

# EU AND UK – SHARED VISION

Brexit and COVID-19



# Executive Summary

COVID-19 changed a lot in this world. Before the global pandemic, the EU Commission launched a €70 billion-worth flagship initiative called the Horizon 2020. The idea of the ambitious project was to support all the research and innovation activities needed to secure Europe's global competitiveness and a bright, sustainable future for all Europeans.

When it was a part of the European Union, the UK was a key player and supporter of these kinds of initiatives. After the Brexit, things changed, and the UK started investing its own £7 billion-worth innovation and research initiatives. While the two long-term allies are separated right now, UK and EU's core visions regarding technology, innovation, and societal improvement remain the same according to our research.

But the question remains: what should the manufacturers in both EU and UK do for a greener, sustainable, innovative future, and fight for economic rehabilitation in the post-COVID world? Biz Dev Dynamics research team prepared a special COVID-19 report about overlapping booming sectors, red flags, challenges, shared visions and

interests of the European Union and the United Kingdom.

We thoroughly inspected the EU/UK strategies to develop crystal-clear visual analysis and roadmaps of the future EU/UK sectors and industries, including health & culture, creativity & inclusive society, civil security for society, food, space, climate, energy, and other areas. Every sector has a list of missions and essential projects.

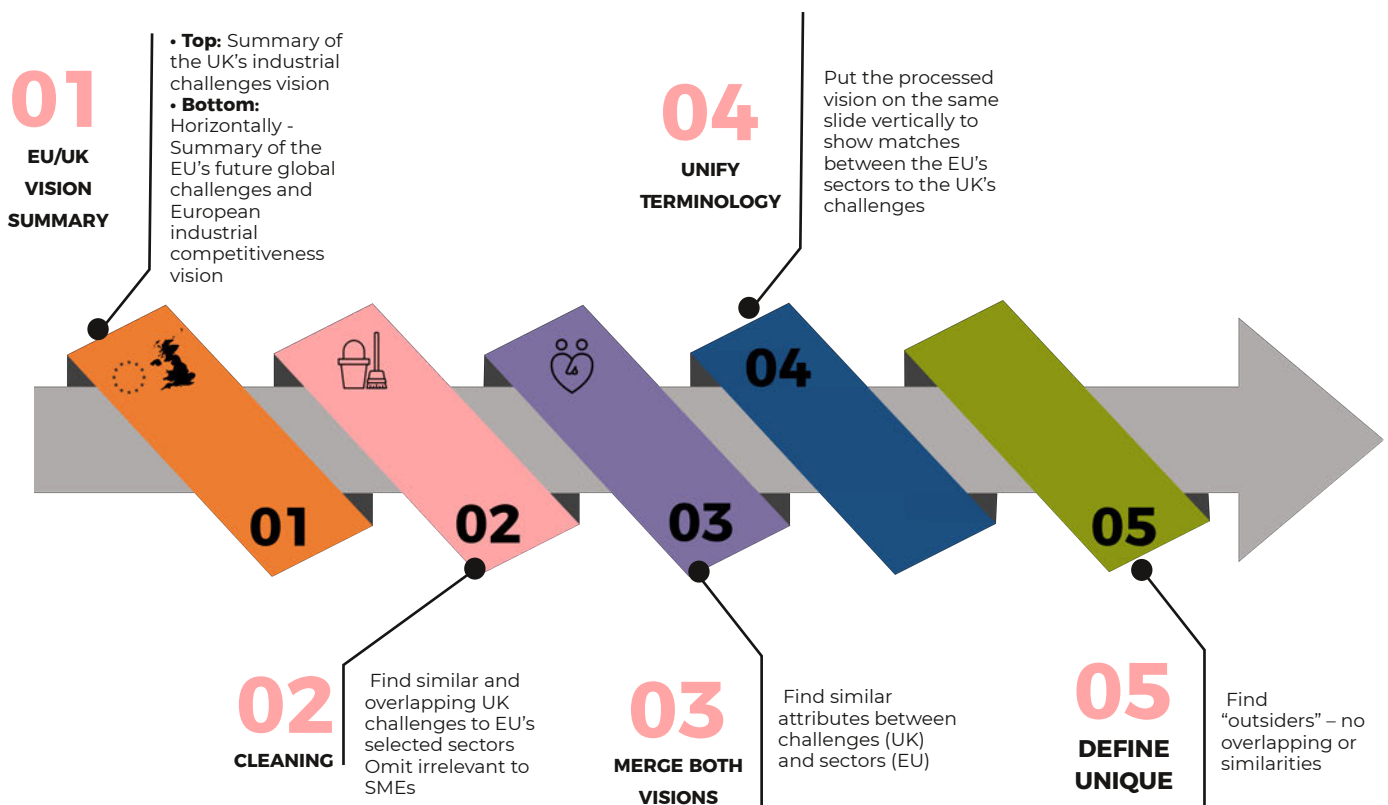
The aggregation of issues discussed in our report leads to a strong argument: the UK might face a short blanket syndrome. The urgent necessities rising from the pandemic and departing from the EU, lay doubt on the ability to support R&I. Although recognized as crucial and declared policy to send reinforcement funds, R&I for SMEs might suffer. The shared EU/UK vision could be endangered.

As for the red flags, technology easy to become obsolete, so SMEs could not achieve ROI. The complexity of the supply chain and Brexit is exacerbating free trade, and UK firms might need to prioritize 'survival' mode instead of 'innovation' mode.

# Methodology to Inspect the EU/UK Future Industries Vision

Inspecting the EU's vision and the UK concerning future industries and sectors is a good test case. It provides all-level decision-makers with an overview of a fundamental brick in the European

economy and next-years' strategy. To do that, we used a visual comparative methodology to create a unified terminology and find how these visions look when they are attached smartly.



# The EU Roadmap – Sectors, Missions and Projects



01

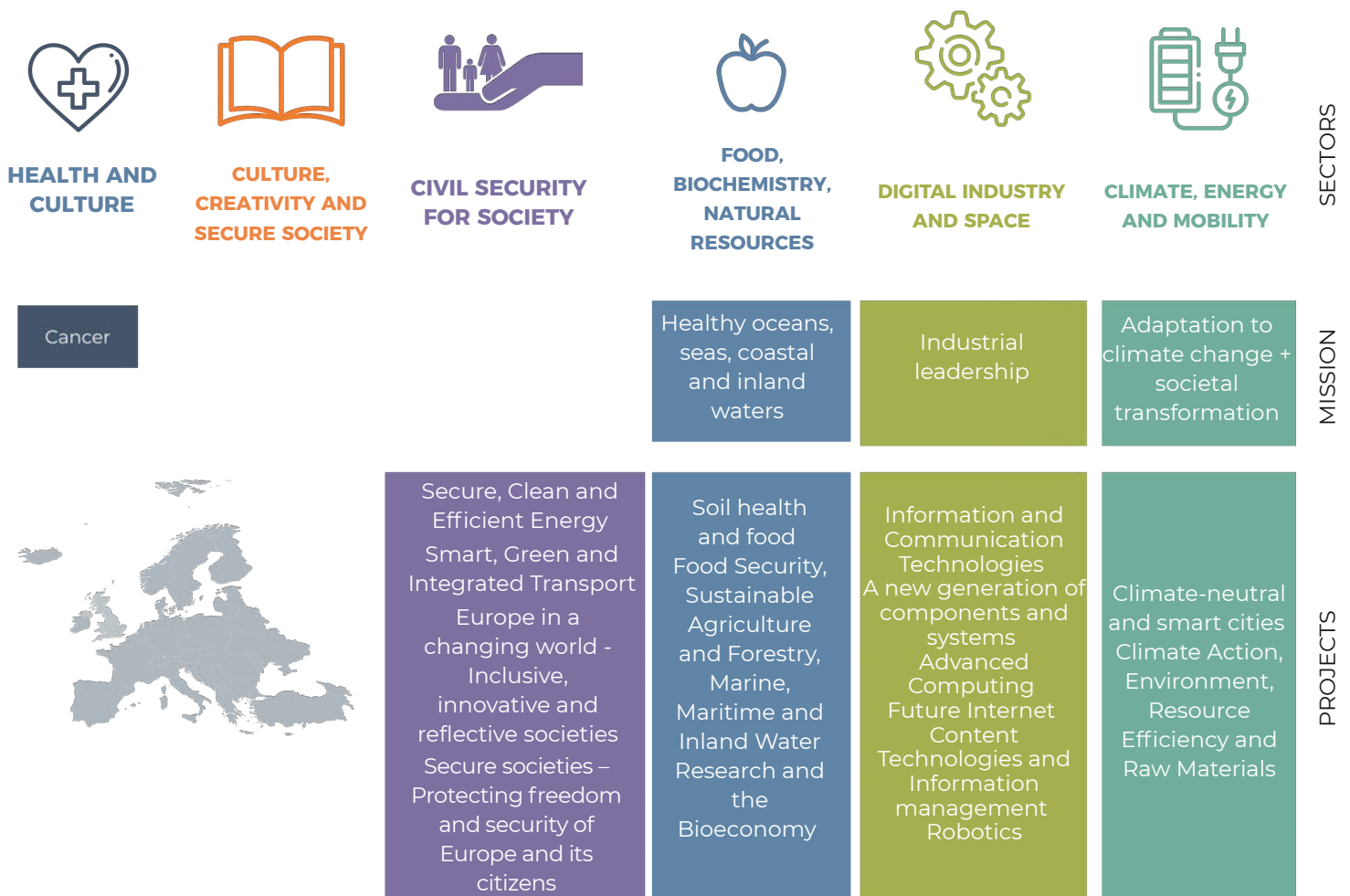
The EC defines three "pillars" in its strategy:

- Excellent science
- Global challenges and European industrial competitiveness
- Innovative Europe

This is a graphic depiction of the sectors within the 2nd pillar.

(There are special missions defined within each sector to receive extra attention and resources)

Headlines depict the clusters of projects accepted to the EU's Horizon 2020 and EIC initiatives that relate to the defined pillars.



# The UK Roadmap – Industrial Challenges



01

This is the UK's sectors and industries defined by the UK Research & Innovation agency with a short description to clarify the content behind the headline.

- Accelerating Detection of Disease
- Audience of the future
- Creative industries clusters
- Quantum technologies
- Driving the electric revolution
- From data to early diagnosis and precision medicine
- Industrial decarbonization
- Healthy ageing
- Leading-edge healthcare
- Manufacturing and future materials
- National Satellite Test Facility
- Next generation services
- Prospering from the energy revolution
- Robots for a safer world
- Self-driving cars
- Smart Sustainable Plastic Packaging
- Transforming construction
- Transforming food production
- Low cost nuclear
- Future flight
- Digital security by design
- Faraday battery challenge
- 5mil healthy volunteers for research study
- New immersive technologies - virtual, augmented and mixed reality fastest-growing creative industries, including film, music, video games and architecture
- Establish quantum technologies products for UK's global advantage
- Next generation electric vehicles, hybrid aircraft, energy generation, smart grids, industrial drives, consumer products, low-carbon off-highway for construction and agriculture, low-carbon maritime and rail.
- Combine data and real-world evidence from our health service for early diagnosis
- At least one low-carbon industrial cluster by 2030 and the world's first net-zero carbon industrial cluster by 2040
- Enable businesses, including social enterprises, to develop and deliver products, services and business models that will be adopted at scale which support people as they age.
- New facilities, research and innovation projects that speed up the development and manufacture of new medicines such as advanced therapies for the benefit of patients
- Develop the next generation of affordable light-weight composite materials for aerospace, automotive and other advanced manufacturing sectors
- 3,500 to 10,000 satellites due to be launched by 2025. The UK needs a world-class central facility with access to a comprehensive set of satellite test capabilities
- Services – including legal, accounting and insurance (i.e. artificial intelligence and data analytics)
- Smart energy systems can intelligently link energy supply, storage and use, and power heating and transport in ways that dramatically improve efficiency (\$2 trillion a year estimated yearly investment)
- To transform industries with extreme environments, such as nuclear and offshore energy, deep mining and space + improvement how the UK delivers industrial and public services
- Aims to make the UK a premier development location for connected and automated vehicles
- Establish the UK as a leading innovator in smart and sustainable plastic packaging for consumer products, delivering cleaner growth across the supply chain
- Support industry in adopting technologies and help buildings to be constructed 50% faster, 33% cheaper and with half the lifetime carbon emissions
- Produce resilient and sustainable food more efficiently - environmental management and earth observation, sensors, big data, artificial intelligence and robotics
- Small Modular Reactors (lead by Rolls-Royce consortium)
- New technologies from freight-carrying drones to urban air vehicles to hybrid-electric regional aircraft + supporting ground infrastructure, regulation and control systems
- Radically update the foundation of the UK's insecure digital computing infrastructure – Cyber, IOT, AI etc.
- Scale-up and advance the production, use and recycling of batteries (market £5 billion to the UK and £50 billion to Europe by 2025)

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# "Cleaning" - Unification of Similar or Overlapping Clusters and Remove Irrelevant



02

## UNIFIED CLUSTERS

- Driving the electric revolution = Vehicles, aircrafts, motors – low carbon, off highway, autonomous + supporting infrastructure
- Leading-edge healthcare

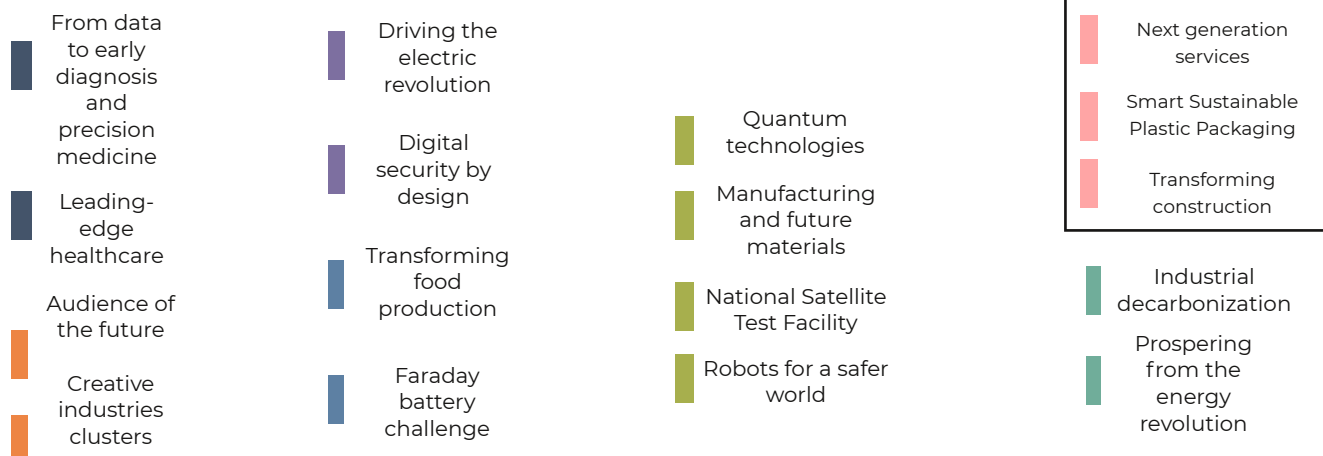
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Irrelevant for SMEs

# Unify the terminology (EU – Sectors, UK – Challenges)



03



**HEALTH AND  
CULTURE**



**CULTURE,  
CREATIVITY AND  
SECURE SOCIETY**



**CIVIL SECURITY  
FOR SOCIETY**



**FOOD,  
BIOCHEMISTRY,  
NATURAL  
RESOURCES**



**DIGITAL INDUSTRY  
AND SPACE**



**CLIMATE, ENERGY  
AND MOBILITY**

SECTORS

Cancer

Healthy oceans,  
seas, coastal  
and inland  
waters

Industrial  
leadership

Adaptation to  
climate change +  
societal  
transformation

MISSION



Secure, Clean and  
Efficient Energy  
Smart, Green and  
Integrated Transport  
Europe in a  
changing world -  
Inclusive,  
innovative and  
reflective societies  
Secure societies –  
Protecting freedom  
and security of  
Europe and its  
citizens

Soil health  
and food  
Food Security,  
Sustainable  
Agriculture  
and Forestry,  
Marine,  
Maritime and  
Inland Water  
Research and  
the  
Bioeconomy

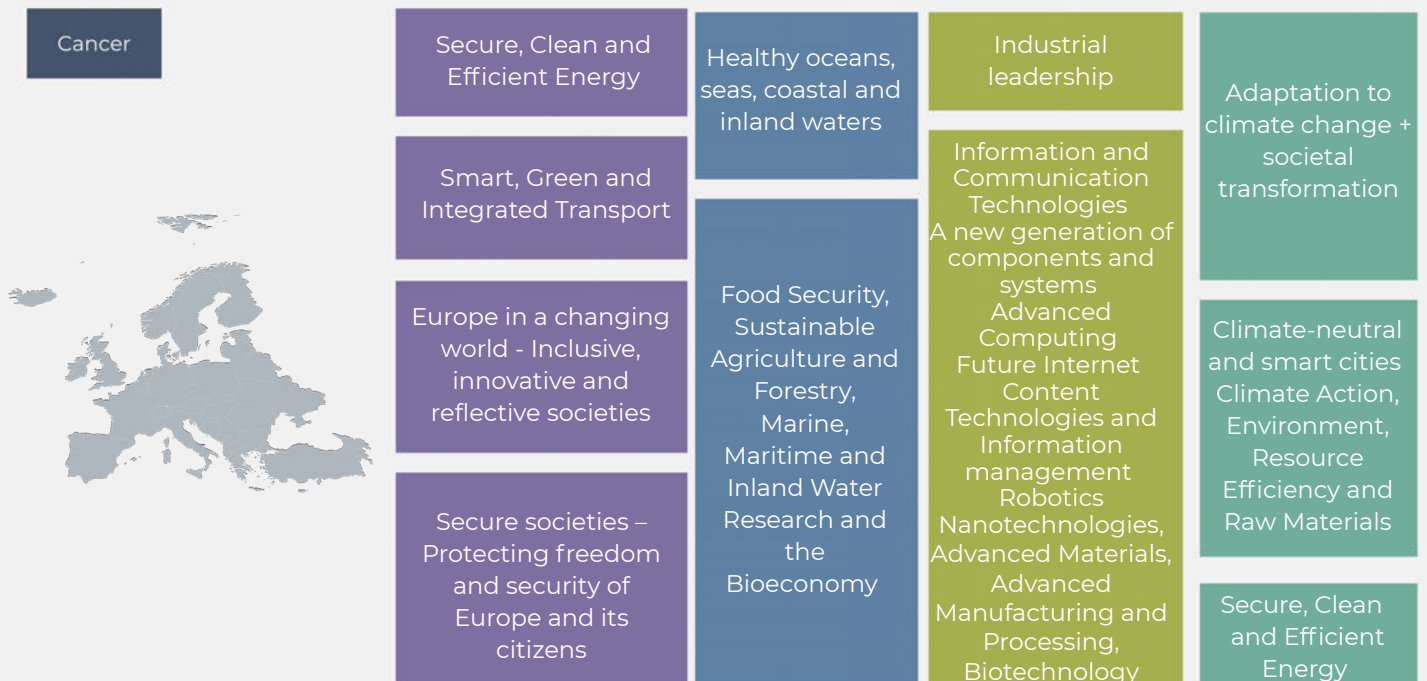
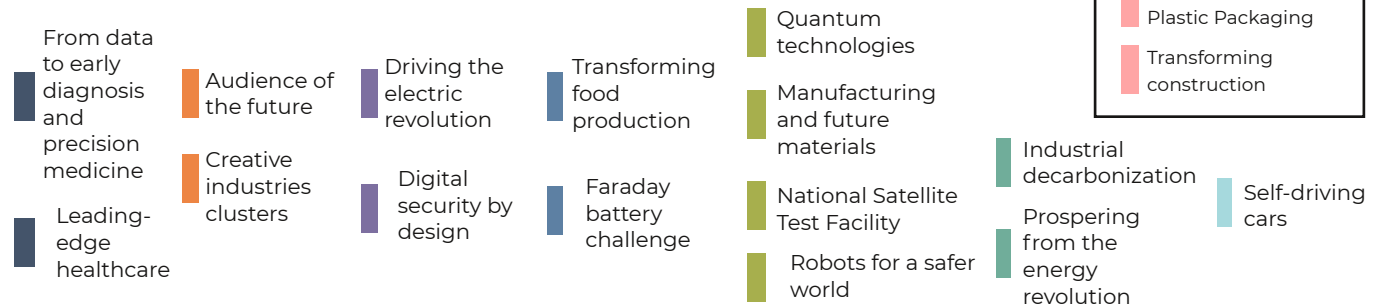
Information and  
Communication  
Technologies  
A new generation  
of components  
and systems  
Advanced  
Computing  
Future Internet  
Content  
Technologies and  
Information  
management  
Robotics

Climate-neutral  
and smart cities  
Climate Action,  
Environment,  
Resource  
Efficiency and  
Raw Materials

PROJECTS

# UK and EU Industries - A Roadmap

## UK ROAD MAP



## EU ROAD MAP



# Consolidated and Merged



## HEALTH AND CULTURE

- Cancer
- Leading-edge healthcare



## CULTURE, CREATIVITY AND SECURE SOCIETY

- Audience of the future
- Creative industries clusters
- Healthy aging



## CIVIL SECURITY FOR SOCIETY

- Driving the electric revolution
- Digital security by design



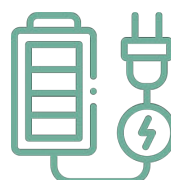
## FOOD, BIOCHEMISTRY, NATURAL RESOURCES

- Transforming food production
- Faraday battery challenge



## DIGITAL INDUSTRY AND SPACE

- Quantum technologies
- Manufacturing and future materials
- National Satellite Test Facility
- Robots for a safer world



## CLIMATE, ENERGY AND MOBILITY

- Industrial decarbonization
- Prospering from the energy revolution

We find these are quite unique and chose to leave them outside the clusters



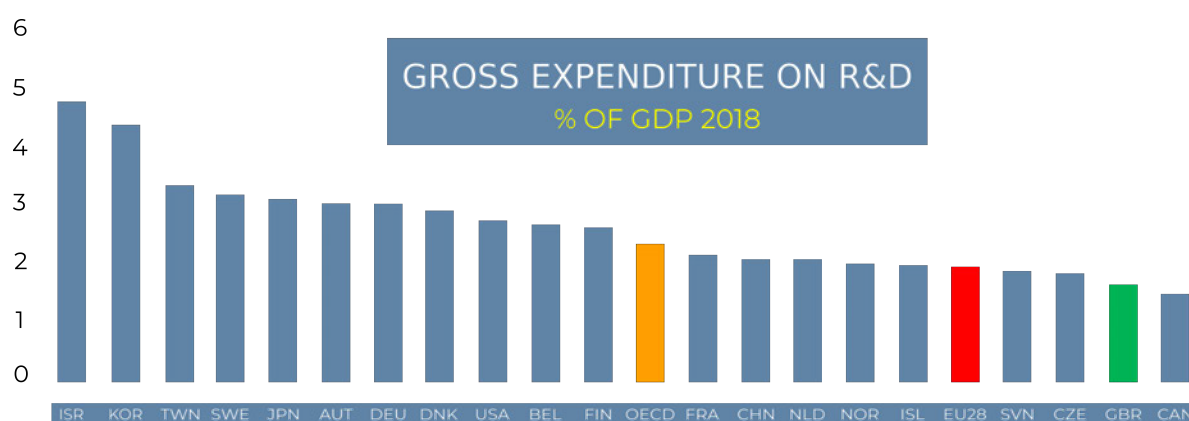
- Next generation services
- Smart Sustainable Plastic Packaging
- Transforming construction

# Short Blanket

As mentioned, the European Commission's primary instrument to implement its strategic plan is the Horizon 2020 initiative. The central pillar is set to deal with Global challenges and European Industrial Competitiveness, as we canvassed thoroughly before. It seems that the Horizon 2020 core funding remains unchanged. Funds needed to support the January 2020 call

Unfortunately, COVID-19 might put a big spoke on the wheels of research budgets. The combination of highly elevated health-system costs, immense funding demand from businesses, and a sharp recession forecast significantly jeopardize the ability to support the investment goals.

Adding Brexit as a significant factor to



for COVID-19 research projects, were diverted from the budget reserved for health research and was increased from €10m to €48.5m. Furthermore, the European Commission seems to be taking substantial measures to maintain continuity and mitigate as much as possible the disruption caused by the pandemic.

The UK is considered a leader of innovation in the OECD and a spearhead in R&D in the EU framework. Hence, bold declarations on reaching 2.4% of the GDP dedicated to research and set it to £22 billion by 2025. This is to be considered a good sign for the innovation and science community. It depicts the understanding of the government that R&D is a long-term investment.

the equation and the unsettled EU/UK trade deal is also casting a shadow.

An alarming signal to support the above assumptions is to form expected changes in the UK's participation in Horizon 2020. To regain application rights and benefit from the initiative and its benefits, the UK will pay more<sup>4</sup> compared to the investments before the BREXIT.

**Conclusion:** The aggregation of issues discussed here is leading to a strong argument: The UK might face a short blanket syndrome. The urgent necessities rising from the pandemic and departing from the EU, lay doubt on the ability to support R&I. Although recognized as crucial and declared policy to send reinforcement funds, R&I for SMEs might suffer. The shared EU/UK vision could be endangered.

# Red Flags

## 1. Shortened "time to technological obsolescence."

It costs one arm and one leg for SMEs to catch up on R&D with giant players; some booming sectors may not be suitable for SMEs to go after.

For SME manufacturers that could not afford a failure in technology and product development, the efforts, and limited budget they put in transforming and upgrading aiming at outperforming may come in vain. Technology-intensive businesses usually involve an R&D budget competition where the SMEs could barely win.

Some of the latest technologies may become obsolete before reaching the market.

## 2. Complexity in supply chain

Manufacturers accumulated network and know-how in their own business. In the context of the COVID-19 crisis, many people are seeking new growth, the UK and EU's shared vision on the promising sectors are a great reference. However, there are many nuances when it comes to new business, among which the supply chain remains a problem.

If you have not established a long-term, stable relationship with a raw material supplier, the chances are that you could not either get a competitive price or a steady volume.

## 3. BREXIT & de-globalization

Whether you realized it or not, de-globalization is happening. The world has enjoyed free trading and open trading for a long time, but the trade war between China and the USA, followed by the COVID-19 crisis, began to break the globalization bubble. A "no-deal" BREXIT might make the situation more complex if UK loses favored trading terms with the EU single market.

From a global perspective, more than 90% of countries have closed their borders to those countries that do not share similar health protocols. The situation has improved as the re-opening starts progressively. But what remains is the fear and changed mindset.

In this case, the repercussions could be two-fold for the manufacturers. On the one hand, the original suppliers are now disrupted in their logistics chain due to COVID-19, so manufacturers are forced to seek available sourcing – geographically speaking. The best or the cheapest raw material is no longer a priority; instead, it is the accessibility. When you have fewer and fewer options for available manufacturing material, there is less room for innovation.

On the other hand, with limited access to the existing customer base and regional market, manufacturers might need to focus on fighting for survival to win as many customers as possible in the addressable market. Survival wins.



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This research was conducted by **Biz Dev Dynamics Ltd**, researchers **Nir Gendler** , **Chen Wang** and **Alex Kharchenko**. Art work by **Cosmina Vlad**

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