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Scenarios – the art of bringing the future into today's decision making!

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Abstract

For more than half a century scenario planning has been part of the toolbox for many strategic planners. The usefulness of the scenario approach is emphasized in turbulent times, as the ones we are living at present. Besides having proven its role in traditional strategic decision making, scenario planning can create value for a number of different purposes. In this article we briefly describe the history of scenario planning and its application in the field of strategy. Our main contribution is in highlighting other application areas for scenarios, like innovation, leadership, branding etc. Scenarios are in our opinion an excellent method to create appreciation for alternatives. And, at best, they contribute to exploration and learning of strategic territories that the decision maker has not been paying attention to. From "thinking the unthinkable" we now use scenarios to spot opportunities and build road maps to preferable futures. A proper scenario process allows disagreement of potential developments become an asset for the organization, fostering a constructive strategic discussion. And uncertainty becomes a friend, not a risk.

Keywords

scenarios • strategic planning • applicarions

A brief history of the scenario practice

Turbulence is an ever-present property of most organisations' operating environments. Thus, different applications of futurising have become important practices as we navigate towards the uncharted waters ahead. The use of scenarios has taken an important role in futurising. The scenario practice started to be recognised as an important way to prepare for what the future could bring in the post-WWII work of Herman Kahn. He was then a young defence analyst at the Rand Corporation, who started to tell brief stories to describe the many possible ways that nuclear weapons technology might be used by hostile nations. Kahn's "thinking the unthinkable" approach pioneered the technique of ''future-now'' thinking in the US[1]. At the same time, Gaston Berger was developing similar methods at the Centre d'Etudes Prospectives, which he founded in France. His method, which he named 'La Prospective, ' was to develop normative scenarios of the future that were to be used as a guide in formulating public policy. By the 1970s, scenario planning was used by several institutions and bigger corporations. Widespread recognition of the value of the scenario approach came from the successful strategic decision-making in Shell prior to the oil crises, a process in which the application of the scenario technique played a central role. In the seminal HBR article from 1985, "Scenarios – Uncharted Waters Ahead", Pierre Wack, who was a central person in Shell's scenario team, wrote: "Given the long lead times for decisions in an oil company, however, it was decided that the six-year horizon (of Shell's corporate planning system UPM (authors remark)) was too limited. Shell therefore undertook experimental studies to explore the business environment of the years 2000. One of them revealed that expansion simply could not continue and predicted that the oil market would switch from a buyers' to a sellers' market, with major discontinuities in the price of oil and changing interfuel competition. The study also signalled that major oil companies could become huge, heavily committed, and much less flexible – almost like dinosaurs. And dinosaurs, as we all know, did not adjust well to sudden environmental changes."[2]
Shell was successful. By the time of the oil crisis in 1973, Shell transformed from no 7 to no 2 of the "seven sisters" and to no 1 in profitability. At the same time, the use of scenarios to inform strategic decision making became recognised as a very

1 See e.g. Horwath: Scenario Planning: No Crystal Ball Required, StrategicThinker 2006
2 Pierre Wack, 'Scenarios: Uncharted Waters Ahead', *Harvard Business Review*, 1 September 1985, https://hbr.org/1985/09/scenarios-uncharted-waters-ahead.

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powerful tool. Scenarios helped to challenge managers' mental models; they created an interplay between deep thinking and enormous amounts of detail. Illusionary thinking, dominant ideas of progress, official futures, etc., had given way to a more elaborate way of perceiving and re-perceiving what the future might bring at you. The scenario approach had established itself as a key instrument in the strategy domain. And we started to see the growth of a new profession – professional dreamers.[3]

In his 1984 article, Pierre Wack[4] wrote: "Scenario planning is...aimed at...foresight in contexts of accelerated change, greater complexity and genuine uncertainty." If those conditions at that time were advocating for the use of scenario planning, the argument is well reinforced by the turbulence of present times.

Purpose

In this article, we will reflect on how scenarios can bring value to decision making, especially in organisations where investment horizons are long. Our aim is not to elaborate on how to build scenarios or the technicalities of scenarios as such, but moreover to discuss the interfaces between scenarios and other functions in organisations, such as strategic planning, R&D, marketing and branding, HRD etc. Although scenarios can be intellectual masterpieces as such, their real value emerges when they are used to facilitate better decisions.

In our discussion, we will make a number of references to scenario projects conducted by the Finnish industrial corporation Wartsila back in 2006-10.[5] By referencing scenario work from a few years back, we are not illuminating any issues that address present strategic decision-making. The cases illustrate very well how decision-makers can make valuable use of scenarios in many important areas of development. Wartsila is a global leader in innovative technologies and lifecycle solutions for the marine and energy markets. Writing this article, we have benefited from discussions with Mr. Christoph Vitzthum, then head of the energy division and the Service division at Wartsila, and Mr. Jaakko Eskola, then head of the Marine division before becoming corporate CEO. It must be noted that all opinions are strictly the author's, and the interviewees did not talk as representing Wartsila.[6]

Scenarios and "traditional" strategic planning

It seems to us that many managers would prefer to live in a world where forecasting could guide their decision-making. Unfortunately, forecasting is not fit for turbulent times. The models are constructed and parametrised utilising historical data. They require that the conditions in the future are similar to the ones prevailing when the models were built. Forecasts are pieces of yesterday, coming later. Scenarios are not forecasts. Working with scenarios, we manufacture alternative, plausible, and qualitatively different futures. This is done by combining trends (more or less certain developments of some issues) and different outcomes of key uncertainties in a systemic logic. The uncertainties and trends are chosen by in-depth analyses of forces that have the potential to change the contextual environment and thus alter the conditions for the future of the business. In doing this, one has to pay attention to not being too close to home; one should push the focus of analysis further out in the contextual environment. And the factors one studies should not be the ones one can control.

There are numerous examples of the successful use of scenario planning in strategy work. Naturally, there is not a one-size-fits-all approach; each strategic decision-making situation has its unique conditions that one must pay attention to when designing how to best utilize scenario planning to enhance the quality of the strategy work and the strategic decisions that come out of that work. Above, we pointed out the need to identify the relevant drivers of change. Equally important is identifying the focal issue of scenario work and the time horizon to apply for the analysis. The focal issue should preferably not be an issue under control of the organisation. In the examples from Wartsila, we did not analyse the future of their products, especially not their combustion engines. We focused on the future of power production and use and the future of shipping, respectively.

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3 The term is attributed to Cynthia Selin, 'Professional Dreamers: The Future In The Past Of Scenario Planning', in *Scenarios For Success* (John Wiley & Sons, Ltd, 2012), 27–51, https://doi.org/10.1002/9781119208136.ch2.

4 Pierre Wack, *Scenarios: The Gentle Art of Re-Perceiving : One Thing Or Two Learned While Developing Planning Scenarios for Royal Dutch/Shell* (Division of Research, Harvard Business School, 1984).

5 'Wärtsilä', Wartsila.com, https://www.wartsila.com. The reader might want to search the net for "wartsila power scenarios" and "wartsila shipping scenarios". On Youtube you can watch the power scenarios on https://www.youtube.com/watch?v=ukp5qXIq5BQ and presentations of aspects of the shipping scenarios on https://www.youtube.com/watch?v=bidHYh6WKrE&list=PLC2D09D6A335A2035.

6 Mr. Christoph Vitzthum is at present CEO of Fazer Group, a Finnish food company who is market leader in confectionaries, bakery products and lifestyle foods. Mr. Jaakko Eskola is chairman of the board of the Technology Industries of Finland.

Understanding those plausible futures leads then to decisions on issues under your control. When deciding on the time horizon, at least three aspects come into play. First one has to ask how fast things are changing. In the energy business things change slowly, with the exception of occasional "crises". Other businesses have a much more dynamic and rapidly changing context. Hard to imagine that an actor in the artificial intelligence sphere would be helped by scenarios looking 30 years into the future, which would be normal in the energy sector. A second aspect is connected to planning timelines and economic lifetimes. In the energy industry, time horizons are long. When making strategic decisions concerning an investment in a power plant or a wind power park, you are well advised to look 20 years into the future. Planning, permitting, construction, and economic lifetime together produce a time horizon that is long. Third but not least is how well one can be informed of plausible developments of the critical driving forces. If one cannot feel comfortable in stretching the time horizon, if the feeling is that it is almost like tossing the coin, then one should shorten the time so that the manufactured scenarios still feel plausible and not like science fiction.[7]

Properly built scenarios are very helpful for strategy work. They illuminate possibilities and highlight risks. Strategic choices can be evaluated against scenarios, new business opportunities, emerging growth trajectories, etc. In the following sections, we will highlight some additional uses of scenarios, demonstrating the potential to create even more value from an investment in the scenario work.

Scenarios, thought leadership, and branding.

As Shell is recognised as probably the leading organisation in the scenario field, one has to ask why they are sharing the deep knowledge built into their scenario work with the wide public. The investment to produce, e.g., Shell's global scenarios every fifth year is considerable. And the scenarios are widely used outside the company. The scenarios are undoubtedly creating a platform for Shell as a thought leader, and they help Shell create and participate in discussions that enhance the perception of the Shell brand.

The same kind of thinking was influencing Wartsila when the business units started to embark on their respective scenario journeys. The company was well known in shipbuilding, and their 2- and 4-stroke engines were found in a significant part of the fleets sailing the oceans. The same engines could be used for electricity production in power plants. The Power Plants division in Wartsila had a growing business focusing on clients in especially remote places, like islands. But when renewables, mainly wind and solar, started to enter the energy markets at volume, flexibility and auxiliary services became important topics. However, the Wartsila brand was not well known in the energy market; it was still heavily connected to shipbuilding and shipping. The idea of producing scenarios and using them to boost the recognition of Wartsila Power Plants as a thought leader in the energy business emerged. And the effort paid off very well. The number of new doors that opened for Wartsila Power Plants' sales and marketing people was significant. The business has started to establish itself as a significant player in the flexible power domain.

For the Ship Power division, the challenge was not that the brand was not known, but it was mainly connected to the engines, not to the broader offering that the division was introducing to the market. So, by building scenarios of the future of shipping, Wartsila Ship Power could be recognised as a thought leader in the shipping markets, providing a broader portfolio of solutions, not only as a manufacturer of very good engines. The scenarios were widely shared. Mr. Eskola wrote, "As the leading marine solution provider, Wartsila wants to share the scenarios with stakeholders for mutual generation of new strategies and modes of cooperation. What the future will look like in reality depends on the decisions we all make, together and individually."[8] The number of presentations at conferences and industry exhibitions was significant. Wartsila Ship Power moved the brand perception from that of an engine manufacturer to a solution provider shaping the future of shipping.

Our argument is that it pays off to build scenarios and use them, including the enormous amount of insight created in the process to enhance the brand, and to strive for thought leadership. It says that the organisation does not necessarily share all of the strategic thinking and insights from the building process, but nobody expects that. Good scenarios frame discussions for mutual advantages among stakeholders, within ecosystems. The organisation that brings the scenarios to the table has an advantage in guiding mutual efforts. And naturally, it is better to be at the table than on the menu.

7 We are not referring to science fiction as inspiration for scenario production, which Alessandro Fergnani and Zhaoli Song, 'The Six Scenario Archetypes Framework: A Systematic Investigation of Science Fiction Films Set in the Future', *Futures* 124 (1 December 2020): 102645, https://doi.org/10.1016/j.futures.2020.102645. has good arguments for.

8 Press-release 08-09-2010: Wartsila publishes Shipping Scenarios 2030

Normative scenarios

Another application of scenarios is when you create a description of a desired future and engage stakeholders in the discussion to jointly reach that future. As above, the scenario as such is not the point, it is the way scenarios can help to facilitate the discussion in order to create joint actions among stakeholders. This approach, called normative scenarios, seems to gain more and more traction. Normative, or prescriptive, scenarios present a future world, mostly a preferred one, which is desirable and achievable if identified actions are taken. At the core is a compelling picture of the future, which is not science fiction but realistic and perceived as plausible. By backcasting, we then build the path from the future to the present, a methodology that ensures that actions and decisions taken today will lead to the desired future. Sharing these normative scenarios one can mobilise stakeholders to jointly embark on the mission to build the future. Among normative scenarios, one has to mention the ones that have been created by the World Business Council for Sustainable Development (WBCSD). The present version of Vision 2050: Time to Transform paints a vision of a world in which more than 9 billion people will be able to live well within planetary boundaries by 2050.[9] Normative scenarios not only paint the picture of the future state of the issue in focus but also highlight the efforts to reach there. In the WBCSD case, "Vision 2050 sets out nine pathways toward transformation. Each includes a vision of the way that societal needs will be met in 2050, as well as a series of transitions critical to achieving each vision and action areas for business to focus on over the next ten years."[10] This scenario approach is well suited to tackle the environmental challenges we face. Another notable example from another area is the work in South Africa by Adam Kahane of Reos Partners. The challenge was to help to build a sustainable political structure after the apartheid era. Kahane gathered a diverse team of leaders and facilitated what became known as the Mont Fleur Scenario Exercise. Using normative (transformative in his words) scenarios, the group explored the dynamics of the South African transition and whether the country will succeed in "taking off". The scenarios provided a road map for the transition to democracy. They helped shift the economic thinking and action of the African National Congress (ANC) government, strengthen relationships and alliances among leaders, establish clearer intentions and commitments as to what these leaders need to do, and develop actions to co-create a democratic South Africa.

Scenarios as learning devices

Beliefs exist in all organisations. They are conclusions about how the world works. Beliefs become very potent if we regard them as truths. When this happens, we tend, according to Carolyn Taylor, to close off from new information that could challenge or negate our beliefs.[11] Beliefs guide both strategic and operational decisions. The shock to the organisation is significant when it turns out that one had the wrong view of how things go around. Scenarios are very good tools to avoid this kind of narrow thinking. As scenarios call for different views, legitimate questioning of the dominant thinking and creating different views, they foster a culture of dialogue. Kees van der Heijden calls this "the art of the strategic conversation."[12] Scenarios enable disagreement to become an asset.

This view is extremely useful when a business is entering less explored territories. In Wartsila Power Plants, this was the case in ancillary services, services needed to make up for the fluctuation of power generation by wind and solar generation. Scenarios were built for the US market. This was very insightful as the US is not one power market; the states differ a lot. It was also particularly important to understand California's very stringent emission regulations. They were, to use a term from Bill Sharpe "pockets of the future in the present."[13] The scenarios led to the exploration of new uncertainties, development of insight into alternative business models, etc. As scenarios deal with something yet to come, no one has the correct answer. Thus, they allow alternatives to enter the discussion and create an arena for balanced discussion about plausible futures. Learning is significant.

The previous example pointed to organisational learning. But scenario work also enhances individual learning. We were asked to run a scenario project for Wartsila Power Plants on the topic of the future of emissions. Although the topic as such was extremely interesting and important, even more important was that the project was designed to enhance individual capabilities

9 'Vision 2050 - Time to Transform - WBCSD', World Business Council for Sustainable Development (WBCSD), accessed 22 February 2024, https://www.wbcsd.org/Overview/About-us/Vision-2050-Time-to-Transform.
10 'Vision 2050 - Time to Transform - WBCSD'.
11 Carolyn Taylor, 'Organisational Beliefs and the Impact on Culture', *Human Synergistics* (blog), 29 March 2017, https://www.humansynergistics.com/blog/culture-university/2017/03/28/the-unseen-force-that-s-shaping-your-culture-every-day/.
12 Kees van der Heijden, *Scenarios: The Art of Strategic Conversation* (John Wiley & Sons, 2011).
13 Bill Sharpe, *Three Horizons* (Triarchy Press, 2020).

to think broader, see further, and cope with uncertainties. Alongside the assignment to produce scenarios, we were asked to pay special attention to the development of the individuals in the team. As the culture is heavily engineering-focused, it was extremely fruitful for the participants to learn that you cannot plan everything and that things do not always follow your plan. To raise the horizon to see further out in the contextual environment, recognise that many things that happen, despite your planning activities, and develop the ability to be prepared for what may come. On the individual level, this also has a positive impact on the perception of signals of what might happen. Having made the journey to plausible futures, one has triggered the perceptive system to recognise also weaker signals. You have created what David Ingvar calls "a memory of the future".[14] We start to pay attention to a much broader spectrum of signals and are better at interpreting them. But this also has consequences. One member of a project team told us that we had destroyed her mornings since "it takes me so much more time to read the morning papers when I see so many interesting things."

The role of the link between scenarios and HRD has been explored e.g. by Chermack, Lynham & van der Merwe.[15] They believe strongly that scenario planning is the vehicle that links the work of HRD professionals to the strategic context of organisations. Rasmus (2021)[16] gives a number of reasons why scenarios are critical to HR. According to him, scenarios foster agile thinking and encourage perceptual learning and heightened awareness. They also build strategic capacity through strategic conversation. Scenarios are also helpful devices for recruiting and retention, as well as developing the organisational design. He concludes that "with scenarios, HR heralds the right tool for chaotic times". The application of scenarios in an HRD context does call for a number of strategic capabilities that the organisation should possess. In his interesting thesis, Konola[17] develops the discussion of corporate foresight as a system. The primary components connected to HR in his concept are People & Networks and Level of Inclusion. Adding Paliokaitė, Pačėsa and Sarpong's views of the role of Leadership and Coordination,[18] we see a picture emerging of how HR should develop the capabilities to make utilisation of scenarios an asset. Facing complexity and uncertainty, leaders should recognise that that yesterday's recipe for success might not work tomorrow. It is not only a question of reframing mental models. It is equally important to rethink management control systems. Malmi, Kolehmainen & Granlund[19] explain the unintended consequences on cognition and inertia of not doing so in the case of Nokia Mobile Phones Successful reframers are geared towards calling on the power of the organisation and mastering the art of strategic conversation. This is even more important when the organisation's operational environment is confronted with significant changes, such as the rise of Artificial Intelligence, the pandemic and the war in Ukraine. Leadership is well advised to foster organisational capabilities to explore future possibilities for value creation. Engaging the organisation in the journey into plausible futures and back requires good process design and leadership that empowers people. Getting this right lays a good foundation for strategies that create value for all stakeholders, including society, customers and colleagues. Leaders who enable the organisation to connect the future with the present understand that leadership is an art. You are a leader as long as those you lead give you the privilege to lead them. Having a common understanding of what the future might bring at you is key. Future-oriented leadership, supported by scenarios from proper foresight processes, empowers the organisation to join the journey into a meaningful future. The endeavour minimises the risk of resignation and keeps the best talent on board. We see how scenarios play an important role in learning how the future might be a different one than the one we are expecting. Besides learning, scenarios play an important role in enhancing the ability to re-perceive the complex environment we are interacting with. In his article "The Gentle Art of Re-Perceiving",[20] Pierre Wack points out that "in our times of rapid change and discontinuity, these crises of perception—the inability to see a novel reality emerging by being locked inside obsolete assumptions—have become the main cause of strategic failures." We note the same in our blog post on mental models[21] where we asked if the "wrong trousers" are here again, but now enabling the war in Ukraine? Analysing why the Kyoto protocol did not solve the climate crises, professors Gwyn Prins and Steve Rayner claim 39 that we believed in the wrong mechanisms

14 D. H. Ingvar, '"Memory of the Future": An Essay on the Temporal Organisation of Conscious Awareness', *Human Neurobiology* 4, no. 3 (1985): 127–36.

15 Thomas J. Chermack, Susan A. Lynham, and Louis van der Merwe, 'Exploring the Relationship between Scenario Planning and Perceptions of Learning Organisation Characteristics', *Futures* 38, no. 7 (1 September 2006): 767–77, https://doi.org/10.1016/j.futures.2005.12.010.

16 Daniel Rasmus, 'Scenarios and Human Resources: 6 Reasons Scenarios and Foresight Are Critical to HR - Serious Insights', *Serious Insights* (blog), 30 October 2021, https://www.seriousinsights.net/scenarios-and-human-resources/.

17 Harri Konola, 'The Relationship Between Corporate Foresight, Dynamic Capabilities and Ambidexterity' (Aalto University, 2023), https://aaltodoc.aalto.fi/handle/123456789/122738.

18 Agnė Paliokaitė, Nerijus Pačėsa, and David Sarpong, 'Conceptualizing Strategic Foresight: An Integrated Framework', *Strategic Change* 23, no. 3–4 (1 May 2014): 161–69, https://doi.org/10.1002/jsc.1968.

19 Teemu Malmi, Katja Kolehmainen, and Markus Granlund, 'Explaining the Unintended Consequences of Management Control Systems: Managerial Cognitions and Inertia in the Case of Nokia Mobile Phones*', *Contemporary Accounting Research* 40, no. 2 (2023): 1013–45, https://doi.org/10.1111/1911-3846.12849.

20 Wack, *Scenarios*, 1984, 1–77.

21 Mikael Paltschik, 'Mental Models, Worldviews, and the Challenge to Perceive Unpleasant Futures!', *Capful* (blog), 22 April 2022, https://capful.fi/blogi/mental-models-worldviews-and-the-challenge-to-perceive-unpleasant-futures-2/.

and used the wrong trousers. Likewise, the worldview in many Western democracies could not align itself with a scenario of a full-scale “traditional” war in Europe. Such a scenario did not exist in the public domain and probably not in most closed chambers of leaders, not political or business. Our Western logic said it would be irrational or downright stupid. Our strong belief in institutions and mechanisms for peace, like the UN and the OSCE, said it would be impossible. The right for sovereign nations to decide their path forward said it would be wrong. Spheres of influence were a thing of the past. We were unable to put all that we had witnessed, from Grozny through Georgia and Syria to Crimea, into a scenario which conflicted with what we believed was rational. And on February 24th, 2022, the “special military operation” started – Russian tanks, missiles, and troops began to shed Ukrainian blood.

There is an obvious need to follow Wack’s call for re-perceiving in times of rapid change and increased complexity, such as ours. Manager’s mental model becomes a dangerously mixed bag: enormously rich detail and deep understanding that can coexist with dubious assumptions, selective inattention to alternative ways of interpreting evidence, and illusionary projections. In these times, the scenario approach has leverage to make a difference argues Wack.

Learning and re-evaluation can also happen on specific issues. Working on the Power scenarios, the future of solar panels as a significant alternative for large scale power production was not clear. The arguments were raised against wider use mainly based on the costs of the panels. No-one doubted the technological feasibility, but could economics ever play in favour of solar? In a world dominated by nuclear and coal fired power plants, this new kid on the block had not yet reached volume. Unit costs remained high. But what if the costs came down? Could national subsidies create more demand, thus bringing production costs per unit down? Could other interventions talk in favour of solar power? Letting constructive disagreement flourish, learning took place and the team started to see how solar power might play a significant role in some scenarios. Scenario production is a good arena for learning. As the future is unknown to all, everybody has to learn and re-evaluate previous positions.

Every organisation is a system of power and political structures. This does impact every exploration into the unknown. Strong cultures of “command and control” might foster single-loop learning processes, mainly achieving adaptation and correction goals. But what if you start to question the assumptions underlying many of your strategic beliefs, if you realize the boundaries in your mental models and start to up- and timeframe your thinking? In a double loop learning process, you might see something new coming at you in the future, not only another yesterday. Embarking on a scenario endeavour, you start to ask yourself questions like: What if we knew less and learn more? What if we knew less and imagined more? These “what if” questions can trigger a process leading to an expanded intellectual realm. Richard Normann in *Reframing Business*[22] called the process “Knowing how to know”. Languaging, use of opening and catalyzing artefacts, structural coupling, etc. are key elements in such a process. The analytical and intellectual debate, “let disagreement be an asset”, were competing views of how futures might come at us is core to every successful futurizing, and scenario, endeavour. Turning this into an ongoing process, integrated in the organisational DNA, can create a platform for “knowing” less and learning more.

Scenarios, R&D, and innovation

As scenarios convey a description of the future context of your business, they also raise the question what type of new products, services, solutions, etc. will play a role in the futures described by the scenarios. Anecdotal evidence of this is the reaction of a Wartsila marketing manager when he was introduced to the Power scenarios, “Damn! We do not have a product portfolio for this.” The link to R&D and innovation activities is obvious. On the other hand, we see that many request to the innovation and R&D functions emerge from sales and marketing. In the competitive situation, sales and marketing want to improve the competitiveness of the company’s offerings in the present situation. This leads to a focus on incremental improvements, not necessarily securing long term success. This, together with unguided idea generation, has the potential to make the front end of the innovation funnel fuzzy.

An example to overcome this challenge is found in Shell, and the company’s Game Changer innovation process.[23] By using scenarios to define what the company could be in different futures, Shell created trajectories from the present situation to the different future “companies”. These trajectories were then populated by different domains that should be created or improved by innovation. In this way, the input to the innovation funnel was in line with strategic visions, and the innovation process became much more efficient.

22 Richard Normann, *Reframing Business: When the Map Changes the Landscape* (John Wiley & Sons, 2001).

23 Rafael Ramírez, Leo Roodhart, and Willem Manders, ‘How Shell’s Domains Link Innovation and Strategy’, *Long Range Planning* 44, no. 4 (1 August 2011): 250–70, https://doi.org/10.1016/j.lrp.2011.04.003.

When evaluating both progress in innovation funnels and what might come out from them, scenarios can play a role. At different decision gates in the funnel, scenarios can be deployed as conditions in wind tunnels in which the emerging concepts are tested. The future business context in which the new concept should produce expected value is presented by scenarios. Altering the conditions in the wind tunnel, using different scenarios, one gets a proper indication of potential success and risks.
It is also interesting to look at an example how scenarios influence competence development within R&D. In work with a major truck manufacturer, we analyse the competencies needed within R&D to meet the challenges of developing the trucks for the future. Several technology competence areas were identified, such as power electro technology, tribology, steel fatigue, etc. Each technology area was broken down into adequate technologies. These technologies were then evaluated against the company's scenarios. The result was a map of technologies and competence to master them that were required regardless of scenario and those that were scenario specific. Based on this, a technology road map was created. It included investment plans and a follow-up mechanism. The work also initiated joint ventures and collaboration with technological universities. Using scenarios ensured that the truck manufacturer was prepared to develop solutions for different futures and to be agile in switching development work, when the future turned out to be different.
In our Wartsila case, both the Power and the Shipping scenarios were utilized by Wartsila Industrial Operations, which was the production and R&D division. At the core of both market divisions offering was the combustion engines, with their fuel, emission etc. challenges. The scenarios was contrasted against the present R&D and production strategies, calling for necessary adjustments and new prioritizations.
In many cases scenarios are also helpful in developing the offering as such. They can make the offering more robust against changes in the business environment, and as in the case of Wartsila's service division, the scenarios were helpful also in understanding location challenges. In many cases geo-political and other global developments are included in scenarios as uncertainties in the contextual environment. Thus they are well suited to inform a global service organisation of e.g. how global shipping routes might develop, does making in harbour service very efficient if your service entity is located in right spots. The scenarios also inform you about how shipbuilding might develop in different parts of the world, and how energy demand can develop. Then, you are better informed when making decisions of where to be located.

Scenarios and the customers' futures

One frequently used illustration in the scenario field is the onion-like graph, developed from the writings of Kees van der Heijden. The contextual environment surrounding the transactional environment, incorporating the actors, which surrounds the focal actor. Very logical. At the same time, the future of most focal actors is to a great deal determined by the future of its customers. Can it be that focusing on the focal actor, our organisation, might lead to an insufficient understanding of what lies ahead?
Let us take a brief look at some big companies that might have looked at the wrong futures. General Motors was for 100 years a dominant company in the automotive industry. Focusing on profiting from financing, they did not pay attention to the changing landscape and the new demands from customers. Bankruptcy was the consequence for one of the world's biggest companies. Kodak, one of the world's biggest film companies, did focus and protect its film business although they recognized and invested in digital solutions. The focus on their traditional core led Kodak to file for bankruptcy in 2012. A third similar example could be Nokia. The company did not recognize the potential of smartphones; perhaps, they had a hard time connecting to their customers. A major downfall and restructuring followed. These examples have strong connections to consumer markets. They also point out that focusing heavily on your own future may be an activity that focuses on a soon obsolete business. In industrial markets, we see that for most B2B activities there is a small number of customers that form the core of the business. Disconnecting from the future of already a few might have profound consequences. Being too close to home might lead us to focus on the wrong futures, our owns instead of those of our customers.
The customer as the core of strategic thinking is not a new idea. Personally, I have had the benefit of being a colleague to pioneering consumer centric strategic thinkers as the late "management guru" Richard Normann and Professor Christian Grönroos. Appreciating that the success of an organisation is dependent on the success of its customers is key. And even broader, it is a question of the success of the value creating system that the company is part of, a system of interactions between actors like customers, suppliers, etc.
It seems to me that a very fruitful futurising approach is to focus on the future of the value creating logic and its dynamic systemic future properties. This would naturally increase the complexity of the analysis, but at the same time reveals more potential opportunities and risks. A futurizing approach like this would also redirect the strategic conversation. The key strategic task would be the design and reconfiguration of roles and relationships among the constellation of actors to mobilize the

creation of value in new forms and by new players. Guided by our understanding of plausible futures, the organisation would design and develop its own value creating system, which has customers as a very central position. Shifting the focal actor of the analysis from the own organisation to its customers, or its value creating system, will also enable engagement in more strategic dialogues with stakeholders, thus enhancing the understanding of what might come at you, given that one has the proper processes and competencies to interpret signals.

To build scenarios for plausible futures of our customers is central for contemporary strategic planning. Doing so brings a better understanding how we can continuously support our customers, and other actors in our value creating system, to prosper and make good in times to come.

Scenario-building approaches deal mostly with the changes coming from the contextual environment. We build scenarios from plausible outcomes of technologies, macroeconomics, changing consumer behaviour, etc. These approaches seldom incorporate how actors in the transactional environment might drive change, seizing opportunities, and sometimes create new maps that might change the landscape. Fortunately, we start to see fruitful analyses incorporating iterative interaction between the contextual and transactional environments. Naturally, this is more demanding, but the approach does pay off. We might understand coming moves of major players, perhaps our most important customers, and emergence of disruptors from the start-up field. Perhaps the new Teslas, Amazons, Facebooks, and alike would pop-up in the analysis.

Conclusions

As advocated above, scenario planning is very useful not only for strategizing, but for a number of different aspects. And fortunately, there is also scientific evidence of the benefits of foresight. World Economic Forum notes that despite its long history, surprisingly little has been done to empirically examine its actual benefits for organisations and their decision-makers. With this in mind, and recognizing the importance of building an evidence-based understanding and implementation of foresight, WEF extracted key results from scientific research, condensed into five main points:[24]

1. Making decision-making styles more intuitive
2. Supporting more flexible and agile choices
3. Promoting entrepreneurial traits
4. Increasing agency to solve industry-level problems
5. Driving firm performance

But these benefits do not come automatically. There are a number of requirements that should be met in order to get the value from scenario planning. Meyerowitz, Lew and Svensson[25] found several important prerequisites; adequate time, people, and resources need to be allocated to planning; the culture of the organisation should support a consultative approach and empower people and decision-making; leadership needs to embrace openness, curiosity and an anticipatory attitude; and finally the scenarios developed should be relevant and actionable. Another aspect that we want to stress is the involvement of people from the organisation. In too many cases, management has bought a scenario project from consultants. However good work the consultants have done, if enough people from the organisation have not taken part in the scenario development process, the probability that the produced scenarios will be a worthwhile report, instead of a value part of decision making in the organisation.

If scenarios are to fulfil all the roles we have outlined above, and more, then the requirement is that the scenarios are good, that the meat at least the following criteria:[26]

- USEFULNESS - Not ‘will it happen?’ but ‘what would we do if it did happen?’
- ACCURACY - Not ‘will it happen?’ but ‘plausible alternatives to existing assumptions’ (most valuable when assumptions were implicit)
- AVOID MINIMAL CRITICAL DENOMINATOR - Allow disagreement to be an asset, not liability. Enhance strategic dialogue & engagement!
- INSIGHT - ‘seeing anew something already known’ more than ‘seeing something new’.

24 Alex Fergnani and Olivier Woeffray, ‘Why Corporate Foresight Matters According to Research’, *World Economic Forum*, 19 September 2023, https://www.weforum.org/agenda/2023/09/strategic-foresight-research-insights/.

25 Danielle Meyerowitz, Charlene Lew, and Göran Svensson, ‘Scenario-Planning in Strategic Decision-Making: Requirements, Benefits and Inhibitors’, *Foresight* 20, no. 6 (1 January 2018): 602–21, https://doi.org/10.1108/FS-04-2018-0036.

26 List from the Oxford Scenario Program.

Scenarios, independent of how well manufactured they are, do not make decisions for you. They inform the decision maker of how various uncertainties and trends in a systemic way can produce alternative, plausible future contextual environments that might come at the decision maker. Hopefully our reasoning can enhance the reader's strategic conversation.

Discussion

Scenarios can be intellectual masterpieces, and they can be fantastic works of art. But the most important thing is that they help us to perceive and re-perceive what might lie ahead, give us the courage to cope with the inherent uncertainty of the future and foster a vivid and constructive strategic conversation in the organisation. In the article, we have elaborated on the use of scenarios in some different managerial contexts. The benefits are obvious, but still there are issues making the use less frequent than we would expect. One issue is about incentive systems. Traditionally, management is incentivised to deliver on the present strategy. That reduces attention to and discussions of alternative developments of the contextual environment. Another aspect is our inherent optimism, as demonstrated by Kahneman and Tversky in their Nobel prize-winning research, see, e.g., Kahneman.[27] Alternative developments that are not positive are not considered, thus minimising the appetite for scenario work. A third aspect worth mentioning is lack of time and resources. Scenario work requires that management devotes time to live the scenarios. It requires an effort to put yourself into alternative future contexts. If time and capabilities are scarce, then the focus is on conditions as we know them. But in our turbulent times, management is well advised to do its best to make uncertainty a friend.

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