



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

armasuisse

COUNTER- TRENDS

USING FORESIGHT TO TAKE BETTER DECISIONS

THE EXAMPLE OF COUNTERTRENDS

A report for decision makers facing uncertainty



Federal Office for Defence Procurement
armasuisse
Science and Technology
Feuerwerkstrasse 39
3602 Thun

Illustrations & Grafik design: 4sing GmbH

ISBN: 978-3-907717-12-7
Contact: quentin.ladetto@armasuisse.ch

FOREWORD

We live in an era of megatrends.

They have everything going for them: upward arrows, reassuring curves, words ending in „-isation“ that paint a clear picture of the future. Digitalisation. Globalisation. Urbanisation. Acceleration. Everything seems to be moving somewhere, and rather quickly.

Megatrends are reassuring. They simplify complexity. They give decision-makers a sense of order in an unstable world. If the trend is there, all you have to do is follow it.

But there is one detail that should not be overlooked: a trend is a trend... until it is no longer a trend.

History is littered with supposedly irreversible dynamics that have taken a different turn. Definitive technologies have been superseded. Inevitable models have run out of steam. Strategic certainties have evaporated.

This is where countertrends emerge.

They are neither whims nor anecdotal marginalities. They are the forces that bring us back to reality. Every push generates resistance. Every expansion produces its limits, its saturations, its side effects. Momentum is met with friction.

Observing countertrends means accepting that the future is not a one-way street. It means recognising that weak signals, cultural resistance, systemic fatigue and unexpected combinations can reshape the landscape. What starts in a niche can become a major correction, just as what seems marginal today can become structural tomorrow.

In the field of strategic foresight, this is not a luxury. It is a necessity. Today's choices will have an impact for decades to come. Making decisions based solely on prevailing trends is like betting that the world will remain predictable and in line with our assumptions.

It never has been.

Thinking in terms of countertrends means introducing a discipline of doubt. Testing the robustness of decisions. What happens if the dynamic slows down, re-

verses or combines with another? The exercise does not complicate action: it reinforces it.

Countertrends make our implicit assumptions visible. They reveal our blind spots. They force us to formulate alternative options and to prefer robustness to naive optimism.

And then, let's face it, it's healthy to look beyond the spotlight. While we celebrate the latest technological breakthrough, other more discreet dynamics are at work in the background: fatigue, regulation, slowdown, a return to connection. The future is not just about momentum. It is also about friction.

This document therefore proposes a change of focus. Not to abandon megatrends, but to put them in tension. To confront them with their counterparts, because ignoring countertrends is to expose ourselves to surprise. Integrating them is to broaden our room for manoeuvre.

This does not weaken the strategy: it makes it more robust. It does not distance us from reality: it brings us closer to it. And we remember, with a little humility, that the future almost always exceeds the scenarios we thought most likely.

Which, ultimately, is excellent news.

Foresightfully yours,



Dr. Quentin Ladetto

armasuisse Science & Technology

Head of Technology Foresight

CONTENTS

0. Foreword	3
1. Executive summary	6
1.1. Definition	6
1.2. Use	6
1.3. Constraints	8
1.4. Complementarity	8
1.5. Recommendations	9
1.6. Conclusion	9
2. Introduction	10
2.1. Decisions are difficult	10
2.2. Overbelief in models	10
2.3. Relevance in security policy	11
2.4. A challenge for any organisation	12
2.5. Anticipating tomorrow	13
3. About countertrends	14
3.1. The concept	14
3.2. Categories of countertrends	15
3.3. How to look for countertrends	16
4. Challenges to countertrends	18
4.1. Resistance to uncertainty	18
4.2. Resistance to outsiders	19
4.3. Resistance to spend time	20
4.4. Limits on countertrends	22
5. Linking countertrends...	24
5.1. To robustness testing	24
5.2. To Artificial Intelligence	25
5.3. To Megatrends	26
5.4. To probing assumptions	27
5.5. To neologisms	27
5.6. To futures wheels	27
5.7. To systems analysis	28
5.8. To scenarios	29

5.9. To pre-mortems	31
6. Final thoughts	32
6.1. A useful addition	32
6.2. Use it or lose it	32
6.3. Involve the decision makers	32
6.4. Understand where to apply it	32
6.5. Drip-irrigate important ideas	33
6.5. Create an immersive experience	33
6.6. Generate and wind tunnel options	33
References	34
Endnotes	34
Key texts	36
Thanks	36

EXECUTIVE SUMMARY

1.1. Definition

For the purposes of this report, a trend is “a general direction of change: a way of behaving, proceeding, etc., that is developing and becoming more common”ⁱ, and a countertrend is a (possibly emerging) trend whose direction of travel contradicts or substantially impacts the first trend. The suitable image is that of two vectors, which appear to be pointing in opposite directions. The trend is the bigger arrow, but the countertrend could possibly – at some point in the future - cause the trend to change direction. Indeed, the countertrend could even become powerful enough to overwhelm the trend itself. For instance, globalisation was a broadly affirmed “megatrend” (very big trend) for many years. “Anti-globalisation” (its countertrend) was for a long time a marginal phenomenon, associated with protests at WTO conferencesⁱⁱ, or other protest activities. However, in the last couple of

years, this countertrend has mutated into “Deglobalisation”, and led by powerful leaders of big countries, it may well overwhelm the “globalisation” trend.ⁱⁱⁱ

Note also, the coining of the term “countertrend” with the meaning evoked above, is recent, and thanks to Horx et al, with their publication on this subject in 2024^{iv}. However, the author of this text goes beyond a simple description of this work, adding insights from other sources and pointing out how countertrends can be adapted to an organisation when it is taking decisions in a real-world situation.

1.2. Use

Governments must take decisions today that will play out over a much longer period, during which much can change in the world around. If the wrong assumptions are made about how the world may shift (e.g. assuming ever more globalisation), the decision



can prove mistaken (e.g. dependency on other countries that are no longer willing to supply vital products and services). Faced with this challenge, many organisations traditionally used linear trend analysis or quantitative modelling. But these methods assume stability and fail to account for disruption. Countertrends provide a structured way to incorporate uncertainty into policy and procurement. Given that decision makers have an (explicit or implicit) assumption about how the future is going to evolve, having them reflect on what major trends could impact the solidity of these assumptions, and how these trends could change (countertrends), is a valuable process to opening the mind to possible changes in the surrounding environment.

As such, countertrends can be used for:

- **Organising information** by making assumptions about trends explicit

and building existing information into a structure.

- **Revealing uncertainty** by presenting plausible alternatives to dominant forecasts.
- **Inspiring options** by helping officials imagine alternative policy choices that fit well in a world where a countertrend becomes important.
- **Testing resilience by evaluating** policies against both trends and their countertrends.

Moreover, because countertrends build on familiar trend analysis, they offer an accessible entry point for policymakers who might otherwise dismiss any future thinking as speculative. They can therefore be a useful tool, especially for those institutions which are used to using trends as a point of departure for decision making. Indeed, use of countertrends could be the first step for an organisation that wants to make better decisions which explore

possible different ways the future could develop – in other words, who want to use foresight, rather than predicting exact future outcomes (forecasting).

1.3. Constraints

There are, however, limits to counter-trends' utility:

- **Institutional Barriers:** Organisations usually prioritise stability and short-term delivery. Countertrends may be sidelined if they:
 - **Contradict** the dearly held (ideological?) assumptions of an organisation/a key decider.
 - **Originate from external teams** rather than those who deal with a particular dossier on a daily basis.
- **Time constraints:** Organisations do not want their decision process delayed or complicated. But executed too rapidly, and with little research, a countertrends process may:
 - **Produce superficial or predictable results** (e.g. repeating the headlines that are in any case currently in the news).
 - **Reinforce cognitive biases** (e.g. encouraging the decision makers to assume a trend will reverse simply because they find it undesirable).
 - **Miss important signals** (e.g. overlooking early warning signals, such as grassroots move-

ments or technological shifts, that are visible elsewhere, but not locally).

- **Misperception:** When discussing countertrends, organisations sometimes believe that these are interesting ideas but irrelevant to what they have to decide upon. This is a fundamental misperception that needs to be countered by directly linking any work on countertrends to decisions that are to be taken.

1.4. Complementarity

Using additional foresight tools with countertrends may help to mitigate some of the constraints listed above, although using them as well does imply adding some complexity and time. For instance:

- **Systems analysis** can help identify which trends drive which other trends, and hence which countertrends to focus on, as well as capturing a broader spread of early warning signals.
 - **Scenario planning** can help explore how multiple trends and countertrends may interact, and under which conditions a trend may reverse, or generate unexpected combinations.
 - **Robustness testing** can help verify if existing strategic options remain good even if a trend changes track.
- Of all the complementary foresight processes, the most important is likely

robustness testing. As per above, it is not enough just to think about the future. This work must be used to improve the quality of decisions taken today by checking a proposed decision, weapons system or force structure is robust regardless of whether the trend or the countertrend dominate.

In addition, a few thoughts are appropriate about using AI as a support. On the one hand, if it were possible to create an AI Agent who acts as a sparring partner, helping a decision maker to identify trends, countertrends and appropriate strategic options, this would be a great step forward for making the countertrends easier to use. However, there is a risk of bias and fabrication based on thin or even poisoned data sets. It will be vital to have safeguards against this built into the process or agent.

1.5. Recommendations

To limit or overcome some of the other constraints listed above, and to maximise the benefits of countertrends, organisations could seek to:

- **Mandate that countertrends are:**
 - Linked to a decision at hand or identifying new decisions that need to be made.
 - Used to generate alternative strategic options.
 - Used to test strategic options before the most robust options are implemented.

- **Deliver insights incrementally,** replacing lengthy reports with concise, frequent updates (briefings, podcasts) tailored to the organisation's needs and style.

1.6. Conclusion

Countertrends offer a practical way for a government that is used to employing trends to engage with uncertainty. They should be seen as one tool in the foresight armoury and work best as part of a broader toolkit. But, as with all foresight tools, they need to be embedded into decision-making as part of a culture that encourages a valuing of long-term thinking. Without this integration, they risk becoming either an ignored input or a superficial exercise that offers little more than false confidence.

INTRODUCTION

2.1. Decisions are difficult

In every area of human activity, we need to take decisions that will have long term implications. And these decisions will be taken in a context of incomplete information and uncertainty as to future changes in the world around them.

In the face of this challenge, organisations have traditionally focused on improving the information base, to ensure that “evidence-based policy making” is possible, assuming that more information will help reduce uncertainty regarding the impact of an initiative. Whilst this is fully justified, and it is important to know if a particular policy worked elsewhere, and why, it is often forgotten that there are no “future facts” available, and that the policy will be implemented in this future, not in the past where the facts have been collected (and additionally, that any examples taken, are likely in different cultural contexts, with distinct initial conditions – which makes comparison very difficult).

2.2. Overbelief in models

All governments make assumptions about the future environment in which their decisions will be implemented. In the worst case, these assumptions are implicit, not mentioned or discussed anywhere. More usually, in the case of economic and financial matters, the assumptions are built into a macro-economic model which predicts how certain policy changes will impact e.g. the GDP, inflation, and unemployment rate of a country. The model calculates e.g. what the reaction to

a fiscal stimulus x will be, based on a series of equations – which are assumptions about how the world works. Moreover, the model needs to assume “ceteris paribus”. It must assume that nothing else in the world changes at all, to produce useful indications of what impact a policy change will have. The problem is this never holds true in the real world, and hence the predictions of what any given policy will produce end up being wrong – but as the prognosis is usually given with a decimal point of accuracy, they give organisations a false sense of security.

A similar logic is often applied outside of economic and financial matters, with varying assumptions being explicitly or implicitly made about how “the world” will change over time and how it will react to a policy, strategy, or purchase being made.

For example, faced with the Russian invasion of Ukraine, the German government decided to replace Russian gas inter alia with supplies of LNG from the Arabian Gulf and the USA:

- **Assumption 1:** LNG is a growing commodity and will be available from different sources if needs be.
- **Assumption 2:** The USA is friendly country and would never seek to weaponize the energy dependency of an ally.

As can be seen when reading these assumptions in the light of the Iran war, and the Trump 2 administration, the assumptions made were highly questionable, and have



simply continued Germany's dependency on imported natural gas.

2.3. Relevance in security policy

In security policy in Europe today, a major assumption being made is that the military threat to Europe will also continue to grow in the years to come. The assumptions underlying this belief are usually contained in some form of national security policy document.^v And this assumption is the result of looking at many clearly visible trends. As with modelling, the aim is to predict the future. In the case of the security threat to countries in Western Europe, the trends are clear. For instance, Russia's questioning of the intangibility of borders and clear statements of a desire to restore control over former satellite states (intent), combined with its large military and nuclear weapons (capability) is seen as a good reason to raise the threat level. Moreover, US security guarantees that underpinned the defence of many European countries, (and indirectly underpinned the security of neutral countries, by reducing the likelihood of neighbours being attacked), are being undermined. And this is not just the work of one President. The mood music of a pivot to Asia has been around for longer. Hence, recent events are pulled together to form a trend of increased threat that is then projected into the future. And this is no doubt highly valuable - in the short term.

However, policy needs to face challenges that are more than just short term. An investment in a major weapons system cannot be made with the expectation that it is only useful for two years. A military cannot easily start

hiring and training personnel for specialist jobs that it expects to disappear again in three years. And as the well-known saying in the foresight community posits: 'a trend, is a trend, until it bends' – in other words, no trend will carry on forever. At some point it will change direction.

Just to underline this point, before the recent shift to the current trend of a growing threat in Europe, the previous dominant assumption was that European militaries would mainly be needed for peace enforcement or expeditionary "out of area" missions. Indeed, the argument was that if NATO was not out of area, it would soon be out of business. In that context, certain Western European nations organised their military equipment, personnel and structures around the assumption that they would mainly need expeditionary forces capable of counter-insurgency work in distant lands. Given the backdrop of Iraq and Afghanistan, these trends led to assumptions that seemed well founded at the time. Looking back at that view from 2026, one can only say, how times can change! And this sort of change is nothing new.

A few examples help illustrate how militaries around the world have repeatedly been caught out by a sudden change in trends. These examples are all taken from "The Future of War: A History" by Lawrence Freedman.^{vi} Just to quote a few of those he mentions:

1. British Navy's Dreadnought Obsession (Early 20th Century)

Prediction: The British Admiralty believed that massive battleships (like the Dreadnought) would dominate naval warfare. Reality: Aircraft carriers and submarines rendered battleships less crucial by WWII.

2. French Maginot Line (1930s)

Prediction: France assumed a static, fortified defense (the Maginot Line) would deter German invasion. Reality: Germany bypassed the line via the Ardennes Forest in 1940, using Blitzkrieg tactics.

3. U.S. Focus on Strategic Bombing (WWII and Cold War)

Prediction: The U.S. Air Force believed strategic bombing alone could win wars, minimizing the need for ground troops. Reality: Wars in Korea and Vietnam proved ground forces remained essential.

4. Soviet Emphasis on Heavy Armor (Cold War)

Prediction: The USSR prioritized massed tank armies, expecting future wars to be decided by armored dominance. Reality: Precision-guided munitions and air power neutralized Soviet armor advantages.

5. U.S. "Revolution in Military Affairs" (1990s–2000s)

Prediction: The U.S. believed network-centric warfare and high-tech superiority would ensure quick, bloodless victories. Reality: Asymmetric warfare (e.g., Iraq, Afghanistan) exposed vulnerabilities to insurgencies and IEDs.

2.4. A challenge for any organisation

Security policy is not unique in this regard. The challenge of taking robust decisions in a world of uncertainty exists also for companies, non-governmental organisations, and government in all other policy areas. As one former foresight leader in a major corporation points out:

“The problem that I find with my senior business colleagues is that we can work to pick out trends that matter for any specific strategic challenge or business issue that we might be focused on. And that discussion is productive. But I find it immensely difficult to get them to give more than cursory attention to the possibility of turning points (...). So of course, when the turning point happens, they are taken by surprise.”^{vii}

(Cho Khong)

In the rest of this report, the examples are deliberately focused on governments, and mostly also on security policy, given the focus of Armasuisse. But the points made remain valid for all other types of organisation.

2.5. Anticipating tomorrow

As can be seen from above, we must be aware that when using trends or models to extrapolate about futures, we start to make assumptions about the world around us will function, and we tend to push aside any uncertainties. This can be seriously misleading for the decisions that are then taken, given that we live in a volatile, uncertain, complex and ambiguous world. With this in mind, it would be better to assume uncertainty rather than to ignore it.

Even if it is vital to find ways of integrating insights about an uncertain future into today's decision making, it is not easy. Given too many possible futures, some organisations give up. More usually they will ask for the 'most probable' future (i.e. a prediction), and the result will be surprise when a change occurs. Hence the need to seek new ways of introducing foresight – not forecasting – into the decision-making process, given that foresight is the realm of exploring what futures could possibly emerge, rather than predicting one particular future they believe (or hope) will come true.

Countertrends are one of the options available, not least as they are still close to the forecasting mindset

that prevails in policy circles. They are intuitive as tools, and (as with other foresight approaches, such as using wild cards, pre-made scenarios, or some games) could be used at a very basic level without a tremendous investment of time and effort by an organisation. More specifically they can be employed to shape what options the organisation looks at: are there alternative strategic choices that can be made if a countertrend changes the direction of travel of the current dominant trend? And likewise, on the operational level, does a countertrend suggest an alternative option could be available when choosing e.g. which type of equipment to procure? Countertrends can also be used to check the robustness of a strategy option being proposed: is this option still good if the countertrend prevails? More broadly, countertrends can encourage colleagues to scan for change, rather than to resist change, and to seek opportunities in doing so, in other words, to introduce the foresight mindset into an organisation.

Key implications

- a. Decision makers like the certainty of prediction using trends and models to predict the future. But such linear predictions just cannot be valid in a world as turbulent as today. This reduces the utility of the trends and modelling, and worse it hides risks and opportunities from decision makers.
- b. At any given time, organisations have a vision of the main security issues they face. Their vision has implications for procurement choices, force structures proposed and policies made. But the assumptions they build their vision on can change radically and fast in a world of polycrises. There is a risk that today's trends will be overturned by tomorrow's developments. In this context, whilst in Switzerland, the overall vision of the strategic challenges did not change so radically as in NATO countries, on an operational level, its officials still need to make assumptions about what current trends imply for what type of weapons system and skills – and will need to challenge these assumptions as well!
- c. Whilst the focus of this report is security policy, the points made are, *mutatis mutandis*, valid for all other types of organisations and sector of activity, and that at the highest strategic and lower operational levels.

ABOUT COUNTER- TRENDS

3.1. The concept

The assumption that any given trend will continue unimpeded has proven increasingly problematic against a backdrop of technological innovation, geopolitical upheaval, and social tensions. Countertrends are a corrective lens to this thinking, allowing for a more nuanced understanding of social, cultural, and economic dynamics, and signal the limits of linear extrapolation by pointing towards emergent dynamics that challenge dominant narratives.

The recent discussion around countertrends in foresight and planning is largely thanks to Horx et al, and their publication in 2024 of “15 Gegotrends: Wie die Zukunft ihre Richtung ändert”^{viii} (“15 Countertrends: how the future changes direction”). As Matthias Horx is a well-respected expert in German-speaking Europe, who is best known for confidently predicting future outcomes, it is significant that he now perceives the need to complement mainstream trend analysis with countertrends that take account of uncertainty. Horx et al. describe countertrends as “Hinweise auf Umbrüche, die bereits begonnen haben, aber ihre Kraft gerade erst entfalten” (“Indicators of upheavals that have already begun but are only just beginning to unfold”). In their perception, countertrends often originate in niche spaces, far from the mainstream, and only later gain visibility as broader shifts in cultural or economic logic.

In this sense, small countertrends represent early-warning signals for systemic transformation. Indeed, it should be noted that the idea (rather than the use of the word for this meaning in the context of foresight) is

not new, at least not to members of the foresight community, who put their emphasis on future uncertainty rather than affirming the continuance of future trends as many trend analysts and forecasters have traditionally done. Indeed, most foresight practitioners do not (yet?) speak of countertrends but rather use other terminology such as ‘weak signals’ or ‘emergent trends’. Furthermore, the word ‘countertrends’ in English is associated with a form of trading strategy in financial markets^x, or less often are used to signal consumer behaviours that deliberately move in the opposite direction to prevailing trends, for instance wearing clothing that is out of fashion^x. As one foresight theorist and practitioner puts it:

“Countertrends are a classical section of trends work, much beloved by marketing and consumer research people who operate on the periphery of ‘the fore-



sight world'. (...) What I do as foresight practitioner - and this is somewhat similar - is to sensitise people to such signals when scanning.'^{xi} (Tanja Hichert)

In this report the term countertrends is used to mean a variation on an established trend, be it a direct contradiction to that trend, or something that may bend a trend in a different direction. The key point being that they are part of a bigger dialectical process where trends (thesis) and another trend (antithesis) bump into each other to create a new synthesis^{xii}. Trends are also cyclical: a trend that is just “starting out” will have a different dynamic (perhaps creating a push back among those facing change as a result?), than one that has been running for many years already (which may have spent much of its force, or may have become so dominant that it is no longer a trend but a fact of life). These features of trends are particularly well described by Horx et al in “15 Countertrends” mentioned above.

3.2. Categories of countertrends

To make it easier to retain the different types of countertrends, the author of this report has chosen to classify them in three ways and given them distinct names.

1. **‘Newtonian Countertrends’.** As with Sir Isaac Newton’s third law^{xiii}, every strong trend will provoke a countertrend, given that it disturbs the status quo. Unlike with Newton, the countertrend may not be equal in strength, and sometimes these countertrends will rapidly disappear. For instance, the trend to mechanisation of mills in the 19th Century generated the Luddite movement, determined to smash the hated machines^{xiv}. The Luddites were, however, rapidly overwhelmed. This said, over time, the broader trend of industrialisation created the countertrends of trade unions and ‘anti-trust’ policy, which had a much bigger impact than the Luddites. Also, not all countertrends lead to the destruction of the trend itself. The countertrend to buying more vinyl records which is very tangible since 2010 has not halted the march of digital music. Moreover, although the recovery in record sales has been astonishing, it has not reached anything like the level of sales from their heyday^{xv}.
2. **‘Exhaustion Countertrends’.** Trends may consume their physical, intellectual, financial or human resources over time, and simply peter out. A classic example was whaling, a big global industry in its day, driven by demand for whale oil (used in lamps, lubricants, and cosmetics) and baleen (used in corsets and other products). However, overhunting

led to the near extinction of many whale species, and by the early 20th century, whale populations were so depleted that the industry became unsustainable (which also spurred the search for synthetic alternatives). On the other hand, the example of ‘peak oil’ is worth bearing in mind. Although it is true that peak ‘cheap’ oil was reached in the early 1970s, repeated technological innovation and geological discoveries have prolonged the life of oil as a key resource. Even today, where a move to alternatives has developed considerable momentum, global oil consumption continues to increase^{xvi}. This provides a word of warning, as innovation can push back exhaustion. However, there is also an alternative form of exhaustion. A trend may also be so successful that there is no place left for it to expand further. In this case it stops being a trend and becomes a fact of life (e.g. mobile phones). In the lifecycle of a trend, exhaustion of this sort is at the end of the cycle. However, given that adoption speeds have accelerated, that may not require so long as in the past^{xvii}.

3. **‘Vector Countertrends’^{xviii}**. No trend exists in a vacuum. And given that there are always multiple trends at any given moment, they will inevitably bump into each other now and again, potentially creating a Hegelian dialectic, where a new trend emerges from the synthesis of two previous trends. For instance, right now the trend towards ever cheaper and miniaturised electronic systems has bumped into the trend of applying artificial intelligence in machines, and we can already see one synthesis emerging from this as being an autonomous military drone.

3.3. How to look for countertrends

Each category of countertrends presents a different type of challenge when looking at it. Although it is easy to spot certain countertrends, the problem is that the more interesting and insightful ones will likely require research.

1. **‘Newtonian Countertrends’**. Most focus likely needs to go on working out if the countertrend is powerful enough to stop or change the course of the trend, and if yes, in what time horizon? Given that this type of countertrend is often the result of actors banding together to oppose something they

dislike, it is important to look at subcultures, lobbyists and grassroots movements, as these are often the breeding grounds for a backlash. If taken seriously, such an approach would require polling, qualitative interviews, and immersion in the environments, even a dip into semiotics to interpret symbolic cues, media discourses, and consumer behaviour.

2. **‘Exhaustion Countertrends’**. The question is what will it take in terms of resources for this trend to persist, and how long the trend is so far that it has become part of the furniture, rather than a trend? In this context, whilst much data may be available about financial or economic resources, increasingly it is worth remembering that biophysical limits must be considered^{xix}. Again, this implies patient research. At the other end of the scale as a trend reaches saturation, its influence becomes so pervasive that it triggers fatigue or diminishing returns. Hence the need to track public sentiment, media discourse, and behavioural data for signs that the trend can go no further.
3. **‘Vector Countertrends’**. The challenge regarding vector countertrends is that there are potentially many trends that could interact, and often a trend will be impacted by multiple other trends, not just one. Hence it is important to cultivate a peripheral vision: i.e. the ability to notice weak signals, anomalies, and outliers that may herald the next countertrend. Indeed, the concept of ‘sidecasting’ is seen as essential by complexity theorists, and notably David Snowden has developed some excellent tools for identifying emergent trends and for making sense of them^{xx}. This is posited on the fact that the future is often already present, but that it is unequally spread – in other words, you may only need to travel somewhere else to see how your own region’s future may look in a short amount of time.

The importance of scanning and research for a better understanding of uncertainty seems to be a central consideration. But in this context, it is interesting to note, as one foresight practitioner and theorist puts it:

“How signals are classified, typified or perceived is highly

contextual and differs depending on who you are, where you are, and what perspective you're looking from. What may be a 'weak signal' for some, might be a blatantly obvious trend for another - depending on context or perspective etc.^{xxi} (Tanja Hichert)

dels in response to feedback and real-world developments. Moreover, expert networks can be called upon to help identify and validate countertrends. For example, Swiss universities, think tanks, and international bodies like the OECD or SIPRI often publish research on emerging trends and countertrends.

In any case, a solid countertrend analysis is not a one-off exercise but an ongoing, reflective process, where the practitioner documents their observations, tests hypotheses, and updates their mental and digital mo-

Key implications

- a. Even if the terminology of countertrends is new in its application here, the concept behind it is well known to foresight practitioners, as it implies that there is a degree of friction and uncertainty present in what otherwise may be seen as a linear prediction.
- b. Even if there is little academic literature, it is easy to see the three different types of countertrends as part of a family. The Newtonian countertrends imply a force moving in exactly the opposite direction, the vector countertrends may just be travelling more at a tangent, and the exhaustion countertrends are simply when a trend has run its course.
- c. Clearly it is possible just to look very superficially for countertrends and to list of examples of where a trend is being challenged. However, it is also possible to examine the strength and nature of countertrends at a deeper level, be this using advanced early warning systems or by sociological and other forms of investigation.

CHALLENGES TO COUNTER- TRENDS

4.1. Resistance to uncertainty

Organisations take decisions with implicit or explicit assumptions about the future. For instance, many militaries are now busy ordering drones, on the assumption that the trend of massive use of drones on the battlefield will continue. But sometimes these assumptions do not hold, which may mean the decisions are not optimal. Even knowing that this challenge exists, many officials see no better way than to determine future needs based on an assessment of current trends as they have perceived in the immediate past. And some still want the (false) sense of security that a prediction or a forecast gives them.

In this context countertrends are perhaps an easier entry point for introducing uncertainty into the calculations of officials, as they:

- **Start from trends, which are familiar territory for many officials.** Given that trends are projections of how a particular dynamic will develop in the future, they bring a sense of security to those using them.
- **Are relatively easy to generate.** All that is required in intellectual terms is to make the one further leap from the trend, and to look and see if any countertrends can be spotted today.

Again, as pointed out in chapter 2, in the past, when a trend was perceived as dominating, countertrends were ignored. But today, given a pervasive sense of uncertainty, where the security environment can change fast:

- **Officials are much more prepared to think about possible future surprises,** as they just keep on happening.
- **Even if officials do no more than to list out the countertrends and their implications,** they will have gained insights that could help them to choose policy and procurement options that are robust.

To the latter point as one long standing foresight practitioner puts it:

“I am always surprised at how some obvious trends can be missed. But that means there is even more value in identifying the countertrends that will inevitably build.”^{xxii} (Cho Khong)



It is also worth repeating that uncertainty impacts decisions both on the strategic and the operational level. The challenge for those working at an operational level is often how to make national security documents – which are usually very high level, relevant for their work.

Here again, countertrends can be a useful tool, as it is possible to zoom in and out quite easily between the strategic and operational levels. It may just be that different trends (and hence countertrends) are relevant in that context. Just to illustrate the point:

- **On the strategic level**, if the ambition is to identify the nature of the security threat a Western European country is facing, no doubt in many defence ministries, an increased Russian threat will figure on the list as a recent trend. But any good analysis should also look at the exhaustion countertrend. Given that Russia has suffered over a million dead and wounded in its war of aggression on Ukraine and given that. Its oil and gas economy has been badly bruised by bombs and sanction, could it be that a new generation of leaders in Russia in five or ten years may prefer a less aggressive strategic posture?
- **On the operational level**, one can zoom in on trends that the Russian invasion of Ukraine has highlighted, such as use of drones. As mentioned, it is likely that many defence ministries are considering how to procure drones. But any responsible official should also consider the possibility of a vector countertrend. What happens if the trend of investing heavily in electronic warfare pays off, and this intersects with the trend to autonomous weapon systems? Potentially an enemy with the right electronic warfare system could kill all

drones, or worse, they could take control of any drones and turn them against their owners.

4.2. Resistance to outsiders

One frequent problem is that one part of government is responsible for setting the framework (e.g. identifying what is coming up over the horizon, what trends to look at, what surprises are plausible), whilst totally other ministries (or at least, other parts of the same ministry) are responsible for taking decisions. For instance, in Switzerland the regular situation reports that assess the threat landscape, are produced by the Federal Intelligence Service^{xliii}. Hence, even if the Armed Forces Staff and Armasuisse provide input to the work of the FIS, it is quite possible that the group of senior officers and officials have worked on the “threat landscape”, have little direct contact with those who will determine what equipment or personnel are needed, what specifications are appropriate for this equipment or skills for the personnel, what suppliers exist for such kit or training, and what criteria are set for selecting between the different suppliers possible.

The separation of roles may have two impacts:

- **The issues raised in the threat landscape may not speak directly to the issues** that the group of officials supposed to develop and implement policy are wrestling with (in which case the threat landscape is seen as nice to have, but otherwise irrelevant).
- **Officials may have a “not built here” reflex**, at best, not fully internalising the implications of the

threat landscape, at worst, actively rejecting certain points that they do not agree with.

Hence any work with countertrends has to show that it is directly relevant to the issues officials are wrestling with. It implies that officials should not just come up with a list of countertrends and a visualised map of how they interact. They must ensure that this work either informs decisions that were already planned, or sparks discussions on whether additional decisions are needed. For instance, building on the examples above:

- **On a strategic level**, if the countertrend of Russian exhaustion came to pass, then certain criminal elements who conduct hacking attacks in the service of the state abroad, would seek their own targets for ransom. The threats to cyberspace would be unchanged, making this a priority, whether the trend or the countertrend wins out.
- **On the operational level**, if the issue is the purchase multiple types of drones, but there is a clear risk of a countertrend of electronic warfare, then regarding the existing decision, the key question is how to get drones that can be shielded from the electronic warfare. An additional decision would be how to develop a technology that allow us to seize control of an enemy's drones. The former may imply including new requirements, the latter the establishment of a research project.

The above also has implications for how any central unit generating trends should ideally behave:

- **Rather than providing a broad threat landscape, it should seek to map which trends/countertrends impact which up-coming decision.** The list will not be the same for each policy area. For instance, the choice of what command and control system to order will depend on (some) different trends than would the choice of a new armoured vehicle.
- **The unit should also spend more time on the communication and customisation of their work, and less on the research.** That implies getting insight into what decisions are going to be taken, and what choice of vocabulary will resonate best with those colleagues.

4.3. Resistance to spend time

For policy, procurement or personnel choices, there will often be a senior official who is pushing hard to get a

quick result. The officials working on the dossier will be under a lot of pressure to produce results that conform exactly to the vision of their hierarchy quickly. What they want and need is the right question at the right time, and a couple of alternative options that also reach the strategic objective set.

For example, trends and countertrends can be used to generate possible strategic options on the nature of military procurement:

- Trend: Most military equipment was made to order by external contractors responding to a specific set of criteria.
- Countertrend: A growing countertrend is that commercial-off-the-shelf equipment is bought and then modified, either using state or private sector facilities.
- Countertrend: A vector countertrend, that includes the "privatisation of war" has private organisations co-funding purchase of equipment that military units themselves modify.

Indeed, in the specific context of military procurement, the time pressure exerted on officials may be about to get much worse. The shock of the Russian invasion of Ukraine, and the speed at which the nature of warfare has evolved on that battlefield, has laid bare a problem that was long obvious to all observers, but where no political momentum was at hand to change things: notably that current procurement processes are far too long and cumbersome. Whilst in the past this was seen as an administrative problem, the war on Ukraine has shown, that a combat system which was seen as being highly effective just two years ago, may well be out of date today. Moreover, given that globally states are rushing to modernise their arsenals^{xxiv}, there is a perception that long procurement processes could be fatal for a military and its capabilities. Hence there is talk of replacing 'exquisite capabilities with 'spiral development', that allows fast processes, learning, and improvements.

However, if decision making is sped up, it is likely that anything that is perceived as slowing things down may end up being thrown overboard. Hence, if anticipating future developments takes months (as is common when e.g. an administration generates scenarios), there is a risk, that it will be ignored (as too late) or even not done at all. Indeed, some will no doubt argue that with a short enough procurement cycle, anticipating the future is irrelevant, as you can always adapt to change in next

cycle. But while this may be true for very small systems, any mistaken approach that fails to consider plausible future developments on and off the battlefield will lead to wasted money, and, in the worst case, lives lost. Moreover, when e.g. purchasing a new type of armoured vehicle, the vehicles need to be made, which can last years. And then the vehicles should remain in service for decades. But what will be the security challenges these vehicles face in a decade or two? What role will they need to fulfil? Gathering more facts about today will not alone answer these questions. And if those uncertainties are ignored, it will be hard to guarantee a good policy choice. And of course, governments are not software start-ups with deep pocketed venture capitalists who are willing to invest, and often lose, millions on the off chance of a successful project emerging.

The use of countertrends may help in this case. Notably, countertrends can take advantage of pre-existing work. E.g.:

- **An official trying to understand strategic threats may just chose a few top trends, that have already been identified by the hierarchy or relevant other agency**, say China & Russia vs. US tensions, increasing espionage and proliferation, plus continued terrorism and radicalisation threats^{xv}. Without calling these trends into question, the official could easily ask, what if all three trends combined? That would make two of the trends vector countertrends to the third one. In this case certain powers use spies to encourage terrorism and radicalisation as a means of pressure on neutral states. This challenge will require new forms of police and intelligence cooperation.
- **On the operational level**, when looking at what system to purchase, an official could take the trend to drones and combine it with the trend for the battlefield soldier to be ever more connected. The vector trend would be a drone that targets anybody with electronic devices on them. In that case connected soldiers will need new forms of protection, or said soldiers must live without communications on the battlefield; in both cases, clever procurement needs to find a solution for this challenge.

Hence, as one corporate expert in foresight suggests:

“I think countertrends

or anti-trends are useful for explaining the dynamics of drivers and changes (...) and it would be a simpler option to explore the future in a lighter setting.”^{xxvi}

(Jongchae Oh)

A light version would consist of a brainstorming of a few hours, where any information gathered on the main trends, countertrends and other relevant trends are visualised (see megatrends and futures wheel in the next chapter), and the implications for the decision to be taken are listed. This work could then be used as a means of synthesising the issues at hand (why is this weapons system needed, what should it be able to do, what it needs to interface with), and this is something that in any case needs to be done, regardless of whether countertrends are studied or not.

Moreover it would easily be possible to check if a “preferred option” (e.g. choice of specifications for a drone) is really best, and that by confronting it with both the trends and the countertrends. If the option make sense both if the trend continues and if the countertrend were to prove dominant in the long term, then the option is robust. If the option no longer makes sense if a countertrend was to prevail, can anything be changed in the option to make the option more robust? If not, is there a worst-case plan B available, and which it would be a good idea to prepare for now?

4.4. Limits to countertrends

Even if there are opportunities, there are also limits on the use of countertrends. Some are inherent to countertrends themselves, others are more generic problems that would impact any attempt to introduce foresight.

In the realm of inherent problems, inevitably, any ‘lite version’ based on a simple brainstorming is only going to bring limited insight. Certainly, the lite process would help to structure the information available and visualise the trends and any obvious countertrends. But any list thus generated is unlikely to bring any big surprises. Also, absent research, it will not be easy to judge whether the countertrends are credible and serious or just mirages or wishful thinking. Adding such research would seem vital given the way that many countertrends may not yet be obvious in their manifestation yet.

Moreover, as one long standing government foresight practitioner puts it:

“How should we consider the changes in society? That requires us to understand the underlying context. For instance, it’s true that an aging society is a trend that is advancing. But the environment surrounding it is changing, so

the same trend has different implications as a result.”^{xxvii}

(Kuniko Urashima)

In other words, if we fail to imagine the context in which the trend – or countertrend – will evolve in the future, even if the trend does not change direction (there is no countertrend), we may still miss an important insight, as if the context shifts, the impact and relevance of the trend will change as well. That, in turn, impacts the robustness of our decision. For instance, there is a trend to increased use of camera surveillance technology in democratic countries. But what if the context changed from a country being democratic, to becoming authoritarian? The trend may be unchanged, but its impact and the wisdom of a decision (with the ability to detain any opponent of the regime), would change. This highlights the risk of looking at trends and countertrends in isolation and failing to embed them in a broader plausible scenario of what else could be happening in the world at the same time as any given trend or countertrend evolves.

More broadly, countertrends, or any form of foresight, require a degree of openness to surprise. Countertrends may arise unexpectedly and can rapidly gain momentum, especially when underlying societal needs are unmet and a tipping point is reached. Institutions, on the other hand, are arguably designed to avoid and withstand surprises. Their aim is to ensure continuity, not change. Hence there may be a fundamental cultural problem, no matter how simple the foresight process proposed.

Moreover, we also have to accept that both institutions and individuals suffer from cognitive biases (e.g., confirmation bias, overconfidence, or status quo bias) in decision-making. These biases can lead officials to reject countertrends that challenge their worldview or existing policies. In this case, the officials must first be brought to recognize that they have such biases before it is possible to mitigate them – and mitigation may be conducted using structured debate, red teaming, or by encouraging a great cognitive diversity in the decision analysis, rather than by pushing countertrends.

Key implications

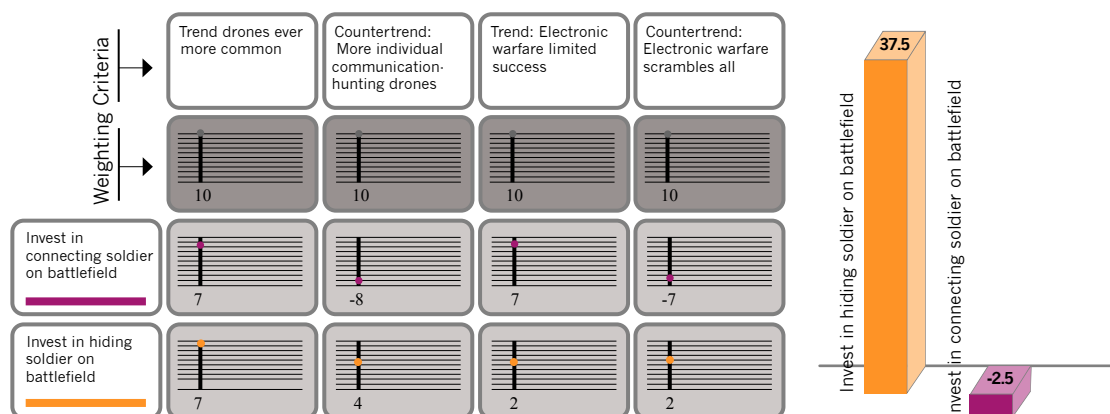
- a. Decision makers should not rely on predictive models at a time when the world is in radical change, as such linear models give a false sense of confidence. This is obvious as the security environment can change radically and fast – and already has done so in the past with single events: just look at the fall of the Berlin Wall, 9/11, and the invasion of Ukraine.
- b. Uncertainty impacts both the strategic and operational level. Even in operations, officials must make assumptions about future needs based on current trends to make informed choices on anything from force structures to procurement. And if the assumptions made about the future are only implicit, countertrends can be used to make them explicit.
- c. Care should be taken to avoid making the work overload worse, as officials are already drowning in information and are under time pressure. Work on countertrends could help, however, if the work is also used to structure and visualise the information available, to make it more useful and comprehensible.
- d. Work on countertrends must be seen to inform and improve policy, without becoming an open challenge to what the hierarchy (sometimes of other institutions) have decided are the key trends and assumptions. Hence it is important to present countertrends as building on the information (trends) given by the hierarchy, rather than as an act of defiance.
- e. Any work done in countertrends needs to give officials an understanding of the options they have today and should not just produce a list of things that may happen tomorrow.
- f. The list of options should be tested for robustness, to identify a choice that is good regardless of how the world around us develops (“no regret options”).

LINKING COUNTER-TRENDS...

5.1. To robustness testing

It is vital to link countertrends to the strategic choice. This can be done by robustness testing alternative strategic options. For instance, one option may be to invest in making soldiers on the battlefield connected to each other and with drones, whereas an alternative could be to invest in helping soldiers be electronically and physically invisible on the battlefield. These options can then be subjected to robustness testing. This is done by looking at each option (invest in connecting or invest in hiding) and comparing its strengths and weaknesses in each trend and countertrend. Each time the question is asked “how good is this strategic option, if this trend (or countertrend when applicable) turned out to be true?” In the example below, if the current trend to using ever more drones continues, both options make perfect sense. For the first option, it would be excellent

for all soldiers to have the situational awareness that drones can provide, and to communicate with each other. For the second option, it would make sense to keep soldiers as hidden as possible, so enemy drones cannot target them. However, if the “countertrend” already mentioned above came to pass, and drones can be trained to hunt any electronic signals, a fully connected soldier on the battlefield becomes very vulnerable. The option to help hide the soldier is very much superior, the connected option would likely prove fatal. As can be seen, the options are first ranked for their relative performance, ideally giving reasons why one or other is better or worse, and then they are given a numeric score. (The vital point is not the absolute score, but the relative score. Is one strategic option much better than another, or only marginally better?) Using a multi-criteria analysis tool^{xxviii}, allows for a visualisation of the results having also given a score to the perfor-



An example of robustness testing on trends and countertrends produced by the author



mance of each strategy in each trend/countertrend (see previous page).

In the above example, the trends and countertrends have been given an equal weighting of 10. This could of course be adjusted if it were felt that the countertrend is much less likely than the trend. Moreover, it is also possible to conduct the same exercise but using scenarios as the column headers instead of trends/countertrends. This has the advantage of pitting the strategic options against a full range of how the world could evolve, rather than just one or two trends.

5.2. To Artificial Intelligence

If there is no time for research into what countertrends could be emerging, or what ones are more plausible than which others, one option would be to have AI do the necessary research in a matter of minutes. Indeed, if an administration were serious about systematically rolling out the use of countertrends (or other foresight approaches) for all policy areas, it would be perfectly possible to create an AI agent that acts as a sparring partner. An official could tell the agent what policy is planned, or decisions need to be taken, and the agent could identify relevant trends and countertrends that the official can then explore or ignore. Moreover, the agent could help in the exploration and then identify consequences of the countertrends for the decision. It could even suggest improved or alternative strategic options to those already being considered, identifying

the pros and cons of each option, depending on the trends/countertrends that prevail.

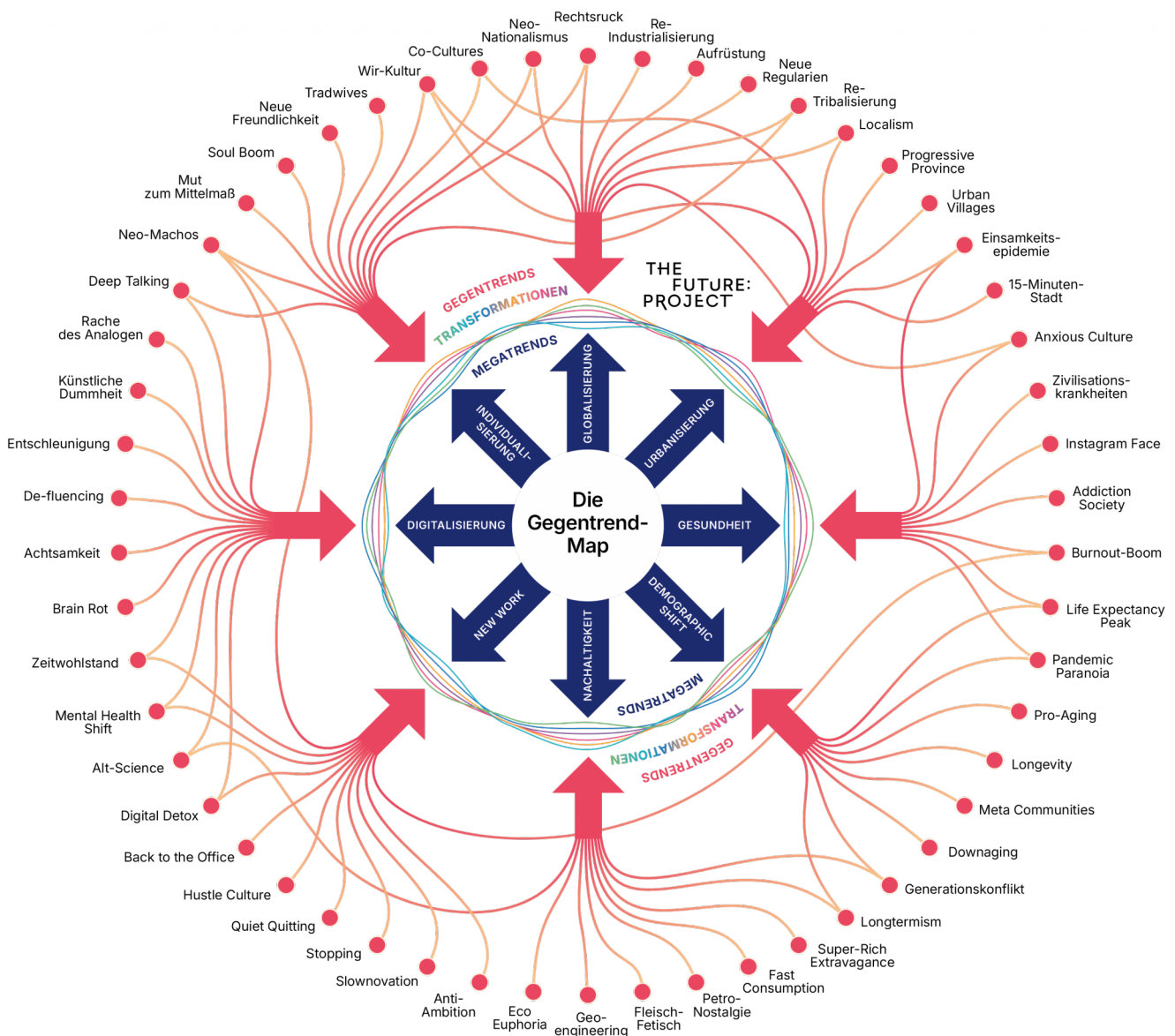
However, any use of AI (especially a commercially available LLM) needs to have safeguards attached. The answers an AI can give is only as good as the information that is available, and so if there is barely any information on a countertrend, its insights will be limited. Worse, the AI will likely perpetuate, and biases present in the training data, without being aware of this bias. Secondly, AI may hallucinate and certainly seeks to be sycophantic, as the business model of the providers requires that people keep on coming back to use it repeatedly (hence they make it as pleasing to use as possible). The simple fact of asking if something may be plausible may become grounds for the algorithm to seek to 'please' the user by affirming that they are right, and that something is plausible, even if the evidence for it is thin. Thirdly, bad actors may even deliberately try to poison AI with fake data to blindside those using it. Hence, whilst AI can certainly be used, a close oversight should be maintained^{xxix}.

These problems could be reduced by using a specifically designed agent, but that would need an investment of time and money, not just in the agent, but also in the local storage and availability of the data sets associated with this agent.

5.3. To Megatrends

Many organisations invest time to identify trends that they consider to be big – i.e. substantial in their nature, enduring over time and impactful on issues of concern to the organisation. Such “megatrends”^{xxx} will often be used to identify longer term opportunities and risks for the organisation, be this on a strategic or operational level. For any organisation with recognised megatrends, it would be possible also to identify countertrends to the megatrends. Indeed, some countertrends will likely impact a couple of such mega trends. In the example below, Horx et al took their own megatrends as their starting point, and then identified the countertrends linked to these^{xxxi}:

As can be seen here, the countertrends map is in the centre, and shows how the megatrends (blue arrows starting at top, and working clockwise) of globalisation, urbanisation, health, demographic shift, sustainability, new work, digitalisation and individualisation interact with countertrends (red arrows pointing inwards) where there are many early warning signals of such countertrends (red dots). For instance, globalisation is facing countertrends as can be seen with the rise of far-right parties (very top red dot), reindustrialisation, rearmament, etc. For an official, it would be relatively simple to identify which megatrends are relevant and only develop countertrends for those.



An illustration of megatrends and identified countertrends copied from Matthias Horx et al.

5.4. To probing assumptions

If there is no single set of trends that are taken as a reference by all to describe the future environment in which the decision will have to survive, it is useful to probe assumptions. As the head of a government foresight team puts it:

“It is important to have policy makers surface their assumptions about how the strategic and operational context evolves, and what new circumstance could become reality. Often these assumptions are implicit, and sometimes there are huge discrepancies between the assumptions made.”^{xxxii} (Kristel Van der Elst)

The process can be done using individual interviews, research of documents, in a workshop, or in a combination of the above^{xxxiii}. The essential feature is to identify the ghost scenario^{xxxiv} that policy makers have in their mind, in other words the trends they see as describing the future world. Once these assumed trends are

clear, it is possible to create related countertrends, to probe whether proposed policy options will hold true or could be invalidated by the emergence of countertrends.

5.5. To neologisms

One way of shifting narrative discourse in an organisation is by shifting its language. And countertrends are good opportunity, not just for reinforcing certain turns of phrase, but for creating entirely new words, that by their nature, allow others in the organisation to recognise a different future may also exist. A lot of work has been done on this with the “Dico du future”^{xxxv} in French, which provides many examples of intuitive insights drawn from pulling different trends together.

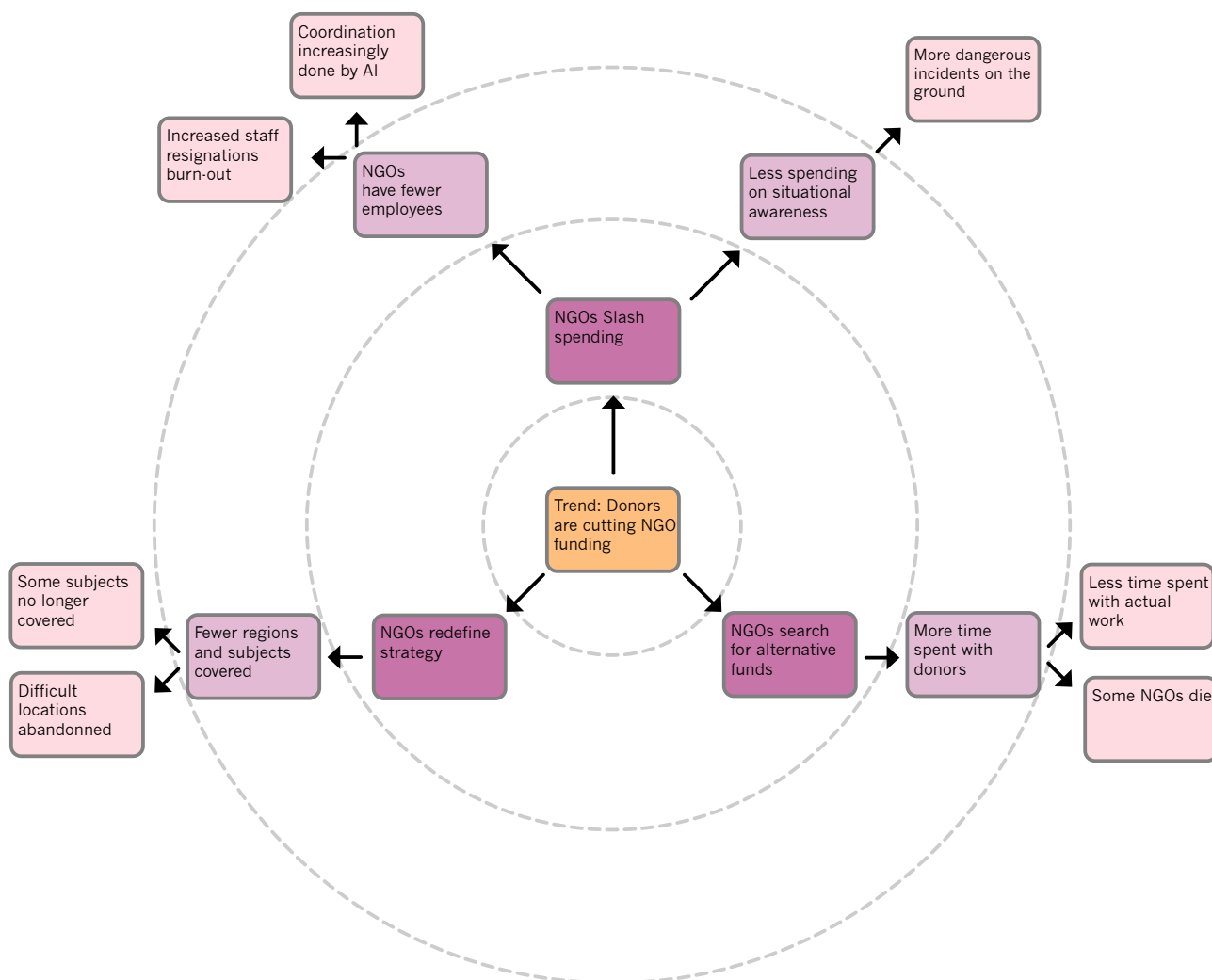
A few examples of a few neologisms in countertrends from “15 Gegentrends”:

- **Slownovation:** A focus on gradual, sustainable innovation rather than rapid, disruptive changes. Reflected in sustainable business practices and the circular economy.
- **De-fluencing:** Moving away from influencer culture and curated online personas.
- **Neo-Machos:** Redefinition of masculinity in response to changing gender norms.

5.6. To future wheels

The futures wheel^{xxxvi} is an effective way of visualising how a trend (placed in the centre) may develop further, with concentric circles of the consequences it may have over time for issues of interest to the user. By building such a futures wheel, the user gets to think of logically of the second and third order changes that a trend may initiate over time – which in turn allows them then to scan information available to see if there are already signs of change.

For example^{xxxvii}:



Using a futures wheel produced by the author to identify second and third order impacts of a trend

There is no reason why the second or third order events mapped could not also introduce countertrends of the Newtonian or Exhaustion variety, with the emphasis then being on what types of early warning signal would one expect to see in this case. Alternatively, it would be possible to make the starting point a vector counter-trend that is posited as being the synthesis of two existing trends that collide, and again, to try and identify what second and third order impacts this would have and hence what to scan for.

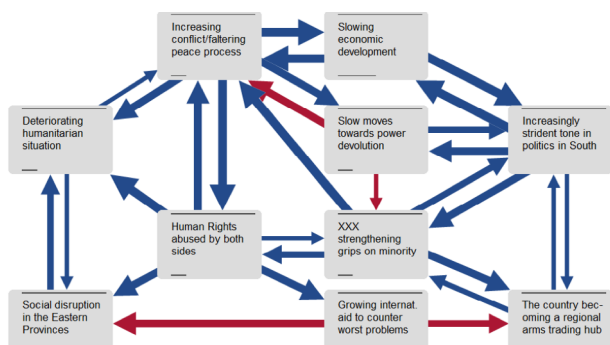
5.7. To systems analysis

As has been mentioned above, it is possible to apply systems thinking to analyse the trends that impact a

decision. The aim is not just to understand how each trend may interact, but also to identify which (of possibly very many) trends are the ones we really should pay attention to. After all, even with an expert foresight team, if we try to follow too many issues, the result is likely to be analysis paralysis rather than better insight.

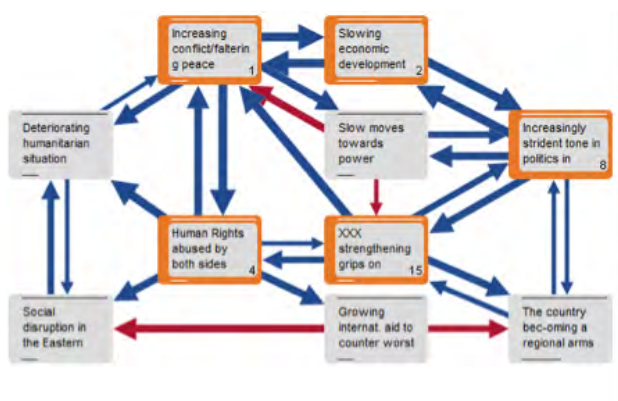
A variety of systems tools can be used to separate the 'driving forces' (most important trends) from a possibly much larger number identified. Here the trends become boxes that are then linked to other boxes (trends) by arrows which denote that there is a causal influence between them. In the example that follows^{xxxviii}, a country (it could have been Switzerland) wanted to use a systems analysis to identify the main influences on the future of an Asian country. The participants identified the different trends (boxes) and then linked them. As

can be seen, the 'increasing (armed) conflict/faltering peace process' trend has an impact on the 'deteriorating humanitarian situation' trend: violence displaces people and destroys their livelihoods. But the inverse is also true – the more humanitarian cases there are, the more certain individuals will be prepared to take up arms and fight. Hence there are arrows in both directions between the boxes. However, as the conflict causes more humanitarian upheaval than the humanitarian situation causes violence, the arrow is thicker in one direction than it is in the other.



An example of a systems map using Parmenides Eidos produced by the author

All too often, non-systems thinkers believe that this map is the end point, and see it as just being a thicket of arrows in all directions^{xxxix}. However, having linked all the nodes, it is possible to identify the most important driving forces, in the case of the tool above, by letting it (automatically) calculate which trends have the largest influence on which other trends. In the graph, they appear as the most 'active' issues (highlighted in the illustration below).



The same example, using a Vester Analysis to identify the most important trends.

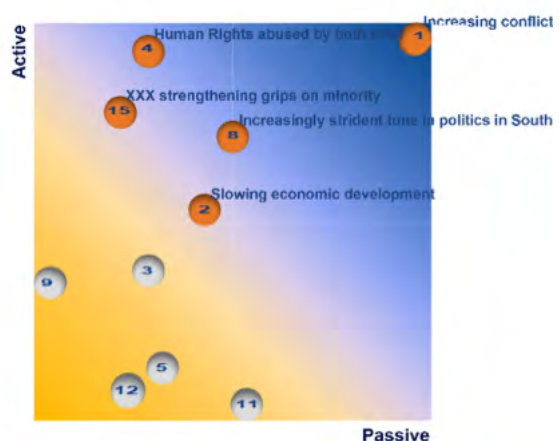
Each ball in the graph on the right hand side corresponds to a box on the left hand side, and the location on the y axis is a function of the number and strength of the arrows emerging from that box. In very simple terms, the more and the stronger the arrows emerging from a box, the higher it will be placed on the y axis. The location of a box on the x axis is then a function of the number and strength of the arrows entering that box. The further an item is to the right on the passive axis, the more it is caused to change by other trends in the system.

Thus, the most active issues are the driving forces, the ones that, if they change, will have the most influence on the system we are examining, and hence are the key drivers to focus on when looking at which trends will most impact our decision – and hence vitally which counter-trends should be priorities for us to investigate further, as they will impact these driving forces. Also of interest, those trends in the top left, are more likely to cause change on their own (they are not so impacted by other trends) and hence are more likely to change first, before having an impact on those trends that are top right (and meaning they are impacted by other trends, and will change later).

5.8. To scenarios

Anybody embracing countertrends is inevitably opening the door to scenario thinking.

As one leading foresight theorist and practitioner says:



“I haven’t heard people referring much to counter-trends, but the way we think about this is that there is always a ghost scenario being worked with – an assessment about the future context of the strategy that the strategy reflects. Then the question is which aspects of the scenario are highly susceptible to trends bending and how.”^{xi}

(Trudi Lang)

If the trends that are currently believed to be true are taken together, they constitute the ghost scenario. The countertrends are reasons why this ghost scenario may not become true, as countertrends bump into trends (and into each other) to change the direction of travel. This level of complexity is best described by alternative hypotheses of how the world could look – in other words alternative scenarios. Again, just for clarity of meaning,

scenarios are not predictions of how the world will look, but rather alternative hypotheses of how it could look that can be used to inspire strategic options of what an organisation could do, and that can be used to test the robustness of decisions an organisation is planning to take. A combination of countertrends analysis and AI could be used to construct scenarios by a group that wished to use foresight for these purposes.

Indeed, for those wishing to be more exhaustive, the scenarios could be built (without AI) using a morphological analysis. The driving forces (possibly selected by a systems analysis above or simply listing the most important trends identified otherwise) are listed along the top (in the grey boxes seen in the figure below). For each grey box, alternative plausible future states can be identified - the yellow boxes appearing underneath. These could plausibly be the continued trend as being the first yellow box, and then alternative countertrends in the other yellow boxes as seen in the tool below.^{xii}

Scenarios December 2008				
Increasingly strident tone in politics in South	XXX strengthening grip on minority	Human Rights abused by both sides	Slowing economic development	Increasing conflict/faltering peace process
Current president with existing coalition	Leader stays in control	Continuing abuses on both sides	Struggle through	Cease fire - Muddling through
Stronger president raises tone further	Existing leadership splinters	XXXX gets worse but govt. stays same	Confidence shaken	Guerilla war restarts
Pres declares state of emergency, v. strident	Leadership decapitated, implosion	Clamp down on both sides	Major setback	Fourth full scale war breaks out
Opposition comes to power & moderates tone		UN called in & truth commission set up	Gold rush expectations	Restart of peace process

An example scenario space of trends and countertrends produced by the author

It is then possible to ask which future states could appear together, and to identify how any given trend or counter trend (i.e. the yellow boxes) could end up coming together as a future. For instance, the trend scenario, where the (at that time presumed) trends continue, would be this combination:



The same example showing how some future trends may combine to create a scenario

5.9. To pre-mortems

A pre-mortem assumes that every decision taken today could end up failing to reach its objectives. Rather than waiting for the failure to happen and then dissecting why it failed (post-mortem) the idea is to identify in advance why it could go wrong, so as then to agree countermeasures that prevent things from going wrong. Countertrends could feed into the pre-mortem process, or could also be identified by it:

- A group agrees what are the key features of the decision to be taken.
- The group then imagines it is transported in time to the future, long enough that the decision has been taken as outlined in i) and indeed, that important elements of the decision have been fully implemented (e.g. a new law has entered into force, or a new unit has been recruited and now

exists). The group identifies the actions/events/activities (any type of risks) that could effectively cause this decision to turn out badly between now and that future date. If countertrends have already been identified, some of these may turn out to be risks. Inversely, the brainstorming may surface changes in the surrounding environment that cause a problem – in other words additional countertrends.

iii) Once all risks are identified, the group clusters similar types of risks, and then ranks the clusters on the y-axis of a graph according to their level of their impact on the decision (from marginal to fatal) and ranks them (x-axis) according to perceived likelihood of this risk happening. This provides an alternative prioritisation of the trends or countertrends (and in this case, other types of event) that need to be investigated further or on which the group should keep an eye.

iv) Finally, the group spends time to discuss countermeasures that can be taken against at least the top 10 risks. The focus is clearly on the high impact risks that are perceived as having a higher likelihood of occurrence.

In the Swiss context, it may be easy to smuggle a pre-mortem process into policy making, given the adoption of ISO 31000 risk management framework by the confederation, which opens the door to any official saying that such a process is needed.

Key implications

- A lot can be gained from twinning countertrend analysis with other tools in the foresight armoury, as these allow for additional depth or structuring of the work done.
- Of all the combinations, likely the most important are the linking of countertrends to robustness testing and to probing assumptions. It is essential that the countertrends work done can be shown as improving the quality of decisions by identifying what assumptions the decisions rely upon, and that the option selected works, even if the assumption about the world outside has to be revised, following a change in trend direction.
- Most of the other tools require time and effort, hence they are likely to be employed only in a second phase, once countertrends (perhaps with robustness testing and probing assumptions) have proven their worth.

FINAL THOUGHTS

6.1. A useful addition

As can be deduced from the report, the mere fact of having given a name to the concept is helpful in giving prominence to uncertainty in the forecasting, quantitative modelling, and trends community. Given that these communities are vastly bigger, and hold much more sway over governments, than do foresight practitioners and thinkers, this is already a great service.

Moreover, as has been indicated, countertrends could be combined with other foresight practices, to widen the appetite not just for investigating risks and opportunities, but also for making decisions that are more robust across a range of alternative futures.

6.2. Use it or lose it

Although many countertrends could be identified without even doing the research that a qualified analyst would want conducted, it must be recognised that one of the biggest challenges has little to do with the research. With a mixture of individual, collective, and artificial intelligence it is possible to generate many interesting insights about the future with any of a variety of foresight methods. The real challenge is to have the countertrends used when decision makers are developing strategy/policy, innovation, or even an organisation's structure.

6.3. Involve decision makers

One way to ensure countertrends have an impact on decisions would be to obtain a political mandate from federal counsellors for them to be used in decision processes, or to have a government coalition write this type of activity into its coalition agreement. Another way would be to design the processes to include the people who need to take these decisions in the generation of the countertrends - generating them and identifying their impacts on policy can be a transformational process. Those who engage in it come away with insights that reshape their 'mental maps'. Indeed, even just having these individuals identify what assumptions they are making, and which source of insight about the future they are using as their basis can be useful. Better still if they grasp future opportunities and risks better and see why others (in their organisation or outside) are making different choices today because of their beliefs about tomorrow. Indeed, these principles are equally true for other foresight methods ranging from Wild Cards^{xliii}, to Causal Layered Analysis^{xliiii}. Getting key actors into this process is a precursor to success.

6.4. Understand where to apply it

For countertrends work to succeed, those wanting to introduce them must map their goals (what do you want to achieve with this process?) and actors (who is needed to deliver these goals?). Moreover, if the key officials are not prepared to spend time working on countertrends, the mapping process needs to identify whom else in the organisation these officials trust, and involving these



others instead, so they can vouch for the results with the key officials when a decision is to be taken.

6.5. Drip-irrigate important ideas

Rather than overwhelming key officials with a bulky report, the mapping should identify who controls their in-box, and drip feed a couple of articles a week, and which speak directly to issues identified in the counter-trends work. Indeed, in-box should be taken figuratively: some individuals like to read, others may prefer podcasts or videos. And this drip feeding should not just target the key official, but also those around them who are contributing to the decision. Rather than a single glossy foresight product, it is much better to have dozens of short, customised pieces, or even original articles from sources they already know and trust.

6.6. Create an immersive experience

Even better is if it is possible to have key officials

physically walk through spaces that outline trends, countertrends or even scenarios, complete with pictures, text, and artefacts from that future. Thanks to AI, it is also now easy to generate supposed newscasts from the future. Whatever the method, the key feature of the experience must be that the trends, countertrends, or scenarios inform the specific issues the official is wrestling with and are credible, ideally with indications of early warning signals visible today.

6.7. Generate and wind tunnel options

Whether an immersive experience is provided or not, it is possible to give key officials a couple of alternatives strategic or policy options to evaluate in comparison to “current course and speed”. This can be visually represented with a multi-criteria analysis tool: it is quick and easy to rank the strategic options with each trend/counter-trend or with different scenarios, and thus to identify which option performs best (= meets the goals of the policy/strategy) when all futures are considered.

Key implications

- a. The key to success is not generating countertrends. Rather it is to ensure that the insights generated in the process have an impact on the decisions taken.
- b. This implies planning out the process to engage with the key actors, and to ensure that the result is better decision making rather than blue-sky thinking.

REFERENCES

Endnotes

- i <https://www.britannica.com/dictionary/trend>
- ii For instance, in Seattle where protesters claimed they had organized the first worldwide movement against globalization: <https://www.britannica.com/event/Seattle-WTO-protests-of-1999>
- iii For instance, see <https://internationalbanker.com/finance/the-de-globalisation-era-is-well-and-truly-upon-us/>
- iv Matthias Horx, Matthias Horx, Lena Papasabbas, Nina Pfuderer, “15 Gegentrends: Wie die Zukunft ihre Richtung ändert”, 2024, The Future Project AG (Publisher).
- v For example: DDPS (FIS) “Switzerland’s Security 2025”: <https://www.vbs.admin.ch/en/fis-switzerlands-security-2025>
- vi Lawrence Freedman, “The Future of War: A History”, 2018, Penguin, Random house UK (publisher), also available on-line <https://archive.org/details/futureof-warhisto0000free>
- vii Quoted from the author’s interaction with Cho Khong, former Chief Political Analyst at Shell.
- viii Matthias Horx, Matthias Horx, Lena Papasabbas, Nina Pfuderer, “15 Gegentrends: Wie die Zukunft ihre Richtung ändert”, 2024, The Future Project AG (Publisher).
- ix See for example the description in: <https://www.investopedia.com/terms/c/countertrend.asp>
- x For example: https://www.accio.com/business/counter_trends
- xi Quoted from the author’s interaction with Tanja Hichert, Co-Chair of the UNESCO Chair in Complex Systems and Transformative African Futures in the University of Stellenbosch, South Africa
- xii As Horx et al put it, “Die Dialektik von Trends und Gegentrends zu verstehen, erlöst uns von dem Vorurteil des linearen Denkens, das immer nur in eine Richtung schaut.” (“Understanding the dialectic of trends and countertrends frees us from the prejudice of linear thinking, which always looks in only one direction.”)
- xiii “To every action, there is always opposed an equal reaction.”
- xiv Wikipedia: <https://en.wikipedia.org/wiki/Luddite>
- xv Statista: https://www.statista.com/chart/7699/lp-sales-in-the-united-states/?srltid=AfmBOoptA2Hr1ttCAar3rOwN38me6d6rNqVZQNHmPn6ZDNw2drP8A_4A
- xvi Statista: https://www.statista.com/statistics/265239/global-oil-consumption-in-barrels-per-day/?srltid=AfmBOoobiKi_F1DfYTmdRITunBEcupE1Yzi4gR0czAtBJYg_EsIVJTBq
- xvii Our World in Data <https://assets.ourworldindata.org/uploads/2019/08/technology-adoption-by-households-in-the-united-states-768x542.png>
- xviii Each trend has a magnitude and direction. However, when the two trends strike each other (like billiard balls) each trend is likely to change course and velocity, or (unlike billiard balls!) they may merge to take on a combined vector.



xix For instance the views of Jean-Marc Jancovici on the need to look at biophysical limits, not just monetary or economic indicators: <https://www.radiofrance.fr/franceinter/podcasts/l-invite-de-8h20-le-grand-entretien/l-invite-de-8h20-le-grand-entretien-du-lundi-19-mai-2025-2881930>

xx For instance: <https://thecynefin.co/casting-around/>

xxi Quoted from the author's interaction with Tanja Hichert, Co-Chair of the UNESCO Chair in Complex Systems and Transformative African Futures in the University of Stellenbosch, South Africa

xxii Quoted from the author's interaction with Cho Khong, former Chief Political Analyst at Shell.

xxiii DDPS (FIS) "Switzerland's Security 2025": <https://www.vbs.admin.ch/en/fis-switzerlands-security-2025>

xxiv SIPRI: https://www.sipri.org/media/press-release/2025/sipri-top-100-arms-producers-see-combined-revenues-surge-states-rush-modernize-and-expand-arsenals?utm_source=phpList&utm_medium=email&utm_campaign=For+immediate+release%3A+SIPRI+Top+100+arms+producers+see+combined+revenues+surge+as+states+rush+to+modernize+and+expand+arsenals&utm_content=HTML

xxv DDPS (FIS) "Switzerland's Security 2025": <https://www.vbs.admin.ch/en/fis-switzerlands-security-2025>

xxvi Quoted from the author's interaction with Jongchae Oh of Samsung in Korea.

xxvii Quoted from the author's interaction Kuniko Urahima a Science and Foresight consultant, and formerly

of the National Institute for Science and Technology Policy, Japan

xxviii Author's own example using the Parmenides Eidos® Option Evaluation tool <https://parmenides-eidos.com/>

xxix WEF study on AI and Foresight: https://reports.weforum.org/docs/WEF_AI_in_Strategic_Foresight_2025.pdf

xxx Wikipedia: <https://en.wikipedia.org/wiki/Megatrend>

xxxi The future project: <https://thefutureproject.de/gegentrends/>

xxxii Quoted from the author's interaction with Kristel Van der Elst, Director General of Policy Horizons Canada.

xxxiii Policy Horizons Canada; <https://horizons.service.canada.ca/en/our-work/learning-materials/foresight-training-manual-module-2-assumptions/index.shtml>

xxxiv Trudi Lang and Rafael Ramirez, MIT Sloan Management Review, October 2023, "How Ghost Scenarios Haunt Strategy Execution", <https://sloanreview.mit.edu/article/how-ghost-scenarios-haunt-strategy-execution/>

xxxv Atelier des futurs, Dico du Futur: <https://atelier-desfutures.org/category/fictions/dico-du-futur/>

xxxvi Wikipedia: https://en.wikipedia.org/wiki/Futures_wheel

xxxvii Author's own example

xxxviii Author's own example using the Parmenides Eidos® Situation Analysis tool <https://parmenides-eidos.com/>

xxxix General Stanley McCrystal famously joked of a systems analysis "When we understand that slide, we'll have won the war". <https://scholarlykitchen.sspnet.org/2010/05/19/get-the-picture-powerpoint-systems-dynamics-the-military-and-the-new-york-times/>

xl Quoted from the author's interaction with Trudi Lang, Said Business School, University of Oxford, UK

xli Author's own example using the Parmenides Eidos® Option Development tool <https://parmenides-eidos.com/>

xlii Wikipedia: [https://en.wikipedia.org/wiki/Wild_card_\(foresight\)](https://en.wikipedia.org/wiki/Wild_card_(foresight))

xliii Wikipedia: https://en.wikipedia.org/wiki/Causal_layered_analysis

Key texts

Three texts stand out as being of particular interest for the reader of this document:

"15 Gegentrends: Wie die Zukunft ihre Richtung ändert", 2024, by Matthias Horx, Matthias Horx, Lena Papasabbas, Nina Pfuderer, published by The Future Project AG: <https://shop.thefutureproject.de/products/15-gegentrends-wie-die-zukunft-ihre-richtung-andert?variant=48219189281103> Horx et al are responsible for putting the term „Gegentrends“ (countertrends) on the map in the sense that is being used in this report. This book is therefore the starting point of the reflection, although, as is visible in this report, others see different ways of applying it in practice.

"The Future of War: A History", 2018, by Lawrence Freedman, Penguin, Random house UK (publisher): <https://archive.org/details/futureofwarhisto0000free> A masterful look at how in the last two centuries, those in charge of security policy in Eurasia and North America looked at the future of conflict and took procurement decisions and organized their forces, in response – but also how they often missed what came next as their response was based on a linear extrapolation of past trends, rather than an anticipation of the emerging counter trends.

"How Ghost Scenarios Haunt Strategy Execution", October 2023, by Trudi Lang and Rafael Ramirez, in MIT Sloan Management Review: <https://sloanreview.mit.edu/article/how-ghost-scenarios-haunt-strategy-execution/> This text presents wonderfully well how decision makers can be trapped in an implicit vision of the future when taking decisions, but are not aware of how many assumptions they are making. Only by revealing these assumptions – showing that there are counter-trends that contradict them – can decision makers move thinking forward.

Thanks

The author, Adrian Taylor, wishes to thank the following for their input:

- Cho Khong, former Chief Political Analyst at Shell.
- Jongchae Oh of Samsung in Korea.
- Kristel Van der Elst, Director General of Policy Horizons Canada.
- Kuniko Urashima a Science and Foresight consultant, and formerly of the National Institute for Science and Technology Policy, Japan
- Tanja Hichert, Co-Chair of the UNESCO Chair in Complex Systems and Transformative African Futures in the University of Stellenbosch, South Africa.
- Trudi Lang, Said Business School, University of Oxford, UK

The author also would like to thank his colleagues Sebastian Stölting and Petra Wiesbrock for their help with research, earlier drafts, and design/formatting of the final document, and Quentin Ladetto of Armasuisse for the helpful insights and suggestions made in the course of the report's production.

**What if the real strategic risk is not missing a trend...
but ignoring what pushes against it?**

In a world saturated with megatrend analysis,
this document takes a different stance: it examines resistance, emerging
reversals, and the forces that disrupt dominant trajectories.

Counter-trends do not complicate anticipation, they strengthen it.
Because strategic robustness is forged through the confrontation of forces,
not their alignment.

