

Seeds for growing Futures Literacy in Net-Zero Emissions Maritime Hubs Deep Demonstration

An analysis of the Futures Literacy Lab on
Negative Emissions Maritime Hubs 2050,
held 24-25 October 2019 in Turku, Finland.

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An Action Research Probe by the Futures Literacy across the Deep (FLxDeep) consortium



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**Futures Literacy Lab for the Net-Zero Emissions Maritime Hubs Deep Demonstration
24 & 25 October 2019, Auriga Business Centre, Turku, Finland (FLL Turku)**



Introduction

The Futures Literacy Lab held in October 2019 (FLL Turku) explored the topic of negative emission maritime hubs in year 2050. Its aim was to explore how the capability called *futures literacy* can help people who are innovating for systems transformation.

This report is intended to start a conversation with the challenge owners, design partners, and EIT Climate KIC staff who participated in FLL Turku. It also aims to help those participants discuss what they learned about futures literacy at FLL Turku with their co-workers.

This report is presented as a starting point for co-creating practical approaches for learning and applying the capability called futures literacy in daily innovation work. The point of this report is not to freeze the learnings from FLL Turku, but rather to activate the participants in creating their own dynamic experiments in learning and applying *futures literacy* in their own workplaces.

This report starts with a short introduction to futures literacy and the design of a Futures Literacy Lab. It then showcases insights gleaned from a close analysis of the FLL Turku transcripts, presenting these findings in two sections: Insight Narratives, and Next Steps. It concludes with a Call to Co-Create Futures Literacy tools and practices for your organization.

Futures

Futures are ideas of what could happen later than now. Futures are in your mind, and in other people's minds. They can be shared and discussed. Futures drive what you perceive, what you think is possible or impossible, and what you ultimately do.

**Futures
Literacy**

***The capability to
diversify how and
why we use futures.***

Futures Literacy

In daily life, futures appear in our minds and are used without much additional thought. A common mode of using futures is to conjure a probable future and then plan for it. Another common mode is to think of a desirable future, then try to make it happen.

However, there are more modes of using futures than to plan for the probable or make desirable things happen. There is an entirely separate category called 'using futures for emergence' -- which refers to noticing the novelty in our world and attempting to make sense of it and what it reveals about transformation.

To become skilled at diversifying how and why we use futures, we must first become aware of how futures are active in our lives. We then need to question the assumptions upon which these futures are built. When we are futures literate, we are capable of consciously switching modes of using futures for different purposes. Doing so widens our perception which helps us innovate.

Metaphor for Futures Literacy— Walking on Two Legs

When talking about how Futures Literacy fits in with our usual ways of working, we often make use of the metaphor of **walking on two legs**.

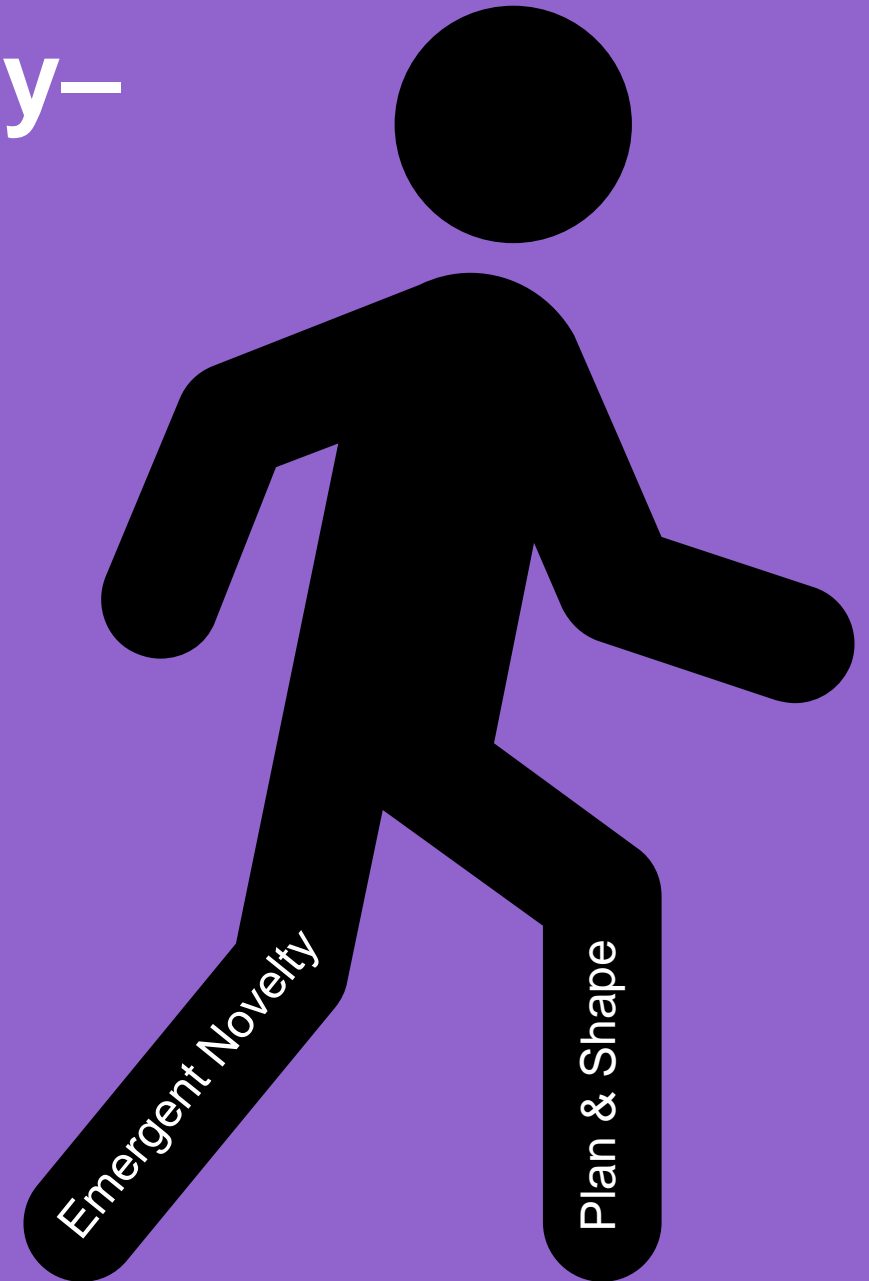
One leg represents our efforts to *plan for and shape the future*. The other leg represents *sensing and making sense of emergent novelty*.

When we are hopping along on the 'planning/shaping' leg, emergent novelty is often seen as a complication, a surprising change that puts “a spanner in the works”, an unwelcome shock that gives rise to wicked problems. When we are hopping along only using the 'sensing and making

sense of emergent novelty' leg, plans and visions limit our view of the rich wonder of our transforming world.

It is not that one leg is better than the other leg. This metaphor is a reminder that we can go further when we remember to use both modes of using futures together in a coordinated, agile way.

Being Futures Literate is the ability to walk on both legs while taking decisions in the present. It is about being open to seeing the new things popping out from our complex world and looking for opportunities to try something new in the present.



Phase 1 REVEAL

Participants share their ideas about the future of the topic of the lab in terms of probable and desirable futures. Hopes and sure bets. They dig into the assumptions underlying their ideas.

Phase 2 REFRAME

Participants are given a set of unfamiliar assumptions about the future and are asked to a future of the topic based upon them. The process requires making sense of novelty.

Phase 3 REFLECT

Participants take time to compare their experiences of using futures in different ways between Phase 1 and Phase 2.

Phase 4 NEXT STEPS

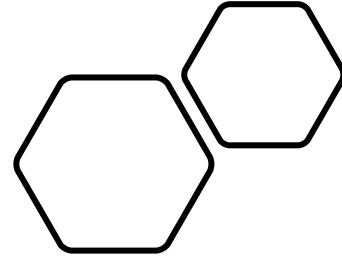
Participants discuss practical uses for Futures Literacy in their organization's innovation activities.

Futures Literacy Lab Design

The Futures Literacy Lab has been developed by the UNESCO Futures Literacy project and Global Futures Literacy Network as an experiential approach to introducing people to the capability of futures literacy. The topic of the lab is selected based on what would be meaningful to the participants. The fourth phase can be customized to produce an output relevant to the participants needs.



Systems Innovation and Futures Literacy



Futures literacy as a capability, Futures Literacy Labs, and other futures literacy processes yet to be created are of a cross-cutting nature to all six characteristics of system innovation.

Characteristics of System Innovation vis a vis Futures Literacy

Characteristics 1-3

Systems Innovation

Futures Literacy

<p>System innovation focuses on socio-technical innovation. The broader system and processes (technological, organization and social processes) should be adapted, transformed and aligned.</p>	<p>Futures Literacy (FL) can forge a culture of experimentation, openness and dialogue conducive towards the adaptation, transformation and alignment of innovation efforts.</p>
<p>System innovation involves multi actors / cross-sector networks aiming at breaking institutional and sector boundaries and silos.</p>	<p>Futures Literacy Labs (FLLs) provide a space for meaningful exchanges and dialogue. Futures are an open space for rapprochement, where shared meanings can be negotiated, and mutual understanding can be built.</p>
<p>System innovation pays attention to cross-society dynamics.</p>	<p>Futures methods and tools used in the context of FLLs are of significant value for qualitative rigorous analysis of system dynamics, while FLLs catalyze community activation and foster continuous engagement.</p>

Characteristics of System Innovation vis a vis Futures Literacy

Characteristics 4-6

Systems Innovation

Futures Literacy

<p>System innovation has a long-term orientation with short-term action.</p>	<p>Futures Literacy allows for the necessary re-evaluation of long-term plans with a view to capturing emergence and continuous change. One important challenge in the context of system innovation is to avoid the colonization of the future based on today's ideas. Leaving space for the future generations to come up with their own futures images, visions and aspirations is vital.</p>
<p>In system innovation there is a permanent need to monitor, reflect and adapt.</p>	<p>Futures Literacy addresses the need for monitoring, reflection and adaptation, allowing the revealing, reframing and rethinking of anticipatory assumptions* underpinning transformation efforts.</p>
<p>System innovation draws on existing and the development of new skills/competences among individuals to support the endeavor.</p>	<p>Futures Literacy is a capability/skill that can be nurtured and learned. FL connects and encompasses both the so-called anticipation for the future and the anticipation for emergence. The former refers mainly to preparation and planning while the latter refers to experimentation through the simulation of emergence, discovery and novelty.</p>

* Anticipatory Assumptions are the assumptions underlying an imagined future.

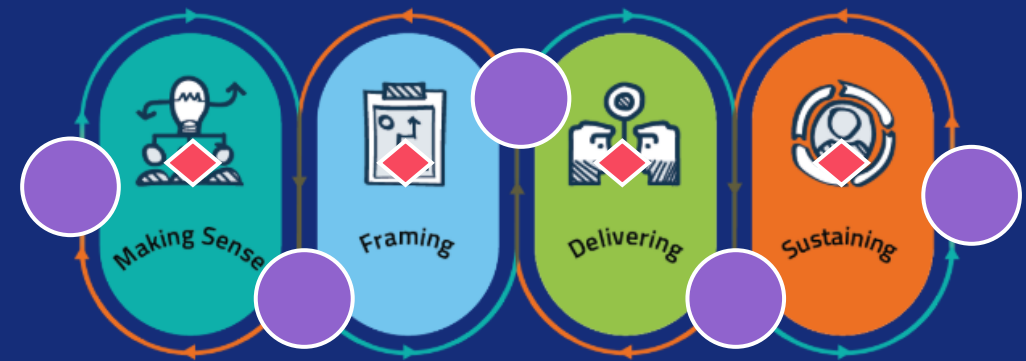
Integrating Futures Literacy in systems innovation process

Futures Literacy interventions such as futures literacy cognitive trainings and futures literacy labs can reinforce the “loopy nature” of system innovation process, allowing the revision and rethinking of the analyses of the previous phases.

The process

The process has four key steps. Each of these has a number of tools, some of which can be applied over more than one step because of the 'loopy' nature of the process. At any point it might be useful to revisit previous steps to check that the analyses are still meaningful.

Select each step to find out more.

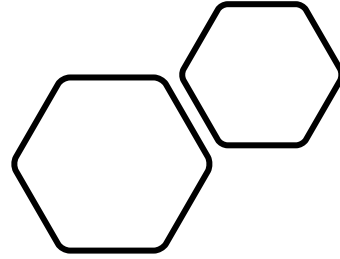


Futures Literacy Labs



Futures Literacy Cognitive trainings

Results - Futures Literacy Lab Turku 2019 Demonstration

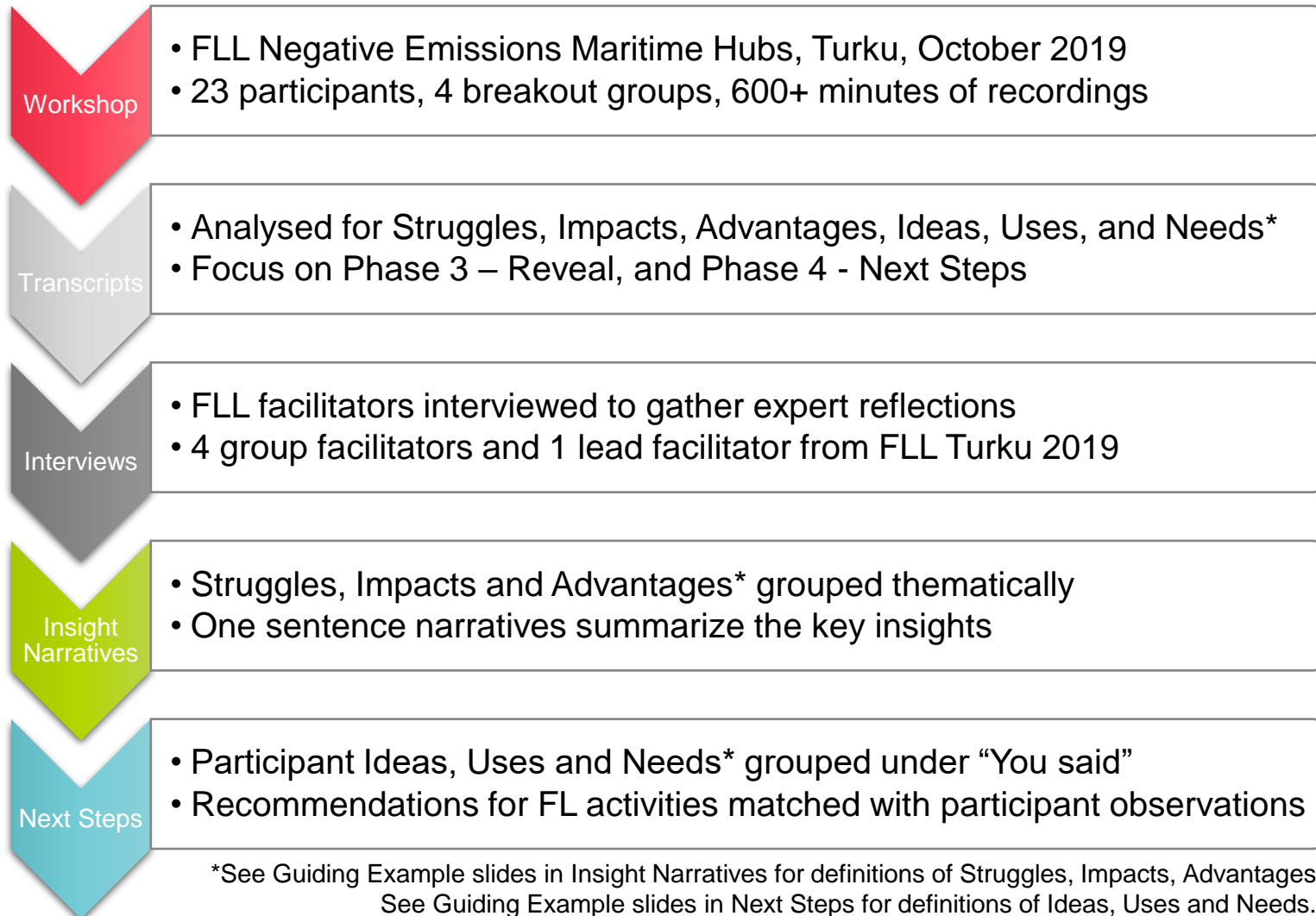


This section presents findings from the FLL Turku 2019 demonstration and is divided into two parts.

The first part, **Insight Narratives**, introduces thematic combination of participant experiences and facilitator reflections intended to echo or provoke consideration of Futures Literacy learning journeys.

The second part, **Next Steps**, presents a compilation of observations and recommendations organized by topic. Each one includes a set of questions or insights intended to be used as conversation starters.

Results Gathering Process



Guiding Question:

What role can Futures Literacy capability building play in supporting systems innovation activities?

FLL Transcripts:

Qualitative content analysis

Facilitator Reflections:

Semi-structured interviews

Insight Narratives

What are Insight Narratives?

Futures literacy is a personal capability.

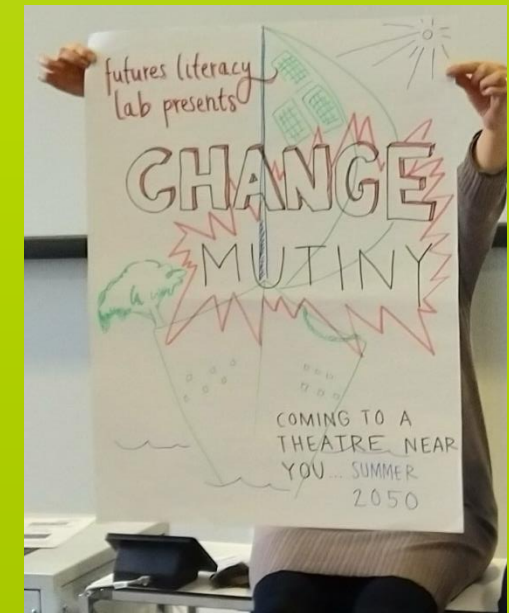
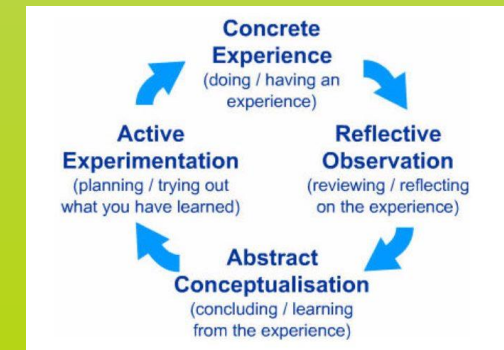
The outcome of the Futures Literacy Lab was not a roadmap or a vision, but steps taken on a personal experiential learning journey.

Insight Narratives are our way of highlighting a few of the possible entwinings of meaning of the participant experience of the Futures Literacy Lab.

Any one individual's learning journey is complex, extending far beyond the limited space and time of the lab, yet during the lab, participants may have experienced great leaps or been confronted by major struggles.

These narratives are rarely visible in the moment, coming to us in moments of insight weeks or months later, they can be intensely personal.

The insight narrative presented here are thematic combinations of participant experiences and facilitator reflections, they do not intend to convey cause and effect, but instead to echo or provoke consideration of your own Futures Literacy learning journey.





Insight Narrative Guiding Example

A one sentence narrative summarizing the insight gained from thematically linked Struggles, Impacts and Advantages.

Struggle	Impact	Advantage
<ul style="list-style-type: none"> Struggles – difficulties and confusions related to using the future for emergence 	<ul style="list-style-type: none"> Impacts – reported changes in thinking, acting or feeling due to the Futures Literacy Lab process 	<ul style="list-style-type: none"> Advantages – of attaining a greater proficiency in Futures Literacy
<ul style="list-style-type: none"> <i>Text in italics is drawn directly from participant comments in the transcripts.</i> 	<ul style="list-style-type: none"> Text in bold is based on facilitator comments in the post FLL interviews. 	<ul style="list-style-type: none"> Text in normal is a synthesis or paraphrasing of multiple perspectives.

➤ **Reflection:** Summarizes the FLxDeep facilitators reflective comment on the links between struggles, impacts and advantages.

➤ **Development:** Questions for further developing one's own Futures Literacy capacities on both an individual and organisational level.

From participant

Facilitator comments

Synthesis of perspectives.



Insight Narrative Question Barriers

Questioning reliance on extrapolation of trends to explain the future helps to overcome **barriers** to spotting radical changes.

Struggle

- Moving past self-imposed limitations of being “realistic”.

Impact

- Recognition of the limitations of relying on extrapolations based on historical data gathered by consultants.
- Deep questioning of the validity of extrapolative practices to inform long term planning processes which do not consider emergence.

Advantage

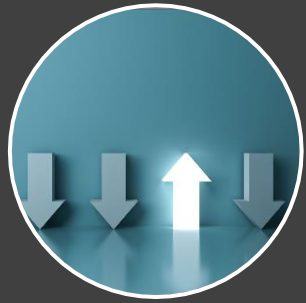
- Ability to spot the potential opportunities inherent in a wider array of alternative futures that move beyond conceptualizations of probable/improbable and utopia/dystopia.

- **Reflection:** What is considered “realistic” is usually based on our understanding of the past or pre-packaged images of the future, using futures for emergence is about breaking out of the box of conventional thinking so that you can better appreciate what is new and different, and what is transforming around you.
- **Development:** What processes can you use to systematically consider discontinuous and “unrealistic” futures when planning or visioning?

From participant

Facilitator comments

Synthesis of perspectives.



Insight
Narrative
**Assume
Resistance**

Exposing what we **assume** will be true in the future as a group can prepare us for overcoming institutional **resistance** to novel ideas.

Struggle

- Moving past using reframing as a tool of visioning to using it as a tool for exposing assumptions.
- Focusing on questioning values as a way of questioning official futures but struggling to make the leap from critical questioning to being open to novel futures.

Impact

- Reframing as a group moved participants beyond predictive and preferable thinking about the future to ‘imagine something completely different’.
- Reframing and the wider FL capability building process is best done collectively; the support of a group was essential for collective knowledge creation.

Advantage

- Future Literacy as a means of enhancing personal and group capacities for challenging tacit assumptions; the more people that can develop FL within a group or at an organisational level the better able they are to overcome institutional resistance.

From participant

Facilitator comments

Synthesis of perspectives.

- **Reflection:** Established organizational interests tend to be self-preserving, which can lead to assumptions that the future will be business-as-usual, radical change typically only occurs when it becomes expedient to do so.
- **Development:** Acting ahead of the curve yields significant advantages, but also risks, how would you combine Futures Literacy with design processes to be more open to experimentation, “failing better”, and being responsive to surprising shifts?



Insight Narrative Resilience to surprises

You cannot know the impact of **surprise future changes** but you can become better at seeing and processing novelty, thereby enhancing **resilience**.

Struggle

- The need to relentlessly ask "but what would it mean if...?" during the reframe stage seemed to indicate that the complexity of considering the multitude of possible impacts of novel future transformations was a daunting and exhausting task.

Impact

- Realisation that transformations cannot be recognised or understood until they have happened.
- Recognition that present ways of thinking and decision making are rooted in assumptions about the future that do not adequately consider uncertainty or emergence.

Advantage

- A reflective stance gives the ability to better comprehend what transformations are occurring as well as an openness to the alternatives that exist once you have moved beyond your own assumptions.
- Appreciation of emergence in businesses provides competitive advantage or the ability to avert disaster.

- **Reflection:** Developing *futures literacy* provides an appreciation of the role emergence plays in the unfolding of the future. Futures literacy enhances resilience towards surprise changes we cannot know in advance. It reduces our shock and increasing our sensitivity.
- **Development:** What processes can you put in place to record and make sense of emerging changes? How might Futures Literacy be applied to support increased resilience of your organization or community?

From participant

Facilitator comments

Synthesis of perspectives.



Insight Narrative Perspective Switching

Exposure to uncomfortable **perspectives** is the first step towards becoming better at **switching** between assumptions to see novelty.

Struggle

- Struggling to move outside one's comfort zone of expertise to explore novelty.

Impact

- Appreciation of the value of other views that go beyond technology, towards a multi-perspective view of futures.

Advantage

- Recognition that multiple futures can be used as a variety of lenses, and that the choice of a specific lens has an impact on present decision making with future consequences.

- **Reflection:** The ability to identify the assumptions upon which we are basing our predictions and visions of the future is inherent to then practicing the switching out of one assumption for another to create surprising new perspectives.
- **Development:** What opinions have you formed and seek evidence to defend? How can you practice a critical questioning of your own beliefs while maintaining decisiveness?



Insight Narrative Conscious Different

We can create opportunities to become more **conscious** and intentional in using the future in **different** ways for different purposes.

Struggle

- Thinking of ways to apply futures literacy in organisations in a practical way.

Impact

- Recognition that they, the participants, have agency in cocreating the opportunities to apply Futures Literacy going forwards.

Advantage

- Becoming designers of conscious and intentional ways of switching between using the future for assessing probable futures, generating desired visions, and for imagining strange discontinuous futures.

- **Reflection:** We can be certain of one thing in future, it will be different to today and in ways that are almost impossible to imagine let alone predict. Developing Futures Literacy helps us to rigorously imagine the unimaginable, to expand the scope of what we know we don't know and bring that into the discussion so that we are not so easily blindsided by surprises.
- **Development:** How can we create opportunities to become more aware of our uses of futures, become more fluent in switching between different ways of using it, and acting on those insights?

From participant

Facilitator comments

Synthesis of perspectives.

Next Steps

Next Steps for Futures Literacy

In this section, a compilation of observations and recommendations are presented, organized by topic. There are three columns on each slide:

- ❖ The *'Participants Said'* column is primarily composed of self-identified needs and gaps in current practices or thinking that could be addressed through developing futures literacy. This column also includes some interpretations of ideas for developing futures literacy, and practical applications of futures literacy in systems innovation that have been earmarked for further comment.

- ❖ The *"You Could Try"* column matches participant suggestions with these needs. Facilitator reflections and suggestions for development activities are also listed here.
- ❖ The *'Conversation Starters'* sidebar presents launch points for co-creating and inventing new processes for your setting that can support your development and application of futures literacy.

We would like to stress that the concrete suggestions in this section are best used as seeds for your further development of futures literacy. Because futures literacy is a relatively new skill, the FLxDeep consortium is co-researching with you how best to bring futures literacy to life in your own innovation context. Because it is a relatively new skill, the FLxDeep consortium is co-researching with you how best to bring futures literacy to life in your own innovation context. We want to help you invent processes, tools, and ways of working that can support your development and application of futures literacy.





Next Steps for

This is a Guiding Example

Conversation Starters

- Questions for further exploring the recommended activities and practical applications of Futures Literacy in your own daily working.
- Questions for igniting a discussion on Futures Literacy.
- Questions for inviting further collaboration on designing applications of Futures Literacy in your project.

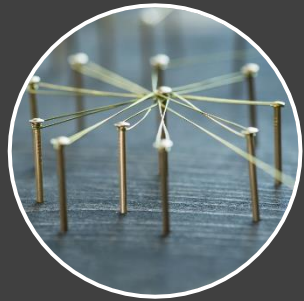
Participants said

- Summarized or paraphrased participant comments categorised as Ideas, Uses or Needs

You could try

- Recommendations based on summarized participant and facilitator Ideas and Uses

- **Needs** – something lacking in current practice or knowledge that could be addressed by application of Futures Literacy
- **Uses** – practical applications of Futures Literacy in systems innovation processes
- **Ideas** – activities that would build individual and organisational Futures Literacy capacities



Next Steps for

Futures Literacy Community Engagement

Participants said

- Further engagement with likeminded individuals on their own Futures Literacy learning journeys was desired.
- Additional Futures Literacy materials and resources could act as reminders of the ideas and concepts discussed at the Futures Literacy Lab.

You could try

- Connecting for cooperation and networking through existing platforms such as LinkedIn, Medium or Twitter.
- Share this report with Futures Literacy tags, start a conversation.
- Creating intraorganizational and public platform Futures Literacy content sharing groups for stimulating FL oriented collaboration

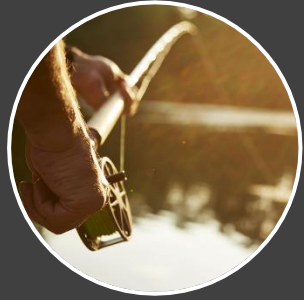
Conversation Starters

- What tacit assumptions about the future would you like to see discussed more openly in your organisation?
- What cultural practices would you encourage in a Futures Literacy community?
- What materials could you adapt or repurpose to initiate a Futures Literacy exploration?

From participant

Facilitator comment

Synthesis of perspectives.



Next Steps for

Futures Sources

Participants said

- We would like recommendations for sources of balanced and curated futures articles, audio-visual media and reports as input for urban and maritime design thinking processes.

You could try

- Rather than endorsing specific sources of 'good' futures information, we suggest following principles such as Jim Dator's 2nd and 3rd Laws of the Future to guide your exploration:
 - “Any useful idea about the futures should appear to be ridiculous”
 - “We shape our tools and thereafter our tools shape us.”
- Strive to balance both evidence- and non-evidence-based sources; radical artists, upstart entrepreneurs, stockbroker-come-shaman and the ridiculed outlier each have unique perspectives that can be a source of novel futures.
- Notice what is changing and not changing around you.

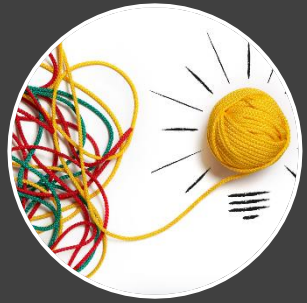
Conversation Starters

- What steps can you take to better identify high quality futures sources for your own needs?
- How would you design your own process of sensing and sense making that incorporates a critical questioning of the assumptions embedded in futures you encounter?
- How would you move beyond the urge to predict and control, envision and plan, towards creating the open and inquisitive space for novel ideas to take root and grow?

From participant

Facilitator comments

Synthesis of perspectives.



Next Steps for

Imagination & Creativity

Participants said

- We do not think as imaginatively as we think we do about the future, we tend towards extrapolation of today's standard ideas even when we think we are being imaginative, radical or novel, tending to draw our visions of the future from media sources.

You could try

- Incorporate short, playful future oriented exercises into regular meetings.
- Practicing creative imagination through use of surrealist games. Artists such as André Breton and Rene Magritte used games to break through conventional thought and behaviour to generate and process weird imaginings.

Conversation Starters

- What games could you adapt for use in your organization's next meeting as a check in, to introduce emergent futures, or to set the tone for a generative activity?
- What ideas about the future do you discard on a regular basis? Where could your discussion go if you were to focus attention on the outliers rather than common ideas?

From participant

Facilitator comments

Synthesis of perspectives.



Next Steps for

Practicing Using Futures literacy

Participants said

- Instructions for running lightweight Futures Literacy activities for use in daily working were requested.
- Presenting a carefully selected video or audio media to provoke discussion about the futures of a relevant topic proved to be very effective at breaking out of rigid and linear ways of thinking.

You could try

- Assigning five minutes for the future at the beginning of meetings. This space could be used for exploring the futures of your team, agenda subject or events in your environment.
- Paying attention to what futures are in use and noticing them – e.g. 'mirroring futures' could be a rotating role.
- Include activities that activate consideration of probable, possible and preferable futures as well as novel surprising futures, on a regular basis in your daily working.

Conversation Starters

- What additional activities would help you to notice futures in use?
- Consider the following questions when reflecting on new information:
 - What uses of the future were in play; predictive, planning, emergence etc.?
 - What assumptions were prevalent? What different assumptions could be used?
 - How might switching to unusual assumptions shed new light on the information?
- What kind of dynamic processes could you design to apply futures literacy in conversations and discussions?

From participant

Facilitator comments

Synthesis of perspectives.



Next Steps for

Stakeholder Engagement

Participants said

- Inclusion of a broad selection of stakeholders with varied experiences, beliefs and expertise was critical to the learning journeys of groups.
- In future engagements involving Futures Literacy, extending the invitation to unusual stakeholders and local decision makers would be critical to surface unheard voices and diversify perspectives.
- Starting a Futures Literacy learning journey with an open mind, predisposed and receptive, with trust in the process, enhanced the impact of the experience.

You could try

- Organising Futures Literacy Labs in your local community on topics selected by the community working with the talent on your doorstep.
- Gradually introducing Futures Literacy through lightweight activities to generate interest and momentum for future Futures Literacy Labs.
- Inviting presentations from actors with interesting and innovative ideas to challenge assumptions or typical modes of thinking.

Conversation Starters

- What micro, meso and macro level engagements could you design to engage potential stakeholders with Futures Literacy?
- What stakeholders could you include in your activities that would spark a discussion, present a radical alternative view, or tap into views prevalent on the ground?

From participant

Facilitator comments

Synthesis of perspectives.



Next Steps for

Futures Literacy Ambassadors

Participants said

- FLL participants who have become more familiar with FL concepts could begin to introduce these ideas into the day-to-day working processes of their organisations.

You could try

- Taking or nominating the role of Futures Literacy ambassador in your organisation. The Ambassador's role might be to champion the following four activities:

1. Expanding the realm of the possible by questioning assumptions.
2. Explaining the relevance of surprising emergent futures and planning for their impact.
3. Articulating the utility of wild imagining for novelty creation.
4. Supporting initiatives for others to develop their Futures Literacy.

Conversation Starter

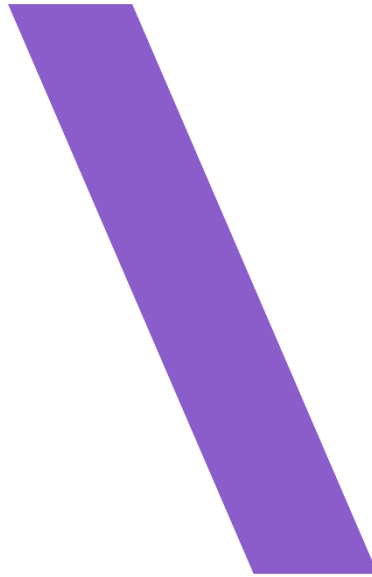
- What capacities would you need to be a futures literacy ambassador?
- What concrete actions could you take to enact the four functions of a Futures Literacy Ambassador? With whom? When? and Where?
- How could you introduce reflective practices into your working?

From participant

Facilitator comments

Synthesis of perspectives.

Try & See



What *futures literacy* activities are you inspired to try in your own organisation?

What should we try in our Maritime Hubs Deep Demonstration?

How can we stay alert to our assumptions about the future?

How can we practice encountering emergent novelty?

Call for Co-Creation

The FLxDeep consortium is here for you!

We are eager to work with you to co-create daily practices that can help you develop and apply *futures literacy* in your own organisation.

Please contact us any time to discuss new ideas for things to try, or to tell us about the outcomes of your own experiments in practicing Futures Literacy.

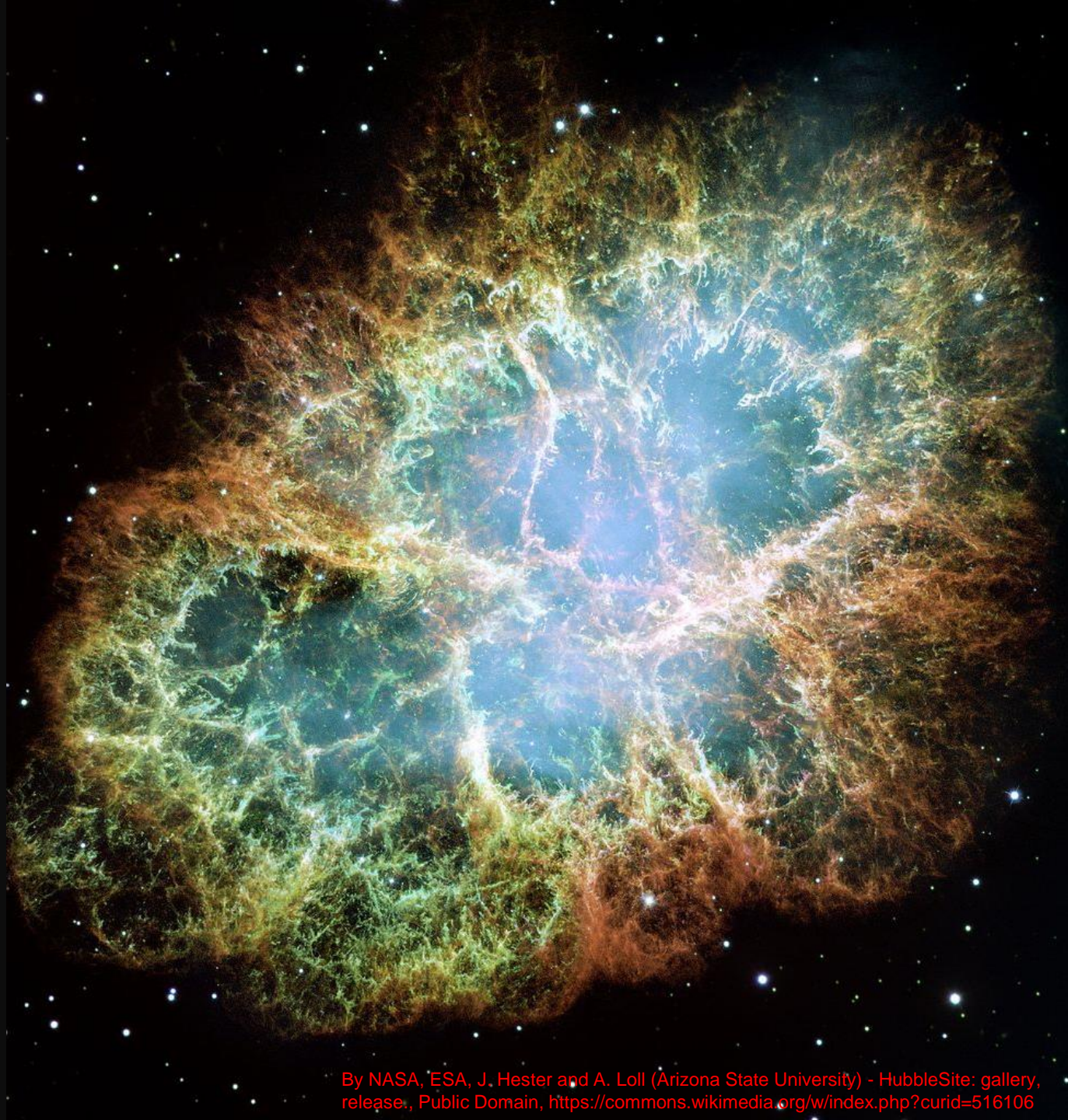
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