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Hands-on Introduction to Futures Thinking and Foresight with the Future Ripples Method

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ABSTRACT

Global and systemic sustainability challenges increasingly require innovation teams to incorporate holistic, long-term thinking in their ideation practises. However, as any full-scale foresight process would be heavy to carry out, there is a need for a more rapid method. The goal of this tutorial is to teach participants how to approach technology innovation practice with a more holistic and sustainable mindset. For this, we will introduce and use the Future Ripples method, a light-weight, participatory activity to brainstorm future consequences of signals or trends. The method aligns with the first steps of a traditional foresight process and thus aims at developing futures thinking and anticipatory capacities.

CCS CONCEPTS

• **Human-centered computing** → **Scenario-based design**; **HCI theory, concepts and models**.

KEYWORDS

Technology Innovation, Consequences, Futures Wheel, Futures Workshop, Anticipatory Capacity, Future Studies, Foresight, Futures Literacy, Futures Thinking, Speculative Design

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1 INTRODUCTION

HCI and design are future-oriented activities. Significant parts of research and practice in the field are oriented to informing the design of future technologies and identifying new ways to support users. Against this background it is essential that HCI researchers and practitioners are mindful about the futures that they consider in their designerly activities. This requirement has rapidly and increasingly become pertinent with the awakening to the global challenges related to social, economic and environmental sustainability [3]. Regrettably, current HCI practice largely fails to answer the call for holistic, systemic futures thinking [3, 4]. To address this problem, we have created the Future Ripples technique, a light-weight participatory activity to nurture anticipatory capacities in innovation teams [1]. It is based on the well-known Futures Wheel foresight method, which allows participants to explore implications and effects in a collaborative manner [2]. Future Ripples incorporates scanning for weak signals or trends and framing as a preparatory activity, hence, aligns with the process of traditional foresight. The sea and ripples metaphor is used to introduce the concept of uncertainty and consequential thinking (see Figure 1).

In this hands-on tutorial, we invite scholars to learn how to apply a futures-mindset to their work and develop anticipatory capacities by using the Future Ripples method. In the tutorial, we will go through the first steps of a typical foresight process that contains signals spotting, framing and mapping out implications of a selected trend. The tutorial aligns with the conference theme of "Participative Computing for Sustainable Futures" since it introduces a participatory approach of envisioning futures influenced by technology in a more holistic and sustainable sense. The goal of the tutorial is to encourage HCI scholars to identify and address consequences of researched technologies and to embrace futures-awareness.

2 LEARNING OUTCOMES

After this tutorial participants will:

- Recognise the unfolding of direct and indirect implications of signals and trends
- Know how to use the Future Ripples tool for mapping out implications
- Know how to address technology development using a more holistic and systemic approach

3 INTENDED AUDIENCE

We invite HCI researchers, designers, technologists, and anyone interested about learning how to apply a future-oriented mindset to their work practices.

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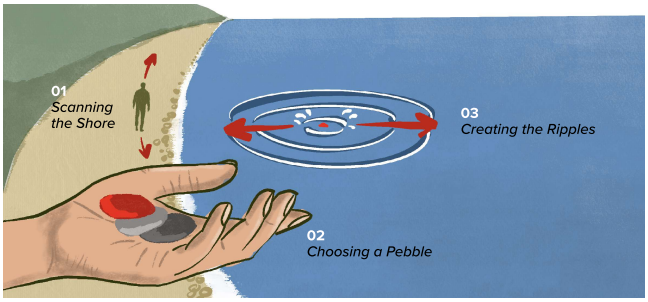

Figure 1: A metaphorical visualisation of the Future Ripples process – scanning the shore for indicators of change (01); choosing a 'what if' scenario as a pebble (02); and, finally, throwing the pebble into the water and mapping out its consequences as ripples (03)

As this is an introductory course, participants are not expected to have any prior knowledge or expertise in foresight. Participants will be asked to bring and present three weak signals or trends they have recently encountered in their field of expertise.

4 CONTENT

The tutorial is organized as a hybrid event which means both online and in-person participation is possible. The duration of the tutorial is 3 hours with a break.

(1) **Welcoming + Introduction of instructors and participants (20 mins)**
(2) **Introduction to the method Future Ripples (10 mins):** Method will be introduced and participants will be assigned to interdisciplinary groups of 5
(3) **Sharing signals and trends (30 mins):** Participants present three trends of their field in a short presentation that have been prepared beforehand (2 minutes per trend)
(4) **Framing a starting point for further exploration (15 mins):** Based on the signals and trends participants decide for a framing of a pebble that will be used for brainstorming its consequences
(5) Break (20 mins)
(6) **Creating the ripples and brainstorming consequences (60 mins):** Participants use the ripple template to envision future direct and indirect effects of the selected pebble
(7) **Reflections (25 mins):** In the end of the tutorial, participants can reflect the created ripples on plausibility and impact. If time is left actionable steps can be ideated to reduce negative consequences or exploit positive opportunities.

5 INSTRUCTORS

Tim Moesgen is a doctoral researcher at Aalto University. With a background in collaborative and interaction design he is interested in exploring the futures of hybrid interfaces combining the digital and analogue utilizing emerging technologies such as wearable computing, physical prototyping and VR/AR. He is conducting multidisciplinary and participatory research on novel, multisensory interfaces.

Felix A. Epp is a doctoral researcher at Aalto University in Human-Computer Interaction and Interaction Design. He investigates how expressive wearable technology can shape our everyday social practices. He uses and develops generative design and participatory methods with an orientation towards technological futures.

Antti Salovaara is the principal investigator for the Future Methods project that explores ways to integrate future foresight methods into HCI research and practice, especially to scenario-based envisioning of possible futures, concretisation of those futures in field trials, and projection of the trials' findings to fine-tune and correct the future scenarios.

Emmi Pouta is a doctoral researcher at Aalto University. Her background in woven textile design and construction informs her quest to investigate new methods to integrate electronics and sensor structures into woven fabrics, and increase understanding on how textile thinking can be utilized as a solid foundation to explore the field of eTextiles.

Camilo Sanchez is a project researcher at Aalto University. Camilo currently works for the Future Methods project investigating the relationship between smart clothing, privacy and the circular economy. Camilo's background in Musicology and New Media drives him to develop physical interfaces that leverage tacit knowledge and the epistemic enhancement of computing in tandem.

6 RESOURCES

We have published about the development of the method at DIS 2022 [1] as part of the research project https://research.aalto.fi/en/publications/reinventing-the-wheel-the-future-ripples-method-for-activating-an. Find the open-source workshop template here: https://miro.com/miroverse/future-ripples-method/.

REFERENCES

[1] Felix Anand Epp, Tim Moesgen, Antti Salovaara, Emmi Pouta, and Idil Gaziulusoy. 2022. Reinventing the Wheel: The Future Ripples Method for Activating Anticipatory Capacities in Innovation Teams. In *ACM Conference on Designing Interactive Systems: Digital Wellbeing*. ACM.
[2] Jerome C. Glenn. 2009. The Futures Wheel. *Futures research methodology—version* 3 (2009), 19.
[3] Daniel Pargman, Elina Eriksson, Mattias Höjer, Ulrika Gunnarsson Östling, and Luciane Aguiar Borges. 2017. The (un) sustainability of imagined future information societies. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*. 773–785. https://doi.org/10.1145/3025453.3025858
[4] Miriam Sturdee, Joseph Lindley, Conor Linehan, Chris Elsden, Neha Kumar, Tawanna Dillahunt, Regan Mandryk, and John Vines. 2021. Consequences, Schmonsequences! Considering the Future as Part of Publication and Peer Review in Computing Research. In *Extended Abstracts of the 2021 CHI Conference on Human Factors in Computing Systems*. 1–4. https://doi.org/10.1145/3411763.3441330