Anticipating change, staying relevant: why trade unions should do foresight

A Foresight Field Guide

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Why a blue banana on the cover?

The idea behind the design was to find a symbolic image that would represent the concept of ‘difference’. Things are not always as they appear at first sight. Foresight is about looking at reality from a different perspective, hence the choice of an object we all know, but which is presented here in an alternative colour.

Trying to imagine how the world will be in 2060 is difficult, no easier, really, than trying to imagine a blue banana.


′ They always say that time CHANGES THINGS, but you actually have to change them YOURSELF ′

(Andy Warhol)
The Philosophy of Andy Warhol: (From A to B and Back Again), 1975
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Christophe Degryse

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Life is often punctuated by unexpected events. Who would have imagined, when the Paris Agreements (COP21) came into force at the end of 2016, that two years later, tens and then hundreds of thousands of young people and children would mobilise all over Europe to make national and European politicians face up to their responsibilities on climate change?

Civil society organisations – trade unions, local associations, non-governmental organisations, etc. – are often experienced in analysis, collective mobilisation and negotiation. However, it is more rare for them to spend time on preparing themselves for unexpected events. Of course, by definition, these events are not predictable, but it is useful to consider possible scenarios, particularly as they can offer precious windows of opportunity for social and environmental actors.

Anticipate the unforeseen, consider the unexpected; it helps to be ready for change. This is the fundamental goal of foresight: to think one move ahead, as the chess players say.

But how can we make it work? Foresight is not about staring into a crystal ball. It offers an array of tools and techniques to serve its well-tested methods. This publication by Aida Ponce del Castillo explores these methods, offering a practical approach tailored to the needs of trade unions. Identifying trends, elaborating hypotheses, detecting possible disruptions, constructing scenarios... These foresight exercises can transform the sleepwalker who sometimes wanders through our organisations into an actor that is awake, lively and agile.

Useful reading for any trade unionist!
section 1

SETTING THE SCENE
History is full of situations where individuals or entities have failed to read the signs and understand the true impact of their decisions.

In 1867, Russia sells Alaska to the USA for less than 5 cents an hectare.

In 1912, the Western Union CEO bets on telegrams over telephones, asking “What possible use could this company make of an electrical toy?”

In 1976, Apple cofounder Ronald Wayne sells his 10% stock in Apple for $800, which would be worth $35 billion today.

In 2016, British Prime Minister Cameron announces a referendum on the UK membership to the EU, convinced there is no chance he can lose.

Individuals, companies, institutions and governments make choices and take decisions every day. Life would be easy if seemingly small decisions had small consequences and if what has worked in the past continued to work in the future (UNDP 2014). However, history is full of situations where individuals or entities have failed to read the signs and understand the true impact of their decisions.

Making the right choices today is even more challenging in a world that is changing fast and becoming increasingly complex. The relations between the world superpowers are shifting, liberal democracies are being questioned, new technologies are emerging and transforming our economies and societies, and the climate is changing. In the words of the European Commission, “the world may be on the cusp of a new geopolitical, geo-economic and geo-technological order” (European Commission 2018).

Foresight can help organisations to take better decisions when faced with increasing volatility, complexity and uncertainty. It gives them the ability to look at reality from a different perspective and project themselves into the future, not so much to predict it but rather to take a retrospective look at the present, see the signs and understand them earlier rather than later. Foresight gives organisations the ability to identify multiple plausible futures and prepare for them. The other option is to “bury our heads in the sand and live a happy life of ignorance until change comes crashing down on us” (Singapore Prime Minister’s Office 2011).

Foresight is an empowering tool because, as stated by the UNDP, its ‘premise is that the future is still in the making and can be actively influenced or even created, not just passively accepted as a given over which we have no power. Foresight allows organisations to build plans to face undesirable but possible and probable scenarios, and at the same time to identify among the many available future pathways the one they ideally want to follow’ (UNDP 2014).
section 2

TRADE UNIONS: REACTING TO CHANGE OR TAKING THE INITIATIVE
Like all organisations, trade unions have to navigate a complex and interconnected environment where they face very diverse and constantly evolving social, economic, labour and technological realities. They are constantly confronted with both internal and external challenges, varying in both scope and severity, and need to become better equipped to resist and adapt to them.

Internal challenges include, amongst others, recruitment (particularly of young people), the evolution of traditional values like solidarity and how they are (re)defined by unions, a declining membership (OECD 2018), the slide towards the far right amongst some members (Gabbitas 2017; Stöss 2017), and the impact of social media.

External factors are difficult to disentangle from other societal problems. They include union credibility, their relevance to society and politicians, the appropriation of the trade union agenda by different types of groups, populism and the rise of extreme political groups, social exclusion, migration and undocumented workers, racism at work, the pension system and other social security issues, and the general spread of fear in today’s societies.

Trade unions need to address these issues and their consequences but, at the same time, they have to continue doing their core work, promoting and defending workers’ interests and participating in social dialogue, nationally and at European level.

Focusing on the present while thinking about the future is never easy but, in a changing environment, new opportunities can arise, and trade unions need to be ready to grab hold of them. Foresight can help them by shedding light on ‘blind spots’ and enable trade unions to turn the wheel at the right moment to avoid undesirable consequences and head in the right direction.

In addition to helping unions to be more responsive and adaptable, foresight can also help them to ‘scan’ the present in a more comprehensive way and look beyond their immediate day-to-day operational difficulties, thus making them more resilient (UNDP 2014). How effective this is will depend on how unions integrate foresight into their internal culture and use it to stimulate their thinking.
This publication is not a DIY manual which trade unions should use to do foresight without guidance. Rather, the intention is to explain the basics of foresight and to describe some of the methods which we believe can work in a union environment. As foresight can be used in many different environments, from multinational companies to international institutions or governments, it makes sense to explain how it can be used by trade unions and to encourage them to ‘go for it’. The tool is there, so why should unions deprive themselves of the opportunity to use it?

Numerous practical examples of foresight initiatives have been collected and are presented throughout the publication in outlined boxes entitled ‘How others have done it’ as well as in the section ‘Inspiration: who is doing foresight?’ In addition, internationally recognised foresight experts and scholars have agreed to share their thoughts about some key aspects of foresight. These are presented in boxes titled ‘In the words of an expert’.

Foresight can help trade unions by shedding light on ‘blind spots’ and enabling them to turn the wheel at the right moment.

Per Lagerström, Futurion
Swedish think tank created by the Swedish Confederation of Professional Employees, TCO

No future is certain. The real future is one among many possibilities and this explains the importance of forecasting and foresight. However, foresight has no purpose if you only end up with the same results, showing the same trends and making the same scenarios as everyone else. This is a common pitfall, and in the attempt to avoid that pitfall, you fall into the next one, which is trying to differ from others by the use of abstract and metaphorical language, slowly drifting away from actual analysis.

The solution is simple: to shift focus. If some megatrends keep staring you in the face and the same subjects are discussed in every conversation around you, take a step back to look and listen beyond the obvious. For a correct or near-correct prediction, pay attention to weak signals, which are the potential game-changers, system-shifters or even new paradigms leading us into the unknown. Having a solid foresight requires knowledge; and knowledge, in turn, requires resources. At Futurion, we always seek to collaborate and cooperate with others in foresight activities. For us, this is advantageous in terms of collecting valid and good content, cross-checking facts, sharing and learning from experiences from a variety of contexts, and observing trends from different perspectives. Our experience clearly shows that this is the best way to avoid groupthink, stimulating people to think outside of the (organisation’s) box.

Not just a one-off thing
Imagine making a foresight study only once and then referring back to it over and over again. Sooner or later the strategies devised to deal with the future will concern the past. Therefore, it is crucial to understand that foresight activities are not a one-off thing but rather a constant and continuous activity.

An independent thinktank like Futurion has the time and ability to discern weak signals in society, which, in today’s increasingly complex environment, can be an invaluable asset for the TCO-affiliated unions that sponsor and work with us.

Mathias Alshkon, HK LAB
Created by the National Union of Commercial and Clerical Employees (HK) in Denmark

Created in 2017, HK LAB is funded by the Danish HK union which represents employees working in the retail sector and administrative staff in both the public and private sectors. The union had two aims in establishing HK LAB as an experimental laboratory for union projects: to think about how new technologies can be used to strengthen unions and to investigate the emergence of new jobs and new ways of learning.

To do this, HK Lab uses horizon scanning (which has involved considering the academic work in the field and visiting Silicon Valley); studies the topic of digitalisation and its impact on jobs; develops awareness-raising courses and dialogue activities for its members; and experiments with new technology to better understand it and how it can be used. Among the many results of this forward-thinking approach, of particular note is the creation of a chat box system that answers young people’s questions about their rights at work and of a virtual reality tool that helps people learn new skills, do job interviews or negotiate a pay rise.

Such initiatives prove that a small investment can produce many results and create new value for unions. The chat box tool uses open-source coding and can be copied and used by any union. By experimenting and testing, we have created knowledge and built up evidence, and this is a mindset that needs to be encouraged in unions.

WHAT IS FORESIGHT?
The idea of ‘foresight’ emerged after World War II in the field of defence strategy and decision-making. It was then adopted by large corporations, such as Shell, to set their business direction. It was also taken up by national governments in strategic decision-making, and currently many states have a specialised foresight department.

Rafael Popper provides a definition that helps us to understand foresight in a practical way: foresight is a systematic, participatory, prospective and policy-oriented process which, with the support of horizon-scanning approaches, aims to actively engage key stakeholders in a wide range of activities ‘anticipating, recommending and transforming’ ‘technological, economic, environmental, political, social and ethical’ futures (Popper blog).

In other words, foresight is the umbrella term for methodologies and approaches that take volatility, uncertainty, complexity and ambiguity as their starting point, explore possible and probable futures (including a preferred one), and generate insights and ‘cross-sights’ that enable transformative actions in the here and now (UNDP 2014, 2018; Wilkinson 2017).

Foresight still faces both unexpected shocks, called ‘black swans’, and extremely complex issues, called ‘wicked problems’. Black swans are defined as highly improbable but high-impact events. They are often rationalised after the fact, which in itself is a danger as it limits our ability to see similar future threats. Examples of recent black swans are the Fukushima nuclear disaster in Japan, the September 11 attacks in New York, the 2008 crash of the US stock market, and the Arab Spring which began in 2011 in the Middle East and North Africa.

Wicked problems are big and complex issues that are extremely difficult to solve for several reasons: they have no immediate or obvious solution, our knowledge of the problem is incomplete or contradictory, and the number of actors involved is high, as are the potential economic costs associated with them. Wicked problems are highly interconnected with other problems and are almost never the responsibility of any single organisation. Solving them implies a change in behaviour, with all the difficulties this brings.
Responses to wicked problems need to be collaborative, innovative and flexible, based on a long-term focus and an understanding of how behaviours can change. Climate change, international drug trafficking, social injustice, Eurosceptic populism and obesity are typical wicked problems.

Foresight can be divided into ‘vertical’ and ‘horizontal’ foresight, and be ‘outward-looking’ (exploratory foresight) or ‘inward-looking’ (normative foresight). Vertical foresight focuses on a specific area of activity, sector or geographical location, to the exclusion of others. Horizontal foresight is based on a broader perspective and looks at a wide range of issues; it is multidisciplinary and cuts across institutional boundaries. (Andersen and Rasmussen 2014).

Exploratory foresight methods are ‘outward-looking’. The starting point is the present situation, before trying to identify possible alternative futures in answer to the question: “Knowing what we know today, what will happen if a particular event happens or if a particular trend develops?” Normative foresight methods are, by contrast, ‘inward-looking’. The starting point is a set of possible and desirable futures, before moving backwards to see if and how these futures may or not grow from the present, given current constraints, resources or technologies (JRC 2007).

These distinctions and concepts are important and will permeate all foresight exercises that trade unions may design and plan. Designing a foresight project implies first of all deciding what is the goal of the exercise and, second, choosing the approach (vertical/horizontal, outward/inward-looking) and methods (see next section) that are most suited to achieving it.
section 4

HOW IS FORESIGHT DONE?
A foresight process consists of three main phases: pre-foresight, foresight and evaluation.

It uses a combination of methods, selected in a way that suits the organisation. These can be used in parallel or in sequence, but emphasis should be placed on a multi-level and participatory approach.

External actors should be involved (such as non-profit organisations, employer organisations, academics, government officials, journalists and unions from other countries) to ensure as broad a view as possible, which will guarantee that all the shades of the spectrum are made visible.
Numerous methodologies can and should be used in the running of a foresight project. Deciding which ones to use will depend on the resources and type of institution; not all are relevant or usable for trade unions, as some were designed by and for large public institutions (including governments) and/or large corporations.

During this phase, the foresight strategy is decided upon, the foresight methodologies that best fit the organisation selected (see list below) and data collected. In a union environment, this last key activity should preferably be based on a literature review about megatrends and on intelligence collection.

When moving on to the foresight phase itself, many methodologies can be used.

**Literature review about megatrends**

This is done by collecting foresight studies and trend analyses and by doing desk research on the current world trends and challenges. A lot of useful inspiration can be obtained from foresight studies carried out by institutions such as the EU Commission, ILO, OECD, NATO, UN, World Bank, World Economic Forum and World Energy Forum, as well as from studies about the future of work and the digital economy.

The UNDP has published a comprehensive list of available approaches (UNDP 2014, 2018):

- Visioning
- Forecasting
- Backcasting
- Roadmapping
- Management by discovery
- Wind-tunnelling
- Stress-testing
- Horizon scanning (or environmental scanning)
- Text mining
- Wild cards
- Weak signals
- Scenario planning
- Trend impact analysis
- Drivers analysis
- Futures Wheel
- Theory of Inventive Problem Solving (TRIZ)
- Expert Panel
- Causal Layered Analysis
- Appreciative Inquiry
- Delphi Method

**Sitra’s Trends List**

The Finnish Innovation Fund Sitra’s ‘Trends List’ has been published annually since 2011. Over the years, Sitra has produced slideshows, videos, card games, draft recommendations and many other kinds of material to support the list. The list of megatrends is not based on academic futures research; it is a compilation of various visions, foresight discussions and viewpoints presented in layperson’s terms and in a usable format. A deeper perspective has been achieved using megatrends-based foresight reports, international and national statistics, academic studies, news articles and expert statements, as well as the work of Finland’s national foresight network and their contributions to a range of debates on future directions.

Produced by Sitra, Finland
Source: https://www.sitra.fi/en/topics/megatrends/#megatrends-2017

**Euromonitor International’s ‘megatrends’**

Euromonitor International has produced a four-step process to identify megatrends. It defines a megatrend as a shift in behaviour or attitude that has global impact and crosses multiple industries.

Learn more about Euromonitor International’s four-step megatrend analysis framework, what a megatrend is and what drives them at https://blog.euromonitor.com/video/the-importance-of-megatrend-analysis/.

**Earth 2050**

‘Earth 2050: a glimpse into the future’ is an interactive visual time machine that provides a 360-degree panorama of the world and allows visitors to explore what different cities may look like in 2030, 2040 and 2050. Kaspersky and foresight experts offer predictions which go from the believable (such as fuel from the ocean or three-hour transcontinental flights) to the bizarre (humans improving their bodies by purchasing upgrades in shops, interaction with the Internet of things through neuron interfaces, improved vision, etc.).

Source: Kaspersky
https://2050.earth/
Intelligence collection

This kind of ‘intelligence’ collection is done by conducting face-to-face unstructured and qualitative interviews with ‘key personalities’ (understood as people who can provide insightful and challenging views). It is an extremely useful method to gather opinions, information, knowledge and intelligence. Some of the interviewees will be from the environment under study (trade unions in this case) but some will be total ‘outsiders’.

The interviews should be anonymised to guarantee that the views expressed are frank and honest. The questions can focus on forward-looking themes, such as the future of Europe and the world, the main game changers in a specific sector, the state of the trade union movement, etc. They should be formulated in a way that encourages the interviewee to think about the long term.

Intelligence collection

How can we ensure fairness in a digital world for the next generation?

Why should people born today become members of a trade union when reaching adulthood?

Horizon scanning

The aim of horizon scanning is to explore the environment in order to pinpoint how it is changing and identify likely opportunities, challenges and developments. The point is not to predict the future but to creatively and freely explore new and often strange ideas, as well as persistent challenges and current trends (UNDP 2014).

Horizon scanning can be based on desk research but, in a union environment, is best done in a group format. A ‘framing’ question is put to the group, with a set time horizon. Examples of framing questions are: ‘What is going to disrupt our business model?’, ‘What will the Japanese market be like in 20 years?’, ‘What will parcel delivery look like in 2050?’ A framing question is one that allows people to project themselves into the future, deals with a very important issue and is associated with a lot of uncertainty (Menet 2014).

Horizon scanning

How do you see the world in 30 years time?

What major challenges will the EU face in the future?
Futures wheel

This method leads to the production of a visual map of the consequences, both direct and indirect, of specific changes or developments (UNDP 2014).

The wheel is based on three concentric rings of consequences: primary, secondary and tertiary. The starting point, placed at the centre of the wheel, is an event or a change the organisation is expecting or contemplating. The key question then asked is: ‘If this occurs, what happens next?’

Primary consequences, usually the most immediate and significant, are identified and connected to the central question. They then lead to secondary consequences which themselves lead to tertiary consequences.

The next step involves the classification or scoring of the consequences, based on their effect, sector or area of impact (environment, finance, membership, etc.) and also whether they are positive or negative, their likelihood and the level of (un)certainty around them. Finally, the plausible consequences and their inter-dependency are identified and the results analysed. The output can be used to feed into the scenario building in combination with other methods (Bengston 2015; Glen 2004; ITC ILO).

What is particularly important here is to think broadly and capture a wide range of consequences. It is always better to identify too many consequences than to think too narrowly and miss what could be important for the future. Truly irrelevant impacts can be discarded later.

Source: https://www.rssb.co.uk

Wild cards (or black swans) and weak signals

*Wild cards*, also called *black swans*, are generally defined as events which have a low probability of occurrence, are rapid and surprising, and have disastrous, destructive or anomalous consequences if they occur. In some cases, however, wild cards can also be beneficial events, whose potential we want to be able to exploit (Hiltunen 2010, Takala and Heino 2017).

According to Taleb (2007), black swans (wild cards) have three key features:
1. The event is a surprise.
2. The event has a major effect.
3. After the event has taken place, it is rationalised with hindsight as if it could have been expected: the data was available but not picked up.

Wild cards are typically considered so improbable that people’s first reaction to them is ‘this will never happen’. Cornish also defines them as events that have the power to completely upset a given environment and radically change people’s thinking and planning (Cornish 2003, Popper and Teichler 2011). Examples of wild cards are Brexit in the UK, the September 11 attacks in the US, the 2010 ‘flash crash’ of the stock market in the US or the Fukushima nuclear disaster.

*Weak signals*, also called ‘seeds of change’, are the first indicators of a possible change or an issue that may become significant in the future. They are unstructured, fragmented and incomplete elements of data hidden among the noise and lying undetected, just below the visible surface (Harryson et al. 2014; Hiltunen 2010). As predictors of future change, they have the potential, if detected and properly interpreted, to provide an organisation with meaningful insights for future action.

All organisations are constantly facing a maze of internal and external stimuli. In that sea of noise, the trick is to sense the vibrations or signals triggered by these upcoming changes. Doing this requires an active stance and cannot be the result of simple observation but must rather involve realising the future strategic potential of the raw information.
There is no easy recipe for identifying weak signals. However, when signals are repeated or come from a variety of sources, one should pay attention. If a major transformation process is underway, it is bound to leave a multitude of small traces in its wake. The idea is to use peripheral vision to scan the environment and cluster together the signals that are generated by the same trends (Kuosa 2010).

One way to organise findings is the following:

Low Probability, High Impact:
- ‘Wild card’
  This scenario is unlikely but could become reality. If it does, it will change everything. This is the ‘we never saw it coming’ scenario. The stars would really need to align, but if they did, lack of preparation would result in severe consequences (Ladiqi et al. 2017).

High Probability, High Impact:
- ‘Brewing storm’
  This scenario is one that reveals a real problem. The organisation needs to look into this future. This is the scenario most leaders and managers tend to focus on.

Low Probability, Low Impact:
- ‘Flash in the pan’
  This scenario is one of a future with a low level of disruption. Limited changes are expected, with limited impact, and overreacting would be a waste of energy.

High Probability, Low Impact:
- ‘Business as usual’
  A change is coming but the organisation can adjust to it without major difficulty. It needs to keep an eye on the situation but can expect things to remain fundamentally stable.

Organisations need a structure that allows them to collect and manage wild cards and weak signals. There is no set method to do this, it depends on the organisation itself. What is also important is to link and interpret such signals within the framework of the whole foresight project and in any strategic discussion that might take place. This may entail dealing with a certain level of discomfort as it forces decision-makers to look beyond their current strategies and invites them to try to understand what this means in the longer term (Mendonça et al. 2012).

Picking up weak signals is extremely important for the future of organisations and even entire countries. The financial crisis of 2008 was preceded by numerous weak signals that were spotted by only some financial actors, while most of us failed to notice them. The crisis was maybe less of a shock for those who had seen the signals than for the rest of the world (Cay et al. 2010).

For anyone particularly interested in this issue, a repository of weak signals and wild cards called the ‘iBank of issues’ has been put together by the EU iKnow project where one can access 14,165 wild cards and 18,996 weak signals, mapped out by 21,651 active members.

**iKnow WI-WE Bank**

The WI-WE Bank of wild cards and weak signals is the work of the EU iKnow project. It interconnects knowledge on wild cards and weak signals (WI-WE) that will potentially shape or shake up the future of science, technology and innovation in Europe. Users and visitors of the WI-WE Bank can map wild cards and weak signals and link them with up to 17 thematic research areas, 6 strategic pan-European objectives and 21 ‘grand challenges’ of the 21st Century.

Source: [http://wiwe.iknowfutures.eu/what-is-wi-we-bank](http://wiwe.iknowfutures.eu/what-is-wi-we-bank)

**Practically speaking,** this exercise can be done in a one- or two-day workshop, with one facilitator. The tasks will be to brainstorm about highly improbable events with mostly highly negative consequences and conceive examples for their own organisation. The results can be presented on an x/y graph.
The best human radars are shop stewards and union representatives: they have the ability to notice signals that nobody else will spot.

The methods presented above are not exhaustive and are constantly evolving. They can and should be mixed and adapted to the needs of the organisation. After collecting data and intelligence, it is time to build the scenarios.

Scanning for weak signals in Canada
The MaRS network’s approach is ‘break out of your filter bubble’. Scanning for weak signals of change implies looking beyond the sources one typically follows and trusts. While a lot of scanning happens online, it is worthwhile to make a habit of scanning in real life. One might notice a weak signal in a piece of graffiti, or in the theme of a play mounted by a community theatre group, or in a conversation overheard in a public bus.

MaRS also says, ‘When you find a weak signal of change, record it and share it with your team. Give the signal a name to serve as a shorthand for the idea, and document what’s changing and why it matters.’

For example, you might record a signal as follows:

**Signal:** The development of exosuits to reduce physical injury and fatigue.

**Description:** Through its Warrior Web programme, the Defense Advanced Research Projects Agency (DARPA) at the US Department of Defense is working to develop technology to reduce musculoskeletal injuries incurred during ground operations. Troops are susceptible to acute and chronic injuries as they carry heavy gear during patrols in dangerous and unfamiliar terrain. DARPA aims to employ a robotics exosuit to protect injury-prone areas and augment muscle capacity.

**Relevance:** The commercialisation of military exosuits may increase productivity and reduce human injuries in manufacturing, logistics, construction and mining. What are the potentially disruptive implications of inexpensive and easily accessible exosuits? What role might exosuits play in offsetting job losses caused by automation? What are some rogue scenarios? And what is the long-term potential of providing superhuman abilities and spurring the development of new cyborg sports?

Source: https://www.darpa.mil/program/warrior-web
https://www.marsdd.com/mars-library/how-to-scan-for-weak-signals-of-change/
The climate is changing. Why aren't we?
The foresight phase aims at producing different possible visions of the future. Once these have been conceived, the next activity consists in identifying desirable features in each of them and then designing a roadmap to make them reality. One trap to avoid is ‘falling in love’ with one particular vision, thereby excluding the other possible futures.

More concretely, the organisation chooses some of the methods listed above and then ‘runs’ them to gather data, insights, intelligence, etc. This work will mostly be done in workshops and involve a large and diverse group of participants. It will take anything between one and two years to complete. After all workshops have been conducted, the data collected is fed into the scenario-building exercise. Any uncertainties can then be identified and the most desirable futures chosen. A timeline and a roadmap or action plan can be built, with responsibilities assigned to specific departments or individuals.

Several of the methods listed above — identified as potentially being the ones best suited for trade unions — are presented in more detail below, along with some ideas and advice about how to put them into practice.

Scenario planning in Singapore
A typical scenario-planning exercise is conducted by a group of public administration officers, from different agencies and with varying expertise, but who are all committed to the scenario-planning project. Team composition is important to ensure diversity of opinion, expertise and experience. Each scenario-planning team typically spends a substantial amount of time researching trends in the environment, otherwise known as ‘driving forces’, which could impact Singapore.

Each scenario project typically begins with an extensive interview process, through which the team seeks opinions on trends, changes and challenges from ministers, permanent secretaries and other public sector leaders.

Personalities from outside government, who can provide fresh perspectives, are also interviewed.

At key intervals, the identified ‘driving forces’ and ‘national scenarios’ are presented to key decision makers to obtain further views and feedback. This overall process helps to ensure that the scenarios are useful not just in and of themselves, but also as part of a process to engender a common understanding of the future among government leaders. Scenario planning helps the civil service to re-examine conventional wisdom and formulate strategies to meet potential new challenges and opportunities. In 1997, the government approved the implementation of a formal ‘scenarios to strategy’ process, which requires ministries to conduct strategic reviews of the ideas set out in the national scenarios.


At this stage in the foresight process, the use of the various tools presented above has allowed the organisation to gather a lot of information, which will now be used to build the scenarios and, subsequently, the roadmap.

Again, it is important to emphasise the fact that scenario planning does not aim to predict the future. It should not lead to choosing one scenario above others, which is then set in stone and comes to define the trajectory of the organisation. Even if one scenario seems to dominate, the idea behind building several of them is that it allows the organisation to remain open-minded, maintain awareness about other possible futures and prepare for more than one of them.
Scenarios also give an organisation the ability to think the ‘unthinkable’ (provided it remains plausible) and to “tidy up” a long-term vision of the future that seems messy and disorderly into a set of “meaningful futures”. As with all tools that aim at simplifying complex issues it can provoke distortions: being aware of this and retaining our ability to remain flexible and adjust to how reality actually unfolds is a necessity.

The scenario method is the most widely used tool in foresight, both by private companies and public bodies, including governments. Two main types of scenarios exist which trade unions can and should use:

**Exploratory scenarios:**
They begin from the present and see where events and trends might take us.

**Normative scenarios:**
They begin from the future, asking what trends and events could take us there.

**Scenario Planning is run via a logical sequence of steps, which are actually the same in every study**

**STEP 1**
Brainstorm major issues impacting the sector:
- Identifying major drivers of business.
- Focusing on short-term, medium-term and long-term horizon.

**STEP 2**
Issues are clustered into groups:
- The one group is what the predictable things we know will happen.
- And the other group is what are the uncertainties.

**STEP 3**
Select top 2 drivers of change:
- Determine which uncertainties are highly correlated and can be combines and which uncertainties are not key drivers of future scenarios and should be removed.

**STEP 4**
Develop two-by-two matrix:
- Review resultant for scenarios. Select the most likely scenario with clear understanding of the degree of certainty of such scenario.

**STEP 5**
Understand each scenario and adjust strategy accordingly in light of scenarios:
- Scenarios used to shape the on-going strategy.

**STEP 6**
Iterate!

Even if one scenario seems to dominate, building several allows the organisation to remain open-minded, aware about other possible futures and to prepare for more than one of them.
How is it done?

The scenario building takes place over two workshops of two days each, with facilitators who know the methodology, and it consists of six steps. The process must be participatory and involve people from within the organisation but also outsiders, to gather other visions of the future and avoid tunnel thinking.

A recommended approach is to use a 2 x 2 matrix composed of four quadrants (a 3 x 2 matrix is a possibility but making sense of the different scenarios is then a more complex exercise). The 2 x 2 matrix is based on a horizontal and a vertical axis, which represent the two drivers; the endpoints of each axis show two opposing situations (see the example below). These should be identified by participants during the workshop by using the materials from the previous phases. (Botterhuis 2010; Meinert 2014; Shoemaker 1995; Svendsen 2001).

European Trade Union Institute

The European Trade Union Institute has published a manual on scenario building which comprehensively details how to carry out the steps summarised below. The ETUI has also produced three examples of scenarios on workers’ participation, health and safety, and the future of work in the digital economy. These scenarios can be used internally by different organisations but are also designed to be used in training courses and to serve as a basis for further strategic thinking. (Degryse 2017; Ponce Del Castillo et al 2016; Stollt and Meinert 2010).

How others have done it

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The goal here will be to formulate two central drivers (both very important and very uncertain) on which the scenario development will focus from this point onwards. The two drivers should be such that they cover all the important uncertainties raised by the participants.

In parallel, a shortlist of key givens will also be prepared. This part of the work can be difficult as participants usually have different mental frameworks and will probably find it hard to agree.

**STEP 3:**
**Naming the alternatives**

In this phase, the aim is to formulate, for each of the two drivers, two different and opposing development outcomes (within the timeframe) or endpoints. In 2040, for example, the driver ‘availability of energy’ could have as endpoints ‘a very high price’ or ‘a very low price’. The cost of environmental pollution could also be very high or very low. Keeping the time horizon in mind, participants have to agree on how far the future development might go in one or the other direction.

In one scenario project looking at the actors involved in media communication, the endpoints were formulated as follows: ‘Will the future of the media belong to a few major players or many small players?’.

If one driver is, for example, social cohesion, two extreme endpoints could be ‘someone is looking after me’ or ‘I have to do things on my own’.

**STEP 4:**
**Designing a compass to calibrate the time horizon**

The formulated drivers and their endpoints are used as a reference system to navigate the future scenarios of the topic. The two drivers become the two axes of the compass, with the present at their intersection. This creates four quadrants.

**STEP 5:**
**Creating scenario narratives (for each quadrant)**

Scenarios are, by definition, stories about a possible future. The aim of this step is to develop a scenario for each of the four quadrants, and thus produce four alternative stories.

The group (usually divided into four sub-groups) has to create each scenario by describing the content, images and the ‘feeling’ of each scenario within the specific timeline. They will describe the challenges, givens, conflicts, solutions and resources that characterise it. The story should have a plot and describe a causal (not chronological) chain of events that shows how that particular future has come into being.

One key value of the scenario method lies in the fact that all four stories have to be seen as equally valid and plausible: all should be developed with the same intensity, creativity and energy, and not one of them should be seen as ‘the right’ scenario.

Finally, a memorable title should be found that expresses the essence of the scenario.

**Scenarios on the future of health**

The Danish Design Centre was asked to do scenario planning on ‘health in Denmark in 2050’. It looked at two axes: how we will understand health/illness and how we will organise healthcare.

**The understanding of health/illness: body vs. life**

The ‘what’ axis has ‘body’ at one end and ‘life’ at the other. Health and illness are about the body. But they are also about the body’s interaction with the outside world and about our understanding of our body and our lives.

One can have a fully body-oriented understanding of illness and health, which is the main focus of the so-called biomedical paradigm. This is rooted in a long tradition which has resulted in many medical achievements and in the structures that characterise healthcare today.

On the other hand, one can have an understanding of health where the body is seen in the context of life as it plays out in culture and society. This is a more holistic perspective that includes mental, social, environmental and personal aspects, as well as philosophical and spiritual ones.

**The future of healthcare systems: collective vs. individual**

The ‘how’ axis tracks a course from a collective, top-down healthcare system at one end to an individually directed and diverse system at the other.

Collective and public healthcare characterises the situation in most developed countries today, with universal healthcare coverage and a right to easy and equal access to healthcare, which is largely funded by taxes. The term ‘collective’ also includes models of universal coverage where provision and/or insurance is formally delivered by private entities.

At the other end we find a more individual-based healthcare service that involves many actors. Here, the individual patient has many more options for accessing individualised healthcare, and there are many different actors who deliver it. They can do so using different approaches and payment models. It is a more diverse and bottom-up healthcare model, and more demand driven. In the figure below, the crossing of the two axes form four quadrants, each of which has a scenario label.

The four scenarios are titled as follows:

- Scenario 1: Most for Most
- Scenario 2: Healthy I
- Scenario 3: Ministry of Root Causes
- Scenario 4: Health Bazaar

Source: https://danishdesigncenter.dk/en/boxing-future-health
The future of scientific research

*The emerging and future roles of academic libraries* by anonymous guest blogger at Education Futures LLC.

**Scenario 1: Research entrepreneurs**

In this future, ‘individual researchers are the stars of the story’. Academic institutions and disciplinary silos are no longer relevant for entrepreneurial researchers who chase short-to-long term contract work from private and public sources.

**Scenario 2: Reuse and recycle**

Scenario 2 outlines a world defined by an ‘ongoing scarcity of economic resources’ which forces the reuse and recycling of research activities, with virtually no public support for research. Academic institutions persist but have little to offer scholars.

**Scenario 3: Disciplines in charge**

Utilising advances in information technology, ‘computational approaches to data analysis dominates the research enterprise’, fostering massive research projects aligned around ‘data stores’. Two classes of researchers emerge: those who ‘control the disciplinary organisation and its research infrastructure’ and everyone else who ‘scrambles to pick up the piecework’.

**Scenario 4: Global followers**

As funding sources dry up in the West, academic power shifts to the Middle East and Asia. Scholars continue to do their research but with new cultural influences from Middle Eastern and Asian funding agencies.

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**STEP 6: Reflecting on the outcomes**

This is the last phase of the process. Here, the group will analyse the plausibility, relevance and implications of the scenarios. Participants will also draw conclusions on how to prepare for the different alternatives.

**What are the characteristics of a good scenario?** (Meinert 2014)

**Novel:** The future is not just an extension of the present; it will contain elements of surprise.

**Multifaceted:** The present is neither one-dimensional nor black and white, so why should one impose such limitations on the future?

**Believable:** A scenario should be surprising and unexpected, but it has to be internally consistent and logical.

**Comprehensive:** Individuals, communities, business and government can all affect and are all affected by social, political, economic and cultural trends and developments, and so various combinations of these should be considered on several levels and in relation to different issues.

**Never right or wrong:** A scenario, by definition, analyses that which has not yet happened; we are projecting, speculating, guessing. Therefore, there is no single correct scenario, only potential alternatives, which should be expressed in a logical and consistent manner.

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The EU Commission’s ‘The Future of Government 2030+’

The EU Commission has looked at how social and technological changes are affecting European citizens and re-shaping their interactions with businesses and governments, as well as with one another. It considered that such developments might lead to new forms of democracy and governance and decided to build four scenarios to better understand these changing relationships and to stimulate discussion about them.

The ‘future of government’ scenarios were developed through a bottom-up process based on open dialogue workshops held across Europe with about 130 citizens and 25 civil society and think tank representatives. The Joint Research Centre (JRC) then reviewed these discussions and synthesised them into four scenarios. Together they highlight some of the key uncertainties about the relationships between citizens, governments and business, and explore, through the eyes of European citizens, how government may look in the future. The four scenarios are: DIY Democracy, Private Algocracy, Super Collaborative Government, and Over-Regulatocracy.

How others have done it

World Energy Council

In order to explore the future evolution of the energy sector between now and 2060, the World Energy Council has built three scenarios: ‘Modern Jazz’, which represents a ‘digitally disrupted’, innovative, and market-driven world; ‘Unfinished Symphony’, a world in which more ‘intelligent’ and sustainable economic growth models emerge as the world moves towards a low-carbon future; and a more fragmented scenario called ‘Hard Rock’, which explores the consequences of weaker and unsustainable economic growth and inward-looking policies.

Source: https://blogs.ec.europa.eu/eupolicylab/futurgov/
section 5

WHAT IS NEXT?
‘Give me six hours to chop down a tree and I will spend the first four sharpening the axe.’

(Abraham Lincoln)

Once the scenarios have been written, the big question is what to do with them. They are not intended to provide immediate advice for action but should be used to develop strategies, since the point of the exercise is for the organisation to be prepared for different possible futures.

Making the best use of your scenarios

1. Develop a ‘strategic plan’ for the organisation.
   How can you prepare proactively for the implications of the different scenarios? How would you (re)act in the scenarios? How does the organisation have to change today to be well prepared for tomorrow?

2. Develop a ‘success scenario’, using the backcasting and/or roadmapping method.
   None of the scenarios should be chosen at the expense of the others but that should not preclude the organisation from focusing on one preferred future.

Backcasting

The backcasting or ‘walking backwards’ method explores the feasibility and implications of achieving certain desired endpoints, by tracing the steps from the desired goal in the future back to the present (Robinson 2003; van den Kerckhoff et al 2002).

BACKCASTING METHOD

- Awareness & Vision
- Actions & Solutions
- Baseline analysis
- Priorisation

Adapted from Phaal et al. (2015)
A backcasting exercise can be done in a one- or two-day workshop with an experienced facilitator. It requires a normative scenario as a starting point. The group has to develop a timeline running backwards from the specific time in the future to today, and use it to reflect about the sequence of phases needed to get to the scenario.

Step 1: Identify the ‘desired’ scenario and develop a timeline.

Step 2: Work out the trajectory and describe the phases and key intermediary milestones. Reflect on the most important obstacles to overcome, the actions required to overcome them and the investments potentially needed, as well as the interventions and interactions that will be involved. All these factors need to be clustered according to specific categories: economic, political, demographic, legal, technological, etc.

Step 3: Identify the necessary timing (that is, when the different phases need to happen) and what ‘trigger points’ will allow the organisation to jump from one phase to another.

Step 4: This is the action stage. Taking into account the key intermediary milestones, the idea is to select the main decisions, actions and strategies that need to be taken. It is important to constantly question whether these decisions and actions are in line with the specific goal, and finally to lay them out in the form of a roadmap.

Backcasting projects on sustainability

The Natural Step Canada, a non-profit organisation, has produced interesting backcasting work on the topic of sustainability, as has the Dutch National Research Programme, in a project entitled ‘Climate OptiOns for the Long Term’ (COOL).

Source: https://www.naturalstep.ca/backcasting

Roadmapping

It is a particularly important process as it represents a visible culmination of all the previous work, or at least an expression of what the organisation wants to achieve based on the various completed stages of the foresight process.

Trade unions can benefit from roadmapping as a framework for their own strategies. It helps to visualise goals, players and needs and to map priorities at any level of operation. Roadmaps can take different formats, but the most common ones are structured according to three main questions:

Objectives
Where does the organisation want to go?

Current status
Where are we now?

Actions to implement the roadmap
How do we get there?

‘A “roadmap” is an extended look at the future of a chosen field of inquiry composed from the collective knowledge and imagination of the brightest drivers of change in that field.’

Creating a roadmap requires a one-day workshop with an experienced facilitator and the participation of all relevant stakeholders. It should be done after the scenarios have been completed and integrate the results from the previous phases of the foresight process.

A successful roadmap needs to meet several criteria:

Credibility
Is the future pathway plausible?
This is why the involvement of key stakeholders and groups is required.

Desirability
Is the future pathway defensible as a good choice for the organisation?

Utility
Does the roadmap help advance the organisation?
It should articulate a path towards achieving common goals.

Adaptability
Is the roadmap process adaptable?
Can it be customised to fit a changing context and integrate periodic reviews, updates and new information?
Roadmapping can be divided into five main steps that follow the choosing of a scenario. The first four are:

(Phaal 2015, 2019)

**STEP 1:**
Establish a horizontal time dimension.

**STEP 2:**
Divide into three columns:
- **‘NOW’**: The ‘Now’ column describes the current status of the problem observed.
- **‘VISION’**: The ‘Vision’ column describes the desired scenario and its benefits.
- **‘WAY FORWARD’**: The ‘Way forward’ column describes the capabilities, resources and actions required in the medium and long term.

**STEP 3:**
Divide into horizontal categories, either departments or key functions (commercial, design, research, education, finance, etc).

**STEP 4:**
Fill in with concrete actions and, if possible, identify uncertainties and obstacles.

However, the roadmap exercise does not end there; it needs to be reworked until it has a communicable visual format and participants then need to assess and ensure its completeness, consistency, quality and usability.

**STEP 5:**
The fifth step is key. The roadmap has to be “transferred” – that is, implemented within the operations of the organisation. This should involve key leaders, who should ideally adopt and communicate the sense of urgency of the new vision, provide guidance, and generate short-term ‘wins’ which can serve as visible proof of achievement. Implementation also implies allocating responsibilities and establishing procedures to plan periodic activities to adjust the roadmap (Gordon N 2013).

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**A new economic vision in the Netherlands**

A Dutch government-wide programme aims to develop a circular economy in the Netherlands by 2050. The ambition of the Dutch Cabinet is to realise, together with a variety of stakeholders, an interim objective of a 50% reduction in the use of primary raw materials (minerals, fossils and metals) by 2030.


**How is it done?**


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**References**

Evaluation and monitoring

Once the foresight exercise has been completed, several follow-up activities need to take place, including implementing the recommendations/roadmap, disseminating the results, evaluating the exercise and turning foresight into an ongoing activity (European Foresight Platform 2010).

Evaluating foresight exercises and their outcomes is essential to ensure the credibility of the process and to identify good practices which can be relied upon in future exercises. This is particularly important if foresight is to become, as is the trend, an ongoing and continuous process rather than a one-off initiative.

Concretely, the evaluation will consist in assessing whether the objectives have been met and how the process was managed (in order to draw lessons for the future), and in identifying follow-up activities. The outcomes and benefits of foresight can be difficult to identify and will not all be simultaneously visible at the end of the exercise. Some effects will only appear at a much later stage.

Some examples of the data needed to perform the evaluation are records of meeting attendance, workshop reports and surveys (of people involved in the various activities). One concrete way of carrying out the evaluation exercise is by using the ‘logic diagram’ approach, which looks at several criteria:

- overall policy objectives
- objectives of the exercise
- main activities pursued
- immediate effects
- intermediate effects
- ultimate effects

### An adaptation of the ‘logic diagram’ approach

(Derived from the JRC, EC (2017))

<table>
<thead>
<tr>
<th>STEPS</th>
<th>WHAT IS EVALUATED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall policy objectives</td>
<td>The overall mission of the organisation sponsoring the foresight exercise and the relationship between the different activities pursued within it.</td>
</tr>
<tr>
<td>Objectives of the foresight exercise</td>
<td>How well the main goals selected for the foresight activities (including implicit ones), as well as the goals added to the exercise during its operation, have been accomplished.</td>
</tr>
<tr>
<td>Main activities pursued in the foresight exercise</td>
<td>How well the major activities that were pursued as part of the exercise have contributed to achieving the foresight objectives.</td>
</tr>
<tr>
<td>Immediate Effects</td>
<td>The extent to which tangible outputs have been achieved (e.g. reports produced and circulated, meetings held and attended, etc.).</td>
</tr>
<tr>
<td>Intermediate Effects</td>
<td>Methods such as interviews with and surveys of the project participants and the ‘users’ of their results are used to ask questions such as: have new networks been formed, have people changed their behaviour, have other organisations incorporated foresight methods or results?</td>
</tr>
<tr>
<td>Ultimate Effects</td>
<td>An attempt is made to identify any effects of the exercise on general performance, although the effects of diverse foresight activities and other interventions may be difficult to disentangle.</td>
</tr>
</tbody>
</table>
WHO IS DOING FORESIGHT

INSPIRATION

section 6
Foresight is a springboard to possible futures, used by many institutions and businesses to survive in a fast-changing world. Just like them, trade unions can benefit from a methodology that has proven its value and been adopted across the planet. Examples of foresight programmes and agencies (of international institutions, governments and private companies) are provided here; they can offer interesting insights into the methodology, its relevance and its usefulness.

Foresight in international organisations

The OECD has produced a study entitled ‘Policy challenges for the next 50 years’.

The European Political Strategy Centre (EPSC) is the in-house think tank of the European Commission.
https://ec.europa.eu/epsc/home_en
https://ec.europa.eu/info/research-and-innovation/strategy/support-policy-making/
support-eu-research-and-innovation-policy-making/foresight_en
https://ec.europa.eu/commission/future-europe/white-paper-future-europe/white-pa-
per-future-europe-five-scenarios_en

The European Parliament has established the Scientific Foresight Unit (STOA). STOA carries out interdisciplinary research and provides strategic advice in the field of ‘science and technology options assessment’ and scientific foresight.

The International Training Centre of the International Labour Organization has organised futures research and foresight tools around six activities critical to futures thinking.
https://technologyatwork.itcilo.org/foresight-toolkit/

‘The beauty of foresight is that the future does not exist yet; it is still a mix of different possible, yet interconnected, directions.’

(Tom Wambeke, ITC-ILO)
Foresight, the ITC-ILO and unions

Tom Wambeke, Chief of Learning Innovation at the International Training Centre of the ILO (ITC-ILO)

Last October I was invited by the ETUI to Lithuania to give a keynote speech on strategic foresight and its potential use in the worlds of work and learning. It is inspiring to see that the ETUI has put foresight at the forefront of its critical reflection on probable, possible and preferable futures for trade unions.

The world of work is an interdisciplinary domain of expertise full of uncertainty. To navigate this complexity, we need entry points that bring the dialogue to the next level, beyond polarised, fixed positions. Foresight can help us to engage with a wide net of connected stakeholders about what a meaningful future might look like and how best we can prepare for it.

When we dive into the issue of future strategic drivers, technology is often described as one of the disruptive forces. Too often we engage in one-dimensional discussions on the rise of new technologies, with one group emphasising the destructive nature of technology and another focusing on the opportunities it generates. The beauty of foresight is that the future does not exist yet; it is still a mix of different possible, yet interconnected, directions.

The ITC-ILO has produced an interesting toolkit that can help to map out this discussion. It can be downloaded for use from https://bit.ly/2kKqG6G.
1. Review literature / Look at megatrends
2. Collect intelligence
3. Look for *Wild Cards* and *Weak Signals*
4. Set a framing question and scan the horizon
5. Produce plausible scenarios
6. Decide where to go
7. Draw the roadmap that will translate your vision into reality
8. Monitor and evaluate
9. Embed foresight in your daily operations
Interested in learning more about foresight, in experimenting with the methodology or in sharing your own experience?

Contact us at www.etui.org

#ThinkForesight!
REFERENCES


Degryse C. (2017) Shaping the digital economy 2030: from research to action, Six scenarios, Brussels, ETUI.


"All links were checked on 05.03.2019"