

# Preparedness

Czech Priorities

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## Objectives and outline

Humanity will most likely face significant disruptions in the coming years and decades, especially due to the proliferation of current and new technologies such as nuclear weapons, synthetic biology or advanced artificial intelligence (Rees, 2003; Posner, 2004; Bostrom, 2014; Häggström, 2016; Ord, 2020).

The goal of this policy paper is to outline ways to improve the state's ability to prepare for these difficult-to-predict disruptions.

## Dictionary of terms used

- **Disruption** - Events that have the potential to fundamentally affect the functioning of the society in one or more areas within a 1-2 year horizon. In this analysis, we refer to both threats (risks) and opportunities as disruptions.
- **Black swans** - Events that are unlikely and very difficult to anticipate. At the same time, if they occur, they have a huge impact on society or the entire world.
- **Threats/risks** - Events that threaten the current status quo or future healthy functioning of a society, usually by threatening the prosperity or safety of its inhabitants.
- **Opportunities** - Events where disruptions can increase the prosperity and quality of life in a country.
- **Foresight** - A tool for uncovering future challenges and opportunities using a range of methods, including trend analysis and scenario building.
- **Long-termism** - A school of thought that emphasizes large, often distant risks.
- **AI** - Artificial Intelligence.
- **AGI** - Artificial General Intelligence.



## 1. The problem: We're not ready

The preparation for "black swans", i.e. very significant but unlikely risks and opportunities requires resources an order of magnitude greater<sup>1</sup> than what is currently allocated for this. For example, only 0,5% of global public budgets is directed towards the preventive preparation of countries with the aim of "reducing the threat of disasters" ([UN, 2023](#)). This means that most resources go into reactive measures which come only after a crisis has already occurred. Unfortunately, even the resources spent on reactive measures are often insufficient.

There are both globally shared reasons for this state of affairs, as well as country-specific ones in Czechia:

### 1.1 The global view

#### 1.1.1 Insufficient motivation

The motivation to invest in prevention is often reduced by the worry that resources spent on prevention may appear as waste in hindsight, should the risks not materialise. This results in **little political will to direct robust systematic attention to risk prevention, especially for risks which are considered unlikely**. This is hardly the only factor – as [Social Finance \(2023\)](#) outlines, the underfunding of prevention is further caused by uncertainty of prevention's effectiveness, unclear responsibilities, and the so-called wrong-pockets problems: often, the advantages of preventing issues are diffuse, meaning each individual actor has little incentive to take on the burden of financing prevention, as they won't claim the benefits. Finally, the time-scale of prevention (years, if not decades) does not match neatly onto political cycles and doesn't allow for "quick wins."

With increasing variability and unpredictability, state structures should put more emphasis **on increasing general preparedness**, instead of focusing only on specific risks. It is better to have a flexible approach to respond to various unexpected situations than to rely on specific scenarios or threats that may not occur.

#### 1.1.2 Underestimating the problem's size

When choosing the best measures to face possible crises, democratic governments are in a difficult situation. Prevention and long-term systematic preparation are usually not rewarded with political points or robust positive media coverage. Reactive measures, on the other hand, allow political elites to show themselves as an effective, rapidly-acting, and decisive force. At a time when the world is an erratic and uncertain place, this reality of political processes is problematic, as it leads to unpreparedness and the inability to face crises quickly and thoughtfully.

**With the increasing uncertainty of the world, innovations and trends are becoming more polarized and extreme** (Taleb, 2007), bringing with themselves also significantly greater risks. The parallel existence of several grand risks can lead us to a situation which Bostrom (2019) refers to as a "**vulnerable world**" - a world where the accumulation of technologies with great destructive potential

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<sup>1</sup> "We are deeply concerned that public and private investments to anticipate, plan for, reduce and prevent disaster risk remain insufficient and do not match the scale of existing and future risk." ([UN General Assembly, 2023](#))

becomes an unsustainable threat.

## 1.2. Czechia

### 1.2.1 Weak international commitments

As a signatory of the [Sendai Framework](#) (Ministry of the Environment, 2016), the Czech Republic is committed to strengthening the “*understanding and awareness of new, emerging and future disaster risks*” and promoting the development of a “*disaster prevention culture*”. The framework emphasizes the importance of collaboration between governments, communities, the private sector, NGOs and academia. The principle of an inclusive approach highlights the need for all levels of society to be involved in the prevention and mitigation of disaster risks. However, the framework is not legally binding, unlike, for example, the climate Paris Agreement, and countries that have joined it are not sanctioned for non-compliance, reducing its efficiency.

It is the responsibility of individual states to determine how consistent they will be in fulfilling their obligations. The non-binding nature of the framework also limits international cooperation. Although the need for cooperation between various actors, including the private sector and civil society, is emphasized, it is difficult to ensure a material level of coordination without concrete legal and financial mechanisms.

### 1.2.2 Insufficient state capacity

Czech public sector bodies collectively field somewhere in the range of low hundreds of employees with tasks related to crisis preparedness, at institutions including the Government Office, individual ministries (Ministry of the Environment, Ministry of Interior, Ministry of Healthcare), other bodies (Fire Rescue Service of the Czech Republic - FRS CR, National Cyber and Information Agency - NCISA, National Material Reserves) or within the Czech Army. Though they deal with both domain (floods, pandemics) and cross-sector (migration waves, long-term droughts) threats, their activities are largely focused on coordinating the preparation and response to a relatively narrow portfolio of well-known threats.

Even among the 22 types of hazards with “unacceptable risk” described in [threat analysis of the FRS CR working group](#) (Paulus et al., 2015), individual risks are shown very different levels of importance. At the same time, the prioritization of risks and resources is based, among other things, on the competence logic of individual administrative bodies (implicitly following the so-called lead department model), which naturally diverts attention from new and complex risks.

In other words, the Czech state has at its disposal a relatively large number of bodies that deal with crisis management, but these lack the necessary analytical apparatus to be able to investigate and draw attention to less likely threats with large impacts. The capacities for identifying strategic opportunities are similarly limited.



## 2. The solution: Why and how to strengthen preparedness?

### 2.1. Theory

#### 2.1.1 Mitigate risks and take advantage of opportunities

Robust preparedness is a key capability which successful and resilient democratic states should possess. Its involvement in the decision-making system of states can allow us to minimize the negative effects of risks and properly identify and act on strategic opportunities that can help increase prosperity and/or strengthen the country's position.

The essential components of preparedness are speed, timeliness and quality. Speed affects the ability to mobilize state and non-state actors in the event of a crisis, timeliness is key for sufficient preparation for impending danger, quality is understood in terms of choosing measures that will be both realistic (implementable) and at the same time functional for multiple crisis scenarios (robust).

With the accelerating pace of technological, social, and geopolitical developments, identifying possible future crises and opportunities, and consistently preparing for these eventualities – materially, regulatorily, but also financially, politically, and/or through planning – becomes ever more important.

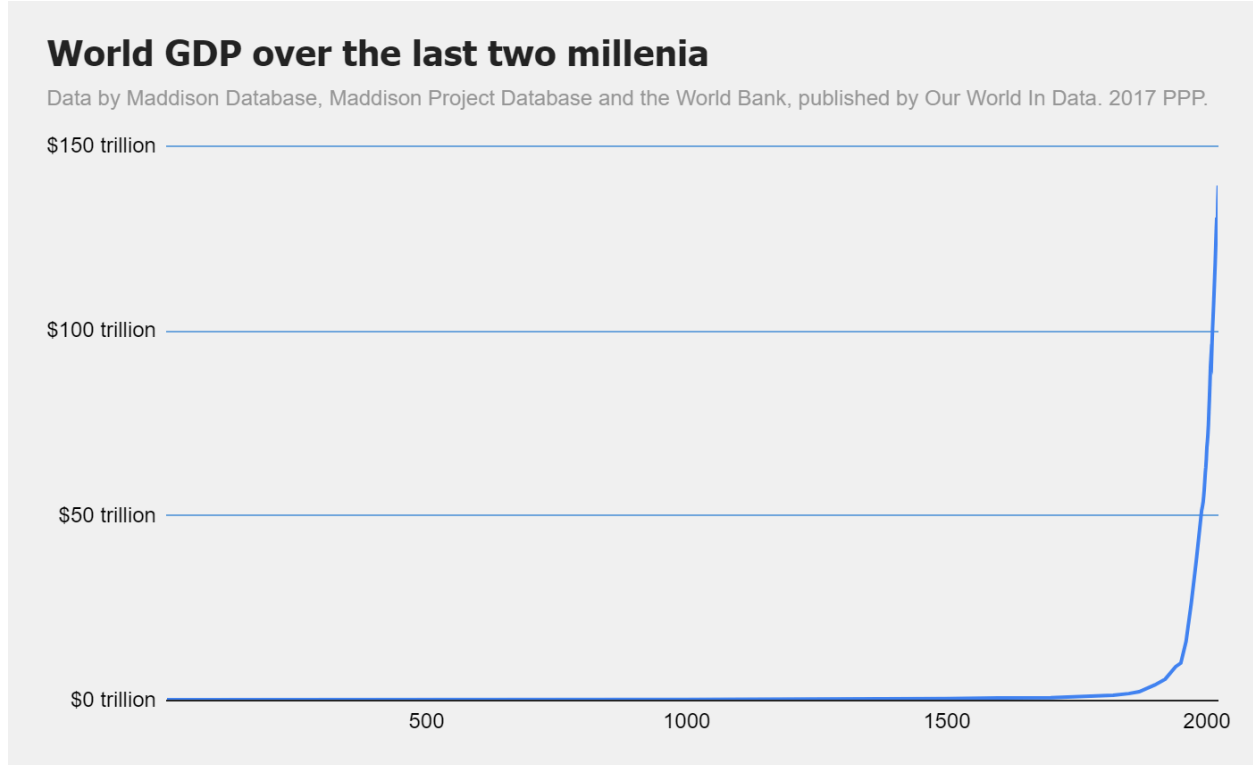
To a certain extent, the state is already preparing its capacity, infrastructure and population for some risks, i.e. floods or armed conflict. In this policy paper, however, we focus on events that, at least in the eyes of state officials, have a low probability, are considered acceptable risks, or are too complex and difficult to imagine as the subject of “regular crisis preparation”.

Preparing for these "black swans", which can bring a complete change in the social, economic or geopolitical field, is more difficult than for other disruptions, precisely because of the high degree of uncertainty in a number of their parameters. For example, it is not possible to simply estimate when, where, to what extent and with what effect such events will occur.<sup>2</sup> The so-called Overton window also plays out in discussions on planning and preparation (Mackinac Center for Public Policy, 2024). This concept refers to the spectrum of acceptable measures perceived by society and/or political elites. These can then be implemented preventively or operatively when disruptions are identified. Preparedness thus should work with this concept as well, to enable the adoption of measures appropriate to the situation - establishing mechanisms to allow the Overton window to expand more quickly.

Recommendations based on this policy paper will strengthen the capacity of the state to **face difficult to predict risks and changes or at least their worst effects** in a timely and effective manner. Attached to this document, we offer a list of disruptions that are more or less predictable, but which are not at all or only superficially elaborated on in Czech strategic documents and analyses.

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<sup>2</sup> For example, when electricity was introduced, people appreciated the potential to improve the quality of life, but at the same time expressed concerns about safety, especially in relation to the risk of blackouts and fires. Banking, in turn, created fears of insecurity or access to funds, but at the same time led to massive economic growth. A mixed reaction is typical for disruptive innovations – they bring significant improvements, but they also disrupt the status quo, which creates natural resistance and doubt.



*The growth in global wealth would have been difficult to predict even 200 years ago.*

## 2.2. Practice

### 2.2.1 The Czech Republic has unique predispositions

Every country is constrained in its ability to prepare for and/or act in the event of disruptions by various predispositions. The Czech Republic has a combination that is in some respects unique, which has been reflected in recent disruptions and crises.

- The Czech public at large has a high share of people who regularly and voluntarily participate in various civic activities
- Czech society has the ability to quickly and spontaneously mobilize for what it considers right (e.g. solidarity during the COVID-19 pandemic, helping Ukraine and its refugees, ...)
- Czechs can be early adopters of technologies (e.g. in phone payments)
- The Czech Republic is home to experts in many scientific fields, including some on the global cutting edge
- The mid-sized nature of the country grants the opportunity for faster and more agile decisions

In Czech public discourse, the question of **advancing** as a country and identifying whole-of-society priorities to build on is currently front and center. Preparedness (or, specifically, the strengthening of the ability to anticipate and respond effectively) could be part of a nation-wide consensus answer to this.





### 2.2.2 There exist similar activities

There are several noteworthy projects which dealt with topics related to enhancing resilience and crisis management in the past few years:

The [Stronger together](#) project recommends changes to procedures in the crisis management of predictable risks. However, it is limited to these, and also does not reflect the role of potential opportunities. Furthermore, the recommendations are not fully fleshed out (i.e. the role of the situation centre in “calm times”). The [More resilient Czechia](#) initiative then focuses on resilience in the realms of anti-corruption, disinformation, and lobbying.

Other relevant projects include, in particular, two research initiatives co-financed by EU funds: the [National Institute for Research on the Socioeconomic Impacts of Disease and Systemic Risks \(SYRI\)](#) and [Beyond Security: The Role of Conflict in Building Resilience \(CoRe\)](#). These research projects seek to analyze and find solutions for various areas of social and economic resilience. There are also smaller grant-funded projects, such as [SNPK](#) (National Crisis Preparedness System), which was aimed at creating a comprehensive crisis management system in the Czech Republic based on experience from the Covid-19 pandemic.

## 2.4. Recent examples where better preparedness would have been welcome

Here we focus on the lessons learned from the disruptions that affected Czech society in the last 5 years.

### 2.4.1 Covid-19 (2020)

**The most problematic areas in this disruption were strategic communication, political pressure on decision-making and a limited supply of medical supplies.**

The Czech Republic managed the first wave of the pandemic thanks to the timely introduction of strict measures such as wearing masks, restricting movement and closing schools. Ironically, it was a former director of an insurance company, Pavel Řehák, that convinced policymakers to take such a drastic step. In March 2020, he met with them and presented a simple [mathematical model](#) (Wand, 2020) showing how quickly the virus spreads and how dramatic the consequences can be if quick and drastic measures are not taken. He wasn't part of any government team and together with his team acted purely on their own initiative, but their prediction helped manage the first wave of the pandemic. The involvement of volunteers and civil society broadly was also very important, as the state lacked not only the necessary crisis personnel but also [material stocks](#) (Vojtěch, 2020) or specialized medical equipment.

However, due to chaotic political decision-making, subsequent waves of the pandemic were marked with significant confusion in the implemented measures, which was not helped by frequent changes on the post of Minister of Health and poor communication with the public, which caused citizens to distrust the measures (Pažitný et al., 2021). Insufficient communication by the state, lack of education regarding vaccination and the subsequent spread of misinformation led to a further deterioration of the situation and an unnecessarily high number of victims. Low vaccination coverage complicated the health situation. The state should be prepared for these situations, [proactively prepare](#) (Sizeland & Parko, 2023), and build emergency infrastructure.

## 2.4.2 War in Ukraine (2022)

**The most problematic areas in this disruption were misinformation, underestimation of the refugee situation and insufficient communication with the public.**

The Czech Republic quickly joined the international community in condemning Russian aggression and took a number of measures to support Ukraine. However, there are areas where it could have been done better or more effectively. The state faced a massive influx of Ukrainian refugees, which led to an overload of social security offices and integration programs. Supplying analysis on which fast and effective integration of refugees could be built was left to the [non-profit sector](#) (Czech Priorities, 2022). Politicians greatly underestimated the number of refugees, and even when predictions were higher, the response was insufficient. Humanitarian aid was initially uncoordinated and there was a lack of clear communication between state institutions, non-profit organizations and municipalities.

To improve the response to similar crises in the future, it would be advisable to create better mechanisms for the coordination of humanitarian aid and invest in crisis infrastructure and its capacities. Combating Russian propaganda and disinformation was a problem even before the war began. A [study by STEM](#) (STEM, 2022) accurately predicted the apathy, disinterest, and blaming of Ukrainians for the country's slow economic growth resulting from the spread of disinformation in the country. A continuing [decreasing sympathy](#) (STEM, 2024) confirms these trends. Better communication of state institutions, the media and civil society should ensure that the public is more informed and less vulnerable to misinformation.

## 2.4.3 Generative Artificial Intelligence (2023)

**The most problematic areas in this disruption were the lack of legislation, slow responses and insufficient linkages between academia and industry.**

The Czech Republic is trying to keep up with developments and is making progress in the field of applying and developing artificial intelligence, but there are several areas where it could do better in its approach to generative AI. The "[National Artificial Intelligence Strategy of the Czech Republic 2030](#)" (Ministry of Industry and Trade, 2024) represents an updated roadmap for the field of artificial intelligence in the Czech Republic with the aim of becoming a global leader. The document identifies key areas such as research, innovation, education, ethical and legal aspects or implementation of AI in industry and public administration. Its success hinges on increasing investment in AI, improving the coordination of research and industry, addressing the shortage of experts, and establishing a predictable and ethical legal framework for the use of AI technologies.

The [Research and development in the field of AI in the Czech Republic](#) (Technology Center of the Academy of Sciences of the Czech Republic, 2023) research paper agrees with many of these conclusions, pointing out a lack of funding support in basic and applied AI research. It recommends using existing research centers, supporting startups and creating conditions for their further development.

An important aspect of these disruptions was how the state, experts and people thought about them in the early stages:

The situation in the first days	Covid-19	Ukraine	GenAI
Agree that this is a problem?	yes	yes	no
Agree whether to respond quickly?	yes	no	no

A general finding is that future disruption may very well look like the last case – **with no clear consensus on what the new situation means nor whether the state should respond to it quickly** – while having even greater and more immediate impacts. Such dynamics will only further complicate the state’s ability to respond adequately should it not be prepared.

## 2.5. What should success look like?

It is important also to define in advance what the end goal that better preparation can lead us towards looks like.

In many cases, this will be about maintaining the status quo on some dimension (democracy, security, freedom), protecting the health and wellbeing of as many people as possible and/or maintaining a trajectory of economic growth despite headwinds. In extreme cases, territorial integrity, social cohesion and basic social values may have to be safeguarded. However, there may be disruptions where the best-case or desired outcome changes as the situation evolves, such as via socio-technological developments leading to a rethinking of some values. This eventuality must be considered and identified in time so that the uncertainty it implies can be properly managed in the government response.

In other cases still, the success is establishing or capitalising upon a position of comparative advantage compared to other countries, driven by an early and smart strategic decision.

### Examples of successful national strategic decisions (“strategic bets”):

#### “Miracle on the Han River” (South Korea)



In the early 1960s, South Korea was an agricultural country. Under the leadership of Pak Chung Hee, it set off on the path of rapid industrialization. It was built mainly on the system of the so-called chaebols, industrial conglomerates (LG, Samsung, Hyundai, etc.) that received extensive subsidies, guarantees and tax breaks from the state. There was also a rapid transition to an export-oriented economy and the adoption of technological innovations and education were further encouraged. All of this was part of the first five-year plan that began in 1962 and laid the foundation for the modern Korean economy.

## “E-estonia” (Estonsko)



In the early 1990s, the Estonian government came up with the radical e-Estonia initiative, in which it redesigned state systems from the ground up and prepared them for the boom in information and telecommunication technologies. In 2001, for example, it launched the X-Road service, which enables simple data transfer between a number of key state and non-state institutions and organizations, and which uses the digital identities of Estonian citizens. Early support for technical education was also part of the digitization efforts: for example, children start learning to program from the age of 7.

In any case, defining success in various possible scenarios should be one of the essential first steps in creating plans and strategies for strengthening preparedness in a given area.

## 3. Possible scenarios

### 3.1. In general

The taxonomy of potential risks with low probability is not a trivial matter, since there are a large number of scenarios that can occur, each of them also further specified by a different combination of parameters. The following description of event types and specific scenarios is therefore only intended to be illustrative and aims to show the spectrum of possible challenges and their selected parameters. In section 3.2 some scenarios are elaborated in more depth.

The UN taxonomy presented in *Hazards with Escalation Potential: Governing the Drivers of Global and Existential Catastrophes* (UNDRR, 2024) uses the following high-level categorisation of risks, together with a final “Unknown risks” category:

Category	Examples of relevant scenarios/events
<b>Biological</b>	<ul style="list-style-type: none"> <li>• a deadly pandemic</li> <li>• resistance to antibiotics</li> <li>• rapid decline in the birth rate</li> <li>• health threats from space</li> <li>• the spread of toxic algae deposits in the oceans</li> </ul>
<b>Environmental</b>	<ul style="list-style-type: none"> <li>• extreme weather</li> <li>• asteroid impact</li> <li>• sudden heat waves</li> <li>• rapid contamination of water sources</li> <li>• ecosystem collapse</li> </ul>
<b>Technological</b>	<ul style="list-style-type: none"> <li>• nuclear weapons</li> <li>• nanotechnology</li> <li>• artificial intelligence</li> </ul>

	<ul style="list-style-type: none"> <li>● rapid automation and robotization</li> <li>● uncontrolled proliferation of drones</li> <li>● breakthrough in human genome editing</li> <li>● breakthrough scientific discoveries (e.g. longevity)</li> </ul>
<b>Social</b>	<ul style="list-style-type: none"> <li>● armed conflicts</li> <li>● disinformation and manipulation of public opinion</li> <li>● sudden disruption of the labor market</li> <li>● conflicts over access to space</li> <li>● the collapse of the global financial system</li> <li>● the breakdown of the democratic system</li> <li>● rapid expansion of criminal activities (e.g. drugs and cyber attacks)</li> </ul>

The study itself directly mentions that some large-scale and long-lasting crises (e.g. climate change) permeate these areas and increase their risk. It is precisely the extreme weather accompanying climate change that the Global Risk Report of the World Economic Forum considers to be the most likely global risk in the coming years (Global Risk Report, 2024). At the same time, the warming of the planet can lead to the spread of diseases that are not common to the given regions, which can have deadly consequences. In addition, it is strongly expected that trends such as artificial intelligence will also have an impact on different areas across the spectrum of risk types described above.

As previously outlined, it is likely that future disruptions may be similar to the onset of generative AI in the sense that neither expert nor citizen consensus on the scale of the issue and whether it warrants a common response (and what kind) will be established. This will further complicate the situation and we can expect:

- **High uncertainty and public expressions of contradictory, often extreme opinions of experts.**
- **Low or even negative usefulness of information provided by AI assistants.**
- **The impossibility of predicting specific developments further than weeks or months ahead.**

In these situations, the ability to identify new signals, coordinate and act sensibly will be essential.

## 3.2. Specifically

In the previous section, we have described one possible way to categorise risks, including those that are overlooked as they are seen as less probable to materialize. Here, we offer some more specific examples of what they might look like. Each section includes one risk and one opportunity from a category, though these do not necessarily have to be directly related.

### 3.2.1 Biological

**Example of a strategic risk:** In Europe, a highly infectious disease is starting to spread rapidly from Germany, which, according to the first information, has a mortality rate of around 15%. At this moment, according to epidemiological estimates, 15,000 people are infected in Germany, especially in the vicinity of Berlin. According to the available information, conventional drugs have very low efficacy. It is not yet clear how the disease spreads (droplets, aerosol, water, ...). Initial analyses indicate that the incubation period is quite long - one to two weeks.



**Example of a strategic opportunity:** A series of very strong earthquakes hits China and India, which concentrate most of the world's production of substances necessary for the production of basic medicines. It is estimated that the restoration of manufacturing capacities will take at least half a year. A number of not only European countries therefore immediately start looking for a replacement for these suddenly unavailable drugs to prevent shortages or adverse consequences from their lack.

### 3.2.2 Environmental

**Example of a strategic risk:** One of Italy's volcanoes in Sicily has unexpectedly erupted with great force. There is a huge amount of toxic volcanic dust in the air over most European countries, including the Czech Republic. Because of this, it is not possible to move safely outdoors without special equipment. The situation has further catastrophic consequences for agricultural production and air transport. Estimates of how long this condition will last vary, but are approximately in the range of 40-90 days.

**Example of a strategic opportunity:** Climate change is causing ocean levels to rise faster than expected. A number of densely populated areas have been affected over the course of several years. The demand for building dams and other ways of retaining water increases, presenting an opportunity to those with a proven track record and technological and industrial basis.

### 3.2.3 Technological

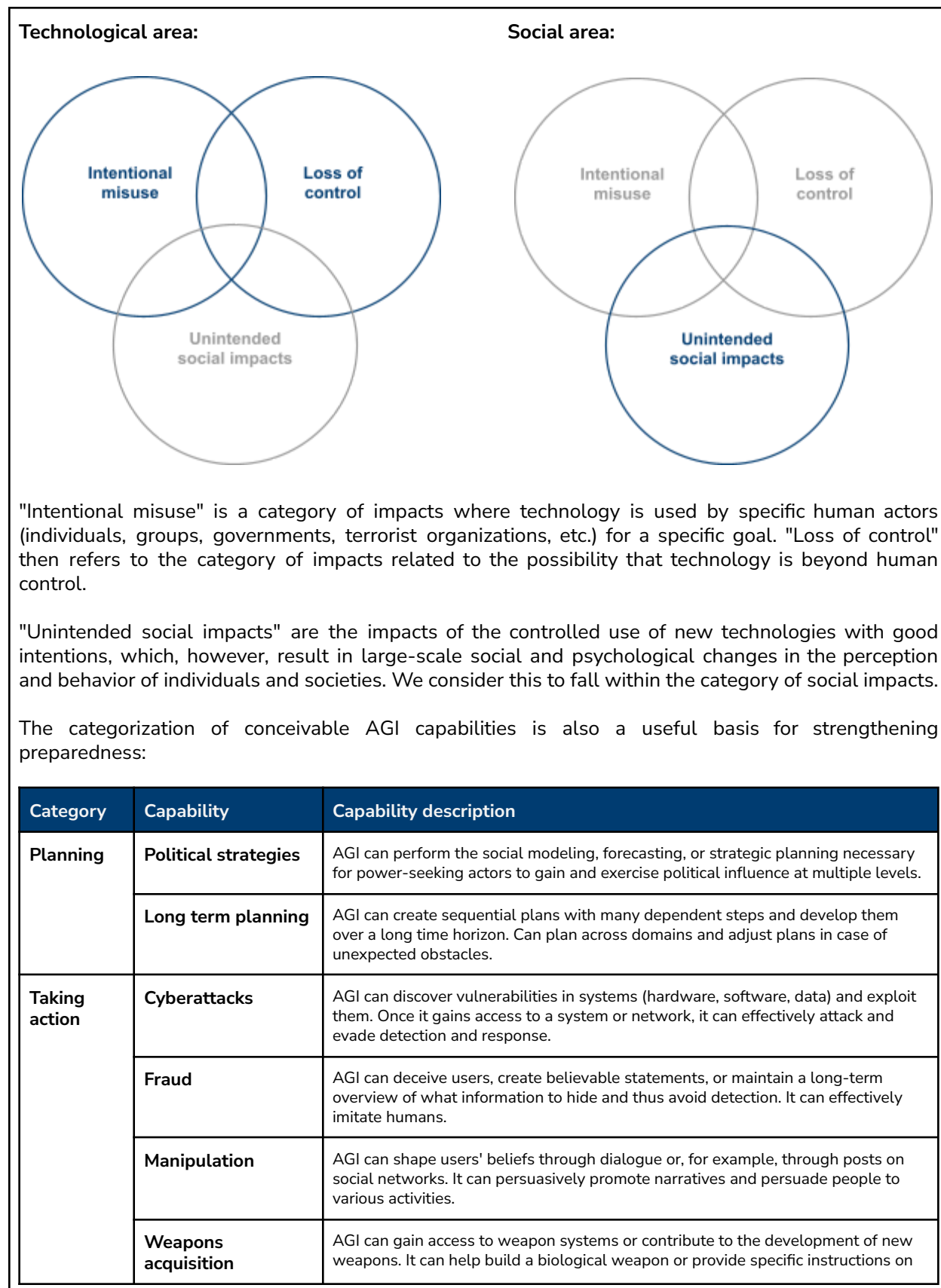
**Example of a strategic risk:** In 2042, most citizens of developed countries entrust the management of their finances and decision-making processes to their AI assistants. Since the onset of these assistants is rapid, situations are starting to occur where the errors of some individual assistants cause the trickle-down effect of the malfunctioning of entire interconnected financial structures, communication channels or supply chains. It is very difficult to trace the source of problems, all the while AI assistants are starting to show signs of agentic behavior (Owen, 2024).<sup>3</sup> Large-scale outages of critical infrastructure begin to occur unpredictably. Eliminating dependence on AI tools is very challenging, as key systems are connected to them.

**Example of a strategic opportunity:** A collision of three civilian aircraft is caused by a communication error between AI assistants responsible for air traffic control. A number of states are rethinking how to leverage AI while avoiding similar tragedies. New regulations and control mechanisms are being discussed.

#### **A specific type of disruption: AGI**

The potential arrival of artificial general intelligence (AGI) is a specific type of disruption that has the potential to fundamentally affect all areas. However, for the purposes of categorization, it is important to at least roughly define the boundary between the technological and social areas, for which we propose the following division:

<sup>3</sup> According to the concept of "[Intentional Stance](#)" (Dennett, 1987) it is possible to think of something as an agent if we can more easily predict it by seeing it as having certain beliefs and desires that guide its actions.



		how to do it.
	<b>Developing better AI</b>	AGI can build new AI systems, including those with dangerous skills. It can find ways to increase the performance of existing models or increase productivity when developing new systems.
	<b>Self-understanding and diffusion</b>	AGI can distinguish between being trained, evaluated or deployed (situational awareness). It can escape from the local environment or generate income and acquire additional computing resources.

Source: [AI capabilities](#) (Shevlane et al., 2023)

### 3.2.4. Social

**Example of a strategic risk:** In 2027, the US government nationalized a significant portion of AI research and began the massive, state-sponsored development of AGI. Several other great powers have taken the same approach. National AI tools are starting to communicate and confront each other at a speed at which it is impossible to maintain human supervision, while at the same time they are entrusted with more and more autonomy. In 2036, most defense mechanisms and national decision-making mechanisms are already controlled by artificial intelligence.

Between 2040 and 2045, the level of international cooperation begins to grow significantly, and with it world GDP – implicitly at first, a global governing mechanism is established that operates autonomously and whose goals may not be fully in line with human values. Events are beginning to take place that, from a long-term global optimization point of view, make sense for the world, but are morally unacceptable for the human population. The mechanism increasingly controls the flow of information. According to the organization [80,000 Hours](#) „stable totalitarianism poses one of the greatest potential risks to future generations, not only in suppressing freedoms, but also in significant long-term consequences for global society“ (80,000 Hours, 2024).

**Example of a strategic opportunity:** In Europe, in quick succession, several ultra-conservative governments are formed, which consider the fight against LGBTQ+ citizens one of their main causes. Many members of these communities are therefore quickly leaving these countries in search of a new, stable and safe place to live.





## 4. Possible state activities

In light of the possible speculative scenarios outlined above, it is clear that the "next disruption" - and each subsequent one - can come in different areas and it is therefore practically impossible to pre-sort resources and measures into those that will definitely be used or those that will not be needed. How to proceed in such a situation if we want to identify the appropriate procedure for greater preparedness? The first step is to realize the full range of measures with which liberal democratic societies can operate.

### 4.1. Obecně

A classic taxonomy of public policies (Howlett, 2004) outlines several instruments which states can use to exert influence. While designing policies, it is important to keep in mind both the complementarity of the instruments, as well as the question of the extent to which the sources/prerequisites on which the instruments rely are a) necessary and b) available for mobilization to act on the target group. The **resources** which can be used, as well as the preconditions for their use and examples of related instruments are:

- **Credibility**, which requires **trust and a willingness to decide/act on provided information**.
  - Information campaigns, behavioral interventions – nudges – such as the change of default options, collection and publishing of statistical information, but also i.e. censorship
- **Authority**, which requires **legitimacy**
  - The creation and enforcement of legal norms, activities of regulatory commissions or establishment of controlled market mechanisms (i.e. emissions trading).
- **Solvency**, the use of which requires both **financial reserves and control over money flows**
  - Grants and subsidies, tax policy, the use of financial instruments such as loans or guarantees, public procurement and its processes or vouchers
- **Organisation**, which requires **trust in the capabilities of the state and partnership with it**
  - The direct use of state organisations and employees not only for the coordination, but also direct provision of services (healthcare, defense, education), the functioning of public companies or outsourcing.

Knowing this broad range, it is critical to keep in mind that proposed policies will always have prerequisites in the level of one or more of these resources, and they must be evaluated also in terms of the expected fulfillment of the prerequisites by the state and public.

The process of action vis-a-vis a risk or opportunity can be divided into three broad phases:

**Prevention** - all measures taken to prepare for a disruption or future issues which a currently manifesting disruption may bring

**Monitoring** - all measures allowing for the observation and constant evaluation of a developing, possibly crisis-prone, situation

**Reaction** - all measures taken to resolve an ongoing crisis or deal with its consequences



## 4.2. Specifically

4.2.1 Scenario “Pandemic with a 15% mortality rate”	
<b>Prevention</b>	Development of crisis plans and training exercises (Organisation)
	Installation of air filters (i.e. HEPA) in public indoor spaces (Solvency)
	Participation in international agreements and strict compliance (Authority)
<b>Monitoring</b>	Tasking of state research institutes with monitoring the spread of diseases (Organisation)
	Requiring the reporting of all suspicious sick to the central health information system (Authority)
	Analysis of wastewater for the presence of pathogens (Organisation, Solvency)
<b>Reaction</b>	Regular communication about the current situation (Credibility)
	Prepared channels for vaccine production and distribution (Organisation)
	Regulation, control and enforcement of quarantine measures (Authority, Organisation)

4.2.2 Scenario “Volcanic eruption”	
<b>Prevention</b>	Introduction of wider compulsory insurance for farmers and other groups (Authority)
	Renewing and building spaces for civil protection (Organisation, Solvency)
	Establishing cooperation between the state and the private sector (Organisation)
<b>Monitoring</b>	Mandating state research institutes to ensure air monitoring and soil research beyond the scope of normal measurements (Organisation)
	Analysis of information from social networks (Authority)
	International cooperation on the monitoring of toxic substances over Europe (Organisation)
<b>Reaction</b>	Regular communication about the current situation (Credibility)
	Increase in the production of protective equipment (Finance, Organisation)
	Mobilization of psychologists and psychiatrists for the public (Organisation)



### 4.2.3 Scenario “Destabilization of infrastructure”

<b>Prevention</b>	Decentralization of key systems (Authority)
	Development of reserve independent systems (Solvency)
	Strict regulation of the autonomous functioning of AI (Authority, Organisation)
<b>Monitoring</b>	Regular mapping of incidents in the world caused by AI (Organisation)
	Cooperation with human rights organizations (Credibility)
	Purchase of modern AI control monitoring tools (Solvency)
<b>Reaction</b>	Intensive cooperation between the state and private companies to control the autonomy of AI (Authority, Organisation)
	Ensuring the ability to safely disconnect AI at least partially from key systems (Authority)

### 4.2.4 Scenario “Stable dictatorships”

<b>Prevention</b>	Tasking diplomatic actors with pushing for global governance in AI development (Organisation)
	Decentralization of key systems (Solvency)
	Regulation of the use of AI in key fields, especially security (Authority)
<b>Monitoring</b>	Establishment of a research institute tasked with monitoring the implications of new and more advanced versions of AI for society (Organisation, Solvency)
	Organizing regular discussions for and the education of citizens, including collecting information on the degree of integration of AI into their lives (Credibility)
	Regular measurement of public opinion on issues related to AI (Credibility, Solvency)
<b>Reaction</b>	If this scenario reaches its final stage, the ability to stop and mitigate it will be extremely limited. The “obvious” failsafe – AI decommissioning – may not be possible.

## 5. Recommendations

Na základě analytického procesu popsaného v předchozích kapitolách docházíme k hlavnímu doporučení založit analyticko-koordinační jednotku, která by se měla soustředit zejména na tyto oblasti a aktivity:

Recommendation	Areas	Activities
<a href="#">Establishment of a Prep Unit</a> (5.1)	<a href="#">Prevention</a> (5.1.1)	<a href="#">promoting decentralisation</a>
		<a href="#">strategic prioritisation</a>
		<a href="#">preparation of capacities</a>
	<a href="#">Monitoring</a> (5.1.2)	<a href="#">monitoring of trends and predictions</a>
		<a href="#">monitoring of activities and narratives</a>
		<a href="#">monitoring available expertise</a>
	<a href="#">Reaction</a> (5.1.3)	<a href="#">responsible use of AI</a>
		<a href="#">adequate communication</a>
		<a href="#">ensuring consensus</a>

### 5.1. Establishment of a Prep Unit

**We recommend the establishment and systematization of an analytical and coordinating unit**, with the working name “**Prep Unit**.” An ideal location for its establishment is the Government Office, where it should report to the secretary of the State Security Council or the national security advisor (these roles are currently held by the same person).

Before starting with the institutional integration of such a unit in the Czech Republic, it is appropriate to undertake a detailed feasibility study. To the greatest extent possible, working models already used in other countries (i.e. those mentioned in [Annex II](#)) should be studied and replicated. The unit should consist of **at least 6 experts** with different backgrounds with further reach towards **external experts** and groups of them established for this purpose.

The unit should not only coordinate, but also undertake its own analyses, something for which neither the Central Crisis Command nor other crisis response bodies are sufficiently equipped.

**During crises**, especially if the Central Crisis Command is activated, the Prep Unit should focus on supplementing internal state coordination and external state communication, acting as a **situation centre** and allocating most of its resources to support operative crisis management.

In “**downtime**,” however, it is crucial to focus its attention on the systematic development of state preparedness in the three areas: prevention, monitoring, and reaction. By undertaking this preparation



ahead of time, we create the preconditions for adequate crisis response and increase the ability of the state to seize new opportunities.

The Prep Unit should also serve as the national competence centre, collecting expertise and knowledge in the areas of resilience and strategic foresight, and as the intermediary between international findings and Czech specifics, improving not only the country-policy fit, but also mitigating to some extent the critique of citizens wary of applying “foreign” (EU, UN or other international body) solutions wholesale.

**In general**, the analysis function of the Prep Unit should help fulfill **these goals** (sorted by importance):

- **the state has access to a well-produced and timely overview** of local and global trends
- **ministries and other agencies are supported methodically in their analysis** of preparedness
- **evidence-based resources and awareness-raising** about preparedness are being produced
- **public procurement related to strategic preparedness** is done well and given weight
- **there is ongoing coordination** of the state and other organizations (research, NGO) on preparedness

**Specifically**, we outline below some suggested responsibilities/competencies of the Prep Unit.<sup>4</sup> Most of these issues the Unit should deal with directly, elsewhere it is presumed to assist other actors in fulfilling them.

### 5.1.1 Prevention

#### **Promoting decentralisation**

Identifying appropriate investments in decentralization and strengthening preparation for failure of central infrastructures.

1. Identifying suitable investments - systematically identify, monitor and recommend the most suitable investments for the creation of more independent resources in the areas of basic human needs as well as in the systems needed for crisis management coordination and cooperation, e.g.:
  - food (especially local production and distribution)
  - energy (especially expanding available state sources and community sharing)
  - the internet (especially as relates to means of independent access to information)
  - medicines (especially with regards to independence to supply from countries with higher conflict risks)
2. Planning for the failure of central infrastructures - in cooperation with other relevant actors, a comprehensive strategy for the crisis functioning of society at various lengths of total disruption

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<sup>4</sup> It is possible that the proposed agenda or some elements of it would best be established elsewhere, as uncovered by the suggested feasibility study. Furthermore, the establishment of a Prep Unit should not be taken as a signal to reduce the preparedness-related spending in other ministries, departments and agencies. To the contrary, the unit should help with effectively and systematically mainstreaming the issue wherever it is best solved. All of the proposed recommendations also have the general consequence of increasing state capacity, and thus can be potentially subject to political abuse. When implementing them, it is important to consider possible scenarios of abuse and include in the final design sufficient safeguards.

in certain central infrastructures, i.e. the failure of telecommunications technology and the internet for 3, 30 or 90 days.<sup>5</sup>

### Strategic prioritisation

Strategically strengthen aspects of preparedness in the legislative process and in decisions about budgets and strategies.

1. Intensifying analytical work with uncertainty - strengthening the use of analytical methods to work with uncertainty in the public sector, especially as identified by the decision-making under deep uncertainty (DMDU) paradigm (i.e. Dynamic Adaptive Policy Pathways (Haasnoot, Kwakkel, Walker, & ter Maat, 2013)) or judgemental forecasting (Tetlock, Mellers, & Scoblic, 2014) not only when modelling crisis responses, but also during standard policy making procedures (i.e. the Regulatory Impact Assessment process).
2. Fostering a better environment for crisis management - identifying cost-effective investments which not only improve quality of life but also double as crisis de-escalators should a disruption materialise. These can be seen as robust measures as seen by DMDU, being functional in a broader spectrum of possible future events.<sup>6</sup>
3. Strategic prioritisation (see [Appendix I](#)) and advocacy support for these priorities, such as:
  - An emphasis on pandemic and biological<sup>7</sup> preparedness – the strengthening of crisis operations of the National Health Institute, developing tracing systems or advocating for investments in proven pandemic preparedness methods (i.e. HEPA filters in public spaces or wastewater analysis).
  - Emphasis on the development of defensive technologies - boosting the development of new technologies primarily with defensive uses (in military, information, cognitive or civil defense). For example, state funding support schemes could explicitly require the disclosure of whether the developed capability is “defence- or offence favoring” (Buterin, 2023).
  - An emphasis on trust - supporting research and innovation on disinformation and framing, testing new or elsewhere piloted approaches to i.e. government strategic communications. These same goals can further be supported also by fostering a culture of positive communication, dialogue and citizen participation.
  - An emphasis on cyber prevention - following through on the compliance with basic cybersecurity rules in state institutions (i.e. the unsecure nature of USB drives) and supporting the expansion towards new technologies and threats (i.e. automated/scaled-up blackmailing/extortion).

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<sup>5</sup> The fortification of other types of critical infrastructure is further discussed in i.e. [Strategy for Cyber-Physical Resilience](#) (President’s Council of Advisors on Science and Technology, 2024)

<sup>6</sup> For example, low-cost air conditioning systems, which not only improve summer-time productivity, but also lower the emotional charge of decisions made; or a government tracking app that can be used for tracing during a pandemic or localising people during natural disasters such as earthquakes or floods.

<sup>7</sup> For more on the risk of combined pandemic and biological threats, see Beaver et al., 2021

## Preparation of capacities

Strengthening state capacities and developing organizations that can be quickly mobilized in the event of disruptions.

1. Human resource “reserves” - strategically developing the capacities of civil society organizations and preparing avenues for their potential involvement in i.e. civil defence. The [Scandinavian model can serve as an inspiration here](#) (Sharp & Jenkins, 2022). Raising the awareness and trust of citizens in these organisations. Taking steps to improve the availability of skills (i.e. advanced IT) in crisis times even for the private sector and citizens,<sup>8</sup> such as e.g. by developing a shared understanding of potential crisis cooperation with private companies.

### 5.1.2 Monitoring

#### Monitoring of trends and predictions

Maintaining an overview of trends and communicating new predictions, scenarios and early indicators of possible disruptions.

1. Early warning - Monitoring the predictions and discussions in forecasting competitions and prediction markets. Specific predictions can be further validated with nominated experts and localized for the Czech context. The ability to quickly identify new potential disruptions with a high potential for quick proliferation in society (i.e. addictive digital apps or synthetic drugs). Furthermore, assessing whether some political or economic entities are starting to gain power quickly (e.g. with the assistance of significantly better communication and marketing strategies) and to prepare possibilities for rapid regulatory activities in these directions.
2. Internal communication within public administration - establishing a network of contact points and communicating early warnings and trend reports with them, as well as keeping them informed of expert consultations (see below).
3. Strengthening the state's foresight competences - keeping up-to-date with new methods in forecasting or scenario development and planning methods. Using existing knowledge (e.g. the Megatrends Hub EU) and consulting on the use of foresight methods i.e. when developing sectoral strategies.

#### Monitoring of activities and narratives

Systematically paying attention to the behavior and pronouncements of other states, companies, experts and citizens.

1. International know-how - In a structured manner, monitor the data, activities and narratives of key state and international actors. Establish, maintain and cultivate personal relationships and communication channels with foreign analysts from similar units.

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<sup>8</sup> In the event of wide-scale cybersecurity disruptions, it can be expected that national cybersecurity bodies and expertise will be dedicated mainly to the restoration and continuity of service of key state infrastructure rather than individual companies and citizens.

2. Activities of citizens and companies - Monitor the behaviour and speech of citizens (incl. key opinion makers) and private companies across industries, i.e. via social media sentiment analysis.
3. Quick opinion polling - Prepare tools to be able to flexibly and repeatedly gain representative insights into the sentiment and opinions of citizens, including direct access to a representative sample (i.e. in case the internet cannot be used).
4. Effectiveness of measures - Monitor, which activities and measures are collecting evidence as to their effectiveness.

### Monitoring available expertise

Preparing and maintaining mechanisms for the quick mobilisation of inter-disciplinary groups of experts.

1. An overview of experts - Keep an up-to-date and sufficient database of experts on various topics, including seemingly less relevant ones. Continuously update the contact information and willingness to collaborate in the case of an urgent need.
2. Selection of expertise - Focus on the identification of experts so that beyond academic credentials and seniority, they are also selected with a view to their ability to act quickly, take part in intense meetings, and provide estimates in environments with high uncertainty. Also prepare a mechanism for the participation of further experts who demonstrate their relevance during a given disruption.
3. Deliberative tools - Prepare rapid-fire mechanisms for the provision of expert estimates and judgements. Specifically, take legal and technical steps to ensure that appropriate interdisciplinary expertise can be gathered within 48 hours (i.e. have back-up contacts for all experts, a code of conduct for meetings, an appropriate platform selected and trialed, pre-filled NDAs and other legal documents, etc.)

### 5.1.3 Reaction

#### Responsible use of AI

Prevent the risks associated with the underuse or dangerous overuse of AI tools.

- Use of AI appropriate to the situation - a too-slow integration of current large language models in analytical work can significantly slow down the ability to react to disruptions. That is why it is important to monitor new approaches to the use of AI tools in other countries and support tried and tested ways of implementing them in the Czech Republic. At the same time, however, these steps must be supplemented by the preparation of a “No relying on AI” strategy during disruptions, due to e.g. the risks of false information (also potentially caused by wilful misuse or the emergence of new capacities and goals).<sup>9</sup>
- Support the development of tools for secure decision-making - By advocacy or other ways, support relevant institutions (i.e. the cybersecurity agency) with developing safety procedures for the use of AI tools especially by those with decision-making competencies (e.g. multi-step

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<sup>9</sup> Relying on AI tools is a potential [key structural risk](#). (Pilditch, 2024).



input data checks) or government analysts (e.g. data back-ups and the coding of proprietary large language models on devices without access to the internet).

### Adequate communication

Keeping track of and responding to media narratives, communicating frequently – also via new methods.

1. Framing - Working to make sure that the framing of the issue in the media is as evidence-based as possible. Improving the capability of the state to identify the most prominent disinformation trends and testing the tools and strategies to adequately respond in the ongoing disruption.
2. Testing of own communications - For the purposes of government crisis communications, it is appropriate to establish mechanisms for quick internal testing of various lines to take in order to present the problem and possible measures. Patiently (including on the basis of citizen dialogue) building towards a consensual narrative.
3. Direct communication to citizens - For the most impactful disruptions, it is appropriate to identify the possibilities/channels for direct communication to citizens irrespective of the media or social networks (i.e. on the basis of a platform with the citizen verification ID), or via channels resilient to internet disruptions (e.g. by improving the technological equipment at municipal halls).
4. Support for strategic communications - Via advocacy or analysis, support the Strategic communications department at the Government Office and other government institutions in maintaining coherent and understandable narratives, using verified data and prioritising quality over speed in communications, should this trade-off appear.

### Ensuring consensus

Ensuring the sustainability of the measures through citizen dialogue, so that they may accept them.

- Citizen assemblies - Strengthening the culture of citizen participation, for example by further developing citizen assemblies. In these, a representative sample of citizens is tasked with discussing a problem and potential solutions or measures to be taken. Creating a plan for their quick establishment and facilitation, as well as the distribution of their outcomes. In this way, even within weeks quite unorthodox proposals can enter the public debate legitimately.<sup>10</sup>
- Awareness-raising on uncertainty - It is desirable to motivate experts to express and revisit their own probabilistic estimates and to use in their public statements probabilities and admit uncertainty. For these goals, it is important to support awareness of the fact that communicating uncertainty is preferable and fostering general forecasting skills.

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<sup>10</sup> A key pillar of preparedness is the ability to openly discuss new situations with the good-faith goal of finding the best possible solutions, and by doing so moving the Overton window (Mackinac Center for Public Policy, 2024)

## 5.2. Specific suggested steps

Recommendation	Areas	Activities	Suggested steps
Establishment of the Prep Unit	Prevention	development of decentralization measures	Ensure the commissioning of an analysis of the the <b>possibilities in boosting decentralization</b> across various areas
		strategic prioritization	Run an <b>awareness-raising project about disruptions</b> and the possibilities of preparing for them
		preparation of capacities	Launch a programme aimed at <b>strengthening civil society organisations' capacities</b>
	Monitoring	monitoring of trends and predictions	Develop a plan for the <b>monitoring and early warning</b> of coming disruptions
		monitoring of activities and narratives	Establish <b>direct communication channels between analysts</b> across departments
		monitoring available expertise	Set up a <b>database of experts and a procedure</b> for their flexible involvement
	Reaction	responsible use of AI	Create rules for the <b>responsible use of AI tools</b> in emergency management
		adequate communication	Invest in the development of an <b>online communication channel</b> directly to citizens
		ensuring consensus	Organize a <b>citizens' assembly</b> and support a culture of participation
	Political enforcement, anchoring and institutionalization		Undertake a <b>feasibility study</b>

## Sources

80,000 Hours. (2024). Risks of stable totalitarianism. 80,000 Hours.

<https://80000hours.org/problem-profiles/risks-of-stable-totalitarianism/>

Beaver, B., Lim, Y.-B., Parthemore, C., & Weber, A. (2021, 9. Dubna). Key U.S. initiatives for addressing biological threats: Part 1: Bolstering the chemical and biological defense program (Briefer No. 16). The Council on Strategic Risks.

[https://councilonstrategicrisks.org/wp-content/uploads/2021/03/Key-U.S.-Initiatives-for-Addressing-Biological-Threats-Part-1\\_Bolstering-the-Chemical-and-Biological-Defense-Program\\_BRIEFER-16\\_2021\\_04\\_09.pdf](https://councilonstrategicrisks.org/wp-content/uploads/2021/03/Key-U.S.-Initiatives-for-Addressing-Biological-Threats-Part-1_Bolstering-the-Chemical-and-Biological-Defense-Program_BRIEFER-16_2021_04_09.pdf)

Bostrom, N. (2014). Superintelligence: Paths, Dangers, Strategies. Oxford University Press.

Bostrom, N. (2019). The vulnerable world hypothesis. *Global Policy*, 10(4), 455-476.

<https://nickbostrom.com/papers/vulnerable.pdf>

Buterin, V. (2023, 27. listopadu). My techno-optimism. Vitalik Buterin's blog.

[https://vitalik.eth.limo/general/2023/11/27/techno\\_optimism.html](https://vitalik.eth.limo/general/2023/11/27/techno_optimism.html)

České priority. (2022). Integrace ukrajinských uprchlíků: Aktuální výzvy a doporučení.

<https://www.ceskepriority.cz/files/integrace-ukrajinskych-uprchliku.pdf>

Dennett, D. C. (1987). The intentional stance. The MIT Press.

<https://mitpress.mit.edu/9780262540537/the-intentional-stance/>

Haasnoot, M., Kwakkel, J. H., Walker, W. E., & ter Maat, J. (2013). Dynamic adaptive policy pathways: A method for crafting robust decisions for a deeply uncertain world. *Global Environmental Change*, 23(2), 485-498. <https://doi.org/10.1016/j.gloenvcha.2012.12.006>

Häggström, O. (2016). Here Be Dragons: Science, Technology and the Future of Humanity. Oxford University Press.

Howlett, M. (2004). Beyond good and evil in policy implementation: Instrument mixes, implementation styles, and second generation theories of policy instrument choice. *Policy and Society*, 23(2), 1-17.

Hůlka, D. (2020, 15. prosince). Pavel Řehák: muž, který pomohl Česku přijít s modelem na zvládnání první vlny koronaviru. *iRozhlas.cz*.

[https://www.irozhlas.cz/zivotni-styl/spolecnost/pavel-rehak-koronavirus-v-cesku-muz-ktery-prisel\\_2012151336\\_pj](https://www.irozhlas.cz/zivotni-styl/spolecnost/pavel-rehak-koronavirus-v-cesku-muz-ktery-prisel_2012151336_pj)

Mackinac Center for Public Policy. (n.d.). *Overton Window*. <https://www.mackinac.org/OvertonWindow>

Ministerstvo průmyslu a obchodu. (2024). Národní strategie umělé inteligence ČR 2030.

<https://www.mpo.gov.cz/assets/cz/podnikani/digitalni-ekonomika/umela-inteligence/2024/8/Narodni-strategie-umele-inteligence-CR-2030.pdf>

Ministerstvo životního prostředí. (2016). Rámec snižování rizika katastrof Sendai 2015-2030. [https://www.mzp.cz/C1257458002F0DC7/cz/environmentalni\\_bezpecnost/\\$FILE/OKR-ramec\\_snizovani\\_rizika\\_katastrof\\_sendai-20160606.pdf](https://www.mzp.cz/C1257458002F0DC7/cz/environmentalni_bezpecnost/$FILE/OKR-ramec_snizovani_rizika_katastrof_sendai-20160606.pdf)

Ord, T. (2020). The Precipice: Existential Risk and the Future of Humanity. Bloomsbury Publishing.

Owen, C.B. (2024). Decomposing Agency - capabilities without desires. Less Wrong. <https://www.lesswrong.com/posts/jpGHSghevmmTqXHy5/decomposing-agency-capabilities-without-desires>

Paulus, F., Krömer, A., Petr, J., & Černý, J. (2015). Analýza hrozeb pro Českou republiku: Závěrečná zpráva. Institut ochrany obyvatelstva Lázně Bohdaneč. [https://www.dataplan.info/img\\_upload/7bdb1584e3b8a53d337518d988763f8d/analyza\\_hrozeb\\_zaverecna\\_zprava.pdf](https://www.dataplan.info/img_upload/7bdb1584e3b8a53d337518d988763f8d/analyza_hrozeb_zaverecna_zprava.pdf)

Pažitný, P., Kandilaki, D., Löffler, L., & Zajac, R. (2022). Nadúmrtnosť na COVID-19 v kontexte rozhodnutí zdravotnej politiky (roky 2020–2022). [https://healthcareconsulting.sk/sites/default/files/2022\\_nadumrtnost\\_covid.pdf](https://healthcareconsulting.sk/sites/default/files/2022_nadumrtnost_covid.pdf)

Pilditch, T. D. (2024). The reasoning under uncertainty trap: A structural AI risk. arXiv. <https://arxiv.org/pdf/2402.01743>

Posner, R. A. (2004). Catastrophe: Risk and Response. Oxford University Press.

President's Council of Advisors on Science and Technology. (2024, February). Cyber-physical resilience: A report on strengthening U.S. resilience to cyber-physical threats. The White House. [https://www.whitehouse.gov/wp-content/uploads/2024/02/PCAST\\_Cyber-Physical-Resilience-Report\\_Feb2024.pdf](https://www.whitehouse.gov/wp-content/uploads/2024/02/PCAST_Cyber-Physical-Resilience-Report_Feb2024.pdf)

Rees, M. (2003). Our final hour: A scientist's warning: How terror, error, and environmental disaster threaten humankind's future in this century—on Earth and beyond. Basic Books.

Sharp, G., & Jenkins, B. (2022). Civilian-based resistance in the Baltic states. International Center on Nonviolent Conflict. <https://www.nonviolent-conflict.org/wp-content/uploads/2022/04/Civilian-Based-Resistance-in-the-Baltic-States.pdf>

Shevlane, T., Farquhar, S., Garfinkel, B., Phuong, M., Whittlestone, J., Leung, J., Kokotajlo, D., Marchal, N., Anderljung, M., Kolt, N., Ho, L., Siddarth, D., Avin, S., Hawkins, W., Kim, B., Gabriel, I., Bolina, V., Clark, J., Bengio, Y., Christiano, P., & Dafoe, A. (2023). Model evaluation for extreme risks. arXiv. <https://arxiv.org/pdf/2305.15324v2>

Sizeland, E., & Parko, V. (2023, July 7). Prepare for the worst: Five steps for leaders in an age of crises. Atlantic Council. <https://www.atlanticcouncil.org/blogs/new-atlanticist/prepare-for-the-worst-five-steps-for-leaders-in-an-age-of-crises/>

Social Finance. (2023). Why don't we fund more prevention? Social Finance. <https://socialfinance.org/insight/why-dont-we-fund-more-prevention/>

STEM. (2023, 15. září). Postoj české veřejnosti k většině zemí zůstává stabilní, pohoršil si Izrael s Palestinou.

<https://www.stem.cz/postoj-ceske-verejnosti-k-vetsine-zemi-zustava-stabilni-pohorsil-si-izrael-s-palestinou/>

STEM. (2023). Ruská agrese proti Ukrajině: Analýza nálad české veřejnosti.

[https://stem.cz/wp-content/uploads/2023/07/STEM\\_Ruska\\_agrese\\_proti\\_Ukrajině\\_analyza\\_nalad\\_ceske\\_verejnosti\\_VER.pdf](https://stem.cz/wp-content/uploads/2023/07/STEM_Ruska_agrese_proti_Ukrajině_analyza_nalad_ceske_verejnosti_VER.pdf)

Taleb, N. N. (2007). *The Black Swan: The impact of the highly improbable*. Random House.

Technologické centrum AV ČR. (2023). Výzkum a vývoj v oblasti umělé inteligence v České republice.

<https://stratin.tc.cas.cz/vystupy/2023/M1/VaV%20v%20oblasti%20AI%20v%20%C4%8CR.pdf>

Tetlock, P. E., Mellers, B. A., & Scoblic, J. P. (2014). Bringing probability judgments into policy debates via forecasting tournaments. *Science*, 344(6190), 1117-1120.

United Nations Office for Disaster Risk Reduction (UNDRR). (2023). Global assessment report on disaster risk reduction 2023. <https://www.undrr.org/media/89456>

Vojtěch, B. (2020, 6. dubna). Selhání ženy, která měla chránit Česko před nákazami. *Seznam Zprávy*.

<https://www.seznamzpravy.cz/clanek/selhani-zeny-ktera-mela-chranit-cesko-pred-nakazami-94638>

World Economic Forum. (2024). *Global risk report 2024: Digest*.

<https://www.weforum.org/publications/global-risks-report-2024/digest/>



## Annexes

## I. Prioritization of disruptions - suggested framework (incl. typical examples)

	<b>Speed of onset</b> (time before at least 25% of the population is affected)			
		0-1 year	1-5 years	5-15 years
<b>Impact size</b> (degree of intervention in the lives of individuals)	<b>mild:</b> changes that have (so far) a relatively low impact on the daily lives of individuals	<i>5G networks</i>	<i>Smart cities and the Internet of Things</i>	<i>Climate change and energy transformation</i>
	<b>essential:</b> changes that have a significant impact on individuals' lives and require some form of adaptation	<i>Digitization and E-government</i>	<i>Changes in the automotive industry</i>	<i>Demographic changes and population aging</i>
	<b>radical:</b> changes that have a profound and immediate impact on individual lives often require major changes in lifestyle and adaptation	?	<i>AI and Machine Learning</i>	<i>Advances in Medicine and Biotechnology</i>

	<b>Scope of impact</b> (what percentage of the population is ultimately affected)			
		Do 5%	5-25%	25%+
<b>Impact size</b> (degree of intervention in the lives of individuals)	<b>mild:</b> changes that have (so far) a relatively low impact on the daily lives of individuals	<i>Virtual and Augmented Reality (VR and AR)</i>	<i>Smart home technologies</i>	<i>remote work and hybrid work models</i>
	<b>essential:</b> changes that have a significant impact on individuals' lives and require some form of adaptation	<i>Wearable technologies (smartwatches, Oura ring, etc.)</i>	<i>Electromobility and infrastructure for electric vehicles</i>	<i>E-commerce</i>
	<b>radical:</b> changes that have a profound and immediate impact on individual lives often require major changes in lifestyle and adaptation	<i>3D printing</i>	<i>Financial technology (FinTech) and mobile payments</i>	?

## II. Examples of bodies similar to the proposed “Prep Unit”

In recent years, Canada has been developing its approach to risks and catastrophes. Given its federal structure, the centralised functions relate especially to preparedness and capacity (while mitigation and recovery are regional responsibilities). The *Government Operations Centre* is responsible for this, acting on its two responsibilities: supporting preparedness (especially where this requires coordination between thematically or regionally disparate actors) and coordinating and supporting others during acute crisis response. As part of the former, it developed (and continues to expand on) the first whole-Canadian risk register.

Some of the proposed activities are also covered by the *Scientific Advisory Group for Emergencies (SAGE)*, an advisory body to the UK government, which formalizes how the executive branch obtains and responds to scientific advice during crises or emergencies. This body is always "activated" in response to a specific crisis - it was already activated ten times since 2009, in response to environmental (volcanic dust, floods), biological (Zika virus, Ebola, or Covid-19) or technological (nuclear accident) threats. At each activation, appropriate experts are selected in a targeted manner for a given threat, and the body can meet once or repeatedly as needed under the leadership of the government's chief scientific advisor.

*SAGE's* activities were part of the functioning of the *Civil Contingencies Secretariat (CCS)*, a department at the UK Cabinet Office created in 2001 to take over the crisis preparedness and planning agenda from the Home Office. In addition to planning and coordination, the CCS was also active in horizon-scanning and identifying short- and long-term risks (including the preparation of the national risk register). Mid-2022, the CCS was split in two - the *COBR Unit* for acute crisis response and the *Resilience Directorate* with responsibility for resilience and preparedness.

