



START HERE!
EVALUATION
AND FORESIGHT

**YOUR QUICK
GUIDE TO BASIC
CONCEPTS AND
TERMS**



Petra Mikkolainen

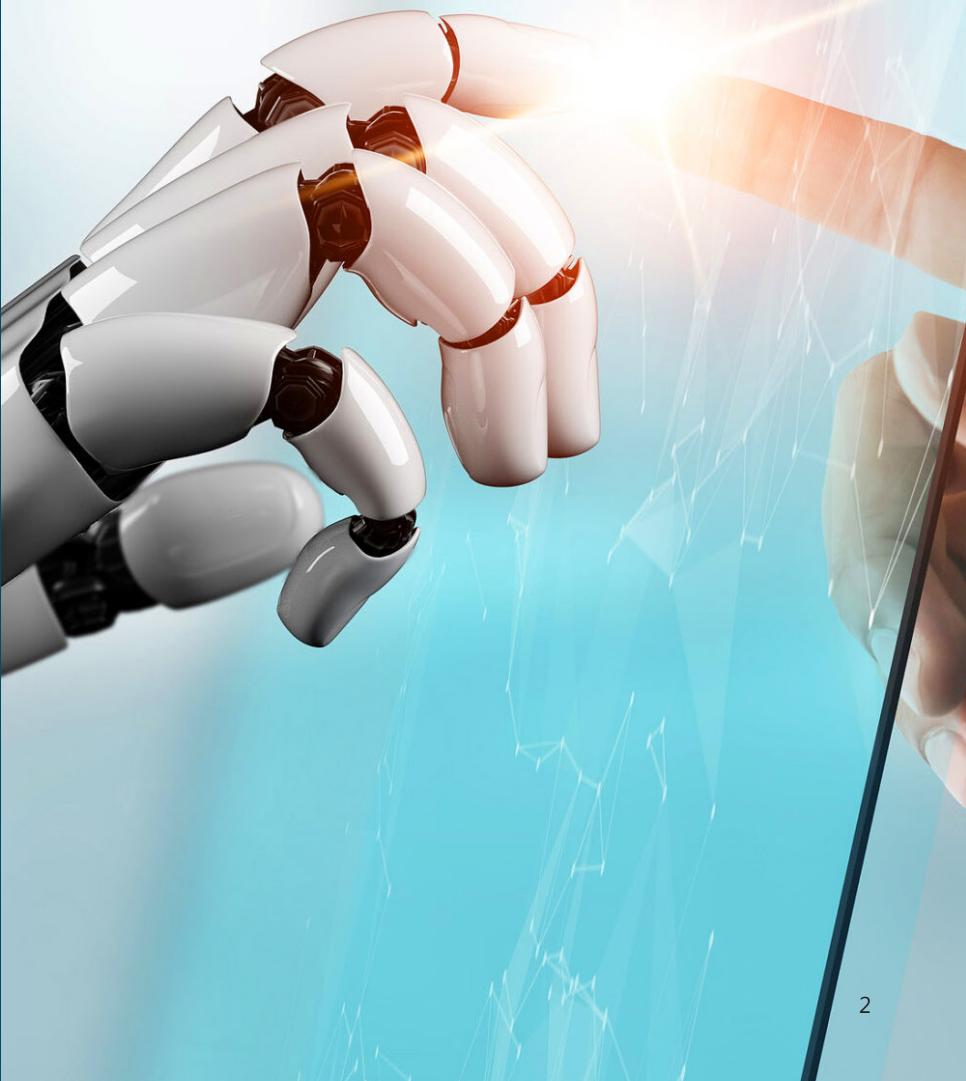
**Senior Consultant,
NIRAS International
Consulting**

Petra's background is in the implementation and evaluation of development cooperation and policy in multiple sectors. Her current areas of interest include the interconnections between evaluation and foresight and futures literacy in supporting organisations' and companies' strategy work. In past years, she has taken courses on futures literacy and foresight with the Institute for the Future and the Finnish Future Fund Sitra. In December 2020, she acted as a core team member in implementing a Futures Literacy Laboratory on the Future of Evaluation in Society. The event was organised jointly by Unesco, the European Evaluation Society, and NIRAS International Consulting as part of Unesco's High-Level Futures Literacy Summit.

 petra.mikkolainen@niras.fi

 <https://www.linkedin.com/in/petramikkolainen/>

A new trend is emerging simultaneously in the field of evaluation and foresight: combining foresight with evaluation and evaluation with foresight. Evaluators realise that evaluation must become more future sensitive, while futures thinking experts consider that foresight should use more lessons from past events to strengthen the analysis of possible futures. This new mindset is useful, given that evaluation and foresight complement each other like two pieces of a puzzle. However, before we can move on with the debate, we must clarify what we mean by each concept and related key terms. This discussion paper serves as your quick guide to evaluation and foresight terminology.





Lost in the jungle of definitions? Not to worry!

It can be overwhelming to try to understand what evaluation and foresight are and what they are not. There are so many terms out there, and simple, explicit, and agreed-by-all-in-the-industry definitions do not seem to exist. There is a reason for that; it is not necessarily beneficial for researchers (in the broad definition of the term) and users of the information to establish strict boundaries to different approaches and methods. Instead, the concepts form a web of overlaying definitions and gradients of colour; each study is unique and adapted to its context.

Notwithstanding, we need to agree on some form of (living) definition(s) for the discussion to move forward. For that purpose, we have prepared this discussion paper to serve as your quick guide to some basic concepts related to evaluation and foresight.

Judgement of value - definitions of evaluation

Evaluation can be described, for example, according to its **purpose**, **method**, or **function**. The book by Chris Fox *et al.* (2016) provides a concise overview of the different interpretations used in the field over the past decades. Among the most cited definitions of evaluation is by Michael Scriven:

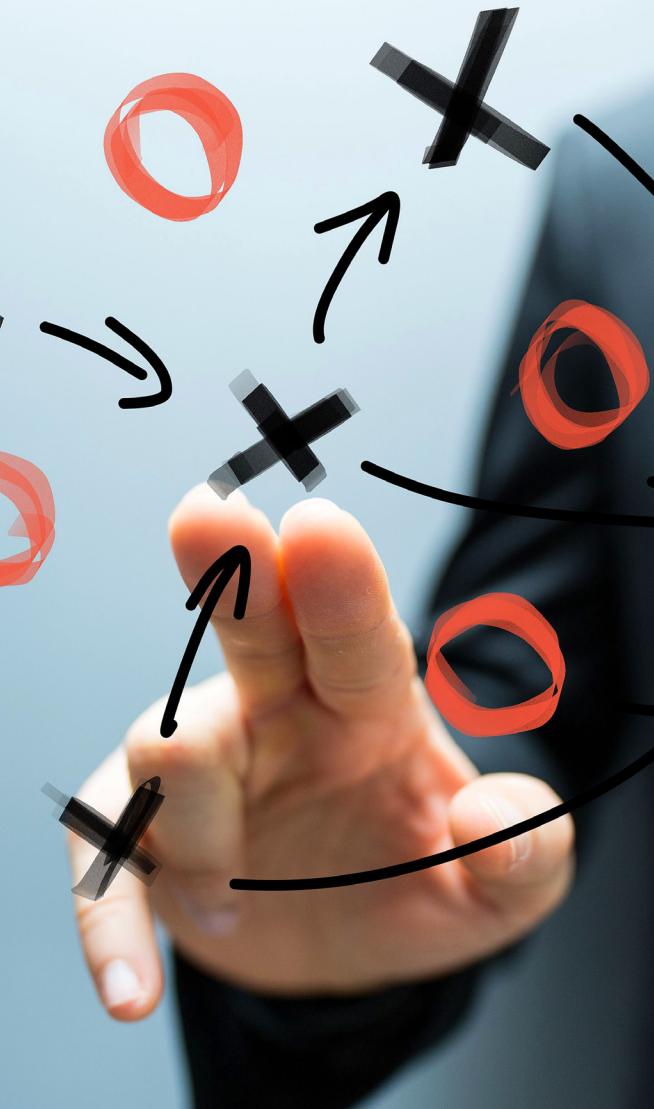
“ Evaluation refers to the process of determining the **merit**, **worth**, or **value** of something, or the product of that process ... The evaluation process normally involves some identification of relevant **standards** of merit, worth, or value; some investigation of the **performance** of the evaluands on these standards; and some integration or **synthesis** of the results to achieve an overall evaluation or a set of associated evaluations. (Scriven, 1991: 139)". (Emphasis added).

In the field of development evaluation, the Glossary of Key Terms in Evaluation and Results Based Management (OECD, 2010) forms one of the most important reference points in the sector. The publication defines evaluation in the following manner:

“ The systematic and objective assessment of an **ongoing** or **completed** project, programme or policy, its design, implementation and results. The aim is to determine the **relevance** and **fulfilment of objectives**, development **efficiency**, **effectiveness**, **impact** and **sustainability**. An evaluation should provide information that is credible and useful, enabling the incorporation of **lessons learned** into the decision-making process of both recipients and donors. Evaluation also refers to the process of determining the **worth** or **significance** of an activity, policy or program. An assessment, as systematic and objective as possible, of a planned, ongoing, or completed development intervention." (Emphasis added).

Fox *et al.* (2016) explain further that by approaching evaluation from the angle of methods, we can distinguish it from similar practices such as monitoring, performance management, auditing, and accreditation. Similarly, the importance of **value judgement** in evaluation is the central aspect that differentiates evaluation from research.¹

¹ A rich debate exists about the differences and similarities of evaluation and research; we do not expand on this topic in this context. Interested readers can start exploring the discussion, for example, [here](#).



Different types of evaluation are typically classified into summative and formative. **Summative evaluation** is a "study conducted at the end of an intervention (or a phase of that intervention) to determine the extent to which anticipated outcomes were produced". In contrast, **formative evaluation** intends to "improve performance, most often during the implementation phase of projects or programs" (OECD, 2010).

While formative and ex-ante evaluation approaches have a mild element of future embedded in them, they should not be confused with future-sensitive evaluation, let alone foresight.

Evaluation as a diversifying field of research

In the past decades, evaluation has seen a diversification of approaches and methods. To make sense of the different "schools", Michael Quinn Patton has identified over 100 approaches, and he has classified them into sub-groups based on their "competing" paradigms (Michael Quinn Patton, 2022). The paradigm depends on the emphasis; what is being evaluated, the role of the evaluator, the level of independence, the emphasis on technical aspects or values and so on. Figure 1 below summarises the different paradigms as explained by Patton.

Figure 1: Ten competing and alternative paradigm evaluation perspectives. **Source:** Patton (2022)





Although Patton describes these paradigms as opposite to each other (to make his point), in reality, they often occur on a gradient. Further, it should be noted that, quite often, the terms "approach" and "method" are used interchangeably. We do not consider that as an issue as long as research methods and distinguished from data collection methods (e.g. key informant interviews, surveys, and desk review are data collection – not research – methods).

Definitions of foresight and other future-related terms

The Merriam-Webster dictionary offers a concise entry point to [foresight](#): it is "*an act or the power of foreseeing*" or "*an act of looking forward*". A synonym for foreseeing is to anticipate, while the definition of [anticipating](#) is "*to give advance thought*".

There are plenty of guidebooks and glossaries online about strategic foresight and futures thinking. We do not take a position about which institute holds the mandate to provide the most valid and up-to-date information. Instead, we list a few places where readers can find user-friendly materials to start exploring the topic.

A glossary can be found, for example, in The Foresight Guide - Anticipating, Creating, and Leading in the 21st Century by Smart and Foresight U (2019) and the Glossary of Terms commonly used in Futures Studies by Bourgeois (2015). In addition, a brief and practical core terminology is listed in Appendix D in the publication by Shallowe et al. (2020).

Here, we summarise the most relevant terms based on the three references mentioned above (see Table 1 below).

Table 1: Glossary of key foresight terms

Term	Definition	Source
Anticipation	The sense of expectation of an occurrence , predicting it and occasionally the act of preparing for it.	Bourgeois (2015)
Drivers, driving forces	Factors causing change, affecting or shaping the future.	Bourgeois (2015)
Forecast, Forecasting	A statement that something is going to happen in the future, often based on current knowledge and trends. Forecasting is the process of making a forecast.	Bourgeois (2015)
	Predicting that an event will happen, to a defined extent, and sometimes with a defined probability. For example "there's a 50-50 chance that at least 1 millimetre of rain will fall in this area tomorrow" is a forecast. Forecasts are usually applied to short-term futures – no more than a few years ahead. A forecast is considered to be less certain than prediction, but more certain than conjecture or anticipation (probabilistic thinking).	Smart and Foresight U (2019)
Foresight / Strategic foresight	The capacity to think strategically about the future.	Shallowe et al. (2020)

	A systematic, participatory and multi-disciplinary approach to explore mid- to long-term futures and drivers of change.	Bourgeois (2015)
	A broad term covering all methods of envisaging the future . These who do professional foresight usually consider it to include strategy that leads to action or decision , which is expressed in the phrase Strategic foresight. Thus forecasting alone is not enough to qualify as foresight, though it is a part of it.	Smart and Foresight U (2019)
	An organised and systematic process o engage with uncertainty regarding the future . "The ability to create and sustain a variety of high quality forward views and to apply the emerging insights in organisationally useful ways; for example, to detect adverse conditions, guide policy, shape strategy; to explore new markets, products and service".	Shallowe et al. (2020)
Future	This common word is mentioned here because it actually has two major meanings, which could be called future-as-time and future-as-image . If you ask "when is the future?" the answer is that it's some time ahead, but probably not this year. But if you ask "where is the future?" the present tense gives it away: it's inside people's heads, and as such it's here right now. These two different meanings can cause confusion.	Smart and Foresight U (2019)
Futures literacy	A capability developed within UNESCO, that offers insights on how we approach unforeseeable challenges by using the future to innovate the present.	Shallowe et al. (2020)
Futures studies	Known also as futures research is an academic discipline about alternative futures which seeks to understand the underlying structures that gives rise to future events, trends or behaviour.	Shallowe et al. (2020)
Futurist	Futurists usually look out more than just a few years ahead. Fortune tellers and prophets don't qualify, because they have no scientific basis for their predictions. Most forecasters don't qualify either, because their focus is short-term and focused on just a few measures. Futurists at the Acceleration Studies Foundation have described twelve common futurist types—six social types, and six methodological types.	Smart and Foresight U (2019)
Outlook	A description of a future state or development that is considered likely (or at least plausible) given clearly defined logic and assumptions.	Bourgeois (2015)
Scenario	Normally (in futures studies) this refers to brief description of a possible future .	Smart and Foresight U (2019)
	A description of how the future may unfold according to an explicit, coherent and internally consistent set of assumptions about key relationships and driving forces.	Bourgeois (2015)
Scenario planning	A futures methodology that uses stories which describe alternative ways the external environment might develop in the future for medium to long-term strategic planning	Shallowe et al. (2020)
Trend	A trend is an emerging pattern of events that suggest change . A driver is a current or emerging trend that may have an impact on development of the policy or strategy area of interest.	Shallowe et al. (2020)
	A measure that has been changing steadily . "The trend over the last 20 years has been for more and more people to go to university."	Smart and Foresight U (2019)
	General tendency or direction of a movement/change over time. A mega-trend is a major trend, at global or large scale.	Bourgeois (2015)
Vision, Visioning	A compelling image of a (usually preferred) future. Visioning is the process of creating a series of images or visions of the future.	Bourgeois (2015)
(Weak) signal	An early indication of a potentially important new event or emerging phenomenon that could become an emerging pattern, a major driver or the source of a new trend.	Bourgeois (2015)

It might be challenging to understand how all these concepts relate to each other. For example, the Institute for the Future (2022) describes a useful "hierarchy" to guide analysis. First, weak signals are collected and analysed and used to identify drivers of change. Then, signals and drivers are combined into forecasts and, finally, the forecasts lead to developing scenarios.

Most importantly, using these concepts requires a **mindset of futures thinking** (also called future-oriented thinking). The [Futuremaker's Toolbox](#), developed by the Finnish Future Fund Sitra, is an interesting place to start. One of the critical skills and attitudes to acquire is the ability to **imagine different futures** (note the plural) and to learn to **question our assumptions** about the future. This type of framing allows expanding our options and act on them.

Finally, futures thinking and futures literacy involve an important value: the democratisation of the future. Futurists want to encourage citizens to question their current assumptions about the future, imagine their desired future, and take action to influence society in that direction. Therefore, the aim is not to make predictions but to reflect on what we want the future to look like and how we can influence it today.

Evaluation and foresight similarities and difference

The publication *Making Foresight Usable for Evaluations* (original title in German *Foresight für Evaluationen nutzbar machen*) by Kind & Vessels (2021) includes a useful table summarising key differences and commonalities between evaluation and foresight.

Table 2: Evaluation and foresight differences and commonalities. **Source:** Kind & Vessels (2021) (*the original document is in German; the table contents have been machine-translated*).

	Evaluation	Foresight
Mutual application	Evaluation can be used to evaluate Foresight processes.	Foresight can be used as a prospective element in all phases of the evaluation - ex ante, concomitant, ex post.
Purpose	Measurement of goal attainment, impact and economic efficiency	Anticipating goals and effects, estimating trends and consequences, e. g. in terms of technology development, economic efficiency, sustainability
Analysis Mode	Assessment of indicators, impact models or hypotheses	Assessment of consequences/scenarios/well-founded assumption
Prospective character	Partially, e. g. to estimate impacts	Focus
Understanding the Future	Future is extrapolable	There is no future. Futures can be designed.
Primary Data Generation	Evidence-based Interviewing experts and Experts	Evidence-based Creative Interactive-participative Interviewing experts
Data quality	Quantitative, semi-quantitative and qualitative	
Primary Collection methods	Interviews, interviews	Various methods (see Popper Foresight Diamond 2009)
Primary Ordering Party	Public sector, civil society (e.g. foundations)	Companies, Public Sector, Civil Societies



Where do evaluation and foresight meet?

The first question is, "what type of evaluation are we talking about"? How well futures thinking can be mainstreamed into the evaluation exercise depends on the evaluation paradigm. Our take is that the approaches that emphasise values, participation, systems change, and utilisation-focus are probably most suitable for testing the integration of methods from foresight.

Already now, evaluation includes some forward-looking elements; one of its core functions is making recommendations for future action. Likewise, the commonly used OECD DAC evaluation criteria, Relevance and Sustainability, assume that the evaluators consider whether the intervention is relevant and sustainable in the coming years. However,

evaluation rarely moves beyond these "basic" aspects of analysis regarding the future.

Similarly, foresight should also assess lessons learned from past events. There is a famous saying by Winston Churchill: "*The farther back you can look, the farther forward you are likely to see*". However, the practice of evaluating organisations' foresight work is relatively underdeveloped considering how advanced the field of foresight itself is (Gardner & Bishop, 2019). Interestingly, colleagues at the Association of Professional Futurists (APF) have recently acknowledged that the intersections between evaluation and foresight should be explored more (APF, 2022).

We believe that evaluation and foresight meet (or, at least, could or should meet) in **systems thinking** and **complexity theory**.

In evaluation, recent years have seen increased demand for approaches and methods to make sense of complex social phenomena (Bamberger et al., 2016). This argument may sound too academic and complicated to tackle in "simple" project and programme evaluations. However, we dare to suggest otherwise. Nowadays, few evaluations can escape complexity, especially if any form of cause-and-effect relationship is to be assessed. The solution is to develop methods that respond to this challenge.

Whether we approach a wicked problem through evaluation or foresight, we must embrace that a lot of **volatility, uncertainty, complexity, and ambiguity** (also known as VUCA) will be involved. Figure 1 below illustrates the interconnections between these four characteristics by giving an example of each.



Figure 1: The VUCA framework. **Source:** Bennet and Lemoine (2014)

Evaluation	What it is	An example	How to effectively address it
Volatility	Relatively unstable change; information is available and the situation is understandable, but change is frequent and sometimes unpredictable.	Commodity pricing is often quite volatile; jet fuel costs, for instance, have been quite volatile in the 21 st century.	<i>Agility</i> is key to coping with volatility. Resources should be aggressively directed toward building slack and creating the potential for future flexibility.
Uncertainty	A lack of knowledge as to whether an event will have meaningful ramifications; cause and effect are understood, but it is unknown if an event will create significant change.	Anti-terrorism initiatives are generally plagued with uncertainty; we understand many causes of terrorism, but not exactly when and how they could spur attacks.	<i>Information</i> is critical to reducing uncertainty. Firms should move beyond existing information sources to both gather new data and consider it from new perspectives.
Complexity	Many interconnected parts forming an elaborate network of information and procedures; often multiform and convoluted, but not necessarily involving change.	Moving into foreign markets is frequently complex; doing business in new countries often involves navigating a complex web of tariffs, laws, regulations, and logistics issues.	<i>Restructuring</i> internal company operations to match the external complexity is the most effective and efficient way to address it. Firms should attempt to 'match' their own operations and processes to mirror environmental complexities.
Ambiguity	A lack of knowledge as to 'the basic rules of the game'; cause and effect are not understood and there is no precedent for making predictions as to what to expect.	The transition from print to digital media has been very ambiguous; companies are still learning how customers will access and experience data and entertainment given new technologies.	<i>Experimentation</i> is necessary for reducing ambiguity. Only through intelligent experimentation can firm leaders determine what strategies are and are not beneficial in situations where the former rules of business no longer apply.



The UK-based think tank, The Centre for the Evaluation of Complexity Across the Nexus (CECAN), has developed a range of materials related to complexity. Especially the poster titled The Visual Representation of Complexity – Definitions, Examples & Learning Points is a valuable tool for unpacking the various elements of complex phenomena. It was developed by CECAN Fellow Joanna Boehnert, illustrating 16 key features of complex systems (Boehnert, 2018).

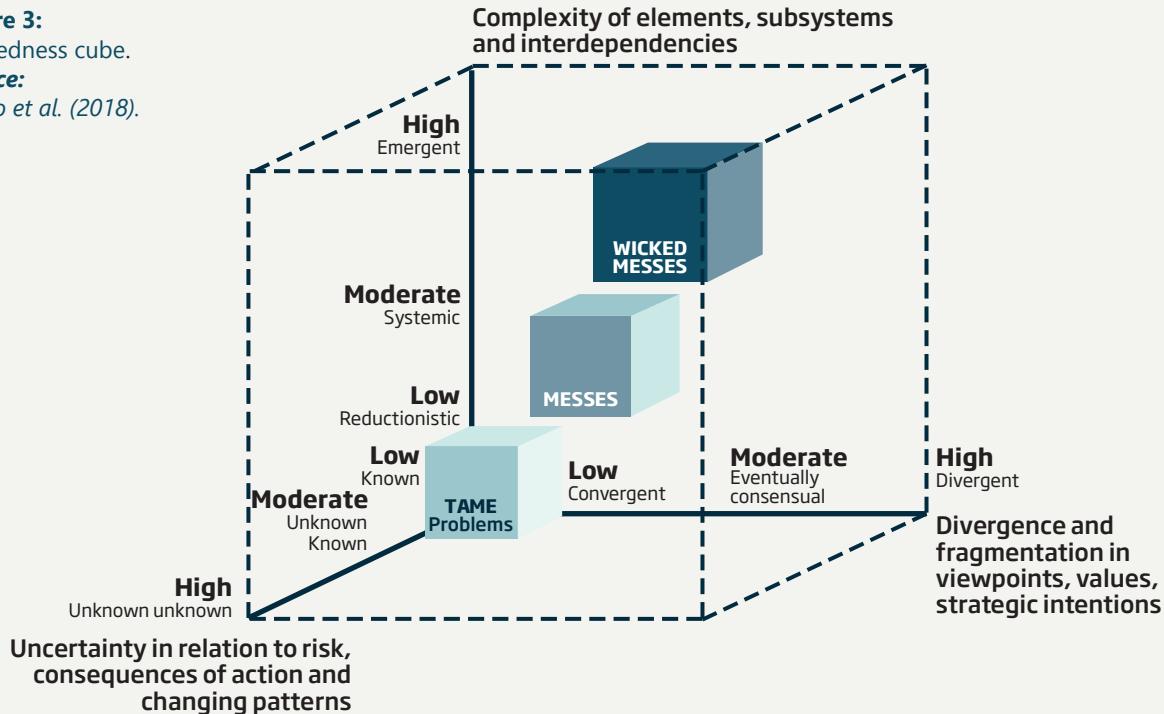
A third entry point to start making sense of complex events and situations is the Cynefin Framework developed by Snowden (CognitiveEdge, 2010). The framework consists of four domains (also called decision-making contexts) that characterise types of situations which we may encounter in professional or personal life. These are clear (or simple), complicated, complex, and chaotic. More often than not, we find ourselves in the centre feeling confused and wondering about how we should respond to the challenge at hand. Mirroring the problem against the four domains helps calibrating the response to the adequate level in a gradient from simple to chaotic.

The website Consuunt provides concise examples of how to use the framework (Consuunt, 2022). For instance, war is typically *chaotic*, weather predictions are *complex tasks*, coaching a team can be *complicated*, and mass producing the same product should be *simple*. The terminology used in the framework has been evolving over the years; at times, it might be challenging to understand all its nuances.

A fourth example of how the “anatomy” of complex phenomena can be illustrated is the Wickedness Cube by Raisio et al. (2018) (see Figure 3). Using the cube as a reference point for discussing the nature of the issue or evaluand can be helpful. The idea is that three dimensions play a role; (1) the complexity of elements, subsystems, and interdependencies, (2) divergence and fragmentation in viewpoints, values, and strategic intentions, and (3) uncertainty in relation to risks, consequences of action and changing patterns.



Figure 3:
Wickedness cube.
Source:
Raisio et al. (2018).



The book *Dealing with Complexity in Development Evaluation - A Practical Approach* by Bamberger et al. (2016) includes a "translation" of these concepts into a practical checklist (see Section 4.2 in the book). The analysis produces a rating based on a score from 1 (low complexity) to 5 (high complexity). Obviously, the discussion around the theme is more important than the score itself.

Some attempts to marry evaluation and foresight

Let's get back to the core issue – the intersections between evaluation and foresight. Regardless of the early stages of exploring this "marriage", there are some examples where researchers have developed and tested theories and practices.

Nieminens and Hyttinen explore the possibilities that foresight can offer for evaluation in their article *Future-oriented impact assessment: Supporting strategic decision-making in complex socio-technical environments* (2015). They argue, for example, that foresight offers the much-needed element to evaluation; the **ability to make sense (faster) of rapidly changing contexts**. Combined further with – what they call – *system dynamic modelling* (i.e. identifying interaction in the system and feedback loops) and

societal embedding (i.e. involving relevant stakeholders to identify the challenges and to draft a common vision), evaluation can better support decision-making compared to a "classic" approach.

Similarly, Patton discusses what foresight can learn from evaluation in his article *Expanding Futuring Foresight through Evaluative Thinking* (2019). He explains what futures inquiries and applications can adopt from six different evaluation approaches (summative evaluation, formative evaluation, developmental evaluation, systems change evaluation, principles-focused evaluation, and Blue Marble evaluation).

A recent study by the Independent Evaluation Group (IEG) of the World Bank Group (2022) tested the use of Delphi analysis as part of a wider evaluation of the institution's performance in supporting the development of renewable energy. Delphi is a well-known foresight tool where a group of experts is asked to provide forecasts on a specific topic in several rounds to arrive at a group opinion. Bourgeois (2015) describes it as "*an anonymous survey method using iterative structured feedback to pool expert opinion on the future*". See "Section 2 Rationale for undertaking Delphi" of the IEG report for an overview of the method and its application in the evaluation.

These are only a few examples of this emerging practice; we will discuss many more in our other blogs.

Final words

Now we should be on the same page with what we mean by evaluation, foresight, and complexity to continue the discussions. Our blog series explores the synergies between evaluation and foresight in the current world. We aim to find practical methodological solutions that commissioners and implementers of evaluation can use in their daily work to support evidence-informed decision-making now and in the future.

QUESTION: Do you have examples of evaluations that have integrated foresight? Or do you have examples of foresight studies that have used evaluation methods? We are interested in learning about concrete examples. Let us know in the comment area below or reach out with a private message.

Petra Mikkolainen, Senior Consultant

Petra's background is in the implementation and evaluation of development cooperation and policy in multiple sectors. Her current areas of interest include the interconnections between evaluation and foresight and futures literacy in supporting organisations' and companies' strategy work. In past years, she has taken courses on futures literacy and foresight with the Institute for the Future and the Finnish Future Fund Sitra. In December 2020, she acted as a core team member in implementing a Futures Literacy Laboratory on the Future of Evaluation in Society. The event was organised jointly by Unesco, the European Evaluation Society, and NIRAS International Consulting as part of Unesco's High-Level Futures Literacy Summit. You can contact Petra by email petra.mikkolainen@niras.fi or via LinkedIn <https://www.linkedin.com/in/petramikkolainen/>

November 2022

References:

- APF. (2022). *APF Task Force on Foresight Evaluation*. Association of Professional Futurists.
<https://www.apf.org/>
- Bamberger, M., Vaessen, J., & Raimondo, E. (2016). *Dealing With Complexity in Development Evaluation: A Practical Approach*. SAGE Publications.
<https://doi.org/10.4135/9781483399935>
- Bennett, N., & Lemoine, G. J. (2014). What a difference a word makes: Understanding threats to performance in a VUCA world. *Business Horizons*, 57.
<https://doi.org/10.2139/ssrn.2406676>
- Boehnert, J. (2018, June 7). The Visual Representation of Complexity. CECAN. <https://www.cecan.ac.uk/news/the-visual-representation-of-complexity>
- Bourgeois, R. (2015). *A Glossary of Terms commonly used in Futures Studies*.
<https://doi.org/10.13140/RG.2.1.1600.2008>
- CognitiveEdge. (2010, July 12). *The Cynefin Framework*.
<https://www.youtube.com/watch?v=N7oz366X0-8>
- Consuunt. (2022). *Cynefin Framework explained in a Practical way with Examples*.
<https://www.consuumt.com/cynefin-framework/>
- Fox, C., Grimm, R., & Caldeira, R. (2016). *An Introduction to Evaluation*. SAGE.
- Gardner, A. L., & Bishop, P. (2019). Expanding Foresight Evaluation Capacity. *World Futures Review*, 11(4), 287–291.
<https://doi.org/10.1177/1946756719866271>
- IEG. (2022). *Delphi Technique: Predicting Emerging Opportunities and Challenges in Renewable Energy* -. Independent Evaluation Group (IEG) of the World Bank Group.
<https://ieg.worldbankgroup.org/methods-resource/delphi-technique-predicting-emerging-opportunities-and-challenges-renewable-energy>
- IFTF. (2022). *Forecasting Skills* [Futures Thinking course taught by Institute for the Future with Jane McGonigal]. The Institute for the Future (IFTF).
- Kind, S., & Wessels, J. (2021). *Foresight für Evaluationen nutzbar machen-Wie sich Methoden der Zukunfts-vorausschau gewinnbringend in der Evaluation einsetzen lassen*. Institute for Innovation and Technology.
<https://www.iit-berlin.de/en/publication/foresight-fuer-evaluationen-nutzbar-machen/>
- Michael Quinn Patton. (2022, June 13). *Why so many evaluation approaches: The short story version*.
<https://www.youtube.com/watch?v=6xY9jMUUorM>
- Nieminen, M., & Hyttinen, K. (2015). Future-oriented impact assessment: Supporting strategic decision-making in complex socio-technical environments. *Evaluation*, 21(4), 448–461.
<https://doi.org/10.1177/1356389015606540>
- OECD. (2010). *Glossary of Key Terms in Evaluation and Results Based Management*. Organisation for Economic Co-operation and Development (OECD).
<http://www.oecd.org/development/peer-reviews/2754804.pdf>
- Raisio, H., Puustinen, A., & Vartiainen, P. (2018). *The Concept of wicked problems: Improving the understanding of managing problem wickedness in health and social care*. Routledge, Taylor & Francis Group.
<https://osuva.uwasa.fi/handle/10024/10236>
- Shallowe, A., Szymczyk, A., Firebrace, E., Burbidge, I., & Morrison, J. (2020, October). *A stitch in time: Realising the value of futures and foresight*. The RSA.
<https://www.thersa.org/reports/futures-thinking-foresight>
- Smart, J. M., & Foresight U. (2019). *The Foresight Guide-Anticipating, Creating, and Leading in the 21st Century*.
<https://www.foresightu.com/>



Petra Mikkolainen
NIRAS International Consulting
November 2022