Dubai Future Forum's Learnings Day 2024 Report

Evolving Foresight Skills: How Will We Shape the Future of Strategic Foresight?

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Abstract

Our rapidly evolving field demands resilient, adaptable, and forward-thinking practitioners. Academic institutions must stay at the forefront by updating curricula, integrating cutting-edge tools, and providing a comprehensive understanding of the discipline's history. Failure to keep pace risks perpetuating outdated practices and limiting the impact of future professionals.
In November 2024, OCADU's Strategic Foresight & Innovation program explored the evolution and future of foresight at the Dubai Future Forum's Learnings Day. Our interactive 'World Café' brought together international foresight practitioners to discuss:

1. Historical events, methods, and literature shaping foresight.
2. Emerging developments influencing foresight's future.
3. Current and future skills needed by futurists.
4. Strategies for organizations to support and benefit from foresight.

Through our collaborative efforts, participants aided in expanding the scope of foresight's history, envisioned transformative innovations, and identified critical skills for practitioners. They also explored strategies for integrating foresight into organizational frameworks, such as building foresight literacy, aligning with strategic vision, and fostering long-term thinking.

Key words:
Foresight, Futures, World Café, Competencies, Timeline

Introduction

As our world struggles with unprecedented complexity and accelerating change, the need for skilled foresight practitioners who can navigate this uncertainty and shape more resilient futures has never been more pressing. Yet, the academic preparation of these practitioners must evolve in parallel with the field itself, incorporating both time-tested methodologies and emerging approaches that reflect our rapidly changing global context.

Our research initiative emerges from a fundamental question: *How might academic institutions better prepare foresight practitioners for the challenges and opportunities that lie ahead?* To address this question, we have undertaken a dual investigation: first, mapping the historical evolution and potential future trajectory of the foresight domain, and second, identifying the critical skills that practitioners need both now and in the future of this field.

Our research hinges on the recognition, however, that the future of foresight education cannot be developed in isolation. The field's inherent collaborative and cross-cultural nature demands that we engage with diverse perspectives and experiences from the global foresight community. This understanding led us to the Dubai Future Forum's Learnings Day, where practitioners from around the world gathered to share insights, methodologies, and visions for the future of the practice. We believed this potential for an international dialogue would be instrumental in enriching our understanding and helping to challenge and/or our initial findings.

Objective

The primary objective of the overall research program is to serve academic institutions, particularly (but not limited to) OCAD University's Strategic Foresight & Innovation (SFI) program, in continuing to develop curricula that meet the evolving demands of the foresight practice. By creating a comprehensive timeline of the field's development and identifying crucial practitioner skills, we aim to provide a foundation for innovation that serves curricular evaluation and to clarify the positioning of specific education programs within the broader field of practice and partnership complementarity.

The significance of this work, however, extends beyond academia. As organizations and governments increasingly recognize the value of foresight in navigating complexity, the demand for well-prepared practitioners continues to grow. Our findings will help ensure that academic programs can effectively prepare graduates and practitioners who are not only well-versed in the field's foundational principles, tools, and literature, but also equipped with the emerging skills necessary to address contemporary challenges.

Our hope is that by incorporating insights from the global foresight community, particularly through engagements like the Dubai Future Forum, we are working to ensure that our

educational approaches remain relevant, practical, and forward-thinking. Our goal is to strengthen the bridge between academic preparation and practical application, ultimately contributing to the development of more capable and adaptable foresight practitioners who can effectively guide organizations and communities toward preferred futures.

Note: This report uses both terms: Foresight and Futures, honouring the overlapping and sliding terms, used by our collaborators and peers. At OCAD University, foresight is used for those endeavours that are enmeshed with systems thinking and strategic ends, predominantly. Futures refers to the more makerly side, in the creation of experiences, creative visualizations, and new technology forms or prototypes.

Workshop Overview

Our proposed workshop aimed to examine and evaluate the evolving foresight toolkit and create a value web, or ecosystem, connecting those trained in foresight skills and employers who engage in foresight activities. By bringing together global leaders in foresight, the workshop seeked to enrich the research project with diverse perspectives and learn about a shared history and future of foresight, as well as cutting-edge practices, methodologies, and evolving skill sets necessary for the practice.

The workshop was structured as a 'World Cafe' (Brown, 2002). This method is participatory, designed to facilitate meaningful conversations and knowledge sharing. The World Café format focused on the possible pasts and futures of evolutions of foresight history as well as skills and practices. Each table would focus on a specific question related to foresight, with participants moving between tables in multiple rounds to contribute to each conversation and build upon the ideas generated. The World Café approach enables collaborative knowledge sharing, as participants share their experiences, insights, and perspectives as they systematically rotate through all inquiry questions established by different tables in rounds. Facilitators at each table helped to 'host' the culminating discussions, starting with an explanation of the previous round key points, where participants wrote with visualizations on worksheets or post-it notes. By the end of the workshop, the collective insights of the group are 'harvested', synthesized with participant support.

Each table was organized as follows with topic and prompting question:

- **Table 1**: Historical events, methods, and literature shaping foresight. *'What are the significant futures events, methods & tools, literature and sci-fiction of the past contributing to a history of futures?'*
- **Table 2**: Emerging developments influencing foresight's future. *'What could be significant Futures events, methods & tools, literature and sci-fi contributing to the future of Futures?'*
- **Table 3**: Current and future skills needed by futurists. *'What evolving skills, present and future, are necessary for futurists?'*

- **Table 4**: Strategies for organizations to support and benefit from foresight.*'How might organizations better support & benefit from futurists?'*

Over the course of four rounds, participants envisioned a wide range of potential developments that could shape the trajectory of foresight practice. The following sections provide a detailed overview of each round, identifying key themes, ideas, and conclusions that emerged at each of the four tables.

The following report is structured by these questions, divided into two main parts: A timeline (past and future) and Skills & Competencies. Each section begins with an introduction to some of our background research, used as inputs or catalysts to the discursive forum of the World Café. From here we summarize the key points of discussion for each round, and summarize some of the points of note for further discussion.

Our background research on methods and literature within the foresight or futures fields in the timeline (the focus of Table one), gave way to the open space for Table 2 at the Dubai Future Forum: identifying important developments into the future.

Similarly, Table 3's core concern on evolving foresight skills and competencies also gave way to Table 4's concern on organizational needs and readiness to integrate foresighters into their core processes; our professional practice must not only focus on the practical skill sets of 'futuring' but must also concern itself with the challenges of meaningful collaboration in different and evolving contexts.

Our ongoing research into these areas has been greatly enhanced by the opportunity to work with DFF participants. We hope this constitutes a beginning of ongoing dialogue, and an annual meet up, as new branches of practice and concern will continue to open.

Futures Timeline

It should be noted that even trying to chart the field is an impossible task and one worth taking on nonetheless. This project could not possibly truly satisfy all practitioners who foreground different methods and processes in their practice and we certainly received some consternation on what was included compared to what was left out. Similar to the previous work at Super O, we created a map of design research methods by project stage (designresearchtechniques.com), we hosted reviews and received valuable input for the map. It has served to help practitioners think through options in designing projects and aids in the opening up of approaches, perspectives and findings. Like this project, that one is meant to be an ongoing endeavor, always, inherently imperfect.

From our lab, we created great spreadsheets and timelines of foresight / futures methods, events and literature, looking for gaps vertically within our categories (e.g. what literature establishes this practice, and catalyzed by what context), we also looked backwards and forwards from our data to see if there were precursors or evolutions to the practices. As large as the initial DFF timeline ws, it was a partial snapshot so as to not overwhelm and to leave space for thought. This timeline did not venture past the present day, creating the opportunity for participants to do what we do best: implicating into the future and determining impacts. The use of a World Café was important for this, as all participants moved through all topics, cascading the insights across our main four questions.

In this section, we review the timelining activities - past to future, detailing the initial work, table discussions and additions.

Histories of Futures

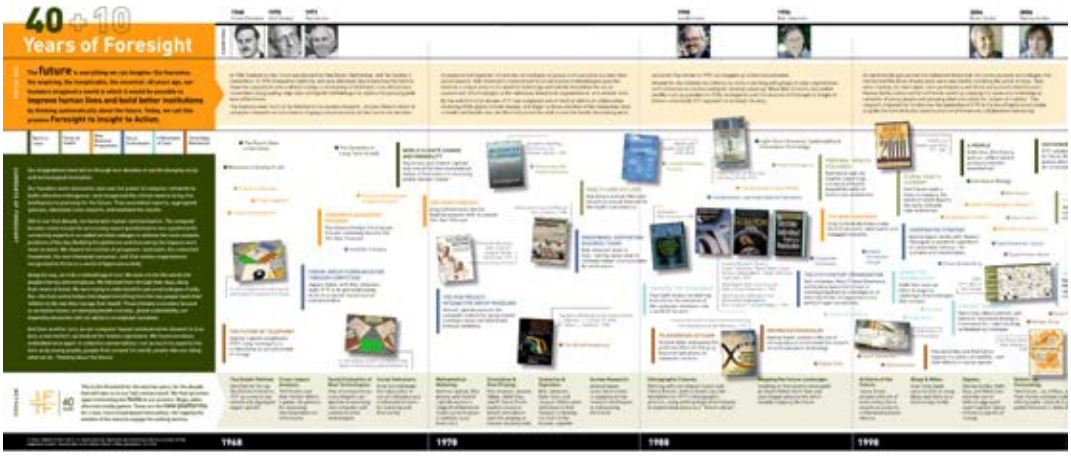
The initiation of this research stemmed from a fundamental question: What historical developments and events have shaped the skills and competencies required of today's foresight practitioners?

To address this question, we initiated two investigations combining a literature review of both the history of the foresight practice and existing frameworks for practitioner skills and competencies.

Our initial timeline development drew from several works documenting the field's evolution, including: The Institute for Future Studies' *40+10 Years of Foresight* (2018) as pictured in **Figure 1**, Futuribles's *The History and Memory of Foresight* (2017), Janna Andersson's *Future Studies Timeline* (2019) from Elon University, and recent work by Boykova, Knyazeva & Salazkin on the *History and Landscape of Futures Studies* (2023). These resources provided a foundational framework of commonly acknowledged milestones in the field's development. However, they also prompted critical questions about the boundaries of foresight practice and the broader contextual elements that have shaped its evolution.

Figure 1.

40+10 Years of Foresight



Note: The Institute for Future Studies' 40+10 Years of Foresight (2018)

A key consideration that emerged early in our research was the potential Western-centricity of traditional foresight historical narratives. While established accounts typically highlight events such as the World Wars and their subsequent influence on national planning systems, or the emergence of institutions like RAND Corporation and Futuribles, we recognized the need to explore how other global historical events and cultural perspectives have influenced the practice. Of note here is the increasingly participatory and inclusive nature of the discipline, which had not been characteristic of earlier, recognized practices, but for which, literature has been retroactively deemed core. So too, we may look at the rising, but slow, acknowledgement of Futures practices that have their own histories and cannons, such as Afrofutures. The gaps and biases of standpoint, led us to expand our research scope and ultimately brought us to the Dubai Future Forum's Learnings Day, seeking to engage with an international community of practitioners to validate, challenge, and enrich our preliminary findings.

To capture the expansive nature of the foresight practice, we structured our timeline to include several distinct but interconnected streams:

- **Significant Events:** Beyond traditional Western-centric milestones, incorporating global events that have shaped futures thinking;
- **Tools and Methodologies:** The development and evolution of key foresight techniques and approaches;
- **Futures Literature:** Central or key works that have advanced theoretical understanding and practical applications; and
- **Science Fiction:** Recognition of speculative fiction's role in shaping futures thinking and methodologies, impacting both social and scientific visionings of what might be.

This expanded framework allows us to better understand the diverse influences that have shaped foresight practice while providing a more comprehensive foundation for identifying the skills and competencies required of practitioners. It also served as a valuable structure for engaging with the international community at the Dubai Future Forum, facilitating discussions about the varied cultural and historical perspectives that have contributed to the field's development, as well as the opportunity for them to add sub-streams of their own that they felt were significant (as displayed by the lower two, blank categories in Figure 2).

Figure 2

A Futures Timeline (Version 1.0)

Note: The culmination of our research on a possible history of futures before featuring at The Dubai Future Forum's Learnings Day, designed by Danny Ghantous.

A Shared Timeline of Futures

At the DFF Learnings Day World Café, the first table pictured in **Figure 3** & **Figure 4**, focused on exploring and expanding our proposed timeline of foresight's historical development. Participants were tasked with addressing the question: "What are the significant futures events, methods & tools, literature and sci-fiction of the past contributing to a history of futures?"

Figure 3

Table 1's setup at the World Café

Figure 4

Participants iterating for the timeline

Participants were encouraged to challenge the timeline's existing categories and add new inputs to broaden its scope. To critically examine the events, methodologies, and works that have shaped foresight practice over time, contributing their unique insights and experiences to create a more comprehensive narrative.

The following sections provide an overview of the key discussions and outcomes from each round at this table.

Round 1

After introducing the group to the timeline's structure and objectives, we encouraged them to take their time iterating on it using the provided post-it notes. Though initially hesitant, participants soon began actively contributing across the various categories once we reassured them that all inputs were valuable and could help validate our understanding of what is considered significant in foresight's history.

Participants not only reinforced key tools and methodologies but also challenged the timeline's scope by introducing concepts we had not considered, such as religion and astrology as shaping people's actions towards a 'better future'. Other contributions expanded the range of impactful tools, noting historical innovations like papyrus, the printing press, ARPANET, and early artificial intelligence.

Round 2

Building on the previous group's additions, this round of participants delved further into science

fiction, expanding the focus beyond literature to include influential visual media such as films (2001: A Space Odyssey, Blade Runner, The Matrix) and animated series (The Jetsons, Astro Boy). This exploration of visual media was insightful, as we had initially hesitated to include them ourselves due to concerns about overrepresenting a Western perspective.

The group also broadened the timeline's scope to encompass global events, particularly one's concerning 'surprising events' around the turn of the 21st century, such as 9/11, the 2008 subprime crisis, the COVID-19 pandemic, and even Trump's inauguration(s).

Round 3

In this round, participants tended to critically examine the timeline through the lens of their specific foresight focus, whether technological, economic, or design-based. They highlighted influential institutions, literature, and key advancements or events within their respective fields.

For technology-focused foresight practitioners, this meant emphasizing Dartmouth's early AI research in the 1950s, the founding of tech-focused publications, and broader milestones like the development of the internet and the US moon landing.

Economically-oriented foresighters added events such as the introduction of corporate foresight, Long Waves Theory, and tools like trend analysis and roadmapping.

Design-based practitioners traced the evolution of their practice through institutions like the d.school and the emergence of critical and speculative design. They also underscored the importance of influential social and psychological literature, including works on feminism, behavioral theories, and even Marx's writings, as essential to their framing of foresight's history.

Round 4

The participants in this round critically examined the boundaries of the timeline's existing categories and proposed methods to better highlight, identify, or differentiate inputs in future iterations. They recommended color coding substreams to visually distinguish inputs focused on specific foresight domains, such as technology or economics. For significant events, they suggested indicating the positivity or negativity associated with each entry to provide a more nuanced understanding of the event's impact and implications. To better understand the influence and scope of the timeline entries, they proposed including geo-location information by tagging where a piece of media was produced, where a technology was developed, or where a specific event took place, offering a more comprehensive view of foresight's global landscape.

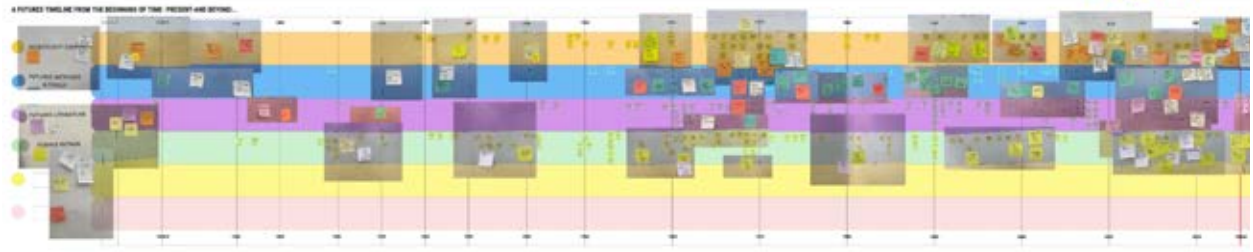
Conclusion

Collaborating with the diverse perspectives on foresight's historical development provided us with a wealth of inputs and continuing questions as to the scope of influence on the practice. Participants expanded the timeline's scope by introducing influential concepts from various fields and global events they believe inherently affect the way foresight is practiced. They

highlighted the importance of interdisciplinary influences and examined the timeline through domain-specific lenses. Participants also proposed methods to enhance the timeline's informational value, such as color coding, sentiment indicators, and geo-location data, as demonstrated in **Figure 5**. Overall, the activity demonstrated the value of diverse perspectives in constructing a rich understanding of foresight's history.

Figure 5

A Futures Timeline (Version 2.0)



Note: The following timeline is a collage of the initial 'A Futures Timeline (Version 1.0)' as exemplified in **Figure 2** up until the year 2024. This figure blends the original digital asset with photos of table 1's inputs layered on top.

The Potential Futures of Futures

The discussions at Table 2 revolved around envisioning what significant futures events, methods, tools, literature, and sci-fiction narratives could shape the future of foresight. Participants contributed ideas across four workshop rounds, spanning areas of technological advancements, cultural and societal shifts, and transformative innovations.

Round 1

In the first round, participants highlighted potential key milestones such as Mars colonization, asteroid mining, and advances in AI technologies such as voice cloning. They also discussed the potential of immersive foresight practices, such as 5-senses workshops and AI-enabled system modeling, and emphasized the importance of data fusion for integrating private and public datasets. Literature reflecting societal transitions and exploring ethical dilemmas in technological advancements was seen as necessary to inspire new foresight practices, while science fiction discussions imagining hyperloop transportation, food alternatives, and artificial consciousness were used to ground societal shifts and future possibilities.

Round 2

Following the initial round, participants began to explore potential future developments such as human-focused health breakthroughs, the colonization of Antarctica, and micro-governance models, as well as the idea of humanity possibly prioritizing non-human life in decision-making practices. Participants also cited enhanced AI tools and dynamic simulation systems as central to addressing future global challenges and fostering collaborative foresight approaches. Resilience and adaptation in the face of crises were considered critical for preparing foresight practitioners, and decentralized governance and interconnectivity with universal libraries were highlighted as sources of inspiration for new models of education and collaboration.

Round 3

The third round saw participants imagine transitions as a direct result of AGI breakthroughs and their implications, a continuation of interstellar exploration and possible first contact scenarios. Immersive simulations and scenario-based workshops were explored as ways to prepare for high-impact futures, while speculative works addressing interstellar ethics and the evolution of humanity in extraterrestrial contexts were discussed. Time travel and AI-dominated societies were also topics of conversation around foresight thinking.

Round 4

In the final round, discussions relied on previous rounds' input, emphasizing Mars colonization, the rise of meta-global systems, and the possibility of human life beyond Earth, as well as climate change adaptation strategies. Real-time scenario adaptation using AI and interconnected systems emerged as potentially transformative methodologies, and participants discussed works imagining radically different sustainability models and societal evolution, highlighting their role in inspiring long-term strategies. Science fiction narratives addressing intergalactic governance and human identity in advanced technological landscapes rounded out the discussions.

Conclusion

The workshop participants at Table 2 engaged in a diverse collection of ideas that can be mapped across Dator's Four Futures framework. The majority of the conversations reflected scenarios of Collapse, such as biosphere collapse, atomic nuclear war, and the end of normal food systems. Scenarios of Growth were less common but included concepts like humans communicating with other earthly species and large-scale resource extraction through asteroid mining, pointing toward continued technological progress and economic expansion.

The participants had a strong leaning toward Transformation, envisioning radical futures such as humans living to age 150 with bionic organs, traveling beyond the solar system, and artificial consciousness reshaping humanity's role in the universe. Discussions of Discipline were sparse

but included the structured extraction of resources and the continued development of balanced governance systems, reflecting the role of controlled futures. Across all these futures, innovative tools and methods such as real-time data analysis, large-scale interactive processing, and 5-senses workshops were discussed as important for navigating the uncertainties ahead. The culmination of their contributions to this question can be seen below in **Figure 6**.

Figure 6

A Potential Future of Futures

Note: The following timeline is a collage of the initial 'A Futures Timeline (Version 1.0)' as exemplified in **Figure 2** post 2024. This figure blends the original digital asset with photos of table 2's inputs layered on top.

Some key themes generated from this table's work include: potential emerging technologies such as AI voice cloning, hyperloop transportation, as well as even asteroid mining highlighting the transformative potential of AI-driven systems, bioengineering, and space exploration. Concepts like artificial consciousness and universal brain-linked libraries spoke to the emerging conversations of the present world and how they may shape the future.

Global and societal shifts were another key theme, with events like climate change adaptation, Mars colonization, the first US female president, Antarctica's colonization, and micro-governance models demonstrating the exploration of societal transitions and transformations. These discussions underscored the importance of considering how large-scale changes in society and the environment may impact the future of foresight.

Cultural narratives, particularly in the form of science fiction, were thought to remain pivotal in broadening foresight perspectives, with participants emphasizing the role of sci-fi in sparking discussions around societal transformations and envisioning alternative futures.

Innovations in futures tools and methods also emerged as a significant theme, with data fusion, immersive simulation tools, 5-senses workshops, and AI-enabled large-scale dynamic modeling being discussed as ways to redefine foresight practices.

The participants also identified several gaps and opportunities in their explorations. These included further implications of space exploration and its societal impacts, speculative ideas about life or civilization in extraterrestrial contexts, the impact of decentralized education systems on future knowledge sharing, the need to make foresight methodologies more accessible and participatory, and the importance of incorporating foresight thinking into formal education systems.

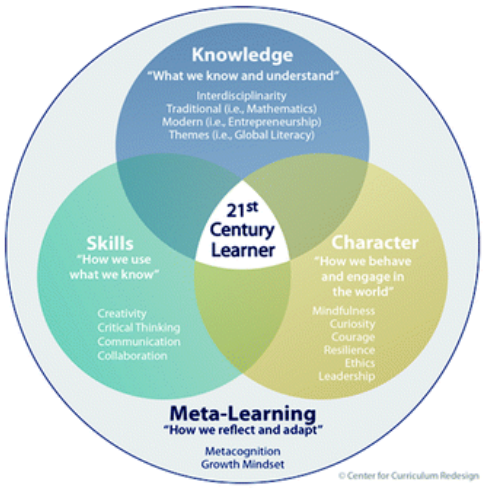
Skills & Competencies

In seeking to understand and develop a comprehensive framework for foresight practitioner skills development, we first analyzed contemporary skills frameworks that are meant to inform modern professional development and capabilities evolution. This broader perspective helped us to understand how general professional capabilities intersect with and support specialized foresight work.

Recent comprehensive skills frameworks - including the Center for Curriculum Redesign's (CCR) *Four-Dimensional Education* (2015) as pictured in **Figure 7**, UNDP's *21st Century Skills for Youth* (2021), and the World Economic Forum's (WEF) *Education 4.0 Taxonomy* (2023), as pictured in **Figure 8**- have highlighted significant shifts in the skills and capabilities required for professional success. As IBM's analysis of global CEOs (Four-Dimensional Education, 2015) indicates and WEF's research confirms, traditional technical expertise alone no longer suffices in a rapidly evolving workplace (Education 4.0 Taxonomy, 2023). The demand for creativity, critical thinking, and complex problem-solving is now matched by an increasing emphasis on social and emotional capabilities.

Figure 7

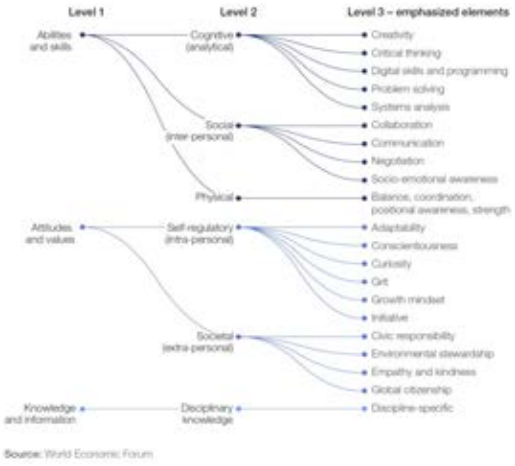
CCR's Framework (2015)



Note: The foundational framework of the Center for Curriculum Redesign

Figure 8

Education 4.0 Taxonomy (2023)



Note: The World Economic Forum's Education 4.0 framework

These frameworks consistently show that modern professionals face what the WEF terms a "VUCA" environment - characterized by volatility, uncertainty, complexity, and ambiguity (Education 4.0 Taxonomy, 2023). This environment demands workers who can not only master

technical domains but also demonstrate significant adaptability and continuous learning capabilities. As highlighted in the Four-Dimensional Education framework, success increasingly requires competency across multiple dimensions: knowledge, skills, character qualities, and meta-learning strategies.

Larger insights into the knowledge requirements for contemporary work positions revealed that workers must balance traditional expertise with constant learning of new knowledge, as new developments and technologies constantly arise. Technical knowledge alone is no longer sufficient. However, these skill frameworks consistently cite critical thinking, digital literacy, and problem-solving as fundamental requirements across all sectors.

As well, communication and collaboration capabilities are increasingly vital as work becomes more interconnected and advents of AI continue to aid in mundane, technical and imaginative tasks. Current workers need strong analytical abilities paired with creative thinking to solve the complex problems that current technology either may not address well or, may in fact exacerbate.

These frameworks also consistently cite the need for strong self-management capabilities and emotional intelligence. A sense of resilience and adaptability are crucial for navigating the constant change of occupations. Therefore, a growth mindset and learning agility, as well as understanding one's own learning process, becomes crucial for professional development and are seen as essential for career longevity.

Practitioners can no longer rely on isolated skill sets. Technical skills must be balanced with social and emotional competencies and the ability to synthesize different types of knowledge and skills is increasingly valuable. Therefore, traditional one-time education is no longer seen as sufficient for career-long success as foresight specialists must engage in constant upskilling and reskilling, becoming ‘expert learners’. Career paths become more fluid and require ongoing adaptation, placing a premium on workers that can adapt skills to different contexts and challenges.

Foresight Skills & Competencies

The development of foresight as a professional practice has undergone significant evolution over the past three decades. What began primarily as a technical discipline focused on forecasting and planning has matured into a sophisticated field requiring not only technical competence, but strong creative and social capabilities. This evolution provides essential context for understanding the competencies required of modern foresight practitioners and how academia and organizations can best develop them

In order to better understand this maturation of the field, we examined the foresight practitioner development through analysis of two major frameworks and associated research: The

Association of Professional Futurists' (APF) *Towards a Foresight Competency Model* (2017) as pictured in **Figure 9**, Canada's federal foresight arm Policy Horizon's: *Canada Competency Framework for Foresight Practice* (2024) as pictured in **Figure 10**, and buoyed by broader design skills outlined by Chris Conely in *Leveraging Design's Core Competencies* (2004) and *An Educational Framework for Advancing the Study and Design of Sustainable Transitions* by Irwin, T., Tonkinwise, C., & Kossoff, G. (2020). The findings reveal both commonalities in how the field understands practitioner development and important distinctions in how different organizations approach capability building.

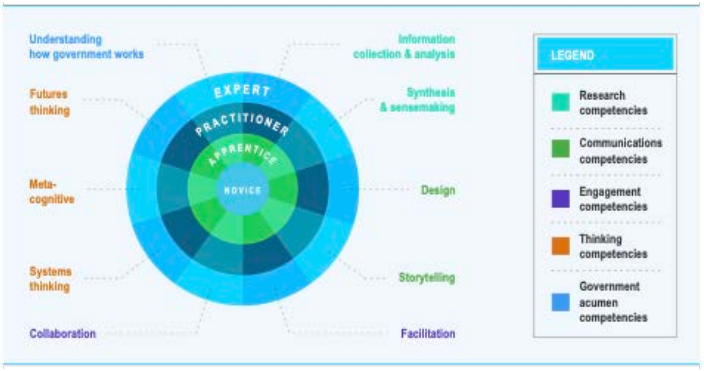
Figure 9

Foresight Competency Model (2017)

Note: The APF's multi-cluster, Foresight Competency Model

Figure 10

Canada Competency Framework for Foresight Practice (2024)



Note: Policy Horizon's framework for Foresight practice, highlighting competencies, skills and mastery

Our research showed that foresight capabilities seem to currently exist on two distinct levels. The first level comprises basic competence - the ability to execute fundamental foresight tasks and methods. The second level represents broader competency - the characteristics that enable superior performance in complex situations (Hines et al., 2017).

The research explored in *Towards a Foresight Competency Model* (2017), helmed by Andy Hines and the APF, demonstrates that foresight competency is not merely about mastering specific tools or methods. Rather, it requires developing "enduring personal characteristics" that predict effective on-the-job performance (Hines et al., 2017). These characteristics include cognitive abilities, behavioral traits, and strategic thinking capabilities that extend beyond technical expertise.

Policy Horizons Canada's newly published ‘Competency Framework for Foresight Practice’ emphasizes that foresight competency development must account for both individual and organizational contexts. Their research shows that effective foresight practice requires practitioners to navigate complex organizational systems while maintaining rigorous methodological approaches. They further that this dual requirement necessitates development of both technical and contextual understanding.

Our analysis revealed at least six competency areas that consistently emerged as essential for current effective foresight practitioners:

- **Framing and Scoping:** Policy Horizons Canada identifies this as the foundational ability to define and bound foresight projects appropriately. This includes understanding stakeholder needs, system dynamics, and project parameters. The APF framework similarly emphasizes the importance of initial project structuring and stakeholder engagement.
- **Research and Analysis**: Both frameworks stress the importance of systematic information gathering and analysis. Policy Horizons Canada particularly emphasizes the need for practitioners to develop robust scanning and synthesis capabilities. The APF model adds emphasis on pattern recognition and emergence detection.
- **Future Thinking:** Our research shows that Future Thinking is distinct from traditional strategic planning. It involves what Hines et al. describes as the ability to think systematically about alternative futures while maintaining awareness of assumptions and biases. Policy Horizons Canada frames this as "futures thinking literacy."
- **Systems Understanding:** Frameworks consistently identify systems thinking as crucial for effective practice. Policy Horizons Canada specifically notes how practitioners must understand both technical systems and human systems in order to be effective as a foresight practitioner, and the APF framework integrates systems thinking throughout their competency model.
- **Design Thinking**: Design thinking is emphasized in both frameworks, as well as within the broader, necessary design skills literature. They particularly emphasize the significance of prototyping and experimentation in the practice.
- **Implementation and Adaptation**: Both frameworks stress that modern foresight practice must bridge from insight to action. This requires practitioners to develop capabilities in strategic planning, change management, and adaptive implementation.

Our research also revealed clear progression paths in practitioner development that are necessary for both academic institutions as well as organizations to understand as they nurture budding and continuing talent. Policy Horizons Canada identifies four distinct levels: Novices, Apprentices, Practitioners, and Experts within the field, with each level representing increasing mastery across multiple competency domains. The APF framework similarly recognizes progressive development stages while emphasizing the importance of continued learning even at expert levels.

Some key takeaways regarding these development pathways include that:

- Development is non-linear and practitioners advance at different rates across different competency areas.
- Experiential learning proves crucial to professional development.
- Mentorship matters significantly, as guided practice accelerates competency development.
- Technical skills form a foundation of competency but do not ensure success in today's foresight practice

Evolving Foresight Skills

At the World Café, the third table was dedicated to exploring the evolving skills, present and future, that are necessary for futurists. This is how the inquiry unfolded.

Round 1

As the first group to engage in discussion around the evolving skills that are and will be necessary for futurists, participants contributed a broad range of skills and competencies that could be categorized as "thinking skills" (critical thinking, systems thinking, creative thinking, seeing the big picture). Other contributions related to important "being skills" or attributes for a futurist, such as being curious, inclusive and able to unlearn and relearn. This group touched on "doing skills", such as those related to collecting and processing information (fact checking, data and tech literacy, integrating information from multiple sources and modalities), facilitation and storytelling, as well as more specific foresight and entrepreneurial skills (scenario planning, risk assessment, influencing, and leadership).

Round 2

The second group had a solid foundation to build on. They expanded on thinking skills by exploring questions of bias, creative and emotional intelligence, while introducing the idea of thinking in designerly ways. They add contributions related to important "being skills" or attributes of a futurist, such as being grounded and pragmatic while also being optimistic and having a growth mindset. Participants also identified the importance of being brave, tenacious and having a thick skin but also having humility, compassion and empathy. In terms of "doing skills", this group added lots of detail in support of engagement skills (participatory skills, collaboration and co-creation skills) and entrepreneurial skills (pitching foresight, thought leadership, client relationship management). They also introduced the importance of monitoring and evaluation. This group felt it was important for futurists to have an understanding of public policy, the potential impacts of technology, and the social construction of technology.

Round 3

Participants in this round were less focused on the ways that futurists think differently or their personal attributes, although they reiterated how important it is for futurists to be self-aware, comfortable with discomfort, be mentally flexible and open minded, in addition to being empathetic and compassionate. They took the discussion into the area of skills related to doing and making, such as working with AI, design skills and tools, visualization and prototyping.

Round 4

The final group had the benefit of seeing the ground covered by the first 3 rounds of discussion. They supported the ideas raised in previous rounds that futurists need to be critical and self-aware thinkers who are adaptable and creative facilitators. Building on the idea of how important it is for futurists to be adept at sensing the external environment, they added that the ability to sense across multiple modalities (sight, sound, touch, taste, etc) would also be necessary.

Conclusion

Across the four sets of discussions, a clear picture of the skill areas that are necessary for a futurist emerges. These skill areas highlight how futurists must be adaptable and self-reflective thinkers, who are both grounded in reality and flexible enough to stretch their thinking in new ways and in different directions. As futurists are often dealing with people who are uncomfortable with ambiguity and uncertainty, participants indicated futurists need to be empathetic, compassionate and able to place themselves in the shoes of their audiences. Additionally, as foresight is not a broadly-understood domain, they recognized the importance of futurists to be skilled communicators and facilitators who can quickly understand the needs of their clients. While these skills were essential for foresight practice, workshop participants recognized that doing and making skills were becoming increasingly important. Some of the inputs provided by participants are highlighted below in **Figure 11** & **Figure 12**.

Figure 11

Table 3's First Round of Inputs

Figure 12

Table 3's Second Round of Inputs

Note: Participants ideate and draw connections between evolving/emerging skills for futurists

Organizations and Futurists

The discussions at Table 4, explored the central question: How might organizations better support and benefit from futurists?

This inquiry hinges on the belief that foresight can offer opportunities to expand organizational capacity, aligning their strategies with future goals, and fostering innovation. However, current barriers such as cultural resistance, resource limitations, and an overemphasis on short-term priorities currently plague its integration.

Organizational receptivity has been a long standing concern within the foresight / futures disciplines. Our World Café sought to work through possibilities of enhancing it, not just from an organizational change perspective, but also connecting it to skills and competencies that our discipline may develop to lead its own entry, stability and influence.

Round 1:

Participants highlighted foresight's dual potential: addressing predictable futures using traditional tools while embracing creativity and adaptability to tackle unpredictable challenges. They proposed embedding foresight literacy into training programs, aligning foresight activities with organizational vision and strategic goals, and improving the ability to recognize and act on early signals of change. Despite these opportunities, participants identified significant barriers, including misaligned strategies and rigid leadership structures, which hinder organizations from fully leveraging foresight's benefits. This discussion underscored the importance of proactive measures to integrate foresight effectively within organizations.

Round 2:

Participants examined how foresight integration differs across organizational types. In government agencies, bureaucratic rigidity often stifles innovation and foresight practices. The private sector, particularly startups, demonstrates agility but frequently lacks the resources to sustain foresight efforts, while larger companies struggle with siloed operations. In research institutions and universities, foresight is commonly treated as a niche activity rather than a strategic asset. To overcome these challenges, participants emphasized redesigning organizational structures to foster collaboration and long-term thinking. They also highlighted the need to cultivate a culture that prioritizes innovation and adaptability, enabling foresight to thrive across diverse contexts.

Round 3:

Participants identified significant challenges in integrating foresight into organizational priorities, including a lack of measurable outcomes and a prevailing preference for short-term goals. To address these barriers, they proposed several solutions: educating leaders on foresight methodologies to foster understanding and secure buy-in, reframing foresight as a critical tool for de-risking decisions and driving sustainable growth and embedding foresight into board-level discussions and strategic planning processes. These strategies aim to position foresight as an essential component of organizational decision-making and long-term success.

Round 4:

Participants emphasized that overcoming barriers to foresight integration requires leadership openness and structural flexibility. Key strategies included upskilling leaders in foresight practices to build organizational capacity, streamlining processes to embed foresight into decision-making at all levels, and fostering exploratory approaches to enhance agility and preparedness. By embedding foresight into organizational structures and culture, companies can break down silos, promote collaboration, and position foresight as a driver of innovation and sustainable growth. As participants highlighted, foresight must be recognized as a strategic imperative woven into the decision-making fabric, enabling organizations to navigate uncertainty and uncover new opportunities for long-term success.

Conclusion

Several strategies exist for integrating foresight into organizations, including building foresight literacy across teams to foster strategic thinking, aligning foresight initiatives with the organization's vision to enhance resilience, and leveraging diverse perspectives to uncover innovative, adaptable actions. However, they also noted key barriers such as limited leadership buy-in, fragmented systems that stall foresight efforts, resistance to long-term thinking within organizational cultures, and a tendency to prioritize immediate, measurable outcomes over more exploratory, long-term insights. However, participants continually highlighted foresight's universal relevance and potential to bridge gaps across sectors; growing foresight skills and competencies to include practices in organizational understanding and change may prove to be critical to help secure and foster the influence of the discipline.

Conclusion

Our workshop at the Dubai Future Forum proved to be critical for the development of our research, as it brought together an international group of foresight practitioners to explore key questions about the evolution and future of the foresight field.

Participants at the first table engaging in the historical events that have shaped the practice, expanded the traditional Western-centric narrative of foresight's history by highlighting influential concepts from religion, astrology, and more global events. They emphasized the importance of considering interdisciplinary influences and examining the field's evolution through domain-specific lenses, such as technology, economics, and design.

For example, they noted how religious texts shaped people's actions towards a "better future," while astrological beliefs influenced early forms of forecasting. Participants also identified key technological milestones, such as the development of the printing press, ARPANET, and early artificial intelligence, as well as economic theories like Long Waves and the introduction of corporate foresight.

To provide a more nuanced understanding of foresight's development, participants proposed enhancing the informational value of historical timelines through color coding, sentiment indicators, and geo-location data. These suggestions aim to capture the diverse influences and global nature of foresight's evolution.

The second table, which tackled envisioning a potential future of foresight, discussed the influence of future technological advancements, societal shifts, and innovations that would transform the globe and practice. Participants explored scenarios such as Mars colonization, asteroid mining, and the rise of artificial consciousness, highlighting the transformative potential of AI, bioengineering, and space exploration. They also considered the impact of global events like climate change, micro-governance models, and the prioritization of non-human life in decision-making.

Participants also emphasized the central touchpoint of science fiction in broadening foresight perspectives and sparking conversations about alternative futures. They also identified emerging methodologies, such as immersive simulations, real-time scenario adaptation, and 5-senses workshops, as potentially transformative tools for navigating future complexities.

Table 3 explored the evolving skill sets of futurists, identifying a range of critical skills and attributes for future foresight practitioners. They emphasized the importance of adaptable and self-reflective thinking, highlighting the need for futurists to be both grounded in tools and methodologies, but flexible enough to explore new possibilities.

Empathy, compassion, and the ability to understand diverse audiences were seen as essential for effective communication and facilitation. As foresight can be a challenging domain for many people, participants stressed the importance of meeting clients where they are and guiding them

through ambiguity and uncertainty. In addition to traditional foresight skills, participants recognized the growing importance of "doing and making" capabilities, such as working with AI, design, and visualization tools. They also highlighted the value of interdisciplinary knowledge, such as understanding public policy, technology impacts, and social dynamics.

Table 4 of our workshop focused on how organizations can better integrate and benefit from foresight practices. Participants identified opportunities such as building foresight literacy across teams, aligning initiatives with organizational vision, and leveraging diverse perspectives to uncover innovative strategies. However, they also noted significant barriers, including limited leadership buy-in, siloed operations, and a tendency to prioritize short-term outcomes over exploratory, long-term insights. To overcome these challenges, participants proposed educating leaders about foresight methodologies, reframing foresight as a tool for de-risking decisions, and embedding foresight into strategic planning processes. There is room here for our discipline practices to learn skills for fostering organizational change.

Further Questions & Ongoing Research

As noted at the beginning of this paper, there is movement between the core professional terms of foresight and futures. This itself is indicative of different practices, understandings and sliding terminology in general. Educational and Professional bodies may help to map out and make sense of terminology, if not simply to acknowledge the contexts under which they are used.

This would help to further make sense of linkages between methods by practice as they evolve, offering new adaptations in the tool kits that we may draw on, whilst being sensitive to their originating contexts.

Further work on the timeline will include visually indicating when methods moved into broader professional awareness, acknowledgment and adoption. We may start to ask further questions, honouring the geographies, vantage points and histories. We see examples of a retroactive integration for which a simple chronological ordering of practices into the ‘canon’ does not do justice; it does not explain when they were brought into discipline. Although foresight practices have always evolved by virtue of importation and adaptation from other disciplines, the profession struggles with its biases, often obscuring or dishonouring the diversity of those that need to be recognized.

As an example, Afrofutures, coined by Mark Derry in 1993, points to present day and historical legacies of African American cultural and liberatory practices. These raise critical awareness of ongoing oppressive power structures, while envisioning alternatives, informing everyday life, influencing communities and inspiring political action (Womack 2013). The relatively recent inclusion of this and other forms of ‘Futures’ points to previous exclusions of considerations - not just of practice, but of large communities of people.

Overall project

Next year at the DFF, we hope to revisit the evolution of our practice from both methods and skills perspective.

At OCAD University, our practices of both strategic foresight and experiential futures continue to evolve, looking at the influences and connections across these disciplines. Both field are looking towards inclusive and participatory practices, as well as connecting in with other departments and faculties within oureEducational setting.

This overall research project is being used as part of the evolution of the Strategic Foresight and Innovation, informing our curricular delivery and unique offerings in another workshop coming up in May of this year. This evolving practices map will help us identify important partnerships of complementary practices and may inform the work of other public, private and not for profit organizations.

We hope that the those that participated in the World Café benefited from the structured conversation and feel that it is well captured here. We are grateful to you and the Dubai Futures Forum and look forward as the collaborations continues to unfold.

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Biographies

Zan Chandler, Adjunct Professor at OCAD University, holds the positions of Executive Board Member at the Association of Professional Futurists, Member of Global Foresight Advisory Council for TFSX and is a Senior Foresight Policy Analyst with Policy Horizons, Government of Canada.

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Aisha Simpson is a graduate of the Strategic Foresight & Innovation Program MDes, OCAD University. She is a Human-Centered Design Strategist utilizing innovative research methods, business design and systems thinking frameworks to drive meaningful equity, diversity, and inclusion change.

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Indranil Udupi has 8 dynamic years of work in roles from service design, innovation strategy to branding and marketing. Having wrapped up his M.Design in Strategic Foresight & Innovation, he has redefined his mission: creating sustainable products, services, and brands that balance human needs, experiences, and our evolving environment.

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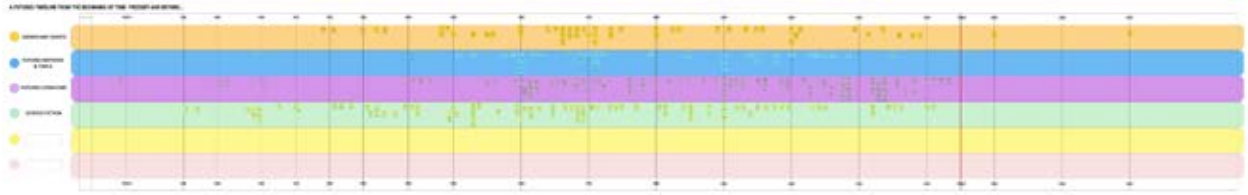
Appendix

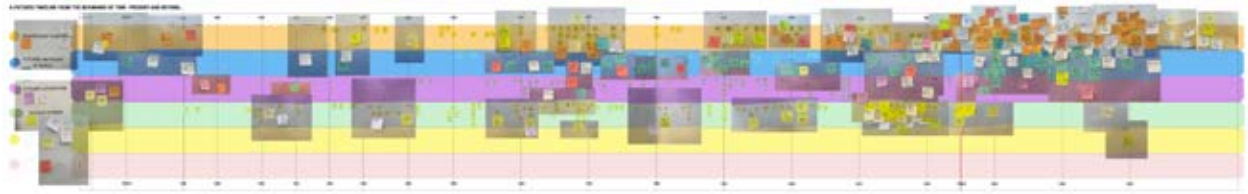
Below are images and links to the timeline - both the initial and the resulting one from the DFF Learnings Day World Café, **Evolving Foresight Skills: How Will We Shape the Future of Strategic Foresight?**

Initial Futures Timeline



Appendix: A Futures Timeline.pdf

Futures Timeline Post-Workshop



Appendix: Futures Timeline Post-Workshop.pdf