.

But my intervention was perhaps hasty and needless in another important way: the FLL-N process was already designed to ask those very questions; to query the particular ways participants 'use-the-future'; to bring to light the hidden contours and Trojan elements that were already part of our many imagination projects; to meet the sticky assumptions that keep us tethered to the same habits of thought/action that maintain the status quo; and, to trouble these patterns well enough that a deeper appreciation for complexity and multi-agential emergence might occur.

In a sense, the FLL-N process was a way of saying 'Map, meet Terrain'. A cathartic release into the wilds where human agency itself becomes part of a larger tapestry of becomings. An unburdening of the Future of the weight of its singular responsibility to deliver. An unshackling of anticipation from its matrix of sameness, so that many other futures can be performed.

And then, low and behold, I started to hear people speaking of their own lives and their own struggles to climb the hill or plunge into the pool of their imaginations. Confounding expectations the conversations started to dismantle convention. Something disruptive, irreverent and ambiguous was afoot. Participants in the FLL-N at the 9th UNESCO Youth Forum were misbehaving, they were losing their certainties. They seemed to be accepting the invitation to take their diversity as a creative asset rather than an obstacle to be dissolved in the pablum of reductionist universal slogans squeezed onto the pin-head of the ideal wealthy society. My worry that collective intelligence would serve as a solvent that washes away distinctions was, on the contrary, like a dye that highlights the boundaries of the otherwise indistinguishable organisms on a microscope's slide. Was there a way to punch some holes in the premises that congealed the visions of the future into confirmations of yesterday's agendas?

Perhaps nothing was more satisfying than watching a collective grimace slowly spoil the creaseless certainty and conformism that was present in the room hours earlier. A deep alchemy was at work in recuperating a sense of wonder. And with wonder comes the clarity of confusion. Of inquiry. Of experiment and risk-taking. Of consultation and new alliances. Of recovered meanings and unexplored terrain.

Halfway through the multi-tiered FLL-N process, I made friends with one of the participants, who told me she was now beginning to question her previous attitudes about education and schooling. She wanted to investigate further. She wanted to know how to ask the half-questions that were tugging at her sleeves. As such, she said, she no longer thought that the major culminating event – where she was to make a presentation – was that important. Harvesting a set of recommendations to fire off at the high and mighty did not seem as alluring as when she flew into Paris. Now, starting to see her own context, home and history, through the lens of different and open futures, she wondered. She wondered.

And in that moment, *that moment of justice*, I recognised a different quality of youthfulness that we probably might do well to pay attention to; that might recommend slowing down in times of urgency; that might insist on dancing where the data might call for a studious stoicism; that might open up new places of power and multiple futures: irreverence.

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## Case 10: Future-proofing an entire nation: the case of Tanzania

*Aidan Eyakuze and Edmund Matotay*

### Introduction

This chapter showcases the Tanzania Dialogues Initiative as an example of a creative approach to 'using-the-future' to engage an entire country in the process of contemplating and creating its own future. Expanding the range of participants

beyond experts, researchers, policymakers and government officials to include ordinary citizens in social dialogue about the country's future is a hallmark of the initiative's social innovation. This chapter describes the use of Futures Literacy tools to structure nine conversations with 387 thought-leaders across Tanzania, with the objective of developing strategic scenarios to influence the national discourse before the April 2015 referendum on the country's revised Constitution and the October 2015 general election.

Tanzania has delivered impressive economic growth performance in the last decade, averaging between 6 per cent and 7 per cent per year between 2000 and 2014. While the poverty incidence has fallen from 39 per cent in 1990 to 33 per cent in 2007 and further to 28 per cent in 2012, population growth has expanded the absolute number of Tanzanians living below the poverty line from 10 million in 1990 to over 12.6 million in 2012. The share of malnourished children has risen (National Bureau of Statistics – NBS/Tanzania, & ICF Macro, 2011). Additionally, despite its taking a very large share of the public purse, education continues to deliver poor learning outcomes at the foundational primary school level (Uwezo, 2014). Tanzania has failed to achieve robust and sustainable pro-poor and pro-jobs growth. The need to prioritise the latter outcomes is increasingly urgent.

Signs of intensifying social tensions are becoming apparent. Religious tolerance, long a hallmark that differentiated Tanzania from other countries in the region, is evaporating as clerics and religious leaders are murdered and places of worship are desecrated. The past decade has also seen an intensified re-evaluation of the union between Tanganyika and Zanzibar. The majority of grievances expressed by Zanzibaris are not new, but the expression of dissatisfaction with the status quo has become more aggressive and is questioning a political marriage that was once thought to be sacrosanct.

Tanzania is at a transitional moment. The general elections in 2015 ushered in a change of top leadership and a new administration. It was the country's most contested election since 1995, and it tested the maturity of the country's political, economic and social discourse, and its national institutions. The outcomes of that election continue to play out.

### *Imagining the future of Tanzania*

The Society for International Development (SID) is an international network of individuals and organisations founded in 1957 to promote social justice and foster democratic participation in the development process. Through locally driven programmes and activities, SID strengthens collective empowerment, facilitates dialogue and knowledge-sharing on people-centred development strategies, and promotes policy change towards inclusiveness, equity and sustainability. SID has over 30 chapters and 3,000 members in more than 50 countries.

SID's Tanzania Dialogues Initiative curated an informed, future-oriented dialogue among Tanzanians. The immediate goal was to shape the country's

narrative from the contemporary discussion about a new Constitution, to the discourse around the 2015 General Election and the design of a new policy agenda in 2016 and beyond.

### *Methodological approach*

This chapter summarises the outcomes of combining three methods used to describe and explain the contemporary state of the country and explore possible future trajectories through commissioned research, assess the national perspective on the future through a nationally representative mobile phone survey, and initiate a future oriented national discourse through nine sub-national one-day Futures Literacy Laboratories (FLL). It describes SID's early experience of implementing the Futures Literacy methodology and, by sharing some of the emerging 'stories' provides an early assessment of its efficacy in inspiring a forward-looking conversation within the communities with whom SID has engaged between July and September 2014. It also briefly explores the possibility that the consolidated outcome, in the form of scenarios from the nine sub-national conversations, could catalyse a broader national discussion about the possible future trajectories that may face Tanzania.

Every five years Tanzanians participate in a general election that allows for a possible change of President and administration. October 2015 yielded the fourth such change. The period preceding the election provided an opportune moment to engage Tanzanians in a structured and future-informed reflection about the choice that they will make on a very specific date, and that will significantly shape their future. Ahead of the October 2015 polls, a number of forward-facing questions were ripe for exploration:

- Will the election campaigning be informed by issues rather than by personalities?
- Will the political discourse focus on immediate issues or the long-term prospects for Tanzania?
- Are campaigning politicians aware of the deep uncertainty facing the country?
- Might they temper their promises to their voters?
- On what basis will Tanzanians make their choices on voting day?

### *Regional Futures Literacy Laboratories*

In order to explore those questions, and many other emerging ones, we carried out nine regional Futures Literacy Laboratories (FLL) across the following regions of Tanzania: Dar es Salaam, Arusha, Pemba (Zanzibar), Unguja (Zanzibar), Mbeya, Kigoma, Mtwara, Dodoma and Mwanza. Working with Tanzania's leading civil society grant-making organisation, the Foundation for Civil Society, we attracted a total of 387 citizens. They came from a diverse set of backgrounds, occupations, experience, expertise and physical ability and included academics and teachers, farmers, religious leaders, journalists, police officers, representatives

from women groups, farmers, youths, people with special needs (blind, deaf, and albino) and in one instance a District Commissioner (one of the senior positions in local public administration).

*Phase 1: Revealing awareness*

Our Phase 1 activities aimed to achieve three things. The first was to provide a package of facts and analysis – a *Picture of Now* – that was logically sound, insightful in terms of offering clear explanations and mentally portable or memorable. We wanted to ensure that conversations about the future of Tanzania started from a common understanding or awareness of the state of the country in a holistic way and why it was that way (underlying drivers). This *Picture of Now* was developed from the highlights of the think pieces and insights from some additional socio-economic and political research. The following main challenging messages of the *Picture of Now* were identified.

- **Rapid structural economic change is marginalising the majority**. As Tanzania's economy grows rapidly, the share of agriculture is shrinking and being replaced by services faster than the rate at which citizens can re-tool themselves in order to earn a living using higher intellectual skills rather than physical capabilities.
- **High and rising malnutrition is sapping the country's strength**. The country's rate of malnutrition, measured as the number of children aged 0–5 years who are stunted, shows a worsening trend between 2004 (38 per cent) and 2010 (42 per cent) with an improvement to a still significant 34 per cent in 2016 (Ministry of Health Community Development Gender Elderly and Children (MoHCDGEC) [Tanzania] *et al.*, 2016). The effect is to seriously impede these children's cognitive abilities and constrain their, and the country's, future earnings.
- **Poor quality schools are producing an unskilled and unprepared generation**. The poor quality of state-run primary schooling manifested by lack of sanitation and teacher absenteeism reinforces the children's nutritional disadvantages and traps them in low productivity economic activities and incomes.
- **Tanzania's gas resources may underperform in terms of boosting the economy**. Despite the discovery of major gas reserves in Tanzania, the uncertainty that is engulfing global energy markets due to anaemic growth in rich countries, and growing alarm over climate change suggest that the possibility of major cuts in carbon emissions (United Nations News Service, 2014), could deny Tanzania some highly anticipated, salutary windfall gas revenues.

These four key challenging messages were outlined at the outset of every engagement, to create a sense of urgency and inspire immediate engagement with the process and content.

The second goal was to reveal people's expectations about the future in a bid to make them appreciate the temporal or chronological elements of change. We did

this through role playing. Discussion participants were asked to imagine themselves as news reporters in mid-2035. Working in groups of 10–15 people, their task was to create news headlines – and the opening sentence of an article, or radio/TV broadcast – that expressed the major stories in the economic, political and social life of a future Tanzania.

The third goal was to complement the shared analytical awareness with an emotional and/or visceral awareness by revealing participants' hopes and fears about the future. We wanted to help articulate explicitly the subconscious basis for some of the choices that have been and would likely continue to be made by individuals and communities about the future. We quickly discovered that attempting to separate expectations/predictions about the future from their hopes and fears about it were futile and ultimately unnecessary. This specific exercise was also done through the creation of imaginative newspaper headlines from a future Tanzania in 2035.

### Phase 2: Reframing and discovery

Tanzania's economy is deeply dependent on the global economy. It relies on external markets for its exports of agricultural commodities (cotton, cashews, tea, coffee) and mineral commodities such as gold. In 2013, the $1.4 billion earnings from tourism overtook gold export receipts due to an increase in visitor arrivals, while gold prices continued to be weak. In 2013, Tanzania attracted $1.9 billion in foreign direct investment, the largest volume in East Africa. Commitments in donor aid and loans have retreated from 21 per cent of the country's budget in 2013 to 15 per cent in 2014. In 2014, donors committed $558 million in aid to support Tanzania's budget (Ng'wanakilala, 2014). However, due to concerns about fraud and corruption, donors withheld these funds, leading to a serious strain in public finances and exposing Tanzania's vulnerability.

This context provided an almost ideal opportunity to engage Tanzanians in a rigorous imagining exercise. Participants were invited to 'think the unthinkable' (*kufikiri yasiyofikirika* in the Kiswahili language) by contemplating a future with no inflows of foreign funds. The aim was to encourage participants to confront the deeply embedded assumption, developed over decades of experience, that donors would continue to bridge any and all funding gaps in Tanzania's budget. Evidence was provided to make it clear that there is a real possibility of funding drying up. It was not difficult to provide a scenario in which Tanzania's traditional bilateral donors – seven European countries, the European Commission, Canada and Japan – experience such a severe and sustained economic stagnation that aid funds are cut. There were indicators of this scenario in October 2014, when Sweden's newly elected government suspended all new disbursements to East Africa pending a review of its aid strategy. Denmark has also suspended all new development assistance commitments to the East African Community as it considers reallocating funds to humanitarian crises in Syria and West Africa. It was relatively easy to outline a roadmap to possible future autarky for Tanzania as foreign investment dries up, commodity markets collapse and tourism receipts shrink.

The simple questions put to participants were, "How will Tanzania cope? Is it a fragile or resilient country?"

*Phase 3: Rethinking choices*

As mentioned above, in 2015 Tanzanians were to make two of the most important decisions in the country's post-independence era. On 30 April 2015, the country was expected to hold a referendum on a revised constitution. If passed, the new constitution would have come into force ahead of general elections due in October 2015. In the end, the referendum was called off. However, the incumbent president, Jakaya Kikwete, had served two terms and could not run again, meaning that Tanzanians were to elect a new head of state and administration.

This context informed our synthesis and consolidation of the outputs of the Awareness and Discovery phases of the Futures Literacy engagement into a set of strategic scenarios in which choice emerges. Their essential character is outlined in the next section on results.

AWARENESS

The major outcome of the Futures Literacy approach was to reveal participants' expectations, predictions, hopes and fears about Tanzania's future. Across the country, some common themes emerged.

On the optimistic side, these themes included: a shared desire that Tanzania become a middle-income country by 2025, in line with the current Vision 2025; the union between Tanganyika and Zanzibar would last although there was also a strong desire for Zanzibar to regain the seat it forfeited at the United Nations in 1964; and a hope that the East African Community would be a strong socioeconomic bloc, with a female East African Commission President from Zanzibar. Interestingly, it was expected, or hoped, that citizens would become much more assertive in holding government to account, with an activist parliament impeaching a non-performing head of state.

Pessimism about the future was informed by: a sense that Tanzania was experiencing a period of immiserising growth – commendable macroeconomic growth performance that left increasing numbers of people in the darkness of poverty; an unskilled generation facing exclusion, marginalisation and destitution as the country's natural resource wealth is squandered; national values of peace, unity and respect eroding further and a union in danger of rupturing.

DISCOVERY

The rigorous imagining of a state of autarky for Tanzania was, unsurprisingly, a significant challenge for participants. This suggested that it was a relevant and significant thought experiment for collective reflection at group and national level. Contemporary events such as the withholding of almost $500 million in budget support by donors lent further credence to the idea.

This exercise led to the discovery of arguably the fundamental question for Tanzanians to contemplate for the future. Faced with the distinct possibility of an autarkic shock, are Tanzanians collectively resilient enough to bounce back from the major economic, social and political stress that they face? Or are there some structural fissures that leave the country vulnerable to irreparable damage in its social fabric?

*Choice – Ujamaa 2.0 or Freeconomy?*

The narrative of the scenarios started from the *Picture of Now* in which rapid structural economic change is radically altering the livelihood foundation for citizens, who are ill-equipped to respond due to high levels of malnutrition and poor quality learning. Game-changing gas revenues are not guaranteed. In the near future, a Tanzania heavily reliant on foreign financial inflows experiences a severe shock in the form of a prolonged cash crunch as aid disappears, shrinking foreign direct investment evaporates, along with tourist receipts and commodity export revenues. Tanzanians are faced with a choice between two alternatives, namely *Ujamaa 2.0* and *Freeconomy* (Figure 5.10.1).

*Ujamaa 2.0* sees the revival of the communalist ideology of 1969–85. The new *Ujamaa* emerges from fundamental agreement between citizens and government to share the pain of austerity and adjustment in an equitable way. Such broad consensus emboldens government to undertake a deep and far-reaching wealth redistribution programme. Overwhelmed by popular support for *Ujamaa*, business has no choice but to acquiesce. Shared pain fosters an unprecedented level of unity and common purpose among citizens. As the state's management capability is strengthened and legitimised, shrinking domestic resources are invested in social services. However, Tanzania's social resilience is accompanied by severe economic fragility and it is not clear how long *Ujamaa 2.0* can last.

The alternative, *Freeconomy*, unleashes and supports individual initiative and commercial energy in ways that expand the national economy, in part through deeper regional integration. A successful appeal by the administration to citizens' sense of enterprise and instinct for individual self-reliance forges a broad
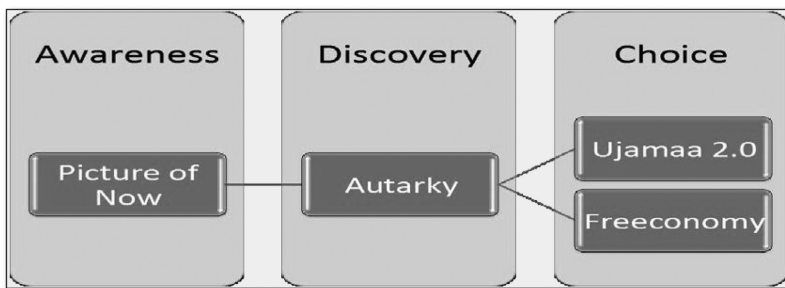


*Figure 5.10.1*  Emergence of choice scenarios

consensus for light regulation and a focus on aggressively reducing the costs of doing business in the country and across East Africa. As trade and business regulations are radically reformed, available financial resources are invested in priority infrastructure upgrades across the country. Business, big and small, expands to take advantage of the unprecedented openness, although trading dominates economic activity. Income and profits are increasingly concentrated among those who had assets and capital prior to the global economic shock. Most struggle to cope with the widening dominance of economic activity and growing evidence of state capture by a small commercial elite. Tanzania's economy proves itself resilient, but at the cost of social tension and fragility.

### Discussion and implications

One of the major motivations for the Tanzania Dialogues Initiative was to catalyse an issue-based discourse in the country as citizens were scheduled to make two important choices in 2015: on the constitution in April; and a new administration in October. A previous national public interest scenarios initiative on Tanzania was published in 2004. Dubbed *Tutafika: Imagining Our Future*, it was the outcome of an intense exercise in introspection and foresight but it involved a small group of about 40 Tanzanians and took two years from inception to conclusion (Society for International Development, 2004). This initiative took place in less than half that time, and involved almost 400 people in a structured conversation about what the potential futures facing the country might mean for collective decisions today.

We published the strategic scenario stories as an insert in Tanzania's highest circulation Kiswahili daily newspaper in December 2014 and went on a dissemination tour in the nine regions that participated in the Futures Literacy Laboratories. Our aim was to popularise even further the use of foresight to inform the two major collective decisions that Tanzanians were due to make in 2015. While it is difficult to evaluate the extent to which the Futures Literacy methodology was effective in raising a general public awareness of Tanzania's prospective future in a way that could usefully influence contemporary decision-making, two observations are worth noting.

First, Futures Literacy is an efficient and effective way of allowing diverse groups to use the future to surface their assumptions, to examine the present and to rehearse the range of alternative decisions that could be made to shape an emergent future. The sequential logic of awareness (fact and analysis), discovery (rigorous imagining) and choice (using the stories) is both powerful and deeply operational.

Second, done well, the Futures Literacy approach can confer confidence and legitimacy on the futures outputs in the form of alternative stories, and build a significant coalition of allies and supporters who can promote the process, the products (descriptions of the present, the plausibility of the autarkic shock, the alternative futures and the choices that are incumbent upon the citizens to make) and maintain a national discourse on its own future.

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## Case 11: Africa Horizon 2035

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### Introduction

On 21 May 2015, the Organisation de la Francophonie (OIF) organised its first UNESCO Management of Social Transformation (MOST) Futures Literacy Lab-Novelty (FLL-N). This event was organised by the Foresight section of the Veille-analyse et Prospective Department inside the Directorate of Programming and Strategic Development (DPDS) and in partnership with the Observatory of French Language of the OIF. This was the first implementation of the OIF's new collaborative approach to co-constructing the way the future is used. The entire activity, including design and all facilitation, was conducted in French. The aim of this exercise was to:

- reinforce the thinking skills of the OIF's staff and its stakeholders;
- improve horizontal partnerships and transversality practices between administrative units;

- develop distinctive competencies in terms of futures thinking and strategic monitoring within the OIF to help program staff initiate exploratory and more open reflection on the future; and
- create new partnerships in terms of foresight and strategic monitoring.

This event is part of an active collaboration between UNESCO and OIF in the field of Anticipation and Foresight framed by the longstanding Memorandum of Understanding signed by the two organisations in 1976. This specific FLL-N also follows on from a first OIF foresight dialogue held in April 2015, where Riel Miller introduced the conceptual and methodological framework of Futures Literacy.

## Issues

Anticipation lets us understand how foresight processes, whether implicit or explicit, affect the choices we make in our daily lives. This exercise practised in groups and debated in plenary sessions, helps people to 'use-the-future' in order to elaborate collective strategies and possible interventions to improve the quality of decisions that have to be made today.

For this first OIF-UNESCO FLL-N, the DPDS selected the topic 'Africa Horizon 2035'. This topic was relevant for both institutions because most programmes of the OIF's four-year plan focus on Africa. This is in large part because of the expected demographics of the French language, as analysed by the Observatory of the French Language (Wolff, 2014).

In keeping with the standard FLL-N design the focus here was on revealing people's anticipatory assumptions. The action learning methodology was seen as a way to reveal the patterns/models and cognitive biases deployed/generated by thinking about the future of Africa. The process was meant to encourage discussion of alternative assumptions and strategies relevant to the OIF.

Such reflection is of interest to leaders of multilateral institutions such as the OIF as it contends with a wide range of complex challenges. On the one hand, current crises of values or identities, socio-economic and development models are strong cues attesting to ongoing fundamental changes. On the other hand, there is a growing pressure to reduce doubts and make appropriate choices, particularly as part of structural and organisational change.

Unfortunately, these two imperatives are often contradictory. The first calls for innovation and experimentation to adapt to a world that is radically changing. The second invites flight to apparent safety by relying on strategies that have worked in the past.

The FLL-N design was adapted by the OIF to encourage:

- asking new and precise questions on the future, locally relevant and of common interest shared by all OIF's boards, about the Africa of tomorrow;
- raising the scope and the nature of the communities of practice that 'use-the-future' in specific places/groups and the tools they deploy to think about the future, including OIF staff; and
- the development of the participants' capacity to use futures literacy in a post-workshop analysis in terms of change/reinforcement of capacities.

*Proceedings*

Two days before the lab, a training session was organised for the break-out group facilitators to acquaint them with the various FLL techniques. Thirty-nine participants from the OIF, UNESCO, the students of the association *Sciences-Po for Africa* and the Director of the think-tank *Thinking Africa* were involved in this event.

The methodology used in this lab is based on a simple action learning and collective intelligence knowledge creation model: collaborative and participative work, interactive dialogue, and plenary sessions for sharing group work. Standard to FLL-N there were three phases:

- **Phase 1**: reveal by inviting participants to expose their values/aspirations and hopes, on one hand, and on the other hand, their expectations/predictions;
- **Phase 2**: reframe by exploring discontinuous futures based on an alternative set of anticipatory assumptions that invite participants to imagine a societal context fundamentally different from current paradigms; and
- **Phase 3**: initiate the exploration of new strategic questions that arise from the review of the assumptions that influence participants' understanding of the present, query the specific images of the future that render certain aspects of the present more or less visible, more or less central to decision-makers.

Participants were divided into five diverse groups of six to eight participants, covering different fields of operation, functional roles and hierarchical levels within the OIF.

*Phase 1: Revealing projections and hopes*

Participants were reminded that they had been invited to take part in the FLL-N as individuals, to feel free to express their own points of view, and to remember that there were no right or wrong answers. The groups were asked to formulate their predictions for Africa in 2035. Most participants justified their expectations using what they called 'facts' or statistical projections that reflected a range of perspectives, often rooted in institutional or media points-of-view. Then the facilitators encouraged the group to extend the reach of the discussion to cover hoped-for futures reflecting the values of each person.

By undertaking these exercises participants started to discern the difference between the imaginary futures that they predict or expect and those that they desire or hope for. They started to differentiate those anticipatory assumptions that are about jobs, governments, nations, industries, banks, climate change, demography, etc., and those that are more open to change.

Summaries of the discussions in the different groups were presented in the final plenary session by the rapporteurs from each group, who had been designated by their peers. These reports incorporated both agreements and disagreements, consensus and conflict within the groups. The summaries covered a wide range of issues – the following are a few of the highlights:

- the place of education and gender issues;
- the need for common security and the place of Africa in global governance;
- the development of infrastructures that would enable a better flow/fluidity of trade between countries in sub-regions and across the continent;
- monetary issues/financial aspects related to the continent's autonomy/independence/self-sufficiency on a sub-regional basis and in local economic communities;
- regional integration as opposed to continental integration, and the current surge of nationalism, identity and religious issues, terrorism, migration; and
- adaptation strategies to deal with climate change.

The FLL-N allowed participants to identify a range of anticipatory assumptions that generated a scenario in which Africa is attractive and creative in 2035. Participants articulated their shared values at the OIF, including the importance of civil service, a faith in change and in the impact of staff members' work. In their effort to distinguish the foreseeable/predictive from the desired/preferred futures the participants produced five sets of observations/scenarios.

AN 'IDEAL' AFRICA: AN ATTRACTIVE AFRICA

- An Africa and Africans who attract investments and reverse a migratory flow;
- Governments that make a difference;
- A politically stable Africa, where a supranational structure such as the African Union plays its full role as regulator and integrator of Africa; implementation of new and effective public policies that cover civil servants and, in particular, the large number of young people.

A 'CONSIDERED' AFRICA: A BUBBLING/BURGEONING AFRICA

- A politically unstable Africa, ripped and fragmented;
- Rise of uncontrolled economies but with more individual liberties/freedom;
- Rise of creation/creativity with an energy liberalisation;
- Identity affirmation within creativity.

A 'LEAD/ER/ING' AFRICA: AN EDGY/DARING AFRICA

- Investment in youth training;
- Development of a quality training allowing civil servants to propose policies that encourage the exploitation of human capital and raw materials;
- Even more globalised, which leads to a loss of Africa's cultural identity.

A 'DIVERSE' AFRICA: AN AFRICA THAT ORGANISES AND STRUCTURES ITSELF

- Diverse dynamics (economic, demographic, political) within Africa;
- Emergence of regional blocks with, on the one side, western, eastern and southern countries, and on the other side, northern and central states (emergence of federal states);

- Establishment of a megalopolis because of cash flow growth;
- Confirmation/statement of a cultural identity that can create extreme social tensions;
- Restructuring of the African Union;
- An Africa subject to current challenges (climate change, emerging/growing civilian society, terrorist threats).

AN AFRICA OF 'CONTRASTS': A FRAGMENTED AND DIVIDED AFRICA

- Rise of political instability;
- Rise of the gap between rich and poor countries, as well as within each country;
- A new economy oriented to China and the Gulf states;
- Development of technology innovation sectors;
- A continent vulnerable to climate change.

This summary process captured the diversity of perspectives on the future. These can be classified in terms of interchangeability, synergy and emergence as well as breakdown, but all point to significant change.

## Phase 2: Reframe

In the second session participants were asked to reframe their imaginary futures and express these alternative worlds in material form by creating sculptures. Participants were provided with a framework for reframing called 'The African Knowledge Society'. This model was an adaptation of the Learning Intensive Society parameters (Miller, 2001), used in other FLL-N, that deconstruct the industrial paradigm and Western models of growth and development. Participants were invited to 'rigorously imagine' an alternative world and invent their lives within that scenario.

Kits composed of various arts and craft materials such as ropes, balls, magazine photos, etc. were given to each group to build a model representing their imaginary futures.

The aim of this practical exercise was (1) to build a 'future reality' materialised as a 3D object, that mirrored collective reflection and was centred on a new societal context in terms of institutions such as schools, banks, police, companies, jobs, parks, etc., and (2) for participants to question the way that things function and what contributes to 'inventing' new social systems. Five sculptures were produced by the break-out groups.

AFRICAN RELOCATION

The first group rethought development models at the local level, inspired by African innovations, including initiatives in participatory governance/democracy (e.g. Somaliland), that take into consideration the need to create an environment conducive to the use of renewable energy.

Subscribing to a logic of sustainable development and thinking of an ecosystem distant from global economic exchange/trade this scenario expressed a middle ground between local isolation and global integration.

The group imagined the creation of communities that established collective areas conducive to learning where the transmission of knowledge and values happened through alternative pedagogical methods. Schools were at once a place to share and produce knowledge using traditional mediators such as the DadaRabe of Madagascar or griot, a west African preacher, singer, poet and storyteller. In this scenario, there was a renewal of such traditional functions, voluntary and community based approaches including female intermediaries such as Mamarabes knowledge transmitters.

CREATING NEW WORLDS

Another group was inspired by the prospect of creating new organisational paradigms to connect individuals with both modern and traditional societies. This scenario placed a strong emphasis on the senses and underscored the role of structures and norms like ownership (appropriation and utilisation of collective goods, locations), identities (representation through individual choices, new codes for attributing meaning, rewards for different and diverse cultural mixes), governance (communities tied together through values, the use of numeric data) and territories (borders are abolished through nomadism).

Pushing their imaginations this group invented a world where complex emergent relationships modulated/deconstructed systems/models by constantly re-establishing and mobilising shared values within and between communities. These dynamic transversal relationships established the conditions to escape from the old state bureaucracies and develop governance beyond old forms of administrative management. In this context 'traditional' values of solidarity that protected individuals/communities were combined with 'a universality where diversity is valued!'

AFRICAN FORESIGHT AND CONQUEST

This group's future took on the image of Africa as a tree, solidly rooted in time and attached to endogenous values but with hospitable, open arms as it welcomes modernity and others. The group was willing to renew a tradition by inspiring itself through the practices of Fang, an ethnic group living in Gabon, where when children are born, they take a bath with a spear. The group replaced the spear by a pen. The child does not only need to be a soldier, and with a pen, he or she is preparing to confront the upcoming challenges of the modern world.

On the right-hand side of this group's sculpture was a seal that symbolised the normality of the innovative dispute resolution methods. Inspired and adapted from traditional values such as dialogue and consultation, African approaches prevailed in a world in which dialogue rendered the use of weapons obsolete. This group's imaginary future is also feminine because women have as many rights as

men. Africa is economically integrated, in part through technological progress that will permit Africans to conquer the moon, space and to push back the limits of the known world.

This group stepped outside the dominant frameworks by imagining the disappearance of borders between African countries, replaced by a vibrant and fluid civil society. They described a world where money has disappeared because wealth has become more holistic and human rather than narrowly 'economic'. In this scenario, there is an equitable (re)distribution of goods and knowledge. The greater internalisation of universal values overcomes the particularism characteristic of international relations in the early 21st century, enabling Africa to take a place in the world.

In this scenario time is re-appropriated through a focus on wellbeing. This is what it means to 'be African', taking control of your own life and time. People and their relationships are functionally tied to wellbeing (like rhizomes). All these elements are irrigated/fostered by what constitutes the force and attractiveness of Africa: the creativity (the green rope). This power, which is not a closed circuit, connects with other geographic locations (Europe, America, Asia). Another part of the sculpture uses balls to symbolise a society that can enrich itself with new elements that express the aspirations of 'being African'. This scenario is composed of the following elements:

*   debates, that remind us of the African 'agora' tree, like an African version of the Italian piazza, that facilitates interaction through measured and shared decision-making;
*   the last cup: a word play reminding us of a festive spirit;
*   environmental preoccupations;
*   creativity as a motor of African society;
*   knowledge acquisition through experience or the transformation of the educational system;
*   a society that lives by its values;
*   the abundance of biodiversity and the awareness of human dignity; and
*   the freedom of conscience and beliefs.

How do we imagine the ideal Africa (and its social life in general) in future decades?

*   through an organisation, a social life around biological rhythms, symbolised in the sculpture by confetti that circulates freely in the water;
*   24-hour days in which activities follow the rhythms of natural cycles of the organism (5–7h; 15–20h). This rhythm has an impact on the social organisation. The exchange of goods and services is demand driven and no longer

constrained by the fixed 9 to 5 type schedules imposed by society. Human beings are synchronised with natural rhythms and, at the same time, society becomes more efficient;

- reinforced proximity to the surrounding nature (symbolised by the colour green underneath the bottle that represents the natural basis of society):

  - by encouraging the use of local products;
  - organic agriculture; and
  - sustainable development

- through social relationships (the different elastics that surround the bottle). These connections are operationalised by the mechanisms that induce sympathy and understanding amongst people (music, religion, taste, etc.) and the fluidity of social networks. People are no longer scared of meeting new people, since they recognise each other through these circles;
- through an 'other' governance: there is no nationality; relationships are established through individuals as part of communities.

However, the equilibrium of this system is fragile. There is always a risk that the society could fall back to a rhythmic society, where people and nature are no longer centred, connected and in balance. Once again, it is the economic interests that bring rhythm to life, all this with a constant urgency of time.

*Phase 3: New questions*

The concluding plenary session provided an opportunity to consider how the anticipatory assumptions that emerged in the previous two phases revealed different aspects of the challenges and potential of the present. By asking what is the future and how do we engage in anticipation the participants in the FLL-N started the process of becoming futures literate. The discussions in plenary confirmed that by deploying collective intelligence participants were able to explore previously unknown ideas, pushing the boundaries of their thinking by inventing frameworks that generate new meanings and emergent possibilities. By privileging holistic and systemic approaches, the FLL-N revealed and clarified assumptions regarding existing systems and invited creative efforts to define and explore innovative frameworks, new strategies and programmes. The design of the FLL-N enabled participants to 'use-the-future' to interrogate their narratives and cognitive capacities, to question and re-examine fears and hopes.

*Implications for the OIF at an organisational level*

Running the FLL-N provided input into efforts to rethink the way that OIF builds its strategic vision. The plenary discussion at the end and reflection after the conclusion of the lab pointed to the following conclusions regarding the FLL-N as a tool for assisting with strategic thinking.

- **Economic**: the cost of actually running such a lab is relatively low since the on-site activity requires only a modest physical space and minimal working materials (Post-it notes, flip-charts, etc.). However, compared to some workshops or traditional topic oriented gatherings the FLL-N design requires much more investment in the collaborative joint-design, up-stream training of facilitators, preparation and selection of participants, and the involvement of expert facilitators able to improvise in real-time as the process unfolds.
- **Strategic learning**: this FLL-N provided a learning process that is playful and gradual for developing participants' Futures Literacy skills and is flexible enough so that different participants can develop different levels of futures literacy capacity.
- **Strategic innovation**: this FLL-N encouraged innovation and introduced new concepts and dynamics to the organisation. By using the future in a structured and theoretically informed manner the FLL-N can engage participants in a coherent process that deploys their collective intelligence to effectively and efficiently create new knowledge and learning.

### *Evaluation*

Entry and exit surveys were used to evaluate the level of knowledge and the perceptions of the participants before and after this FLL-N.

### *Futures Literacy and the need for capacity reinforcement*

More than 70 per cent of participants of this FLL-N were staff members of the IOF. In addition to these staff members, there were participants from UNESCO, the Association Science PO for Africa and from the Thinking Africa institute. These participants held at least a Bachelor's degree (licence) and had an interest in the field of anticipation and questions on the future in general. This level of training was taken into account in the customisation of the FLL-N and given the selection of heuristics and sequencing of topics played an important role in bringing participants to engage with unfamiliar methods and potentially intimidating topics.

Before the FLL, 47 per cent of participants estimated that they did not hold any expertise in terms of methodological approaches for thinking about the future and 53 per cent identified themselves as beginners. After the training sessions, 76 per cent self-proclaimed themselves beginners and 24 per cent felt as though they still did not have much expertise in the subject matter. In both cases, surveys revealed that no participants considered themselves as experts or had considerable experience in this field.

### *Importance of prospective/future*

In the pre-survey, most participants (41 per cent) responded that thinking about the future helps to determine the best choices. However, the remaining participants

indicated that information about the future would be unlikely to help address the challenges of our time (30 per cent), or even assist with the invention of new possibilities (29 per cent). At the end of this FLL-N, 53 per cent of participants leaned towards 'using-the-future' in ways that would enhance their capacity to invent new possibilities.

These results show us the evolution of people's thinking about specific futures and about how to 'use-the-future' – moving from an initial position before the FLL-N that focused on continuity and research into the past, in order to seek solutions to current and future problems, to starting to see that different futures can be imagined by 'letting go' of existing paradigms and inventing new possibilities. They felt more comfortable with uncertainty because they detected ways of going further in discovering and inventing the possible. Within an institutional environment, such as intergovernmental organisations constrained by constant planning, the challenges of this approach are significant, but necessary and possible to address, as demonstrated by such FLL-N exercises that invite deconstruction/ reconstruction.

Ninety-four per cent of participants stated that as a result of their participation in this FLL-N their understanding of anticipation had evolved. For the majority, this FLL-N had not only helped them to rethink how they approached uncertainty and the future but also exposed them to a new strategic tool that they would like to continue to develop and deploy.

### Follow-up

This was the OIF's first FLL-N; since then the OIF has been involved with five more FLL-N organised in collaboration with UNESCO and other partners on the following themes:

- October 2015: at UNESCO Headquarters: 9th World Youth Forum or the World in 2030;
- December 2015: at the Institute for Research and Strategic Studies of Morocco: The Future of the Arab World: Imagining the Future of Water and Cities in North Africa;
- March 2016: at the Tunisian Institute for Strategic Studies: Foresight and Social Transformation;
- July 2016: at UNESCO Headquarters: The Future of Human Mobility and Identity: Horizon 2050; and
- July 2017: at Mohamed V University of Rabat: The future of sciences in Africa.

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## Case 12: Rethinking non-formal education for sustainable futures in Asia-Pacific

*Ace Victor Franco Aceron*

### Introduction

The focus of the Futures Literacy Laboratory-Novelty (FLL-N) held in Bangkok, Thailand on 2–5 September 2015 was on how non-formal education can be instrumental in contributing to sustainability. At a general level the FLL-N was designed to explore the relationship between learning and sustainable development. The outcomes of the process can be summarised under three headings: thinking about forever; a process of learning; and a dynamic balance (UNESCO, 2010).

### The participants

The theme of this FLL-N, 'Rethinking Education through Imagining Futures Scenarios', attracted applications from all over the Asia-Pacific region. The selection of participants by UNESCO Bangkok's Education Research and Foresight Team was restricted to practitioners with at least five years of experience in non-formal education. As such, selected participants were those who had leadership roles and a proven track-record working in community-based learning centres, technical and vocational education institutes, as well as NGOs and universities with mandates in non-formal education. Two other important selection criteria were used: the ability to articulate ideas in English and an indication that the participant would be able to apply what they learned to his/her community context.

Forty participants in all joined the FLL, 20 of whom were selected from an online application process and the other 20 were invited participants from UNESCO offices in Bangkok and Paris, UNESCO partners and affiliates, and Chulalongkorn University, the host university of the FLL. The 40 participants were highly diverse, including both junior and senior professionals, aged between 25 and 70 years, and coming from Australia, Bangladesh, Cambodia, France, Germany, India, Japan, Kazakhstan, Malaysia, Nepal, Pakistan, the Philippines, Thailand, Tuvalu and Vietnam. In the FLL-N, participants were divided into five diverse groups, balanced in terms of nationality, gender, age and field of work. Each group had an expert facilitator, familiar with FLL processes and techniques, who assisted conversations through the three phases: Phase 1: Imagining 2040; Phase 2: Describing the Future Differently; and Phase 3: New Questions and Perspectives about the Future (UNESCO, 2015b).

### "Thinking about forever"

UNESCO's teacher education programme on teaching and learning about sustainable futures defines thinking about forever as a commitment to the common good, "by thinking differently, considering things previously forgotten, broadening our perspectives, clarifying what we value, connecting with our neighbours,

and providing hope for future generations" (UNESCO, 2010). During the lead-up to the FLL-N and during the first phase of the Lab, participants shared their specific ways of articulating their commitments to these goals. The design of this FLL-N included an online preparatory component. Two weeks before the FLL-N in Bangkok all the participants were invited to engage with UNESCO's NESPAP Open Platform. This was a virtual space designed to enable the sharing and exchange of resources, experiences and expertise for all interested in education from across the Asia-Pacific region and beyond (UNESCO, 2017). The invitation to start expressing views about the future online was a way for participants to get acquainted with each other and with the issues as they took part in conversations about topics which ranged from presenting one's professional background to sharing one-word statements on the future of education. These initial exchanges were useful in determining similarities and differences in the group's anticipatory assumptions and helped with the design and implementation of the FLL-N in Bangkok.

The face-to-face part of the FLL-N spanned three days and was accompanied by a team making a video (UNESCO, 2015a) and a team of experienced FL facilitators. The basic learning-by-doing structure followed the three-phase approach: Phase 1: tacit to explicit regarding expectations and hopes; Phase 2: a locally customised reframing exercise; and Phase 3: new questions. The design included the novelty-reframing component meant to test the diversity of participants' anticipatory systems and took advantage of a strong team of break-out group facilitators able to adapt specific tools to context. The workshop report (UNESCO, 2015b) provides a highly detailed, step-by-step, group-by-group report of the FLL-N, including photos and a full agenda.

### Phase 1: Imagining 2040

In the first phase, participants were asked to imagine the world in the year 2040 by considering two different future scenarios: the probable future and the preferred future. When comparing participants' ideas on these two futures, striking similarities can be observed. All of them saw a world that is increasingly interconnected and globalised. In this context, the most consistent view about the two futures was the blurring boundary between formal and non-formal education. This referred to the assumptions that teaching and learning can take place anywhere, anytime, and that many forms of technological advancements in education – from the preponderance of using mobile and internet-based learning to highly advanced concepts of artificial intelligence, genetically modified learning and robot instructors – could narrow the capacity gaps between learners and teachers. The dynamics of learning is also constant in both futures as it moves from a highly structured, teacher-centred system to a more flexible, student-centred one where learning is seen as flexible and self-directed.

Plotting the imagined probable and preferred futures presented solutions and problems to potential issues in education, where for instance, an expected information overload and increase in knowledge products meant having greater access

to them in the preferred world. While it was expected that neoliberal influence in education will continue to thrive, visions of a preferred future also saw the coexistence of profit and social responsibility.

Aside from the shared and complementary features of the probable and preferred futures, there were contrasting features of each future. Imagining education in 2040 was easier when it was free from reality-checking. For one group, when they thought of an ideal world for education, they simply listed their aspirations and described situations they hoped would come true. Hence, the expected future presented more problems and concerns such as the dominance of Western thinking, financial constraints, slow education reforms, overpopulation, redundant development goals, etc. There was a difference between what is feasible and what is desirable, and what seemed feasible were the events that can be confirmed by the realities of the present.

*Phase 2: Describing the future differently*

Transitioning the discussion in Phase 2, the lead facilitator introduced the groups to an alternative frame that they could debate and discuss, a catalyst for their imaginations. For instance, this alternative frame invited them to question the relationship between school systems and learning. Motivated by the distinctive and challenging features of this alternative future, participants began the process of moving beyond the anticipatory assumptions underlying their probable and preferred tomorrows. This FLL-N design called for the use of a specific tool to encourage the group to use their collective intelligence to articulate a reframed future – they were asked to build three-dimensional sculptures – symbolic representations of non-formal learning in a radically different context.

A box of art supplies and stationery were given to each group. Using these materials, they created group exhibits by patching, assembling and decorating a shared object that collectively represented their ideas. One group, for example, made a 3D collage with three sections: probable, preferred and alternative futures. In each section, a CD disc representing the world was placed on top of a cup. The CDs were connected by a piece of thread, which represented the connectedness of the three future worlds. Images cut out from magazines that depicted various ideas and themes for each future scenario were added to the collage (for photos and detailed accounts see UNESCO, 2015b).

However, not all groups created a static object like a sculpture. Participants were given the liberty to be innovative and find the best ways to represent and present their imagined alternative futures. One group decided to illustrate their alternative future through a performance in which all the group members played roles. To characterise the connected and inclusive learning community that they had envisioned, the group surrounded themselves with straws that were put together and strung them around other members of the group. Each member also wore a crown with a symbol of a vocation to show that every vocation was valued in this future. A phrase that describes learning in this future was also

written on each crown, while objects that represented robots were created and placed on a table meant to be a field to illustrate that robots work and humans learn in this future.

*Phase 3: New questions and perspectives about the future*

Though the exhibits generated in Phase 2 made thoughts about sustainable learning futures more detailed and evocative, the process of rethinking how to 'use-the-future' did not culminate here. Phase 3 opened up further opportunities for review and reflection of the participants' anticipatory assumptions and the implications. By looking back at the past activities, Phase 3 was about generating new ideas, questions and policy options that might enable community-based learning and non-formal education to make a more powerful contribution to meeting the global challenges of today. The questions focused on the 'how-to' aspects.

Coming from the non-formal education sector, there were two questions common to all groups. The first question was about how to integrate formal, informal and non-formal learning approaches. This question considered the context of a changing educational landscape, where future technological advancements and the availability of learning resources allow teaching to happen whenever and wherever. The second question was about preparedness. For most participants it felt 'natural' at this stage in the process to wonder how communities and individuals might become more aware of both different futures and what is involved in thinking about the future. In addition, the group discussions gravitated towards value-based topics, questioning their previous ideas on how to humanise education, widen space for participation, provide more opportunities for learning, nurture talents and skills, and promote a culture of peace. By contrasting the futures they imagined in Phase 1 with those they imagined in Phase 2 participants started to see their present circumstances differently and began to explore alternative possibilities for now and tomorrow.

### Observations on the design and implementation of the Bangkok FLL-N learning process

FLL are action-learning processes that introduce participants to FL and to rethinking the nature and role of the future in decision-making. The Bangkok FLL-N was tailored to invite experienced non-formal education practitioners to play with the future and explore different ways of seeing and doing. Enabling this kind of collective intelligence knowledge creation processes calls for a range of approaches, in the joint design process leading up to the event, during the Lab and afterwards to analyse the results. Numerous choices were made along the way, including the decision to initiate online discussions prior to the event, the selection of the group sculpture and/or role-playing option for Phase 2 and, as discussed briefly below, the introduction of the 'layered analysis' heuristic that originates with the work of Sohail Inayatullah on the method of Causal Layered Analysis (Inayatullah, 1998). The power of CLA in this context is not so much with the causal dimensions of

the future but rather with the richness that emerges when participants deepen their descriptions of the imaginary futures they have invented together by using the CLA filters: litany, systems, worldview and myth.

*Layered analysis*

In each phase of the process Causal Layered Analysis (CLA) offered an analytical framework that assisted participants to add detail and understand the multi-dimensional nature of the pictures they were painting of imaginary tomorrows. First they discuss *litany*, or which aspects of the future they imagine can be captured by everyday phrases or the headlines of a newspaper. Participants identify those aspects of the future that are considered – in the future – to be obvious and commonplace. Next is the *systemic perspective*, where participants explain how the economy and political processes work in the imaginary future. Third is the protagonist or actor's *worldview* that fills in the picture from the point-of-view of the teacher or parent or politician or business person, etc. The last layer is the *myth/metaphor* that encapsulates the overarching message or 'flavour' of the future being described by the participants in this particular phase. Myths are associated with emotive and historical characteristics, like when people call Paris the 'city of lights' or New York the 'city that never sleeps'.

In keeping with the standard design for FLL-N the facilitators emphasised that the goal was to imagine snapshots of the future, not movies. Participants were asked to paint a picture of a specific point in time, in this case 2040, without worrying about how or why the future turned out this way. In Phase 1 the facilitators invited participants to close their eyes and imagine the future world. As they opened their eyes, the participants were then asked to recall images that came to mind as they were imagining the future. These images or ideas were used to fill up a table with the four layers of the CLA.

In both the probable and preferred futures, the ideas under litany (also called headline) were readily generated as this layer refers to commonplace aspects of the future. Forms of globalisation and technological advancement, and their impact and implications for education, were the most obvious outcomes that filled participants' observations of tomorrow. Next participants were asked to describe the systems – the perceptions of economic and political functioning in 2040. Working on these descriptions led participants to examine underlying structures and connections of an increasingly networked world and a much more open environment for learning. They described a wide range of systemic elements such as government policies, rule of law, business practices, climate change, education reforms, and behaviour change, among others (UNESCO, 2015b).

The next step went deeper by exploring the perspectives or ideologies of specific actors that embody or dominate their perceptions of phenomena in 2040. In imagining the probable future, the participants evoked worldviews that spoke to democratic, capitalist and neoliberal perspectives. Though the same belief systems were carried over in imagining the preferred future, it is worth noting that in this future, ideas of cooperation, interconnectedness and sustainable development

surfaced in many group responses. This may be the case because, as mentioned in the previous section, thinking about an ideal future is not constrained by reality checks and is inspired by the patterns of present discourse. In general and as expected, the probable future was problem-oriented, a projection of today's concerns, while the aspirational and optimistic although liberated from some of the constraints, stayed within the same currently topical concerns.

Lastly, in the final layer participants used myths/metaphors as a powerful way to summarise the descriptions offered in the three preceding layers. Overall the groups' one-liner summaries of expected futures were somewhat grim, even if the promises of technology and the massive need for learning tended to counter the worries about climate change and inequality. Desired futures elicited metaphors that were, in a general way, anchored in the networking and openness that are part of the promise of the Internet and globalisation.

Layered Analysis was also used in Phase 2 to assist the groups to reflect and describe reframed futures. As per the standard FLL-N design the focus in Phase 2 is not on probable or desirable futures to describe futures based on distinctive, alternative anticipatory assumptions. They engaged actively in thinking 'outside-the-box' and initiating re-examinations of their existing anticipatory assumptions for imagining the future. In this round of Layered Analysis participants were challenged to be creative, inventing new visions of the future based on different anticipatory assumptions. While they echoed the same ideas such as 'education innovation' and 'learning for all', there were new insights picking up on the potential for more significant change and imagining radically different ways of learning. This highlighted the role of broader learning systems with different structures of organisational power to address diversity and expand the 'ownership' of learning.

Compared to Phase 1, the efforts to think about reframed futures stretched the imagination of participants. One group for example named their alternative future as an 'infinite flying magical playground'. This idea was no longer labelled under myth/metaphor but in the litany layer – where what we readily see is a fun place, where all learners soar high, and enjoy free and infinite access to resources and opportunities to learn.

The results of Phases 1–2 then became cognitive maps which guided the groups to list new questions and perspectives about the future of non-formal education in Asia-Pacific.

### Other methods and styles of facilitation

In the plenary sessions the main facilitator was able to draw together the range and distinctiveness of the different anticipatory assumptions articulated through the group exercises. The highly experienced group facilitators, each with their own style and specific tools, were able to draw out a variety of perspectives, giving meaning to both shared and distinctive points-of-view, contexts and knowledge. The capacity of the facilitators to adapt to specific group dynamics meant that the

process took full advantage of the knowledge creation potential of collective intelligence. The use of the Layered Analysis tool throughout the process also helped to further deepen descriptions of future. As participants became more familiar with the Layered Analysis they were able to go even deeper and wider as they explored imaginary worlds.

Besides CLA, facilitators made use of other techniques to support the thinking process of their groups. For instance in Phase 2, one group opted for a flexible analytical framework, brainstorming independently of the facilitator. Participants decided to pick colours that best represented their idea of a reframed future. Many participants said that their idea of a reframed future was best symbolised by a 'rainbow of colours', no single colour can describe it. Next participants adopted a storytelling heuristic, starting their account of the future with the phrase: "Once upon a time in the future . . .". For this group this was the approach that worked, allowing them to think deeper and connect their ideas to a picture of an alternative future.

Similarly, another group made use of colour coding to organise their inputs from Phase 1. They called it a spiral rainbow, which was diagrammed in layers of colour-coded circles. Each colour represented the factors and attributes that relate to an individual learner. In this illustration, a line was drawn to signify the importance of dialogue and communal interaction. The use of colours also aided this group in making their exhibit and to describe the story behind its design and structure.

In Phase 3, a unique approach was used by one of the groups to help them categorise the questions they had developed. Through the INSPECT (Innovation, Natural, Social, Political, Economic/Environmental, Cultural, Technological) model, the group was able to synthesise and explain their questions to the plenary session.

### *Evaluating the learning process*

In the post-workshop evaluation survey, 20 out of 29 respondents said that the FLL changed the way they think about education and learning; four said that it did not, while five remarked that they had gained new ideas and deep insights but were not absolutely sure about whether the workshop did change their perspective on education and learning. Respondents whose way of thinking changed added that they appreciated the new ideas, the broadening of their perspectives and the enhancement of their understanding of how thinking about the future could be related to their field of work. Based on the comments of the nine respondents whose ways of thinking about education and learning did not change, they did learn something but this only validated their current views (UNESCO, 2015b).

For many of the participants, particularly those who gained new perspectives and posed new questions, the FLL-N contributed directly to the development of innovative action proposals related to non-formal education.

*A dynamic balance*

The participants in the FLL-N were all leaders in the field of community-based learning and non-formal education. They came to the process already having visions of what a sustainable future might be like. At the end of the workshop, these visions, which were changed, developed or affirmed in the three-phase exercises, had deep regard for a dynamic balance between cultural differences and the emerging global ethic of "interrelatedness and sanctity of life" (UNESCO, 2010). This dynamic balance was central in the learning process, and especially in the design of action agendas. The diversity in each group and their differing perspectives were opportunities for them to create universally appealing and highly workable projects. This could be observed in two complementary features of the project design.

First, the type of projects, as listed in Table 5.12.1, found strength in diversity and the idea of connecting units with different functions to work together toward a similar end. In Group 1, the feasibility of realising the virtual playground and virtual companion depended significantly on the cooperation of different stakeholders who could assist with its experimentation and implementation phases. Groups 2–5 proposed a learning hub or a network from which learning could be facilitated, and could provide space for knowledge exchange and the promotion of values. Group 3's Spiral Rainbow project, for example, envisioned that unity between suppliers and receivers of formal, informal and non-formal education programmes could only take place once a common ground – a space for dialogue – is established. This coincided with a more concrete plan proposed by project *Nantuapan* on creating hubs all over the Asia Pacific region that will provide intergenerational and transformative learning. An interesting aspect of this project is its name of local origin, indicating a unity in function amidst diversity in language and culture.

Second, the projects considered the principle that education for sustainable futures is founded on local actions in communities and their potential to extend outwards, through efforts based on shared understandings and changed outlooks. This is most visible in the design of Group 2's project, where collecting and disseminating ordinary stories about different ways of learning can educate adults on peace, compassion and sustainability. This could later extend to more families through learning hubs where reflection and learning between families take place. Similarly, the 'People's Lab' of Group 5 aims to connect community-based learning centres to different industries (for example, factories, universities, hospitals, media, etc.) to pool knowledge and information for the education and training of a community. The project invests in scalability, meaning it is expected to widen its reach – the more local, regional and national industries or stakeholders it connects with, the greater the educational value it will bring to many members of the community.

*Next steps – building a community of practice*

The experiences from this FLL-N, be it "Thinking about Forever", facilitating an action-oriented learning process, or seeking a dynamic balance as the governing

*Table 5.12.1* Action agendas developed by the five groups

| Group project | Description |
| --- | --- |
| Group 1: Virtual Companion and Virtual Playground | This project was inspired by the group's alternative future based on the idea that learning would be an 'infinite flying magical playground' where all children would be able to explore unlimited knowledge in a constantly available virtual playground. They would also have access to a virtual companion that would serve as a tutor/mentor, but not replace teachers or parents. The project will start with a research paper co-authored by the group members and will later seek support from governments, communities, institutions and companies for its the experimentation and implementation phases. |
| Group 2: Collection and dissemination of stories about different ways of learning | The project will collect and disseminate stories to convince adults to recognise and value different ways of learning, especially to promote peace, compassion and sustainability. In partnership with community learning centres, the project will provide learning support and resources for those who are inspired by the stories and create family learning hubs where reflection and learning between families take place. |
| Group 3: Rainbow Spiral Project | This project was based on the idea that dialogue and information exchange among communities is important in inspiring and empowering individuals to act and break the imaginary line between suppliers and receivers of formal, informal and non-formal education programmes. It is also necessary to create a space and promote dialogue between different groups such as youth, children and elders. |
| Group 4: *Nantuapan* | The project *Nantuapan*, named after a local word from the Murut ethnic group in Borneo which means "The Meeting", aims to create learning hubs all over the Asia Pacific region that will fuse formal, non-formal and informal learning systems. Through capacity building workshops and institutional partnerships, these hubs will provide intergenerational and transformative learning to create the group's vision of an ideal society. It will be built on the value of empowerment and initially target children and youth in the community. |
| Group 5: People's Lab | The "People's Lab" could take the form of a virtual learning space or a hub of learning, which would closely connect a CLC with the important sectors in society, and pool knowledge and information for the training and education of the community. The Lab could also function as a safe space for dialogue on social issues (e.g. women's rights), not necessarily through a fixed meeting venue, but through other concerned institutions actively connected to this multi-sectoral network. |

principle for learning that contributes to sustainable futures, all contributed to the development of a nascent community of practice. In a follow-up survey conducted by Social and Human Sciences Sector, UNESCO Bangkok in April

2016, it was learned that although none of the action agendas have been fully implemented, advancing the capacity to 'use-the-future' remained of interest to 21 respondents, with 20 actually having pursued activities which directly and/ or indirectly made use of their enhanced understanding of futures thinking as a result of the FLL-N.

About half of the respondents look to UNESCO to provide them with more opportunities to deepen their understanding of Futures Literacy and help build communities of practice. Prospects for further collaboration in this regard appear promising given that 70 per cent of them were able to engage their own communities in futures work. To develop and sustain a community of practice, the participants have stressed the importance of two methods: first is the creation of an association or centre dedicated to helping develop capacity around 'using-the-future'; and second is the organisation of special meetings to bring together practitioners and experts to share case studies and recent developments in research related to 'using-the-future'. This is closely followed by their choice of conducting dedicated training sessions before and/or after another FLL-N that they hope UNESCO will organise.

Another finding of the survey, one that relates closely to the discussion of Dynamic Balance, is that Futures Literacy needs to be deeply rooted in local communities. One way of doing this would be to conduct FLL-N workshops in the local native language and tailor the heuristics to the specific needs and expectations of the community. Because FLL-N workshops are designed to 'consider people's ability to think, imagine, analyse and articulate' it would be a good idea, according to one of the participants, to run these workshops at a local level. Indeed, the survey shows that around 60 per cent of the participants who work at the national level and some 24 per cent who work at the local level believe that building local communities of practice is highly feasible. These participants could open venues of interaction and help facilitate the integration of these communities at the regional and global level.

### Conclusion

Revisiting themes of education for sustainable futures in describing the activities and outcomes of the Bangkok FLL-N demonstrates the interdisciplinary role of futures thinking. This case study supports the view that enhancing participants' understanding of anticipation not only contributes to thinking about the future per se, but also plays a role in changing their framing of the present. Furthermore they grasped the potential that Futures Literacy might have for creating conditions conducive to learning and sustainable development. Participants displayed a different understanding of the unknown and unknowable. The Rethinking Education through Imagining Future Scenarios with Non-Formal Education Practitioners FLL-N was a conscious effort to actually 'use-the-future' in new ways.

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## Case 13: Water and urban renewal in North Africa

*Nisreen Lahham*

### Background

The Futures Studies Forum for Africa and the Middle East (FSF) is a non-profit organisation that brings together the Middle East and North Africa (MENA) regions with Sub Saharan Africa (SSA) by conducting futures studies, sharing knowledge, and exchanging experiences in relation to all aspects of development.

To fulfil the above mission, FSF focuses its research and networking efforts on North Africa as the common region between Sub Saharan Africa and the Middle East.[1] Believing in the role futures studies can play in transforming Africa's future, FSF aims to strengthen the capacity of all segments of North African society to use the future to help inform perceptions, alternatives and choices, to assist in understanding potential developments and to articulate and work towards desired futures.

### FSF – a Futures Literacy Lab champion

The adoption by FSF of an action-learning approach to 'using-the-future' for Africa was not the only motivation for seeking to collaborate with UNESCO. Developing foresight capacities in the MENA region – one of the core objectives of FSF – also led to the decision to work with UNESCO's innovative anticipatory systems and process approach, and take on the role of a local Futures Literacy Lab (FLL) champion.

In May 2015 FSF held its first 'One Africa Roundtable' in Amman, Jordan. The meeting aimed to facilitate knowledge and experience-sharing between experts and futurists from MENA and Sub Saharan Africa. The meeting discussed areas for cooperation between the two regions, based on the findings of two Bulletins (Futures Studies Forum for Africa and the Middle East 2015b, 2015c). In addition, it discussed the state and role of futures studies in transforming Africa's future.

At this meeting, UNESCO presented the design principles of the general purpose FLL, and FSF decided to apply this innovative approach in its next meeting that aimed to explore the findings of the next two bulletins.

In December 2015, the second 'One Africa Roundtable' meeting was held in Rabat, Morocco, jointly with the Royal Institute for Strategic Studies (IRES) in cooperation with the Foresight Unit at UNESCO and funded by the Rockefeller Foundation.

The main objectives of this meeting were:

- rethinking the systemic challenges and opportunities for sustainable approaches to water management and urban renewal in North Africa, through engaging participants with the content of the two monitoring bulletins produced by FSF: *Managing Water Scarcity in North Africa* (Futures Studies Forum for Africa and the Middle East, 2015b) and *Future of North Africa's Slums* (Futures Studies Forum for Africa and the Middle East, 2015a);
- facilitating knowledge and experience-sharing between experts and futurists from MENA and SSA;
- identifying cooperation areas between MENA region and SSA, based on thinking about the future as it relates to both water and urban slums in Africa;
- exploring the potential for joint projects among participating organisations such as FSF, IRES, UNESCO; and
- building the capacity to 'use-the-future' (Futures Literacy) through greater familiarity with diverse anticipatory systems and processes.

In order to achieve these objectives, the event was organised as a UNESCO MOST Futures Literacy School taking the standard Futures Literacy Laboratory-Novelty design as the starting point for co-creating the process and its implementation.

The FLL-N engaged the collective intelligence of participants through discussions and brainstorming, with a strong emphasis on learning-by-doing. FSF believed that a conversation about the future could create a space to build the common ground that enables different stakeholders from the MENA and SSA regions to meet and find areas for collaboration and a more sustainable development model for water management and urban renewal.

Workshop participants were selected on the basis of their knowledge of the subjects as a whole, and their geographic representation covering North Africa, SSA and the Middle East. The workshop had 25 participants from Morocco, Egypt, Senegal, Cote d'Ivoire, Cape Verde, Mali, Sudan, Tunisia, Ghana, South Africa, Canada, the UAE and Jordan. They represented a broad cross-section of stakeholders including policy makers, leaders from the business community, civil

society, academic institutions and universities, and representatives from national and international organisations.

### *Futures Literacy Lab-Novelty – the three phases*

The design of the FLL-N targeted the development of greater awareness of the anticipatory assumptions underlying the futures that people imagine and starting the learning process related to Futures Literacy. FSF collaborated with UNESCO and facilitators drawn from the community of practice emerging around the Futures Literacy Laboratories to design and implement this FLL-N.

The FLL-N opened with a discussion of the objectives of the workshop as a way to invite a diverse group of participants to start building a shared discourse around their different ways of thinking about the future. This was followed by the standard three phases of the FLL-N action-learning process. Participants were divided into four groups, with an experienced facilitator to moderate each group. These groups worked through three FLL phases with plenary feedback and discussion after each phase.

#### *Phase 1: Reveal expectations and normative visions*

Phase 1 focused on revealing anticipatory assumptions by asking participants to discuss their expectations and hopes for water and slums. This exercise helped to turn tacit knowledge into explicit knowledge. The participants were asked to describe the attributes of water, in all its dimensions, and low-income neighbourhoods in 2045. Expectations in this part were supposed to be 'realistic'. Then the participants were asked: What would you consider to be a desirable state for water and slums in 2045? This part was about hopes and participants were urged to be imaginative in describing the values underpinning what is 'good' in 2045.

Each group was then asked to present its results to a plenary session. During presentations participants were invited to be open and trusting, because the purpose was to provide an open space to express fears, hopes and expectations as an important phase of a learning process. Some of the ideas on the expectations and hopes for water and slums are shown in Table 5.13.1.

At the end of the presentations participants provided their general comments and ideas on the results of the exercise.

#### *Phase 2: Rigorous imagination and reframing*

In this phase an attempt was made to spark some 'rigorous imagining' by inviting participants to leave behind probable and desirable futures in order to experiment with a discontinuous framework.

Consistent with the FLL-N design principles it was not suggested that this alternative future was likely to happen or was even desirable. The point of the exercise was to experience the power of anticipatory assumptions in shaping the futures we imagine and the potential to address the creative challenge of inventing paradigmatically different futures. This was the steep part of the learning curve – the reframing phase.

*Table 5.13.1* Expectations and hopes for water and slums

|  | Expectations | Hopes |
| --- | --- | --- |
| **Water** | Migration from water-scarce areas to water-rich areas. | A green revolution in Africa. |
|  | Drought will increase and will disturb demographics and cause conflicts. | Setting up a global structure for free of charge access to water. |
|  | Transporting water from rich water areas to poor water areas. | Technological progress to address water issues. |
|  | Technological advancement and large scale renewable energy will be used. | Reusing waste water in agriculture. |
| **Slums** | Slums would become autonomous and uncontrollable by authorities. | More smart cities. |
|  | Slum dwellers will be able to employ technologies to better organise themselves making slums more autonomous. | Reversed migration flows and circular flows. |
|  | Private sector will lead housing market. | End of macro civilisation of management of large cities. |
|  |  | Development of cities, transforming informal settlements into productive segments of society. |

For this purpose, Riel Miller introduced an adapted version of the Learning Intensive Society (LIS) scenario (Miller, 2006) as a catalyst or playground for Phase 2 discussions. He stressed that the idea is to play with the assumptions we use to imagine the future. The LIS is a world where formal/informal has been transcended and the relationship to resources is endogenous to quality of life. As per the standard FLL-N design the primary task in this phase was to use the analytical model of the LIS to challenge participants to invent different social, economic, political, organisational, behavioural, etc. contexts. The goal being to describe in as much operational and 'day-in-the-life' detail what it is like to live in this Learning Intensive Society of 2045. Participants were asked to deepen their picture of the LIS using a four-layer Causal Layered Analysis (Inayatullah, 1998) framework:

1    Headlines – what do people talk about at the café?
2    Systems – what are the words for the economic or social system?
3    Point of view – how do different stakeholders describe the world around them?
4    Myth/Metaphor – what is the overarching nature/purpose/character of the society?

The final question helps participants to articulate their imagined futures through a powerful vision statement, revealing the metaphors and myths that underpin those futures. On this basis the groups were then asked to build 3D models or sculptures that would provide a symbolic representation of 2045 built upon the LIS anticipatory work. They were asked to provide a detailed description of water and slums in 2045. Participants were invited to connect deeply with their imagined vision.

This exercise represents an important step in building Futures Literacy as a capacity. It helped to make the point that it often seems easy to reconstruct the past but challenging to construct futures and imagine scenarios of change. Participants come to see the role of their anticipatory assumptions in what people see and do. Using the LIS as a model for thinking about water and slums in 2045, the groups were able to begin working with a different set of framework conditions – social, economic and cultural. They were able to illustrate – as a snapshot – how water management and slums looked given an alternative set of boundaries and conditions. The scenarios created by the four groups are described below.

GROUP 1 SCENARIO

*Global nomadism in combination with local neighbourhoods and communities*, where the local identity is important but what will change is the prime marker of those identities. Glocalisation will be dominant. With the disappearance of the Weberian state there will be more localised power leaders at the community level. Leaders could have symbolic power due to knowledge or religion or any other factor but will differ from one community to the other. The leader will be close to the identity marker.

The economic framework will be one in which knowledge will be gained on a non-institutional basis (de-institutionalising knowledge) with radical implications for all other economic and social systems. The economic system will no longer be based on demand and supply but on community 'do it yourself' systems, a model that will change patterns of production. This alters what happens with food and water and dwellings.

Dwellings under this scenario are either transient or temporal with the possibility of moving homes around the globe, or moving to host homes, or to printable biodegradable houses. The city is a 'plug-in' city. Nutrition is very different with either a return to hunting food or taking food tablets/injections or other modes not yet imaginable.

GROUP 2 SCENARIO

*Emergence of United States of Africa, leading to an African identity fostering autonomy and common policies.* The Sahara perceived as an ocean will turn into a link between SSA and North Africa. Africans will set up several learning communities acting in a smart manner with an African agenda. Technology will be intensively used to gain better command of water resources and agricultural development. This promotes a diversity of agricultural value chains. People talk

about cities, not slums. Concepts involved: identity, a common Saharan space, a Pan African learning network through the use of technology,

*AfriMer(e) (AfriWater)* where water shapes the future of Africa. The use of water determines all activities, with optimal use of available technology. An African Water Council engages in water resources research, with the sea as a central element. In the second scenario *AfriTerra (AfriLand),* the society is the opposite of that of AfriMer, with a maximum exploitation of land, with mobility of African populations, suppression of borders, successful monetary integration leading to Africa becoming a global power. People are very well endowed with knowledge, generated by an indigenous model of knowledge creation and use that rests on an Afro-Maghreb identity – this also serves as a melting pot for the East and West.

Chinese company opens sun capsule factory in Angola: IRES (Royal Institute of Strategic Studies of Morocco) innovation celebrated. The myth or metaphor is 'Atom the Head of Gods, God of the Poor'. This is a sun economy in a corporate and hyper globalised world, where the human worker is focused on innovation and robots undertake manual work. Families are small and individualistic, with increasing reliance on robots. Women rule; they occupy positions of power and leadership, with leadership expressed mostly at the community level, through a return to elected community heads.

## Phase 3: Using the future

The third phase focused on the questions that arose from the contrast between the reframed scenarios participants developed in Phase 2 and the futures described in Phase 1. During this phase, participants started to explore the implications for the present of alternative and even discontinuous scenarios of the future. The innovative ideas that emerged motivated the participants to realise the array and diversity of possibilities in the present.

   The aim of the process was to get people to ask new questions, not to come up with a blueprint for the future. Riel Miller discussed how to think about change and continuity, by asking questions such as:

- How can we change the way we think of change? We can think of change within the system, and think of change outside the system, and understanding better how to set the menu then choose the components from the menu.
- How do we know what we do not know? What we see and do in the present depends heavily on what we imagine in the future.

- How can we use the future to discover the present? To grasp novelty, emergence, and systemic boundaries.
- How can we detect human anticipatory information? FLL-Ns can serve as microscopes of the 21st century.

### Conclusions: the journey is more important than the destination

The goal of foresight exercises is usually to set an agenda or develop a plan. Foresight sets a goal and planning tries to implement the steps needed to get there. Often enough there is a sense that the ends justify the means. In this exercise, the means are the ends, since discovery through learning-by-doing is the point. Learning how to think 'outside-the-box' involves knowing what the box is and how to construct it and many others. Thinking about the future as an extrapolation of what has happened in the past is still one way of setting out a menu of choices. But reframing and Futures Literacy, developing a capacity to change the way we 'use-the-future', enables people to invent new items to choose from the menu of action or even to throw away that menu.

Most of today's foresight initiatives explore the possibility of different futures in order to consider the opportunities to shape the future, working with the assumption that today's decisions form and create the societies of tomorrow. FLL-N can expand the terrain of opportunities by enlarging what is imagined beyond what is currently considered probable or desirable. In this way the FLL-N process is useful for policy development meant to address different societal challenges, and also to raise awareness and create consensus around innovative ways to enlarge the opportunities and appreciate the nature of new developments. It contributes actively to improving anticipatory intelligence and an increased awareness of knowledge resources and strategic orientations for the actors who participated in the FLL-N.

The anticipatory assumptions of the participants changed during the FLL-N. The inputs provided by participants in the second phase provided new elements necessary to ask new questions and to develop new insights in the third stage. Participants expressed their ability to use the future in a more self-aware fashion and mentioned that they understood that the future can be used in different ways.

There were several challenges in designing and implementing this FLL-N. Some of the challenges arose because of the specific characteristics of the participants in this FLL-N and the topics selected for the process. FSF collaborated with UNESCO and the facilitators to assess what would be the best language, terminology and heuristics for inviting the participants to think about how the future is used, how to embrace a more open and pluralistic approach to 'using-the-future', how to use their imaginations creatively, and to understand that their expectations and vocabulary for using the future are caught up with probability. The experiences of this FLL-N showed that participants' visions of the future are largely based on a continuation of the past and present into the future and that it is hard to escape this way of thinking. They tended to focus on what they know in

terms of already prominent aspects of issues around water and slums. Moreover, specifying and agreeing on the scenarios was a challenge, since it requires capturing the diversity of participants' interests and backgrounds.

The challenge is to continue implementing future tools such as FLL, to continue using the future to understand the present, creating new opportunities for Africans to act in ways that are consistent with their values and hopes. This tool can inspire experts from SSA and MENA region to work together to continuously re-imagine the future, not as a place where we are going to be but as a place where we are living today.

The results of this FLL-N were presented to the Council of Futures Studies and Risk Management at the Academy of Scientific Research and Technology on 19 March 2017, at the first conference of this Council, which aimed to disseminate Futures Studies methodologies to other scientific councils.

### Note

1  In 2015 the Rockefeller Foundation supported the Futures Studies Forum for Africa and the Middle East to produce four quarterly bulletins scanning future possibilities in North Africa, as well as to conduct two meetings titled *One Africa* to exchange knowledge and experiences.

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## Case 14: Youth leadership and the use of the future

*Ace Victor Franco Aceron and Shermon Cruz*

Youth programmes often offer avenues for young people to channel their vigour and, in certain cases, learn to appreciate the nature of their aspirations for the future. One approach to designing such programmes is to attempt to create an empowering environment that helps young people to explore social innovation

and imagine what it might be like to be agents of change. This was the challenge taken up by the MVP Future Thought Leaders Summit, an annual youth event, in honour of Philippine businessman and philanthropist Manuel V. Pangilinan (MVP). The group organising the event, the First Pacific Leadership Academy, turned to UNESCO Bangkok to work with them in designing parts of the Summit. This joint effort was inspired by the widening space for youth action in the Philippines and aimed to reach out to passionate young leaders from different provinces in the country. The overriding goal was to provide participants in the process with the opportunity to enhance their knowledge; practise their leadership skills; and collaborate with equally enthusiastic individuals in seminar-workshops and team-building activities.

The Summit organisers decided to introduce thinking about the future as one of the means to achieve their goals. This provided an opening for a collaborative implementation of UNESCO's Futures Literacy Laboratory-Novelty (FLL-N) that aligned directly with the overarching objective of equipping young leaders with the exemplary practices of thought leadership (Kouzes and Posner, 2014). The purpose of this case study is to discuss this specifically customised FLL-N design and present the process, results and achievement. This brief summary concludes with the recommendation to continue similar efforts that use the future to effectively and efficiently leverage the vitality of young people in ways that advance their desire to learn (UNESCO Bangkok, 2016).

### *Participating young leaders*

Over 100 senior high school students who had demonstrated leadership excellence in their schools were chosen to participate in the Summit. These included not only academic achievers but also student leaders in arts, sports and journalism. Coming from eight Philippine provinces including Bataan, Batangas, Bicol, Cagayan de Oro, Caloocan, Pangansinan, Rizal and Tarlac, the participants were proud representatives of their communities. They were eager to share the experiences of their community. They displayed a strong desire to contribute to their communities using what they learned at the Summit.

The diversity of participants and enthusiasm of the youth were instrumental in meeting the Summit's overall objective to equip young leaders with the exemplary practices of thought leadership. The background of the participants also played a key role in the design and implementation of the FLL-N. The richness of diverse perspectives, interests and experiences allowed for a more active exchange of ideas. This was ensured by conducting a pre-workshop survey a day before the FLL-N which helped determine the background of participants and their prior knowledge of why and how they 'use-the-future'.

A total of 46 male and 52 female respondents, between 13 and 18 years old, took the survey. Sixty per cent of them consider themselves to be leaders who are 'creative entrepreneurs', meaning leaders who create their own 'greatness', while 40 per cent see themselves as 'reactive adapters', those who believe that greatness is thrust upon leaders. The survey also found that most participants envision their future jobs as being doctors, lawyers, broadcasters and engineers.

## *Putting the FLL design to work*

The FLL-N was designed to broaden the perspective of the participating youth on how to imagine future scenarios, find alternative solutions and create impact in their own communities. This included exercises on harnessing the power of imagination, creativity, goal-setting and teamwork. Specifically, the lab designers crafted a process involving the three standard phases of FLL, which were complemented with introductory lectures and plenary discussions. As usual the design of the FLL-N followed a collaborative process that tailored each phase to the experiences and expectations of the participants, as well as the organisers of the Summit and the local socio-political conjuncture. As a result, the heuristics for each phase were chosen with the aim of connecting with a school age group, filled with hopes for leadership, in a context that reflected Philippine culture, values and current events. The process was carefully customised in ways that it was hoped would be effective at moving expectations and hopes from tacit to explicit in Phase 1, inducing a reframing experience of leadership in Phase 2, and generating new questions in Phase 3.

Given these considerations the FLL-N design was customised as follows: Phase 1 was divided into two parts. In the first part participants played The Thing from the Future, an imagination game that challenges players to collaboratively and competitively describe objects from a range of probable and hoped-for futures. This was followed by a second Phase 1 activity that enabled the participants to be more explicit about their preconceived notions of leadership using the Futures Triangle process (Inayatullah, 2008). Phases 2 and 3 were brought together in an exercise that called for reframing and rethinking assumptions about leadership by materialising their ideas in a group sculpture depicting a day in the life of a leader in a different future. Overall the process followed the action-learning curve approach of the standard FLL-N design, but with considerably more time devoted to the Phase 1 goal of making anticipatory assumptions explicit because it was believed that such an exercise for this particular group required indirect and playful techniques. As a result, Phases 2 and 3 needed to be compressed so the selected design integrates the reframing and questioning by setting up a collective deconstruction/reconstruction process, using 3D sculptures, around the participants' conceptualisation of leadership.

### *Phase 1, Step 1: Playing with assumptions*

Phase 1 was a fun starter for the FLL-N as it introduced the Situation Lab's The Thing from the Future (Situation Lab, 2017). The game engaged participants with their anticipatory assumptions by coming up with the most entertaining and thought-provoking descriptions of hypothetical objects from different near-, medium-, and long-term futures.

In this phase, 10 groups were given a deck of 108 cards, together with a supply of note pads and pens for each player. The card deck is divided into four 'suits', just like in a deck of playing cards; the four suits are: Arc, Terrain, Object, and Mood (see Table 5.14.1). These four suits served as the parameters or constraints

for imagining a thing from the future. The rules for playing the game were adapted to the context of the Summit. At each of the 10 tables, participants were divided into teams of two, with triads for tables with an odd number of participants. Each team (five per table) had to compete with other pairs at their table by generating the most disruptive and thought-provoking object. In a span of 10 minutes per round, the teams had to write or draw their imagined object on a notepad and explain it to their table, after which all players at the table were given time to decide on which team's object won the round, based on the given criteria. The winning team then received coloured stickers to mark their victory in a particular round, and the team with the most coloured stickers at the end were deemed winners of the game.

At the end of the game, the groups were asked to review all their objects and nominate one object that they believed to be the best of all. They could nominate one from their list of winning objects, or any of the imagined objects that they believe could compete with the other groups. Their nominations were then to be judged by a panel composed of members of the event secretariat.

The selection process for the nominations used the same criteria of disruptive thinking or thought provoking 'things'. The panel found it difficult to narrow down the finalists so they took the following steps. First, they eliminated objects which already exist or have appeared in science fiction. Second, the objects were reviewed based on how effectively they were generated according to the four types of cards. Third, the presentation skills of the participants in the plenary session had a bearing since this showed how well students were able to articulate and promote their visions.

*Table 5.14.1* Four types of cards in The Thing from the Future (see Chapter 6)

ARC CARDS
ARC cards broadly describe different kinds of possible futures. These cards contain two kinds of information. The main (top) text of each Arc card specifies one of four generic images of alternative futures for players to imagine: Grow, Collapse, Discipline, or Transform.

- **Grow** is a kind of future in which everything and everyone keeps climbing: population, production, consumption. . .
- **Collapse** is a kind of future in which life as we know it has fallen – or is falling – apart.
- **Discipline** is a kind of future in which things are carefully managed by concerted coordination, perhaps top-down or perhaps collaboratively.
- **Transform** is a kind of future in which a profound historical transition has occurred, whether spiritual or technological in nature.

| TERRAIN CARDS | OBJECT CARDS | MOOD CARDS |
|---|---|---|
| Terrain cards describe contexts, places, and topic areas. Two terrains appear on each card in order to provide richer possibilities for the deck. | Object cards describe the basic form of the thing from the future. | Mood cards describe emotions that the thing from the future might evoke in an observer from the present. |

In the card game, the creative and problem-solving aspect of futures thinking was evident. It could be observed that when students think about the future collectively, critical and creative thinking skills are at work. In nominating their best objects for instance, sharing imaginative insights with the group sparked criticism and invited debate. Teamwork was important. Thinking as a team allowed them to learn to accept opposing views and find ways to compromise. In doing so, they had to be both creative and strategic in choosing a winning object.

For these young people, the future – whether growing, collapsing or transforming – will continue to present challenges that require creative and practical solutions. The facilitators observed that the assumptions about the future revealed by playing the card game were infused with a sense of fear and insecurity. For the students, all the objects from the future must be functional and needs-based. Although the participants were given explicit prompts by the Mood and Terrain cards, their underlying anticipatory assumptions were very powerful, pushing them to find objects that address preconceived problems in the future such as the spread of disease, lack of space, loss of morality, and less family time. These reflected a future that they extrapolated on the basis of what they know about the present and the past. Anticipatory assumptions were made more explicit but, as expected from Phase 1, there was little exploration of more creative non-linear futures.

*Phase 1, Step 2: Mapping leadership*

Phase 1, Step 2 of the FLL-N began with asking the participants to define exemplary leadership based on their understanding of the term in the present. The session found that their typical understanding of the term pertained to a leader who is a role model, a good follower and a communicator. They often described an exemplary leader as someone with the qualities of being generous, responsible, willing, friendly, passionate, caring and inspiring.

After having consolidated their group's ideas, the participants were introduced to the Futures Triangle – an organising device or method to help them map and deepen their understanding of exemplary leadership. The Triangle was instrumental in Phase 2 because it invited participants to reframe exemplary leadership. The participants' ideas, images and stories about a plausible future of leadership were organised and created under the three dimensions of the Futures Triangle. First is the push of the present. This categorises trends and drivers that push us toward a particular future. Second is the pull of the future or the compelling images of future that draw us closer to it. And third is the weight of the future, which relates to barriers to change or simply the factors that hold us back and get in our way.

In this process, there were often lengthy discussions about ideas that the participants found difficult to categorise into push or pull or weight of history. Some could even belong to more than one category. For example, the leadership quality of 'obsession with achievement' may push or pull us to the envisioned future, and at the same time it could hold us back.

Based on this Triangle, the most common image of an exemplary leader was a passionate servant-leader who acts as a role model and driver of change. This leader was described as a person who could communicate effectively in order to inspire and command others to follow. This quality of leadership was seen as a pull of the future. What pushes a future society to achieve this kind of leadership was the presence of family and good relationships. A leader has to be equipped with the right education and leadership values, for example, selflessness, responsibility, respect. Most students believed that greed, incompetence, low self-esteem and false limiting beliefs were the weight of history or the major hurdles to achieving their envisioned future of leadership.

Guided by their facilitators, the last step of this activity was for participants to use the ideas under each dimension to create the plausible future of exemplary leadership. The word 'leadership' was put inside the triangle to represent the future which they had to develop through their collective ideas.

### Hybrid Phase 2/3: Using reframing to materialise new contexts and conceptions of leadership

Having identified the elements that make up leadership on the basis of their Futures Triangle, along with a list of assumptions about exemplary leadership, the participants were asked to reflect on any disruptive assumptions about the future from the very first activity – starting from the winning objects – and how those aspects of the imaginary future might influence the nature of leadership in 2040 or 2050. Using all the data and information they produced, the primary goal of this hybrid Phase 2/3 was to help participants reframe their ideas by identifying one or two new aspects of leadership in the future. While some groups started from scratch, most of them came up with new aspects of leadership by using the results of the Futures Triangle, which provided them with a basis for critical thinking about what it means to be a leader.

In the last activity the hybrid Phase 2/3 directed participants to create a sculpture that would concretise their visions and ideas about daily life in a future they had reframed by distancing themselves from what they had discerned in Phase 1. Through the sculptures, the participants were able to integrate many of the new ideas and perspectives generated across all the different activities they engaged in throughout the Summit. The sculptures expressed the group's ideas because the participants were guided by design principles that called on them to create the sculpture in an open and collaborative fashion. Some groups were more effective than others at incorporating their deconstructed or reframed descriptions of leadership in the future into their sculpture. Others built their sculptures using the more radical ideas that had been generated by playing The Thing from the Future in Step 1 of Phase 1.

Most of the sculptures provided tangible manifestations of the participants' altered perceptions of what it might mean to be a leader in the future. Building and then describing the sculptures also allowed the participating Filipino youth

to make visible the centrality of family, ethics, moral precepts, spirituality and strength of character. An 'awakened conscience' could also be further attributed to their sculptures as all these reflected leadership qualities of being sensitive, caring, inclusive, magnanimous, reflective, decisive and courageous.

### Evaluating the FLL-N

According to the FLL-N post-evaluation survey, 98 out of the 102 respondents replied "yes" when asked if their understanding of leadership changed as a result of the workshop, and 97 of them affirmed that the FLL-N sessions changed their expectations of leadership. The survey also asked about what actions the participants are going to take after the workshop. All of them responded with enthusiasm and broadly stated their will to serve their communities and make a difference. Specific actions such as organising a leadership workshop were mentioned by students who are officers in their school organisations. They plan to introduce futures thinking in their club activities.

The students' understanding of the future also expanded. This could be observed in statements like "I want to be a futurist leader" which implies their recognition of knowing how to use the future (Futures Literacy) as a quality of a leader, not just a term which refers to what might happen. However, when asked if there is one ideal future, 60 per cent of the participants said yes. This underscores how difficult it is to achieve one of the main goals of Futures Literacy: to enhance the capacity to invent and consider a range of imaginary futures as a way to both diversify planning and better appreciate complex emergence in the present. The students' belief or yearning for one ideal future merits further exploration and could be used as an indicator for the success of different designs of the Futures Literacy Learning process.

### Conclusion

Foresight and anticipation as a tool for leadership development were new to the participating student leaders. The freshness of the approach may have inspired enthusiasm and great interest from the participants, as can be concluded from their active performance and positive feedback. But it also stimulated the accompanying school coordinators to learn more about Futures Literacy and consider how they might 'use-the-future' in new ways in classroom teaching and education. Volunteer facilitators from the academy likewise found value in FLL-N, and felt that they could improve on the logistics and commit to a more in-depth train-the-trainer session for subsequent FLLs. Suggestions included preparing guidelines on how to determine if the objectives of each phase are achieved, and training on "effective facilitation through the art of questioning".

A major achievement of the Summit was its effort to include young leaders from cities outside Metro Manila, especially those who are less exposed to new ideas and forms of international collaboration. This custom designed FLL-N had a direct impact on the participants by enlarging their understanding of why and

how to 'use-the-future' and illustrating the value of action-learning. From the early co-design phase through implementation, the FLL-N proved its relevance to changing perceptions and actions.

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