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# Crisis management in the 21st Century.

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Abstract

The article discusses the concept of complexity in decision-making processes, emphasizing the challenges faced by politicians, managers, and entrepreneurs in today's interconnected and interdependent context. The complexity is characterized by the large number of variables at play, the speed at which their values change, and their interconnectedness, making prediction difficult. The article also addresses the shift from traditional crises with clear perimeters to systemic crises that span multiple areas and the need for organizations to develop a strategic foresight capability to anticipate potential crises. The COVID-19 pandemic and the war in Ukraine are cited as examples of systemic crises, and the article highlights the importance of human emotions and sensitivity in understanding complex contexts.
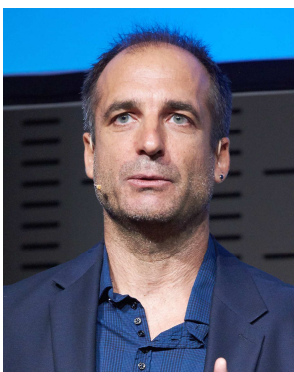
Complexity.

In the new interdependent and interconnected world we live in, "being a politician, manager or entrepreneur, taking decisions that will have a profound impact on the present and the future of entire communities is less and less a trivial activity or one for which a flicker of creativity is sufficient in the face of competence. (…) In short, decision-making in the new millennium has become complex". "Complexity is described by the meteorological anecdote of the butterfly, which, rising in flight from a flower in the Philippines, triggers with the flap of its wings a hurricane in Florida. Complexity implies a state of wide variety of variables at play (too many), of variability in the dynamics with which their respective values change (too fast), and of their close and sometimes indecipherable interdependence (too loosely connected). Together, these three conditions make prediction difficult, even for a machine with significant computing power such as a supercomputer. And this is where the importance of the human being over technology comes in. Because the human being is endowed, in addition to skills, with those emotions and sensitivities that allow him, with the support of technology, to better understand the context. Complexity requires an effort of immersion to understand it and to deal with it" (Verona, 2022).

We are in fact immersed in increasingly interconnected operational contexts, in which behavioral patterns interact not only within each individual organization, but also between different organizations, in an increasingly interdependent environment (Allison, 1999).

Systemic crises and polycrises.

Crises are no longer what they used to be. Unlike those of the 20th century where the context was clear and the perimeter well-defined, think for example of events of an industrial/environmental nature (for ex. Seveso, Exxon Valdez), or those associated with food or drug safety (Tylenol), the systemic crises of the 21st century tend to project us into hyper-complex scenarios where "the event is no longer the core of the problem. The problem is the fragility of the fundamental structures of our system". These cross-border crises tend to drag us "into the chaotic, they span ever wider and more complex territories, they are difficult to frame in predefined categories. (…) They push us into a universe characterized by the loss of orientation and reference points" (Trancu P. et al. Lagadec P. 2021).

The attack on the Twin Towers on September 11, 2001, the first systemic crisis of the new century, represents the moment of rupture between stability and instability. But it is the intertwining and concatenation of

two systemic crises, Covid19 and the war in the Ukraine, that sanctions the transition to constant uncertainty and gives origin to the term «polycrisis».

In this already extremely complex scenario, it would be a mistake to ignore additional factors at play in the background such as permanent hybrid warfare or the potential emergence of new terrorist threats with the use of new arsenals of easily accessible, low-cost, high-impact weapons.

Limits of crisis management.

The pandemic experience has highlighted what many risk and crisis management experts have long realized: most organizations and Nations are not wired to look for and appreciate negative scenarios. The incubation period of the pandemic (and the war in Ukraine), illustrates the challenge that lies ahead: the need to develop an inclination and capacity to examine the environment with a dedicated antenna for potential crises (Boin, 2021). It is a matter of introducing strategic foresight mechanisms in organizations, be they companies or nation States. Cells that gather and analyze a flow of information from various sensor and network systems with the aim of constantly monitoring the horizon to identify possible critical scenarios in a logic of anticipation.

The truth is that in most countries we have witnessed organizational blindness: the inability to imagine; systems organized in silos (Scharte, 2021) unable to connect the dots; the dilemma of dealing with low probability but high impact events; the illusion of control and the inability to confront the harsh reality of 'what if' scenarios; the tendency to entrench oneself in familiar contexts - the known knowns - during the risk analysis and preparation phase; the practice of 'soft' scenarios (Boin et al. , 2021); communication that is difficult to understand (Trancu et al., Grandi, 2021) and aimed at providing reassurances not supported by the reality of the situation.

We are facing problems of culture, organizational architecture, coordination, leadership, command and control, transparency and communication that require urgent attention. In the case of Western democracies, these are often compounded by the lack of adequate legislation which represents an additional obstacle to the effective management of critical events. There are 5 areas that require urgent intervention: 1) overcoming organizational blindness 2) establishing robust and multidisciplinary decision-making processes; 3) managing fragmentation; 4) articulating credible narratives; 5) managing collective stress (Boin et al., 2021).

Our approach to risk management has thus far been based on «known unknowns»: the risks of which we are aware of. We have identified, mapped, and understood them. But the key issue today is that posed by risks that are off our «radar screens» and that we are unable to identify: the «unknown unknowns». The risk perimeter has hence dramatically expanded.

There is therefore an urgent need for mental and organizational transformation. We need to be able to identify potential faint signals at an early stage through strategic foresight to rapidly set in motion both reflection and action. Decision-makers need to be able to rely on support and interdisciplinary teams, fast thinking cells (Lagadec, 1991), strategic foresight units, to help them govern chaos with the necessary expertise. We must abandon the idea of the single leader at the helm and favor diffuse leadership; reject 'group think' and value individuals who show ingenuity, creativity, and the ability to deal with the unexpected and the abnormal. It is more necessary than ever to learn to 'think and act outside the box' in a context where the box no longer exists (Grannatt, 2004).

In conclusion, the crisis management toolbox we inherited from the industrial era is obsolete. And so are the organizations and leadership styles. We need to rethink crisis preparedness and management for all types of organizations in the light of the elements of complexity introduced by the systemic crises and polycrises of the 21st century. Re-think public-private collaboration as a fundamental element of the process, re-think communication processes and overcome the logic of silos to arrive at a holistic view of critical events.

The role of ideas.

Being prepared to think the unimaginable (Taleb, 2009) is a skill that is increasingly required to deal with possible futures (Li & Qiufan, 2021). Time, as we know it, loses its determinacy in that it is not a «when» the event takes place, but rather the challenge of «what» kind of event will materialize. Futures in the plural have thus become the real focus of interest in crisis preparedness (Ladetto, 2022). Being prepared for crises also means developing, sowing, and harvesting new knowledge, new ideas to seek the intellectual flexibility needed to see beyond the unimaginable (Rappazzo & Eigenheer, 2020). Thanks to Prometheus, who by order of Zeus gave man the ability to think (Aeschylus, 2018), we have the necessary tool to prepare ourselves. But ideas are like seeds: they must be sown, harvested, eaten or mixed with other seeds, and this ad infinitum.

Ideas are born from knowledge and analogies. Ideas combined create more knowledge, and with

knowledge, man's experience becomes greater and greater. To sum it up in Pascal's words, man begins his life in ignorance but continues to learn and grow constantly. Men and women benefit from their own experiences and from the knowledge of those who have come before them.

Modern crisis management.

Globalization (in the holistic sense) and the pervasiveness of technology have put the reliability of the system inherited from the first Industrial Revolution, a hierarchical model with clear responsibilities mainly focused on control and execution (commander and executor) on trial.

To face contemporary challenges a modern structural and conceptual framework for crisis management is required (Henrizi & Müller-Gauss, 22. November 2022). We need a mindset adapted to the circumstances (Watson et al., 2021) and to possess an appropriate tool, or as Urner Maren (2019) put it, a mental butler, to manage crises. The 5+2 model, i.e. the management process developed by the Swiss Armed Forces (Führung und Stabsorganisation der Armee 17 : (FSO 17), 2019) offers a simple, scalable process suitable for all crises, regardless of their nature. The principle is not to practice what will happen, the scenarios are far too broad, but rather to internalize the process as the only constant in a crisis is the word crisis itself (Rappazzo & Eigenheer, 2020). Every crisis, even if it bears the same name, will never be the same as previous ones.

So, what are the limits of the Swiss Confederation's current crisis management system and how can they be overcome? The limitations are certainly not in the ability to plan, but rather in monitoring (the ability to detect and anticipate), supervision and management of the critical event. These are the real challenges. The ability to react quickly and effectively to changes is crucial for success. Decision-makers must be able to closely follow the management of the event and take quick decisions to maintain control of the situation.

The risk of managing a crisis according to the concept of management by emergency measures, or also under the name of micromanagement (Rappazzo, 2015), is a real danger that should not be underestimated. It is a situation in which the decision-maker tries to control every aspect of the crisis instead of relying on the expertise and professionalism of the people around him. The risk is to stifle creativity and initiative, as well as to fuel the climate of distrust and fear that already characterizes the crisis. Democracy, regionalism, different partners, strict hierarchical structures and rigid processes hamper agility and the ability to proactively manage critical events. Political agendas and resilience do not go hand in hand. It is not a matter of ill will, but politics has its own times and ways. Voting, for example, is something that cannot be ignored: it means consensus, and without consensus there is no re-election.

Without a clear method or process to solve problems, crisis can create misunderstandings and undermine mutual understanding.

Organizations that close in on themselves become a monoculture and are less likely to evolve. Over time they tend to become more vulnerable and run the risk of extinction. As if this were not enough, another danger is the confirmation bias, which is the mother of all errors in human reasoning. It manifests itself as the inclination to consider new information in a way that confirms existing theories, worldviews, and beliefs. This means that it is applied to new information to divert thoughts towards the status-quo (Dobelli, 2013). This is especially true in a world where changes are increasingly rapid and challenges increasingly complex. To survive and thrive, organizations must therefore be able to evolve and adapt quickly to change.

The complexities of structures and processes that function well in a normal situation are insufficient during exceptional times. At such times, managing the event requires a more flexible and action-ready approach.

By reducing personnel and compressing costs, i.e. maximizing every spare minute, we have lost the ability to think long-term. Critical thinking requires time and though it is economically burdening it must be viewed as an investment. Moreover, the ability to develop critical thinking (Urner, 2019) is the key to dealing with the VUCA (Volatile, Uncertain, Complex, Ambiguos) world now – according to some - under transformation into BANI (Brittle, Anxious, Nonlinear, Incomprehensible).

Strategic foresight as an innovative approach.

To cope with the profound transformations taking place, we must innovate. We must push the thinking one step further.

Strategic foresight is defined as the "structured and explicit exploration of multiple futures in order to inform decision-making" (OECD, 2019). Strategic foresight typically involves scanning the horizon for signs of emerging change, developing, and exploring a diversity of possible future scenarios, and identifying potential implications for the strategies and policies being developed in the present. Strategic foresight can provide a powerful foundation for the development of forward-looking public policies and help to ensure the future-readiness of existing policies, particularly in the context of "environments that are both complex and uncer-

tain" (Greenblott J.M. et al. 2017).

This anticipation of the future, being alert to weak signals and current trends that herald a coming change is above all an intellectual attitude. Whether it is to protect ourselves from crises or to look for opportunities, it is a permanent activity, a continuous process in which short and long-time frames interact. The various actions undertaken aim to keep our certainties vigilant and to constantly test them by virtue of hypotheses or ideas inspired by a constantly changing present.

The Federal Department of Defence, Civil Protection and Sport, through its armasuisse science and technology center, created a strategic foresight program in 2013. Its aim is to anticipate the use of technologies that could have a disruptive impact on the way Switzerland defends and preserves its security.

The program, known as deftech (an acronym for defence future technologies), makes a clear distinction between foresight and forecasting (Ladetto, 2022) and seeks through national and international projects and synergies to anticipate disruptive uses of technologies and their convergence. Despite the uncertainty of the context, foresight helps us to see what the possible states of the future are (Foresight Series, 2021). Future thinking helps us understand how these states might evolve and, consequently, how we should question our prejudices, blind spots, and mindsets. We must then systematically translate these insights into strategies and policies, to take the necessary steps now to be prepared for the future. Tomorrow is built entirely from today. There is nothing in between. There is a void that can also be called becoming. This void is waiting to be filled by an infinite number of innovations, developments, and opportunities.

This intellectual position is important because it gives full relevance to present actions. Since these actions and interactions are potentially infinite, this justifies considering not one, not two, not three, but a multitude of futures.

Such futures are not considered in relation to time horizons, but in relation to the differences and impacts they present in relation to the present (single), or in relation to presents (a multitude) if we take into consideration our different mental models.

A schematic representation of the thinking model that guides foresight device projects and enables better preparation for possible futures in a context of uncertainty (Ladetto, 2022).

Making this multitude of possibilities visible and inspiring decision-makers in their actions is the goal of a strategic foresight unit that is now more essential than ever to be able to manage more effectively 21st century systemic crises. But it is also necessary to think in terms of anticipatory governance i.e. systematic embedding and application of strategic foresight throughout the entire governance architecture, including policy analysis, engagement, and decision- making (OECD 2019). Anticipatory governance and institutionalization

of strategic foresight should include establishing dedicated foresight institutions and frameworks (for ex. units, committees, networks, legislation and practices) and building a foresight culture within existing institutional structures (OECD 2022). Including crisis management teams.

Adapting crisis management organizations to the 21st century.

Based on these considerations, there is an urgent need to discuss a different organization for crisis management and to initiate training processes aimed at creating a «mental fitness» and a «crisis prone attitude» to deal with new scenarios rather than exercising familiar ones.

How can the current system in force in the Swiss Confederation and potentially those in other countries be strengthened? The first step is to recognize that to cope with the external complexity of a system, it is necessary to increase its internal complexity (De Simone, 2020). We must therefore rethink the organization. It is no coincidence that this is one of the 13 recommendations in the post-mortem report Covid-19 drawn up by the Federal Chancellery (2022) alongside another important cross-cutting theme: at the strategic level, the report states, we must improve the ability to anticipate possible crises and related developments.

To meet the numerous challenges, based on the lessons learnt from the pandemic and the abovementioned recommendations, in March 2023 the Federal council decided to «strengthen the organisation of the Federal Administration for future crises». The three pillars of the future organization are:

- the establishment of a permanent Crisis Management Unit to provide support at time of crisis at the supra-departmental level. This is in fact a horizontal structure that aims to overcome the problem of vertical silos, ensuring continuity, a uniform crisis management approach and knowledge retention over time;
- the establishment, on the instructions of the Federal council, of an additional Crisis Management Unit at the political-strategic level (SMCPS) under the direction of the department responsible for managing the crisis in question. The task of the new body is to formulate political responses for the Federal council and to ensure the coordination of crisis management at the supra-departmental level;
- the possibility of setting up an operational Crisis Management Unit (SMCOp) within the department responsible for management, which has the de facto task of drawing up the necessary basic documentation for the SMCPS as well as ensuring coordination between the administrative units.

The reorganization also provides for the involvement of the cantons, the scientific community and any other relevant actors in the work of the CMSPS and the SMCOp. Finally, the Federal council has mandated the competent bodies to draw up the legal bases of the new organization.

In our opinion, this is an important step forward in the establishment of a different organizational structure, better suited to meet the challenges of 21st century systemic crises. Although details are not yet available, we believe the permanent Crisis Management Unit should fulfil some primary tasks that go beyond what has been made public so far. These include:

1) harmonize the understanding of the crisis management process for the entire Confederation, other institutions, as well as the private sector through training programs;
2) become a «center of expertise» open to foreign experts that can create a common culture by also integrating information campaigns aimed at all stakeholders including citizens. The harmonized crisis management process should be inspired by the 5+2 model, i.e. the management activities of the Swiss Armed Forces, which thanks to its simplicity and scalability has proven over time to be a reliable tool;
3) act not only as the coordination point between the different structures (see below) by integrating them horizontally, but also ensure that the listening processes are active;
4) design a new organizational response structure and become the focal coordination point within the federal government and with other relevant stakeholders' organizations;
5) create a strategic foresight unit (Ladetto, 2022) with the task of continuously stimulating and challenging crisis hypotheses, imagining new scenarios and comparing them to the present and to constantly monitor weak signals. In relation to the potential impacts across different sectors, identify short-, medium- and long-term time horizons for possible actions. A concrete example is Singapore and the 'Centre for Strategic Future', which has been part of the new Strategy Group in the Prime Minister's Office since 2015. It was set up to focus on strategic planning and prioritization across government, the coordination and development of initiatives, and to incubate and catalyze new capabilities in the national public service;
6) create, train, and prepare «rapid reflection cells» tasked with working in parallel during a critical event with the aim of asking the right questions at the right time;
7) identify intra-federal, inter-departmental and external stakeholder contact and coordination cells and a define a "modus operandi";
8) Set up an interdisciplinary unit dedicated to Artificial Intelligence to explore and implement applications

in the field of emergency and crisis.

The proposed reorganization certainly constitutes an important starting point that should, however, be pursued with an eye towards the future. The subject of crisis anticipation, although evoked by the Federal council, must start from a more detailed examination of strategic foresight, whereas fresh thinking is needed to look at how to integrate artificial intelligence systems, a subject that also carries with it ethical evaluations. The missing elements appear to be a clear reference to a multidisciplinary approach, a fundamental element in the management of today's systemic crises, and a focus on the central role played by training those who will be called upon in various capacities to pilot future crises.

We have discussed the importance of anticipation, process mastery and the role of ideas. The issue is not only structural reorganization. It is the need to establish within the new organization a culture that encourages constant sowing of the fields, and, at the same time, one that promotes the alternation or grafting of new sowings to ensure a culture of constant training and change. Every organization carries within it the germs of current problems. Instead of investing hours or even years in the preparation of fictitious exercises (which is already a good thing anyway), it is simply a matter of practicing on real problems. Then give more scope to simulations, which require a lot of preparation. To do this, however, it is necessary to have a good grasp of basic processes

The objectives of crisis management are - and it is good to remember this - threefold: to end the crisis quickly, to limit the damage and to restore credibility (Rappazzo & Eigenheer, 2020). This also means not hindering or slowing down the normal course of duties of the various departments or institutions involved. It means having a problem-solving element free from the constraints of business continuity management (BCM), capable of autonomously restoring, with the necessary and available resources and expertise, the normal or desired situation in the shortest possible time.

The peculiarities of systemic and cross-border crises of the 21st century characterized by high elements of complexity and increasingly destined to become polycrises require a rethinking of how they should be managed. There is a need to evaluate new organizational approaches, gain a better understanding of possible futures and, above all, focus on how we recruit and train women and men to navigate hyper-complex, unknown and chaotic universes.

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