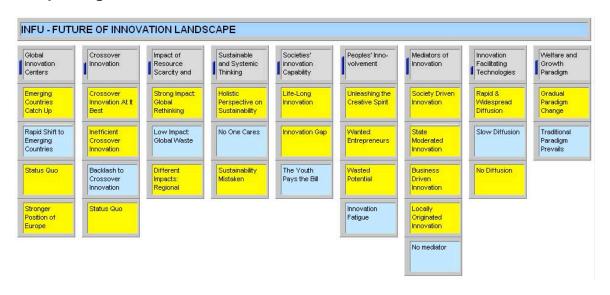


# 4.3 Scenario 2: The Exhausted Giant. European Innovation Fatigue

## Summary: The Scenario in a Nutshell

Demographic ageing, inadequate policy responses, high competitive pressure from other extremely innovative world regions, and a certain "innovation fatigue" of its population cause the European Union to lose most of its innovation capacity by2025. Faced with this situation, policymakers and entrepreneurs stick to obsolete models of growth and welfare, education and innovation. The few remaining innovation activities are exclusively business-driven and not embedded in systemic approaches to sustainable development.

## Morphological Box: The Premises



(\*Premises are highlighted in blue.)

# Key Aspects of the European Innovation Landscape in 2025

- Inefficient education systems: shortages of qualified personnel and creative workforce become more severe, the number of people working in creative industries drops.
- Brain drain: the EU has little to offer as a location for innovation for high-skilled foreign experts.
- Closed innovation: most innovation activities in companies take place in isolated R&D departments, excluding customers and other stakeholders.
- Social innovations remain the exception: too much administrative red tape and too few people with enthusiasm for and commitment to innovation.



- Very low and poorly coordinated public support of research: lack of appropriate innovation framework programs to improve international cooperation, links between academia and commerce, and knowledge production in R&D.
- Innovation fatigue: very low demand for new products and services as well as very low motivation of people to engage in innovation projects. Social initiatives and individually driven innovation projects are almost non-existent.
- Little crossover innovation: disciplinary and "silo" thinking dominates in businesses and research institutions.
- Only small-scale and inefficient use of new innovation facilitating technologies, primarily in major companies and highly specialised research institutions.
- Few efforts towards sustainable development in politics, business and society.

## **Description**

By 2025, most of Europe's innovation capacity has been lost. A lack of students resulted in university departments being shut down, technology parks and business incubators, launched with considerable public funding during the century's first decade, have turned into (at least partly) empty wastelands with birches springing up in Eastern European business parks and cypress trees in Southern European ones. In the cities, the premises of fashion and game designers, the offices of architects, and the practice rooms of bands lie abandoned or have been transformed into large lofts. A major part of the so-called creative class and many post-grads have escaped to hot spots in Asia and Latin America, not least to flee increasing tax burdens. In addition to the R&D outsourcing wave that was already visible in the beginning of the 21st century, most of the companies have relocated their R&D units to Asia or Latin America, where they do not only find young, well-trained and innovative employees and markets of early adopters and fast followers but strategic resources that are limited to the rest of the world due to export restrictions as well. What happened to the continent that had been the cradle of invention? That supplied the rest of the world with innovations – and its spirit of creativity? Some may say that this exhaustion is part of a natural cycle, of growth, maturation, and decay. Others may go so far as to actually welcome it, bringing an end to "change for change's sake". Life has become quieter and a lot more calculable, following the age of consumerism and hectic hustle, heralding in a spiritual dimension, which affects large parts of societies and of people's lifestyles.

## Making old-fashioned goods

For the European economy, this turns out to become a problem. During the past decade, exports plummeted and domestic markets are in decline. Europe is predominately producing uninspiring, old-fashioned, non-innovative products. A "No-Innovation" attitude gains rising popularity and product cycles are becoming longer again. For relative market success especially on domestic markets, unchanging quality is more important than ever-new offers. Efforts to develop trend-setting services have met with little success. Some ten years ago, European goods may not have been cutting edge, but definitely state-of-the-art. Today, they are obsolete, attractive only for a population buying what it always has and unwilling to experiment, no novel glittering gadgets from overseas that might force you to

jump through new hoops. Small wonder that European products have little appeal on the world market, even with the euro as weak as it is and at prices below production costs. Some traditional brands will certainly survive but economic growth cannot rest on this type of activities and traditions.

#### Decline of the innovation framework

Early in the second decade, the writing on the wall was clear to anyone who wanted to see. In the EU, workforces began to shrink in 2011. Europe's populations were ageing. Companies complained about a lack of young, well-trained and creative workers that could replace retiring skilled workers, engineers, and researchers. Everybody was aware of this: The EU was facing a demographic challenge, yet counter measures remained insufficient and inadequate. There were more than enough people willing to immigrate, but social integration schemes still did not work out as desired. No political Sunday speech was without calls for more children, better education, higher work participation of women and elderly people, work-life balancing, life-long learning, and more innovation. But when it came to realising actual improvements, the prevailing mood seemed to be that reforms are the replacement of a state with known disadvantages by a state with unknown disadvantages.

Also, the burden of accumulated public debts prevented any significant investments into the future. Soaring welfare costs – pensions, unemployment benefits, and health care spending – left no scope for manoeuvre. Quite literally, the European Union was paying for past inactions. Yet it still hoped to maintain its lofty status quo and said so. However, initiatives such as the "Europe 2020 Flagship Initiative 'Innovation Union' came and went with hardly an impact. As a consequence, the EU and the member states increasingly failed to promote the needed innovation programs, to introduce new, in particular more efficient educational models, and to fund high-class research infrastructures – and this was precisely what formerly "emerging" countries were doing. Populations with little trust in their governments continued to react with confusion and mass demonstrations. Thinkers who continued to lecture about the need for reforms remained unheard while enjoying a high reputation abroad.

#### Spotlight 2025

Automatised Innovation by Auto-Inno 3.0. Advertisement

Suffering from a lack of young and inspired innovators? Feeling the pressure of global competition when developing new products and services? Auto-Inno 3.0 is here to help. Virtual Innovation Inc.'s latest release of its innovation toolbox for enterprises is the finest creation ware on the European market. As a self-adapting innovation suite, it can be customised to 29 languages and it is able to run in any software environment, no matter how old your cloud application may be. Auto-Inno 3.0 is based on the most advanced insights of brain research, simulating cognitive processes in the human and higher animal mind. It combines the adaptiveness of a cat with the panoramic view of an eagle and the sense making of a human being. Auto-Inno 3.0 not just supports innovation processes, it replaces employees and external experts in all stages of the innovation process. It is open and closed innovation in one piece. Just as its mega-selling predecessor Auto-Inno 2.7 (released in 2024), Auto-Inno 3.0 outdoes any other web-based innovation tool. It identifies bright ideas even within hidden domains of the Web. It extracts inspirations from everywhere in the virtual world, but with its TRIZ-based ideation-generator it also combines and transforms findings into novel concepts, novel products, novel services, and novel business models. Virtual products created with Auto-Inno 3.0 can be exported to any current fabbing machine.



Services and business models can be transformed into virtual business platforms of advanced standard. Innovation may be 5% inspiration and 95% perspiration, but Auto-Inno 3.0 with its artificial intelligence can handle both sides: having an idea and seeing it through to market maturity. Auto-Inno 3.0 helps you adapt innovations to your customer base. Depending on your preferences, innovations too radical and too novel are filtered out, and moderate innovations which suit the needs of old and conservative clients given priority.

## **Urgent need for researchers**

Companies first tried to compensate for the lack of public innovation engagement and the shortage of young innovators. Often, researchers would postpone retirement till 70 – well beyond the official retirement age of 65 to 67. Occasionally, a business would try to involve – more or less by force – all of its employees, from janitor to board member, in innovation activities. The result was often only an increased reluctance to innovate. Others experimented with web-extracted innovation: Intelligent software agents search the web for useful ideas, unmet needs, changing consumer preferences, inventors who lack capital, etc. But in general, the expensive technologies that could foster innovation remain out of reach for all but a small share of major companies. And of course, even the best technology cannot replace the "human factor".

#### Spotlight 2025

Go East, Young Man.

From the 3D-edition of The Singapore Times (TST), March 29, 2025, 9 p.m.

<u>TST</u>: Mr. Miller, there have been complaints about the harmonised ASEAN immigration regulations...

<u>Miller</u>: This does not affect me. And, honestly, do you feel that an IQ threshold of 110 according to the Pacific standard scale is too high for immigrants? I passed the test without much effort. Inventing a new name for some high-tech suitcase is not exactly a brain-twister, is it?.

TST: So you feel comfortable with the Innovativeness Quotient...

Miller: Sure.

TST: And what are your reasons for leaving Europe?

<u>Miller</u>: Primarily, it was the feeling of decline, both in my company as well as in society in general. The GDP is stagnating at best, pension schemes are highly disputed and exports are dwindling, and nobody really seems to care. Europeans are so risk-averse that they are unaware of the greatest risk of all – and that is not taking any risks at all.

TST: Could you provide some more detail for us non-Europeans?

Miller: It is the mentality. Most Europeans prefer things to be tried-and-tested. I am also speaking of regulation. You'd be mistaken to believe that Europe had little regulation based on the fact that people are allowed to eat on European commuter trains. Rather, quite the opposite is the case. There are directives and laws and decrees for everything. I am specialised in a very specific field of nano-structured surface technologies. My team invented a number of ways to ... Well, I'd better not bore you with too many details. But none of our five key inventions made it onto the market. My employer's pencil-pushers "de-prioritised" one since they had no idea of the potential market size, two are still being tested for the potential emission of harmful nano-particles, one won an innovation award but fear of possible interactions with some detergents finished it, and the last one made it to the market only for public mood to turn suddenly against nano-machines, relegating all nano-enabled products to becoming shelf-warmers.

TST: So frustration made you leave your country.

Miller: I am now fifty-five, just the right time to start a business of my own. It is so much easier to set up a company here. I am well connected globally. With my experiences in innovation management, I am going to offer my services as an "innovation chain manager" for companies who want to globally source innovation resources. Perhaps I will even succeed in luring some of my old European colleagues into the network.

## Sustainability neglected

Ultimately, top management has to answer to its shareholders and to provide convincingly high quarterly profits. According to the traditional growth paradigm, only short-term success counts, not long-term competitiveness. And why should a company stick to a European city as headquarter, if profits come from elsewhere, if markets develop elsewhere, if its workforce originated elsewhere, if R&D and innovations were made elsewhere – or on the web, which belongs nowhere? As the climate for growth and innovation worsened in Europe, many companies looked for more promising lands.

By about 2020, executives and policymakers began to feel that sustainability had ceased to be desirable and become a kind of luxury, something from a period with plenty of capital available. Of course, people continued to pay lip service to saving the environment, saving the climate, saving the planet, but this did not amount to much, and most Europeans no longer expected their leaders to realise key measures. Other countries, in particular these latecomers in Asia, were worse polluters. Other continents – like South Asia or Africa – were far more affected by climate change. So, why bother? Why take the lead? Why shoulder the burden of environmentally correct behaviour? Most European elites assumed that piecemeal measures would suffice to prove their good intentions and that a real systemic approach to sustainable development would overload all sorts of capacities, financial, personal, organisational. Even adherents of sustainability admitted that implementing new sustainable business models and processes causes high initial costs and increases complexity and market risks.

In former times, NGOs and even the European Commission had elaborated on the benefits of environmental investments and calculated the net economic gain from redirecting investments into "green" growth. But in a period of shrinking or – at best – stagnating economies, this message seemed more and more utopian, wishful thinking from days past. The primary concern of large parts of the European population and of most companies remaining in the old continent was simply to muddle through in dire times. Day-to-day thinking and living dominated. Some called it "flow" and considered it a re-discovered virtue. Most people, however, were little inclined to reflect on their situation in this way. They found themselves absorbed in carving out a living or getting access to adequate medical care. Perhaps one should emphasise that there were two fields in which innovation continued to flourish: the subsistence economy of poor people and organised crime.

# **Basic Impacts**

.. ageing population slowing down

.. setirement postponed ..

... living better consuming less ...

## Positive Impacts<sup>11</sup>

- Increasing business opportunities and sales potential for foreign companies using Europe as a mainstream market for extended product life cycles and to install an additional long tail for their strategies.
- High competitive strength of globally operating European companies that relocated R&D departments and other critical business units to "emerging" countries such as Asian and Latin American regions at an early stage.

## **Negative Impacts**

- Deterioration of Europe's economic situation and declining welfare spending
- Lack of appropriate framework conditions and opportunities for young creative people (who leave the European Union in ever greater numbers)
- Gloomy outlook for researchers, teachers, and professional coaches as research budgets shrink and automatised innovation efforts increase
- Much-needed entrepreneurs face increasing administrative and financial obstacles
- Unfavourable conditions for citizens with ideas for social innovations who face a risk-averse social environment reluctant to innovate
- Negative business environment and bad conditions for carrying out R&D for globally operating companies from Europe that failed to relocate R&D departments to other world regions at an early stage
- As tax revenue declines, public funds suffer
- Society, commerce, and politics pay little attention to environmental aspects. Dramatic loss of Europe's former leading position in clean-tech

# Main Milestones: A Short Roadmap

- 2010 European population is shrinking; high public debt become impossible to reduce or even contain, notwithstanding the EU's official incentives and regulations. European Union and member states still pursue an agenda of innovation and competitiveness.
- **2015** Innovators start to leave Europe; large companies shift their innovation activities to emerging markets.

Full impact of budgetary problems on the economy: Health and pension spending absorb (deficitary) governmental budgets.

Dramatic lack of a young and skilled workforce. Teachers and trainees fail to renew their skills and competencies.

<sup>&</sup>lt;sup>11</sup> For further positive impacts, please also see the Scenaretto "When the race is over" on page 32.

European competitiveness in decline
Exports and domestic markets begin to shrink
Sustainability is no longer seen as an imperative
State-driven innovation programs and excellent educational conditions mean that "emerging" countries outperform industrialised countries in breakthrough innovations.

**2025** Dramatic lack of innovations and creativity in the EU.

#### **Related Innovation Visions**

The following (consolidated) visions, which have been developed and discussed in the previous INFU work packages, are particular relevant and become mainstream within this scenario:

#### **Automated Innovation**

Several new techniques, e.g. semantic web analysis, make it possible to automate parts of the innovation process, from idea generation to design and testing. Sophisticated semantic filters track changes in consumer preferences and new ideas in real time, and autonomously identify innovations with exceptional market potential. Virtual-only products satisfy the human appetite for newness. They can be accessed by the public in virtual galleries or be projected on demand into homes and offices for individuals. Some of these products are never materialised.

### **Innovation Chain Integration**

Innovation is expected to become globally dispersed. But what mechanisms will be used to integrate the distributed and diverse elements and to match ideas and solutions with problems and needs?

Combined with Europe's decline, the global integration of innovation chains means that the bulk of successful and disruptive innovations comes from today's emerging markets. The West becomes a follower and having to face products primarily designed for different cultural contexts. Western companies wishfully look to Asia, often with the help of industrial espionage. Creative people migrate to the new innovation hot spots in Asia and send back remittances to their aging relatives in the US and the EU.

#### **No-Innovation**

What if innovation fatigue takes over and No-Innovation becomes en-vogue? The innovation rush is finally slowing down. Product cycles are extended. For market success, unchanging quality is more important than ever-new offers.

Scenaretto: When the Race Is Over



Shouldn't this be considered a natural development, or, even better, a sign of maturity? The EU has given much to the world, and now it takes a backseat and lets others take the lead. After more than two centuries of progress, economic growth, acceleration in all spheres of life, Europe is opting for a slower pace. Let the strong and young compete. "Living better with less" is one of the slogans of this new spiritual age. The digital life-style, once the sign of the time, has ceased to be desirable. Less media use, more real communication – face-to-face, this is one step on the way to a life of physical and spiritual health and happiness. "You are producing electro-smog" has become an oft-issued warning...

Innovation has lost its positive connotation and is increasingly considered an unwanted burden, something that unnecessarily shakes up society and makes difficult things even more difficult (evident in the constantly growing number of manuals). Companies feel that they are better off if they limit the number of people involved in their innovation processes and voluntarily abandon all attempts that aim at the opposite. Products may be less innovative and less "cutting edge" as they used to be, but quality has increased, they last longer, offer real usage and emotional values for owners and users – let the economists argue whether the value added has in- or decreased. Europeans are producing less waste, less  $CO_2$ , cause fewer environmental problems. – "If you want to grow", they say, "grow spiritually, and your ecological footprint decreases." Perhaps some day, other people will begin to envy Europeans for their relaxed, spiritual, calm lifestyles.