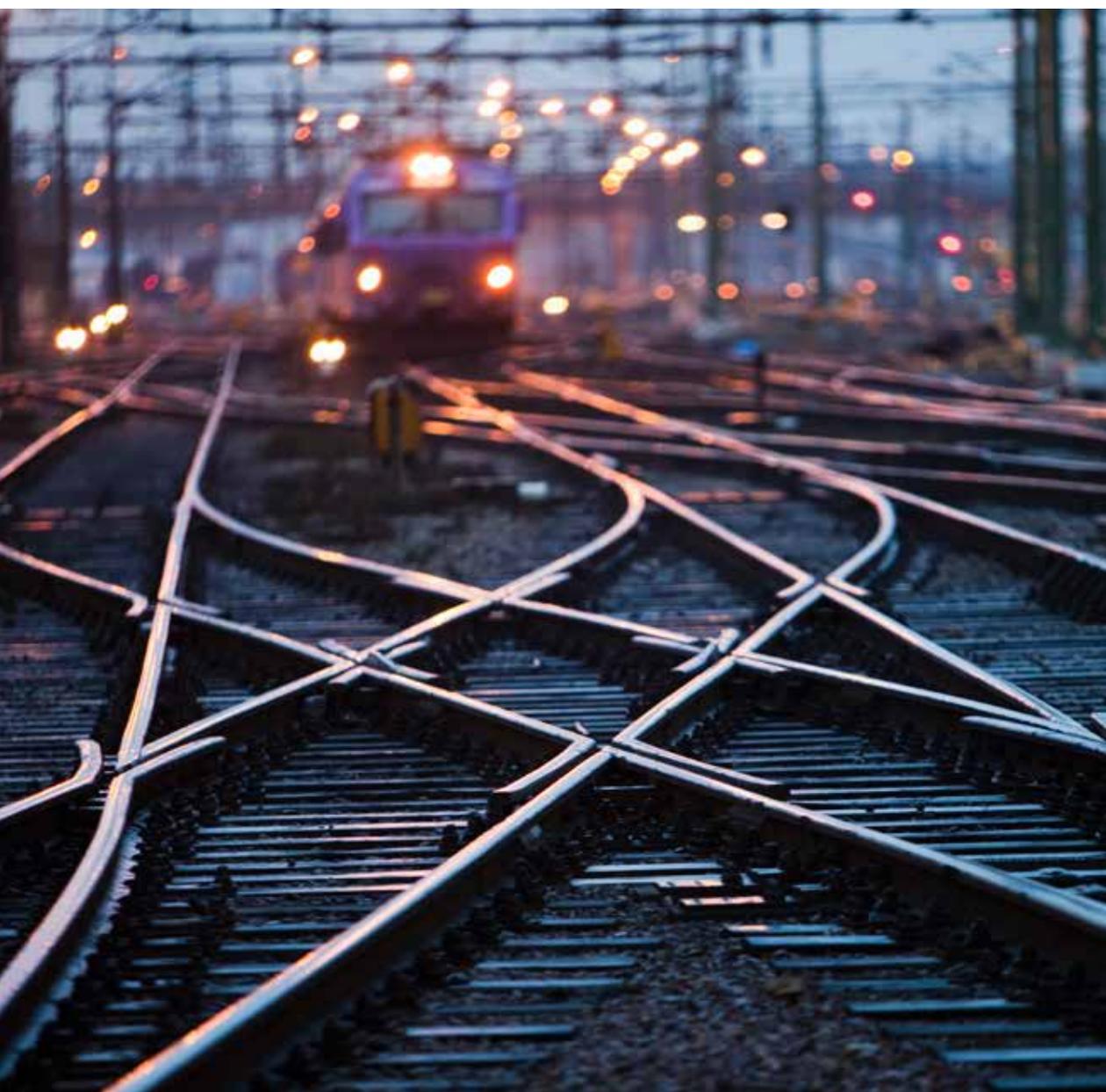




Swedish Civil
Contingencies
Agency

Five challenging future scenarios for societal security



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This document is a shorter version of the report *"Framtida utveckling som kan påverka arbetet med samhällsskydd och beredskap: Redovisning av uppdrag i MSB:s regleringsbrev för år 2012"* ("Future developments that could affect the management of civil contingencies: Report of the project in MSB's appropriation directions for 2012".)

Five challenging future scenarios for societal security

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Introduction

Introduction

The Swedish Civil Contingencies Agency, MSB (Myndigheten för samhällsskydd och beredskap) has been tasked with developing and supporting society's ability to deal with accidents and emergencies. MSB's vision for a safer society in a changing world means that the agency needs to work long term and strategically to meet the challenges and seize the opportunities that the future holds in the field of societal security.¹

In this document, MSB presents five different scenarios showing how society might develop up to 2032. The societies described in the scenarios are faced with various types of challenges and opportunities for societal security. It deals firstly with the changing threat and risk scenario and secondly with how the conditions facing society to deal with accidents and emergencies are being influenced by society at large. Possible developments are explored through the scenarios from a number of different perspectives. The scenarios are aimed at provoking thoughts and ideas, challenging routine thinking and paving the way for a structured discussion on the significance of various future developments. In addition to the five future scenarios, this document also gives a brief description of how the scenarios are structured.

The content of the future scenarios should not be regarded in any way as MSB taking a stand as to what constitutes the five most likely paths of development. All scenarios are, however, possible. Obviously, there are far more possible future paths of development than those MSB has chosen to include in these scenarios.

¹ Societal security refer to MSB's entire operational areas that, according to the agency's instructions (2008:1002), are comprised of protection against accidents, emergency preparedness and civil defence.



The future scenarios have been developed within MSB's long-term strategic analysis, which aims to provide a basis for the strategy and alignment process in the field of societal security. The scenarios are an important tool in the continued analysis of how to develop society's ability to deal with accidents and emergencies. The scenarios can be used to discuss the following issues:

- How can future societal development impact on societal security? What types of accidents and emergencies do we see before us? How are the conditions influenced for society to prevent and handle accidents and emergencies?
- How can we deal with future accidents and emergencies with today's capabilities?
- How should we develop our ability to handle future accidents and emergencies in a better way?

MSB will be broadening and deepening its knowledge on how developments in a range of areas of society might affect the work on societal security.

MSB invites other players to participate in the ongoing discussion of future societal security.

Read more:

At www.msb.se/sv/Kunskapsbank/Utvarderingar--strategiska-analyser/Langsiktig-strategisk-analys/ MSB has published additional material related to the work on the five future scenarios.

At this website, you can also download the report "Framtida utveckling som kan påverka arbetet med samhällsskydd och beredskap: Redovisning av uppdrag i MSB:s regleringsbrev för år 2012". (Future developments that could affect the management of civil contingencies: Report of the project in MSB's appropriation directions for 2012) This report contains a more complete description of the scenario methodology used to create the five future scenarios, as well as in-depth explanations on developments in the various areas that are relevant to societal security.

Scenario 1

**A growing population and
deteriorating public health**

A cityscape featuring a construction crane in the background, a large multi-story building, and a residential area with white buildings and dark roofs in the foreground. The scene is set against a backdrop of trees with autumn foliage.

The global rate of population growth has outstripped UN projections. In 2032, the world population is 8.5 billion and the population of Sweden is 11 million. Sweden has a relatively high employment rate, and Swedish companies are asserting themselves well in new technological fields such as nanotechnology. The world can be said to have undergone an energy revolution, and the share of renewable energy has increased rapidly due to technological and scientific breakthroughs. People are living in crowded cities, while rural areas are being depopulated. Public health issues such as severe obesity, high blood pressure and diabetes are posing major challenges to society.

Scenario 1 – A growing population and deteriorating public health

The world in 2032

In 2032, the poverty rate is falling in large parts of the world, and the global population is 8.5 billion. The economies of China, India, Russia and Brazil have grown strongly. Private commercial players have increased their global influence and are a driving force in the development of society. A dozen or so large multinational companies hold a very dominant position. Healthcare, education, infrastructure investment and planning are run by private companies in many countries. Former national assets such as drinking water and roads have also been privatised in many cases.

Corporate lobbying is affecting political decision-making in many fields. Most major companies have developed broader social responsibility, CSR (Corporate Social Responsibility), and have built up businesses that address issues concerning the environment, social services, infrastructure, regional development and international aid. Even non-profit organisations and popular movements have grown in importance and are influencing the political agenda. As the ballot box is no longer as important as it was for those who want to exert influence, many people are choosing instead to get involved in organisations that monitor and that maintain a dialogue with the large companies. With the exception of a few, more confined armed conflicts, the world in 2032 is more peaceful than it was 20 years ago.

Climate change has occurred at a faster rate than was expected at the beginning of the 2000s. In 2032, extensive flooding, widespread and prolonged drought, the erosion of coastal areas, and tropical storms are increasingly common occurrences. The lack of clean drinking water has become a hot political issue in many countries. This development made it clear to companies, agencies and the public of the need to rapidly reduce greenhouse gas emissions. At the end of the 2010s, the world agreed to impose global-wide emission limits. In many ways, a reform of the UN system made climate agreement possible. The UN has since this time played an important role in the work on global climate change.

Accelerating climate change and global emission limitations intensified development in energy technology and major technological breakthroughs were made in the 2010s, particularly in the field of solar energy. The share of renewable energy sources is growing very quickly and, according to some projections, over 90 per cent of electricity production will be based on renewable energy sources by 2050. New non-fossil fuels have for the most part replaced oil as fuel. In Europe, car and truck traffic is predominantly based on renewable fuels such as hydrogen and renewable electricity. According to the latest UN projections, global warming will slow down over the next few decades.

The breakthrough of nanotechnology

The 2020s came to be known as the decade of nanotechnology. The entire field of materials technology has undergone a nanorevolution; materials development mostly concerns building the capabilities most in demand from a micro level. The applications are numerous. The use of nanoparticles in medicine in 2032 means very high precision in delivering medicine to a specific part of the body, which has revolutionised cancer care, for example. In the environmental field, nanoparticles are used for effective purification of water, for example. “Intelligent” fabrics are commonplace today in healthcare, emergency services and the police, but also for private individuals. There are clothes that detect blood pressure, heart rate and perspiration. There are also soft but very resistant fabrics that are used by the police for protection.

The capability of “personal production” in the home is just beginning to be offered on the consumer market. Through what is known as a 3D printer, it is now possible to “print” simple three-dimensional objects. This is expected to lead to a revolution similar to the one the Internet brought at the beginning of the 2000s.

Sweden in 2032

Sweden is considered to have a favourable business climate, and many multinational companies have located a number of development projects and production facilities in the country. The ability of the Swedish business community to utilise innovations in emerging technologies such as nanotechnology is excellent, and many smaller and newly established Swedish companies enjoy large market shares in countries such as China and India. Swedish companies have also been at the forefront of the development and utilisation of new

energy technologies, which has brought great benefits as the global climate agreement has made old energy technology very expensive. Unemployment in Sweden is low and the general standard of living is high.

In general, people believe that the private sector is best suited to run healthcare, education, welfare and other social services. The majority of people also believe that individuals must take personal responsibility, but there is also a perception that “someone else” should assume responsibility for the overall challenges and issues. Both interest groups and large corporations actively conduct campaigns to lobby decision-makers, and even though the government has reduced its role in society, people feel they are able to affect important societal issues. Political decision-making in recent years has in many respects been event-driven, and when public opinion has swung, or when big companies have exerted pressure, policy makers have been responsive.

A growing population

Sweden’s population has grown dramatically in the 2020s and is fast approaching 11 million. This is principally due to the fact that Sweden has been a very attractive country to migrate to. Larger labour migration has taken place because there have been periodic labour shortages in Sweden, both in skilled occupations and more basic service work. The lion’s share of those who have migrated to Sweden come from countries in Europe and our immediate surroundings, but also from countries on other continents. The birth rate has also risen more than expected in recent years. More families are choosing to have a third child, and new fertility methods have made it possible for more people than ever to have children.

Migration and internal mobility flows over the past decade have been concentrated in the big cities where job opportunities are plentiful. In 2032, the majority of Swedes live in one of the three metropolitan regions of Stockholm-Mälardalen, Öresund or Västra Götaland. Construction of new homes has not been sufficient to meet housing demand, which has meant that house prices and rents are high and that overcrowding is widespread across large areas. In 2032, public health issues such as severe obesity, hypertension and diabetes are very common and are a major problem for society. This is partly a consequence of healthy food also being expensive food. The rise in the frequency of travel also means people are being exposed to a greater variety of communicable diseases. Alcohol and



drug abuse has increased exponentially over the past ten years, which has resulted in higher accident statistics. By way of example, about 1,100 people die each year on the roads. The ability of the country to treat the sick is very good, at least in the private healthcare sector, which has embraced the great medical advances that have been made in areas such as nanotechnology. Expensive health insurance, however, means that many people have to turn to the few public healthcare facilities that remain. These have scarce resources, are lacking doctors and have long waiting times. There are also major differences between urban and rural areas in terms of access to and performance of healthcare and social services.

Challenges facing social structure

Over the last 20 years, the growth of larger cities and the decline in rural areas has continued. The business community is principally located close to metropolitan areas, which means that economic resources are unevenly distributed across the country. The cities have expanded geographically, and suburban areas and surrounding rural areas have been linked through effective and rapid means of transport and communication. Other sections of the country are more neglected in terms of development of physical transport and communication networks, social services and job opportunities.

Companies account for a number of major investments in the community, and several large multinational companies, especially in metropolitan regions, have initiated major road construction projects, made investments in infrastructure development for renewable fuels, and modernisation of electronic communication systems and construction of new electricity grids. These are largely financed through various user charges. Development of a strong process of urbanisation and weak rural growth has meant that transport and communication systems in certain parts of the country are patchy, which means that a small portion of the population in Sweden has limited access to the systems for transport and communications, information or raising alarms. A lot of these activities that are particularly important from a civil protection perspective, such as the supply of drinking water and energy, have been completely privatised, and companies usually set the necessary priorities in relation to different types of emergencies.

As Sweden enjoys good drinking water resources, and much of the rest of the world suffers from a shortage, the Swedish water market is in high demand. Many multinational companies are competing for water resources and Swedish drinking water is a growing export commodity.

Media and communications

In 2032, traditional media such as television, radio and evening newspapers are still used to a great extent by large segments of the population. However, morning newspapers, both national and local/regional, are fighting over a failing advertising market. The use of electronic media and social media has risen over the last 20 years, but usage patterns for the various types of media differ between urban and rural areas, between generations and between different socio-economic groups.

Despite declining circulation of morning newspapers, newspaper journalism generally enjoys a high level of credibility among the population, and there is a high level of trust in what is reported. People's ability to evaluate information is relatively good, mainly because it is easy to search for and question things that have been said and reported using both on-line sources and via social media.

Scenario 2

**Weak economy,
high unemployment
and social unrest**



The revolutionary developments in information and communication are shaping the world, but most European countries are struggling to keep pace with developments led by the strong economies in Asia. In recent years, Sweden has struggled with a faltering economy and high unemployment, and in 2032 the population of Sweden dropped for the first time in the modern era. Both the welfare system and infrastructure are plagued by major deficiencies. Trust in politics and social life is declining and social unrest characterises society.

Scenario 2 – Weak economy, high unemployment and social unrest

The world in 2032

Global development is very strong in Asia, while it is weak in the West. Population growth has been slightly below UN projections. Over the past 20 years, Asia's influence has increased, and China, through its financial strength, dominates the world stage in 2032. China has moved towards democracy and has become an even more attractive centre for finance, commerce and culture. The development of new technologies is also mainly in China, India and other Asian countries. Private commercial players exert significant influence over both business and politics on a global scale, and many of the largest multinational companies are headquartered in China. In many ways, their influence has emerged at the expense of the influence of individual countries.

Compared to the 2010s, this new power structure has undermined established positions of power and created new tensions between aspiring superpowers. In the United States, there is widespread popular resentment to Chinese domination. China is now the principal focus of US security policy while US interests in Europe and European security are virtually non-existent. EU countries have found it difficult to keep pace with developments and are struggling with weak economies and high unemployment. This is to a large extent a legacy of the great financial debt crisis that prevailed in the 2010s, and almost scuppered the EU.

Climate change was barely an issue in the 2010s and 2020s, but there are now many indications that the average global temperature has started to rise rapidly.

A new IT revolution

Social development is driven by enormous progress in the IT field. In 2032, computer capacity is about 150,000 times faster than it was in 2012, and quick, cheap and wireless computer connections can be found virtually everywhere. The 2020s saw a number of breakthroughs in research on artificial intelligence (AI). The development of intelligent computer systems that can handle more advanced tasks such as

translating, planning, learning and making decisions is now starting to take off. Robotic technology also developed rapidly during the 2020s. Service robots are being used in 2032 in many different fields such as healthcare, social services and offices where humans and computers communicate through speech. You can also talk quite normally with computers built into items such as lifts, cars and refrigerators. Systems with interfaces between the brain (via sensors outside or inside the head) and computers are also becoming commonplace, particularly when this involves working with personal computers, driving and medicine.

Sweden in 2032

Sweden, like many other European countries in recent years, has been characterised by a faltering economy and high unemployment. In recent years governments have largely consisted of experts and successful business executives, and interest in political ideologies and solving major societal problems through political means is low. Politics has failed for many years to tackle unemployment and the major deficiencies that are hampering education, healthcare and social services. Virtually all resources and infrastructure critical to society are owned by private companies. A few activities are still entirely in the public sector such as the police, the judicial system and defence.

The dominant perception in Sweden is that politicians should not be able to make decisions that restrict business and individual opportunities, and the public generally considers that everyone has major responsibility for ensuring their own safety. The state's ability to manage and control the activities of large (often multinational) companies in education, health, infrastructure, energy and other fields, is severely constrained. Many municipalities engage private providers of emergency services but their quality varies from one part of the country to another. The state has limited capacity to supervise private rescue service companies.

Public debate is characterised by pessimism. Confidence in the authorities and politicians is low, as demonstrated by poor voter turnout. At the last election voter participation was around 65 per cent. The gap between those who rule and the electorate is large. Although there is no direct evidence, studies show that the general public believes that the pronounced commercial climate has led to increased corruption in society. Organised crime is prevalent all over Sweden and is a major



problem affecting, among other things, the ability of the judiciary to function. Much of the crime has gone online, and expertise in information security has become increasingly important. In recent years, organised crime has also accounted for an increased number of robberies and kidnappings in exchange for large ransoms.

In 2032, different socio-economic groups tend to make greater efforts to isolate themselves from each other, and intolerance, mistrust and xenophobia characterise society. Riots, rumour mongering and stone throwing at the police and rescue services are not uncommon. It has reached such a state that the regular emergency services are unable to operate in particularly vulnerable areas. Instead, specially equipped rescue police are being engaged from private security companies. Vigilance committees are common phenomena and in some parts of the country people have completely lost confidence in the police and judiciary system. Overall, Sweden is a country with a great deal of social unrest and loss of confidence in democratic functions and politics.

A declining population

There are large differences in education and income levels among the population and the proportion of illiterate people has increased in Sweden. The gap between the “rich” and “poor” is greater than it has ever been in the modern era, and while some people live well with access to the latest technology, consumer goods and education, many others would barely survive without food parcels from non-profit organisations and corporate initiatives. Young people are increasingly looking abroad, often to Asia, where the opportunities for a good education, jobs and a life of prosperity are considerably better. There is a shortage of skilled labour in Sweden, including doctors, engineers and biotechnologists. As Sweden is no longer an attractive country to migrate to, the population in 2032 has dropped for the first time in the modern era. The proportion of elderly people over 80 is at a record high in relation to the general population, and even though the retirement age has been raised a number of times and many healthy 70-year-olds continue to work part-time, the dependency ratio has grown. The ageing population means that fewer people are working to support the growing group that is not working. Welfare systems and the small public sector are suffering from very scarce resources.

Challenges facing social structure

Apart from large private investments in information and communication technology, long-term infrastructure investments have been largely absent in major parts of the country due to weak economic growth and sudden downturns in the economy. Roads, railways, electricity grids, water and district heating are being neglected, especially in areas where there are no private interests.

Access to goods and critical products, such as food, oil and electronics is relatively good, but vulnerable. The guiding principle for companies has been high productivity and an aspiration to reduce costs, which has meant that many businesses have even more centralised functions and carry virtually no inventory. Swedish production of food has declined, partly because production is strictly adapted to what can be produced competitively from an international perspective.

In 2032, various sections of the infrastructure are being exposed to periodic interruptions due to both poor maintenance and lack of new construction. Sabotage and vandalism are also increasing concerns and are causing regular interruptions in the transport network, as well as increasing disruption of the energy and water supply. The perpetrators are often criminal groups that cause damage by stealing the products. However, Swedish society also suffers more often from sabotage where the underlying cause is discontent among political groups and private individuals. Computer hacking and virus attacks on IT systems have also increased and come in ever-changing guises in response to rapid technological developments in this area.

Media and communications

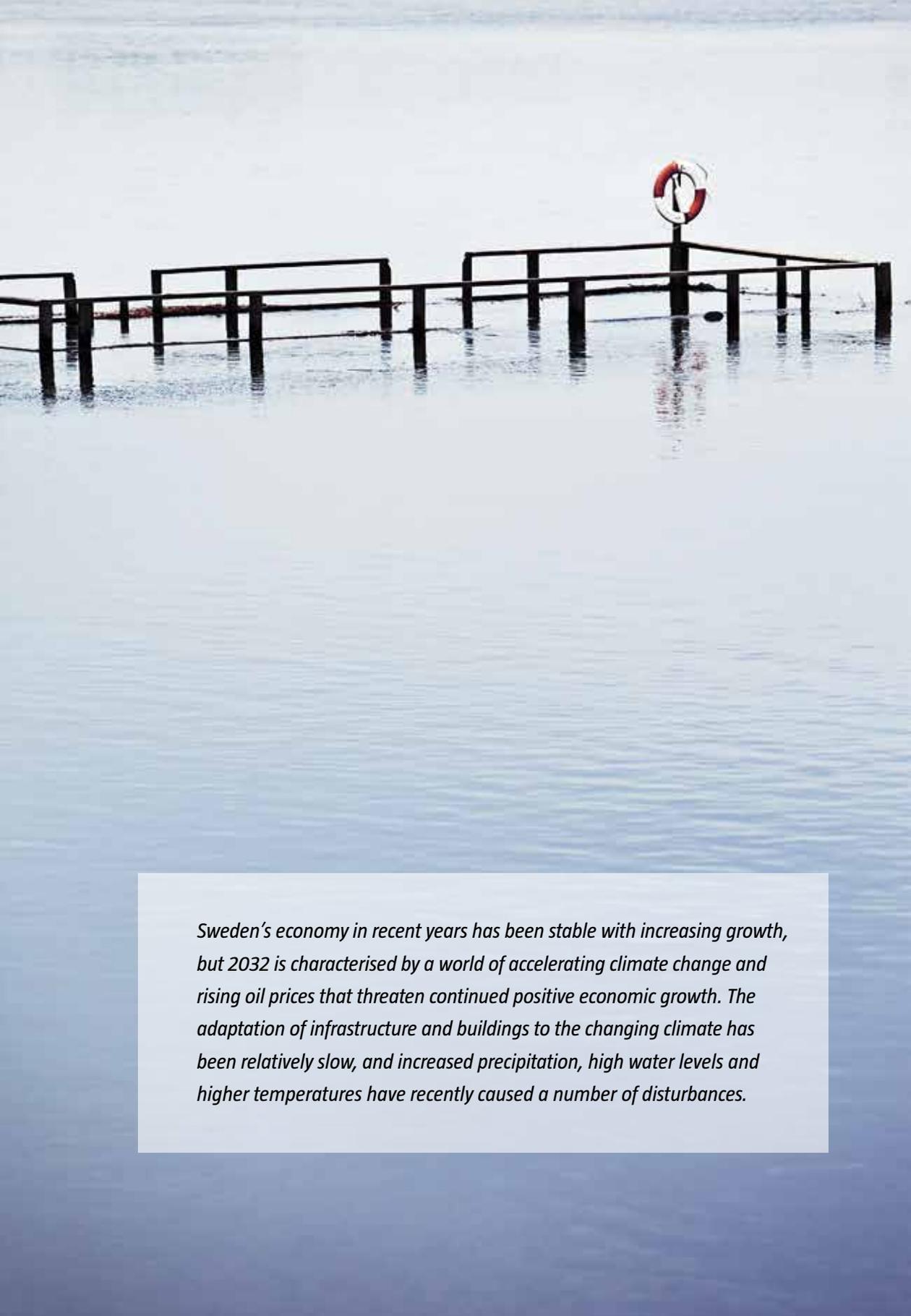
Technological advances in information and communication technology have driven large (mainly private) investment in infrastructure for communications. The new technical systems and infrastructure work well and are crucial to many functions in society, both in everyday life and in times of crisis. However, there is a tendency for the development of new communication systems to be restricted to large towns and the older systems are being only partially maintained. Some infrastructure systems in rural areas are therefore in a state of decline, and the risk of failure is high.

In 2032, no public services remain. The many media companies are private and often multinational. Consumption of traditional media such as radio and print newspapers is limited among large parts of the

population. The newspaper sector across the country is in a vulnerable position, and in cases where morning newspapers are still in circulation, they are specialised and very expensive. Social, interactive media account for the majority of all communications and information exchange. Information is generally available as soon as it comes out and is packaged in an easily accessible, short format. The heavy flow of information places great demand on the individual to both digest and validate the information that is being constantly produced through a growing number of electronic channels. People are relying on the information made available through social media to an increasing extent, and there is a widespread perception that information that has been confirmed by many people is probably true. “The expertise of the masses” is thereby a more trusted source of information than information from individual experts and public authorities. A negative consequence of this development is that it may be difficult to distinguish public relations from news and that rogue news sources could have a major impact.

Scenario 3

**Accelerating climate change
and rising oil prices**



Sweden's economy in recent years has been stable with increasing growth, but 2032 is characterised by a world of accelerating climate change and rising oil prices that threaten continued positive economic growth. The adaptation of infrastructure and buildings to the changing climate has been relatively slow, and increased precipitation, high water levels and higher temperatures have recently caused a number of disturbances.

Scenario 3 – Accelerating climate change and rising oil prices

The world in 2032

Over the last decade, the West has experienced relatively stable economic growth, while countries in the developing world are characterised by low growth and low levels of education. The United States has retained its position as the world's political, economic and cultural powerhouse. The EU, China, India, and Russia have made up ground and to some extent challenged the strong position of the United States but to date have been unable to seriously disrupt the global power structure. Europe and its immediate surroundings have been spared armed conflicts, even though the political situation has sometimes been strained.

Sweden is one of the countries that frequently and successfully contribute to both civilian and military crisis management capabilities in international operations. The demand for emergency assistance during floods, torrential rains and landslides has tripled since the 2010s.

In 2032, the average global temperature is 2^o C higher than in pre-industrial times. The consequences of climate change are particularly noticeable. Heat waves, prolonged droughts, torrential rains, floods, earthslips, landslides and extensive forest fires are more common phenomena and are causing major problems and damage to buildings and infrastructure around the world. There are clear signs that the melting of Greenland's ice sheet is about to breach a critical threshold. Even so, there is still no noticeable effect on sea level, but researchers are generally in agreement that it could rise by two metres over the coming century. Communities around the world are finding it difficult to adapt to the new conditions.

Consumption of fossil fuels (oil, coal and gas) continues to increase and carbon emissions have grown significantly since the early 2010s. Rapidly rising oil prices over the past five years have meant that investment in renewable energy is now increasing rapidly, but decades of lost investments mean that demand far outstrips supply. Both renewable energy and oil are very expensive, which is a threat to the world economy. Major investments have also been made in expanding



wind power and solar energy, but the latter still represents a very small percentage of total electricity production. Small-scale energy production is also increasing rapidly. China is building new nuclear power plants, but in Europe only obsolete plants are being replaced with new ones. Commercial biomass-based power plants are also under construction.

In order to quickly reduce large-scale emissions, tests for storage of carbon dioxide have been initiated, but technical problems and costs have hampered construction. The number of power plants using this technology is therefore negligible. There are also plans to test different methods of “geoengineering” on a large scale, as they are generally considered to be the only way to quickly address the problem of accelerating climate change.

Significant advances in biotechnology

In 2032, the use of biotechnology in healthcare and nursing is much more extensive than in the early 2000s. Stem cell research in 2020 has yielded successful treatment methods, which have led to the creation of many new small and medium-sized innovative companies working with different forms of stem cell treatment.

Advances in biotechnology have also meant that many of the most common viral diseases that previously affected wheat, rice and potatoes have now been virtually eradicated. Developments in the area of environmental technology are progressing quickly. Microbiological methods to clean up toxic waste are common, and even algae for use in biomass have been harvested.

Sweden in 2032

In 2032, the Swedish economy is characterised by stability and strong growth. Employment is rising while the proportion of highly educated people has risen over the last decade. Sweden’s strong “new industry” is based on innovations from areas such as nanotechnology and biotechnology. As in the rest of the world, economic stability and growth are under threat from rising oil prices and because there are no equivalent alternatives or options for quickly converting vehicle fleets, for example.

Political decision-making over the past decade has been characterised by short-termism, which has led to policies to some extent being criticised for being inconsistent and populist. At the same time, there

has been room for flexibility in decision-making when emergencies have occurred. Although private companies own virtually all economic activities, the responsibility for citizens and civil protection rests primarily at a municipal and regional level. Uncertainty prevails, for example, in meeting transportation needs in evacuation situations following a major incident, and there are other examples – such as access to medicines in times of shortage – for which the allocation of responsibilities is unclear.

Population growth in line with previous projections

The population of Sweden is growing at a slow pace and is largely in line with the population projections made in the 2010s. In 2032, the population is just over 10.3 million. Sweden's increased growth has led to an average standard of living higher than in the 2010s, and the relatively prosperous "middle income" group is growing. Developments in biotechnology and nanotechnology have led to positive growth in several areas. The incidence of lifestyle diseases has declined over the past 20 years. The social climate is inclusive and Sweden is a country where different religious, cultural and other social expressions coexist. Social commitment is strong and characterised by special interests that respect and communicate with each other. Confidence in the authorities and elected representatives has been positive to date.

Challenges facing social structure

Sweden is frequently hit by floods, storms, earthslips, landslides, extreme temperatures (heat waves) and forest fires. Roads and conduit-based systems for electricity supply and drinking water distribution have been hit hard by the various types of damage and disruption.

At the same time, adaptation of infrastructure and buildings to the changing climate has been relatively sluggish, and increased precipitation, high water levels and higher temperatures have recently caused a number of disturbances in road and rail networks. New constructions have not always been erected with the consequences of changing climatic conditions in mind. For example, new residential areas and houses are often built in scenic areas with a high risk of flooding. Many insurance companies are refusing home insurance that includes flood protection to people living in areas of high flood risk. Protests aimed at both municipalities and companies that have allowed construction in vulnerable locations are on the rise.



The transportation system in Sweden is still heavily dependent on fossil fuels, but rising oil prices, combined with attempts to restrict climate impacts, is having an effect on the transport sector. Aviation's status has declined and the combination of boat and train has become the main mode of transport. Tracks for high-speed trains are under construction between Swedish cities and on to Denmark and the continent.

Media and communications

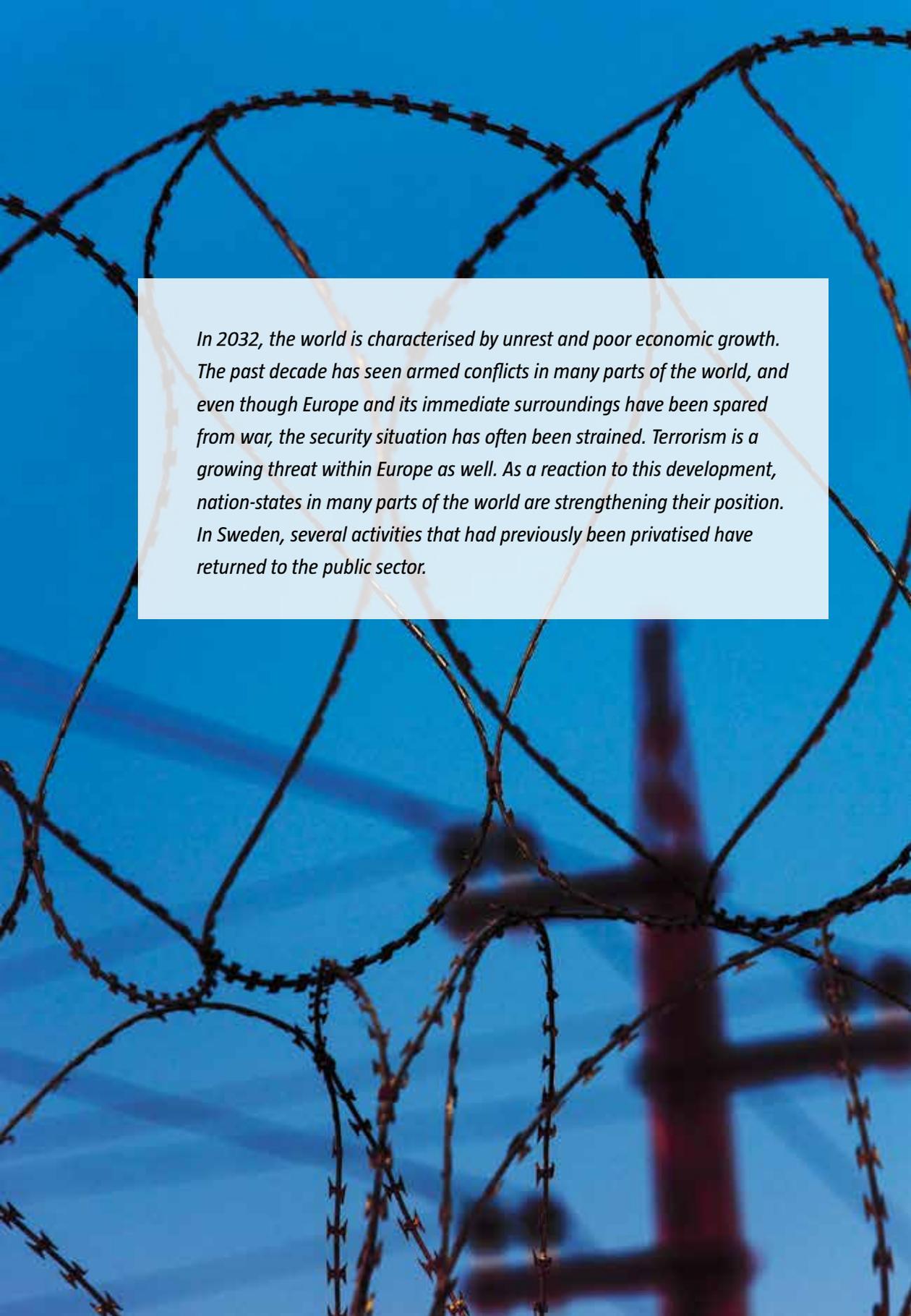
In 2032, communications over long distances and between different cultures and languages are not a problem. In Sweden, the new communication systems are working well and are essential for many functions in society. Just as with developments in general, there is a tendency for new infrastructure to be limited to metropolitan areas and old, more geographically widespread systems are only partially maintained. In principle, all people in Sweden can always raise alarms, and actors in civil contingencies have a good electronic communication platform and excellent opportunities to communicate in a secure environment with each other.

The electronic flow of information and the use of social media are extensive, although there is a certain difference in usage patterns among various socio-economic groups. People's ability to evaluate information effectively, both in traditional and social media, is also relatively good.

Traditional media such as TV and radio, as well as evening newspapers, are still used to a great extent by large sections of the population. However, usage patterns are scattered between town and country, between generations and between different ethnic groups. Morning newspapers, both national and local/regional, are fighting over a failing advertising market.

Scenario 4

**The threat of terrorism
in a world of conflict**



In 2032, the world is characterised by unrest and poor economic growth. The past decade has seen armed conflicts in many parts of the world, and even though Europe and its immediate surroundings have been spared from war, the security situation has often been strained. Terrorism is a growing threat within Europe as well. As a reaction to this development, nation-states in many parts of the world are strengthening their position. In Sweden, several activities that had previously been privatised have returned to the public sector.

Scenario 4– The threat of terrorism in a world of conflict

The world in 2032

In 2032, the world population stands at 8.5 billion. Global economic growth is weak and poverty is widespread in many countries. Recurring financial crises have led to regulated markets and the room for global companies to manoeuvre has diminished. In many regions, nation-states are stronger than in the 2010s, and the global balance of power is multipolar with regional superpowers such as the United States, Brazil, China, Japan, India, Iran, South Africa, Russia, Turkey, Germany and the UK.

The EU is greatly weakened compared to the 2010s, and several countries in the Euro zone have returned to their national currencies. In the late 2010s, the EU had problems with reconciling the different member states' policies and economics and was criticised for moving towards a greater administrative superstructure and for inefficient decision making. In 2032, the EU is an organisation for intergovernmental cooperation within a limited number of fields.

Armed conflicts have characterised the last decade in many parts of the world such as Central Asia, Central Africa and the Korean Peninsula. Iran's nuclear capability, along with subsequent efforts in several other Middle Eastern countries to acquire nuclear weapons, has caused much concern. There are also tensions in Europe's immediate surroundings and rhetoric between European countries has been heightened. Among other things, demarcation issues in the Arctic region have been a contributing factor to this trend. In addition, a variety of political and religious extremist organisations have carried out some high-profile terrorist attacks in Europe aimed at both political institutions and infrastructure. In many European cities, underground railways and airports are often closed as a result of possible threats. The Olympic Games in Prague in 2028 were plagued by a string of attacks. In the most extensive attack, nearly 300 people were killed when an explosion brought down a stand in connection with the closing ceremony. Several of the top Swedish athletes have now declared that, for security reasons, they will skip the 2032 Olympic Games in New Delhi. The feeling of insecurity is palpable.

Biotechnology offers new products but also increased risks

In the biotechnology field, major advances have been made since the 2010s, and new industrial processes for biomass have led to many new, synthetic products coming to the market. Bioplastic is one such example. Biocomposites used as building materials are also popular. Genetically modified crops have also meant that harvests have increased globally. Production is exported, however, primarily as bio-fuels for industrial use in developed countries, and are used on only a small scale for people in the poor countries where the production takes place.

A further consequence of biotechnology developments is the increased risk associated with the spread of a new generation of biological weapons. There are indications that some countries, in contravention of relevant international law, are in the process of developing highly effective biological weapons. In addition, there is widespread fear of bioterrorism. A terrorist organisation fighting for regional autonomy in the Russian republics last year was very close to succeeding in spreading a contagious virus in the Moscow underground.

Sweden in 2032

Sweden has experienced a number of decades of unbalanced growth; a few years of rapid economic growth have been followed by deep depressions of zero growth and then once again a few years of economic growth. Over the years, a general downward trend can be seen in which growth is gradually declining.

Using arguments that highlight the importance of achieving political stability in times of economic downturn, scarcity and global turbulence, many activities that were privatised at the end of the 1990s and the beginning of the 2000s have returned to the public sector (for example healthcare, education, welfare and other social services). Many elements – such as railways and energy – that have been classified as critical infrastructure from a security perspective are now either nationalised or heavily state regulated and controlled. The dominant perception of the population is that the responsibility for civil contingencies is the domain of government. After a major terrorist attack at the National Arena (Swedbank Arena) in Stockholm, during which members of the crowd were taken hostage and shot in connection with a controversial concert, far-reaching terror laws have been enforced.

Cross-party agreements are now commonplace, which gives a long-term perspective to political decision-making. Stability has been highly valued for many years, which has made decision-making less flexible. Centralisation of responsibility for civil contingencies is underway, and in the event of a crisis there are laws that give the state the capability, from a central level, of rationing and prioritising activities and resources on a large scale. The rescue services are now fully run by the government. The National Agency for Accidents manages the activities and maintains preparedness across the country through its operational rescue service forces.

Although the government's enhanced control, and increased capability for monitoring, has led to discussions about reduced integrity and individual freedom, the values of the general population are characterised by a level of trust in government agencies and elected representatives. One explanation may be that Sweden handled the period of financial difficulties relatively well. Another argument raised in the debate is that Sweden must be kept together in an increasingly turbulent world.

Stable population growth and good public health

In 2032, the population is over 10 million and population growth is largely in line with projections. Despite the troubled world, people are generally tolerant of each other and society is mainly characterised by social cohesion. Many people have large community involvement, which manifests itself in active participation in organisations with a broad societal interest.

Living standards have not evolved significantly in recent decades, but public health is generally good, with minor differences between groups. There are several explanations for this. Diet, exercise and various forms of stress management mean that the prevalence of lifestyle diseases is low. The ability of healthcare to treat diseases has also increased due to advances in biotechnology.

Challenges facing social structure

Since the 2010s, the growth of large cities and the depopulation of rural areas have continued. Investments in infrastructure outside the major urban areas have also failed to materialise. Instead, the "patch and mend" approach has been adopted as a financial policy instrument in times of crisis. In large parts of the country outside the major urban areas, maintenance of roads and water and sewage systems has been neglected.



Sweden remains heavily dependent on the outside world for its supply of critical products such as food, electronic components, raw materials and metals. Domestic production and Swedish industry are facing major challenges as fuel has become more expensive, while reliance on non-renewable energy remains high. Sweden conducts limited research in biotechnology and environmental technologies, but Swedish companies embrace new technology to a great extent, even though user licenses are expensive.

The threat of terrorist attacks against infrastructure critical to society has increased in recent years, and a terrorist attack in a neighbouring country was recently aimed at oil industry infrastructure. Energy transport in the Baltic Sea has almost doubled since the 2010s. The turbulent global situation means vessels are often escorted by the military on the high seas. National energy resources are seen as critical.

Media and communications

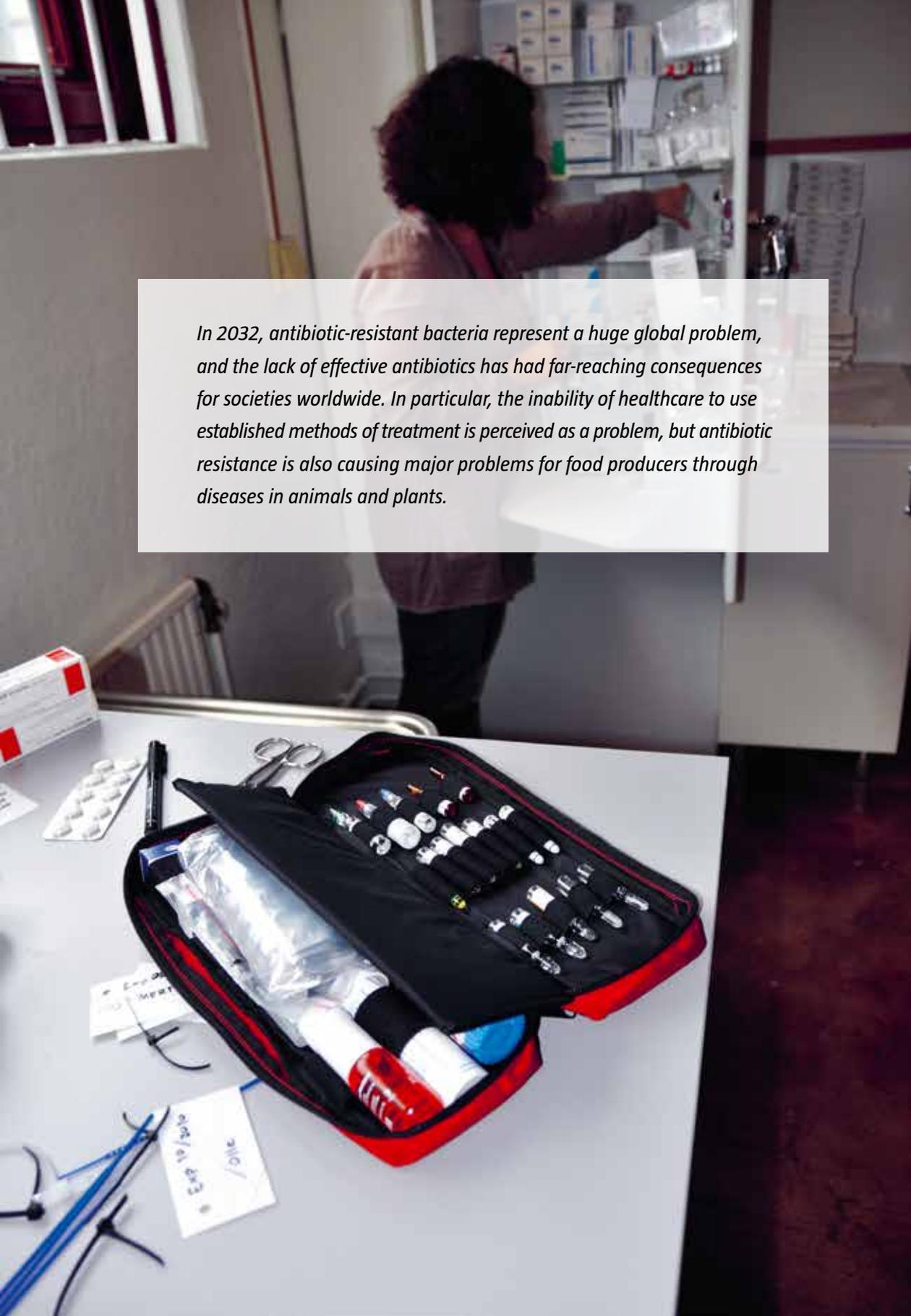
Growth in the computer field progressed rapidly until the mid-2010s and then decreased. Public investment in new communications infrastructure that occurred in the early 2000s slowed and suffered from lack of maintenance. In 2032, an ordinary PC has the same performance as one from the 2020s. Wireless data transfer is relatively expensive and capacity is limited, which means that transmission sometimes does not work at all.

The use of electronic and social media is greater than in the 2010s, and people are exposed to a large flow of information. Almost all media, including news journalism, is available in electronic format only. People to a large extent do not listen to the radio anymore, but TV viewing remains high and public service TV enjoys a lot of respect.

People's ability to manage and validate the amount of information they are exposed to is restricted, largely due to the high volume of information. In some cases, it has also proven to be the politically extremist networks that have sponsored the creation of new social meeting places and functions on the Internet. As a reaction to this, people are increasingly turning to the authorities and experts to validate the information that is being disseminated on the Internet, in everyday life and in times of crisis. The public sector is considered to provide accurate information and many authorities are represented on a number of social media sites and are skilled at communicating and interacting with people.

Scenario 5

**Antibiotic-resistant bacteria
spread across the world**

A person wearing a white lab coat and a dark cap is seen from the back, working in a laboratory or pharmacy. They are standing near a white cabinet filled with various bottles and containers. In the foreground, a red and black first aid kit is open on a white table, revealing various medical supplies like band-aids, gauze, and syringes. Next to the kit are several white pills in a blister pack, a pair of blue-handled forceps, and some handwritten notes. The background shows a window with white bars and a white wall.

In 2032, antibiotic-resistant bacteria represent a huge global problem, and the lack of effective antibiotics has had far-reaching consequences for societies worldwide. In particular, the inability of healthcare to use established methods of treatment is perceived as a problem, but antibiotic resistance is also causing major problems for food producers through diseases in animals and plants.

Scenario 5 – Antibiotic-resistant bacteria spread across the world

The world in 2032

In 2032, the EU is a stronger player than ever before with far-reaching political, economic and cultural affinity. The member states have transferred more and more decision-making powers to the common institutions and the “pan-European political parties” are engaging more people. Among other things, the emergence of common threats such as antibiotic-resistant bacteria and tough competition in global trade has driven this development.

In 2032, antibiotic-resistant bacteria represent a huge global problem and the lack of effective antibiotics has had far-reaching consequences for societies worldwide. Many decades of the overuse of antibiotics have resulted in a situation in the early 2020s where the world has virtually no effective antibiotics. As the antibiotics stopped working, most countries have introduced increasingly stringent restrictions in protection against infections, where the sick are often isolated and areas where bacterial proliferation has occurred are cordoned off. After several years of negotiations and many controversies, a ten-year moratorium was adopted in 2027 on the use of antibiotics in virtually all countries. The purpose of this is to let the resistance of bacteria “run their course”, which is possible only if antibiotics are not used for an extended period of time.

In particular, the inability of healthcare to use established methods of treatment is perceived as a problem, but antibiotic resistance is also causing major problems for food producers through diseases in animals and plants. Human behaviour and habits have also changed worldwide. People stay at home even for simple colds and increasingly refrain from travelling.

To some extent, the new methods of treatment that biotechnology has created compensate for the treatments that require antibiotics no longer working, but common infections are difficult to treat. Surgical intervention is avoided wherever possible because of the risk of bacterial infection, and many people are waiting as long as possible to replace a worn-out hip or choose to treat the various forms of cancer with new, less proven treatments rather than surgery.

The situation has created a lot of tension and unrest around the world. Some countries have been identified as being more lax in managing both the ban on antibiotics and in protecting against infections. A constant cause of concern is what would happen if a worldwide pandemic were to break out. In conjunction with an influenza outbreak, many people suffered bacterial complications, which are now very difficult to treat. Additionally, control of the pandemic itself was complicated by the fact that the virus developed resistance to antiviral drugs. Many people across the world harbour a deep distrust of the authorities' handling of the antibiotic resistance issue. Conspiracy theories and rumours spread quickly through various communication channels.

Major scientific breakthroughs

A positive spirit prevails in relation to science and technology, which are seen by many as a means of solving major social problems, such as the consequences of climate change and antibiotic-resistant bacteria. Technical and scientific development is spread over large parts of the world and very tough competitive conditions predominate. Major breakthroughs have been made in many areas of technology, including materials technology, biotechnology, and information and communications technology.

Thanks to efficient water treatment technology through nanoparticles, it is now uncommon for people to die of starvation or lack of water. The development of intelligent computer systems based on artificial intelligence (AI) that can handle more advanced tasks such as translating, planning, learning and making decisions is now also starting to take off. Robotic technology has evolved rapidly in the 2020s, and in 2032 military aircraft and vehicles are, for the most part, entirely controlled by computers. Service robots are becoming commonplace in the streets and in offices, and the majority of Swedish households have at least one robot.

However, in the field of energy technology the major breakthrough that would reduce dependence on fossil fuels and promote more efficient energy production has been conspicuous by its absence. Economic growth throughout the world has led to increased demand for energy. The development of renewable fuels has been sluggish, and global greenhouse gas emissions are still on the rise. Car and truck traffic continues to be petroleum-based, and interest in collaborating globally on emission limits has been lukewarm.



Global climate change is still considered to be relatively moderate and manageable in the early 2030s. However, widespread recognition of the major challenges that lie ahead as a result of continued climate change plays a key role in community planning. Across the world, great resources are being made available for the adaptation of infrastructure and buildings to withstand floods, sea level rise, increasing temperatures, etc.

Sweden in 2032

In 2032, Sweden and the EU are at the forefront of innovation and technological advances, and international trade is growing. Economic growth has also been robust throughout the EU over the last decade. As the EU has evolved to become an even more powerful arena for decision making, many of the issues previously resolved in the Swedish Parliament are now being handled at the EU level instead. Sweden is divided into six politically and economically powerful “major regions”, which also play a significant role in issues related to security, including operational crisis management. The national decision level has declined in importance in relation to the major regions and the EU level, and European Parliament elections are engaging more people.

In 2032, much of socially essential infrastructure such as healthcare, energy supply and transportation is owned by private companies, but the government exerts a relatively strong influence over the way in which operations are run. However, opportunities for the state to prioritise critical resources in the event of a crisis are limited. EU bodies interact with the Swedish central authorities and major regions in terms of the security and preparedness of society, and the EU has issued detailed requirements for resilience and supervision of critical infrastructure based on a security perspective. At the same time, a certain scepticism lingers in Sweden about the authorities, and the general consensus is that individuals have a major responsibility for their own security. Studies show that large parts of the population are well prepared to deal with accidents and emergencies.

There is extensive community involvement both in urban and rural areas. Non-profit organisations are engaging many people and these organisations also assume responsibility for everything from the operation of sports facilities to preparedness in the event of power outages. In many parts of the country, rescue services preparedness is maintained with the support of non-profit organisations. Many organisations are also part of the pan-European networks that collaborate across borders.

Stable population growth and higher standards of living

Population growth in Sweden is in line with the forecasts made in the 2010s, and in 2032 the Swedish population is over 10.3 million. Favourable economic growth in Sweden and the EU means that the standard of living in Europe remains comparatively high. Most of the population has some form of higher education and the distribution of income is relatively uniform.

Even though the problem of antibiotic resistance in bacteria has had major impacts on society, people have so far managed to maintain a generally good level of public health, thanks to excellent initiatives by non-profit organisations to spread information. New patterns of behaviour such as strict hygiene and practices to prevent infection have contributed to better health. Another explanation for the good health status is a generally healthier lifestyle based on nutritious food and exercise. Alcohol and drug consumption has declined dramatically since the early 2000s. In 2032, the robots that have long been used in healthcare and social services in Asia are also becoming more prevalent in Sweden.

Challenges facing social structure

The urbanisation trend that has been part of development of society for much of the 1900s has slowed. Housing shortages and high housing and living costs in urban areas have led to more and more people choosing to live in small towns and in areas that were previously sparsely populated. The “country life” is appealing to many young people and a vibrant economy with new industries and effective new communication systems has made it possible for many people to earn a living outside of the major cities.

The year 2032 is characterised by community building in Sweden as a result of a more cohesive European community. The EU has a far-reaching project that aims to integrate national high-speed train systems into a single pan-European system. In Sweden, new European, national and regional investments in railways and other public transport have made it easier for those who commute to work. Nevertheless, the development of antibiotic-resistant bacteria has led many to choose to work from home or drive instead of using public transport.

Media and communications

In 2032, social and interactive media account for the majority of all communications and information between people, and individuals are exposed to a large flow of information on a daily basis. However, studies show that the majority of people do not perceive this as a problem. Swedes consider themselves to be fully capable of validating information by using and comparing different sources. However, the Swedish government and the EU authorities have found it difficult to keep pace with developments. By way of example, the authorities are represented on social media but have so far failed to find good structures to reach out with community information to a larger number of people. Although there seems to be a willingness to enter into a dialogue with the general public, it is often difficult to reach larger groups than the most interested and well-informed people. In many parts of society, trust in public representatives is low and people prefer information from sources that they sympathise with politically or that are of interest.

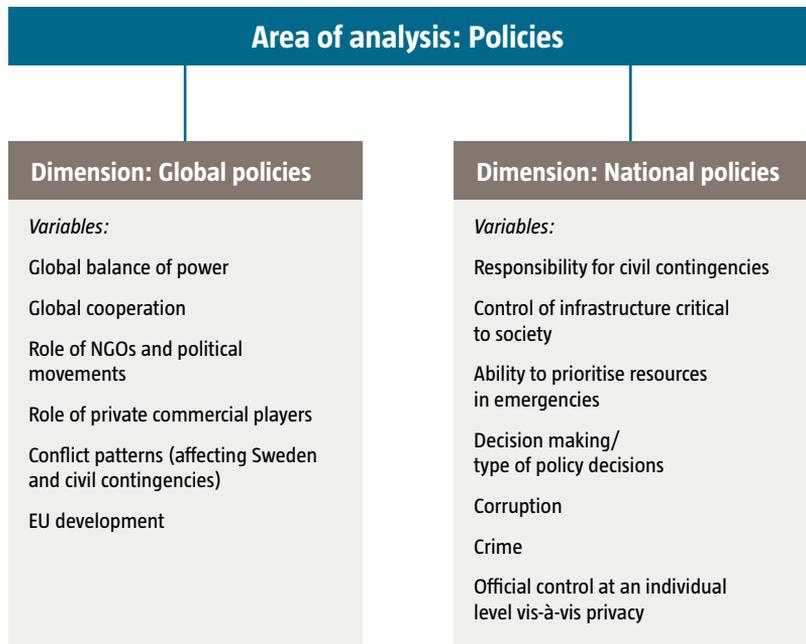
**How are the scenarios
constructed?**

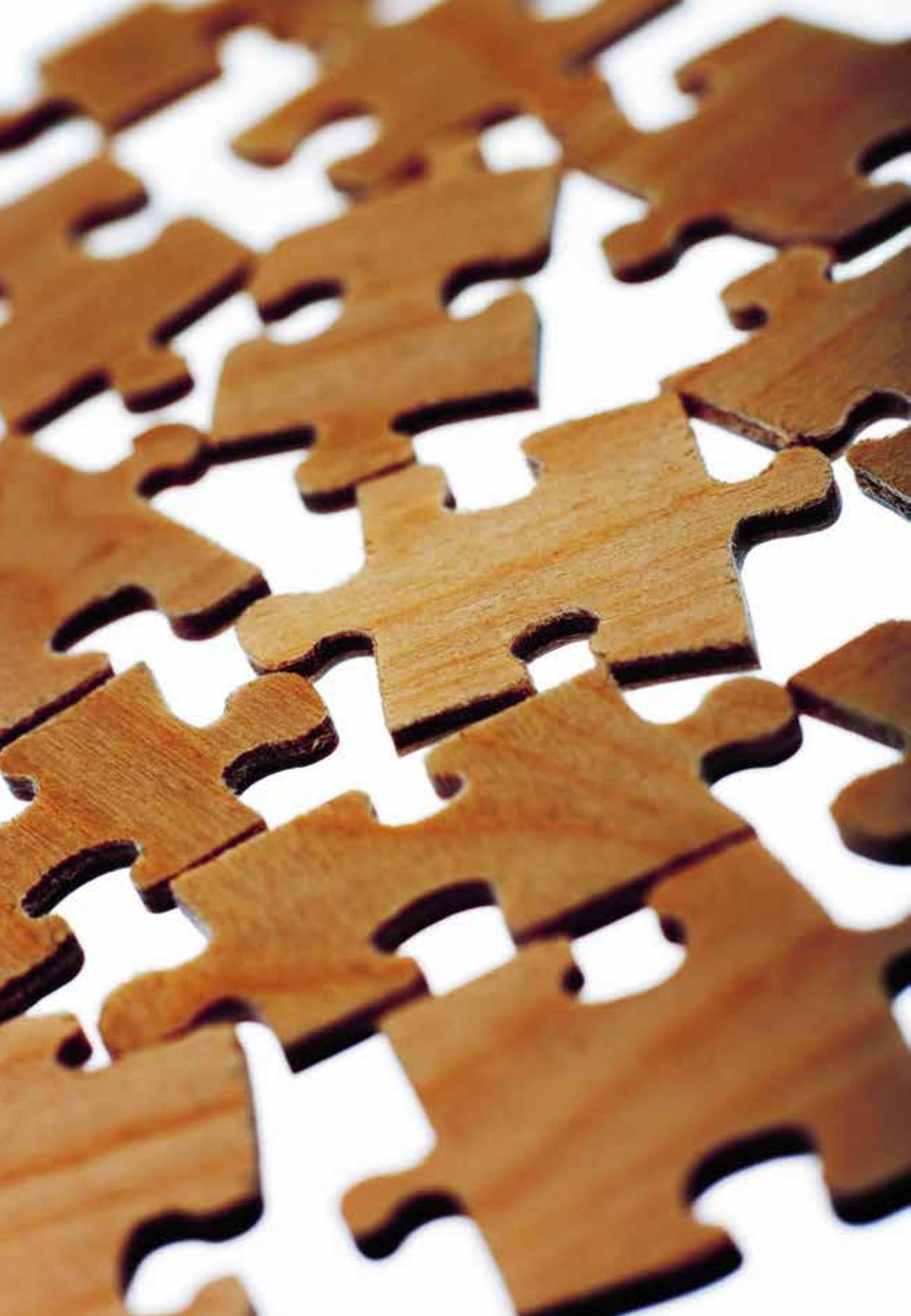
How are the scenarios constructed?

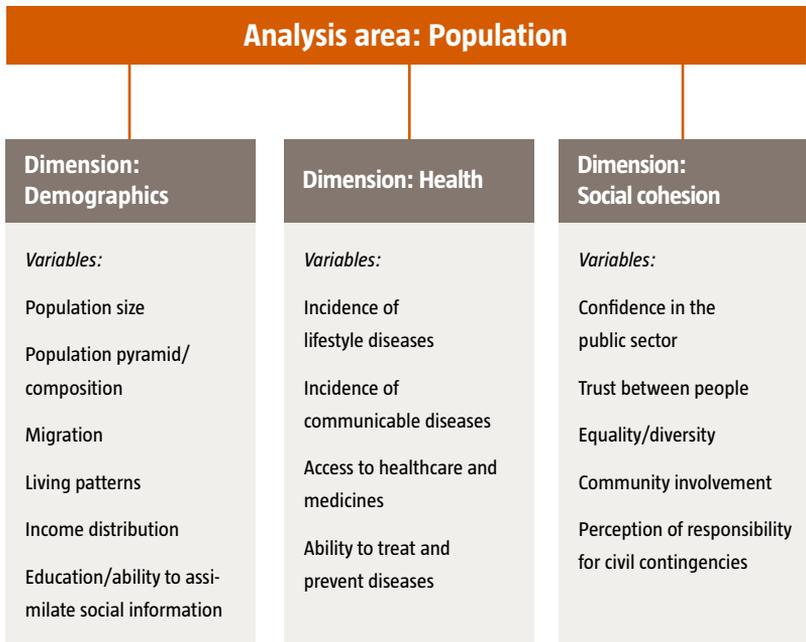
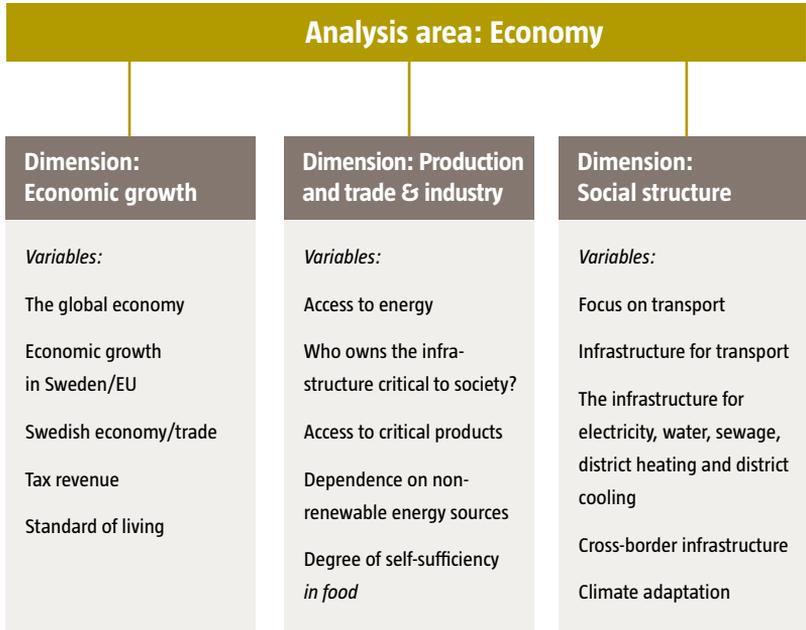
This section provides a simple description of how the five future scenarios have been constructed. A more detailed description of the methodology used to create the scenarios is available in the report “Framtida utveckling som kan påverka arbetet med samhällskydd och beredskap: Redovisning av uppdrag i MSB:s regleringsbrev för år 2012” (Future developments that could affect the management of civil contingencies: Report of the project in MSB’s appropriation directions for 2012) The report may be downloaded from www.msb.se/sv/Kunskapsbank/Utvarderingar--strategiska-analyser/Langsigtig-strategisk-analys/

The five future scenarios are constructed within the six general areas of politics, economy, population, information and communication, climate, and technology. These six areas of analysis consist of 13 underlying dimensions, each of which consists of 4-7 different variables.

The analysis areas, dimensions and variables together make up an analysis structure as illustrated below.







Analysis area: Information and communications

Dimension: Communication between people and players

Variables:

Trusted information media (TV, radio, newspapers, social media, etc.)
Trusted sources of information (who do people trust?)
Information load and ability to navigate
Incidence of misinformation and ability to validate information

Dimension: System requirements for communications

Variables:

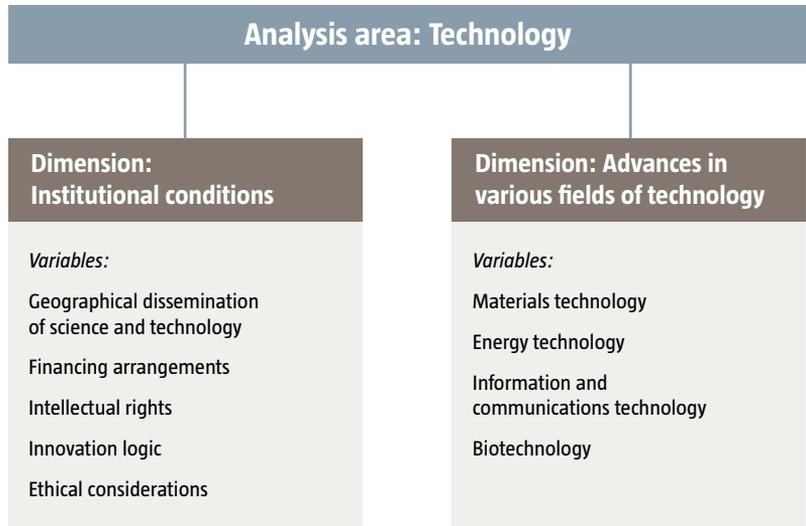
Infrastructure for communications
System redundancy and reliability in operation
An individual's ability to alert at a national level
System compatibility of responders and adaptability of systems
Access to systems in Sweden
Access to systems globally

Analysis area: Climate

Dimension: Climate change

Variables:

Global mean temperature increase in 2030
Rate of climate change after 2030
Temperature and precipitation patterns in Sweden
Expected rise in sea level in Sweden
Frequency and magnitude of natural events



For each of the 13 dimensions, MSB has developed a number of sub-scenarios describing various possible developments in the field in 20 years' time. The analysis structure contains a total of 60 different sub-scenarios.

The five future scenarios have been structured by combining different sub-scenarios in terms of what has been deemed to be thought-provoking and challenging future scenarios. As part of this work, MSB has not made any assessment of the development that is most likely, but all sub-scenarios and combinations of sub-scenarios have been deemed possible.

The analysis structure makes it possible to create additional future scenarios in a clear and subsequently traceable manner. MSB welcomes interested parties to visit the site www.msb.se/sv/Kunskapsbank/Utvarderingar--strategiska-analyser/Langsiktig-strategisk-analys/ for more information and updates from the scenario effort.

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