

# Project Future Ecom: State of the Art Report Innovation and Product Development



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## 1) Introduction

Whilst ecommerce might be strictly defined as the carrying out of transactions using electronic and digital technology, for the Future Ecom project we are looking more widely at all the processes that companies might need to adapt in order to make the most of the ways in which digital transactions can improve the business. This runs from innovation

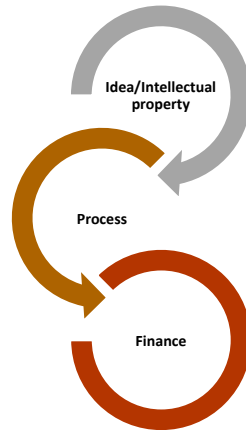
Innovation is a difficult topic to define. A dictionary definition is “A new method, idea, product etc.”<sup>1</sup> In business this can be considered simplistic. Having new ideas is the easy part. It is taking the idea and proving that it has application that makes real innovation. And yet even this needs impact and innovation adds little value without implementation. Using this definition the most important innovations are those that can be applied. These can be completely new ideas or the new application of older technology in new environments (new to me).

Technology is recognised as a key driver of innovation. Adoption of technology is usually left to the businesses involved in the industry. Most sources are agreed that we are on the cusp of a major shift in patterns of work and not just of manufacture.

## 2) Current situation

There is a great potential for innovation in digital, both within the technology and through using digital technology to increase the speed technologies of innovation and product development. Artificial Intelligence, Machine Learning and the Internet of Things all provide opportunities to improve processes and products for all kinds of business. Developing and using these technologies requires a significant upskilling of staff in the businesses at all levels. If managing authorities want their businesses to participate in and benefit from this revolution, then identifying and highlighting these opportunities and creating this preparedness must be a priority.

Commercial innovation can be a complex process. It requires expertise across the business. The Harvard Business Review defined the key elements as Intellectual Property, Process and Finance. These elements are both sequential and part of an iterative process.

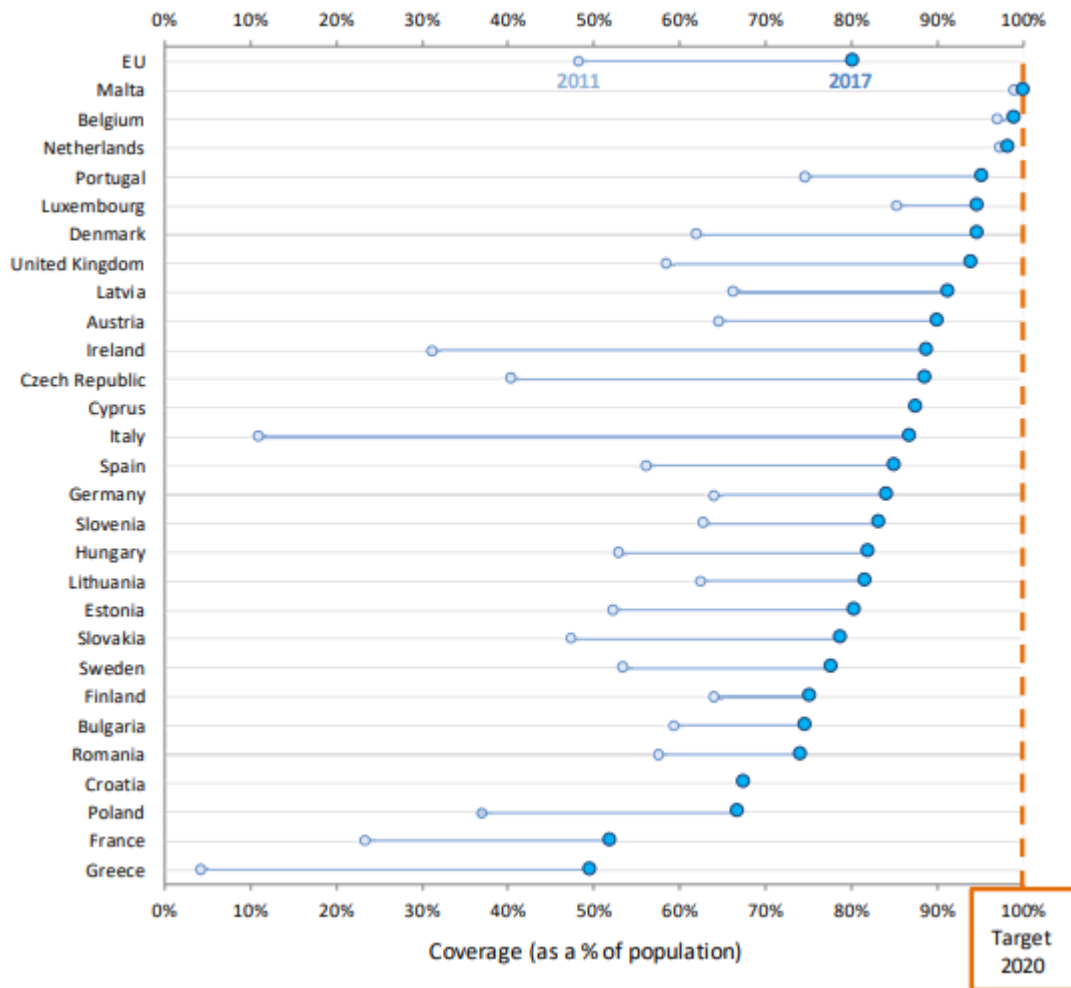


Digital technologies are an enabler at all stages of this process, but offer the most benefit during the process stage. Iterative modelling, CAD and 3D printing for prototypes can all play a role in accelerating and reducing cost through this stage of the process. This can speed up the innovation lifecycle reducing costs and increasing the pace of innovation.

To date most support has been placed on facilitating the change to take place. Ensuring the availability of the broadband and mobile digital networks that are needed to enable companies to adopt the new technologies. There is, however, a driving need to place an emphasis on ensuring that companies have the skills needed to respond to the opportunities for innovation.

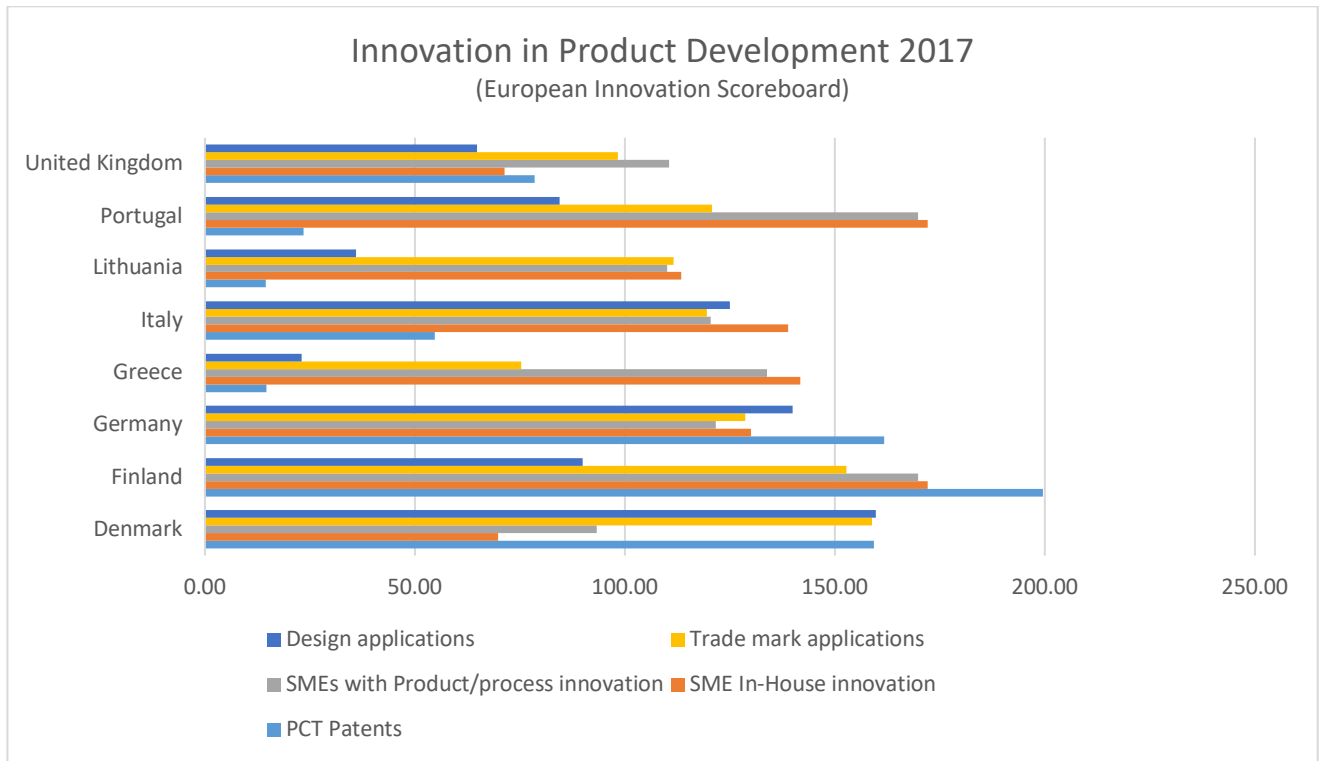
Broadband has been rolled out across much of Europe, and there is very good uptake in most EU states. However the challenge of providing coverage to rural and remote areas using commercial companies is slowing progress in nearly every member state which is putting the 100% target for 202 at risk.

30 Mbps coverage in all Member States in 2011 and in 2017<sup>ii</sup>



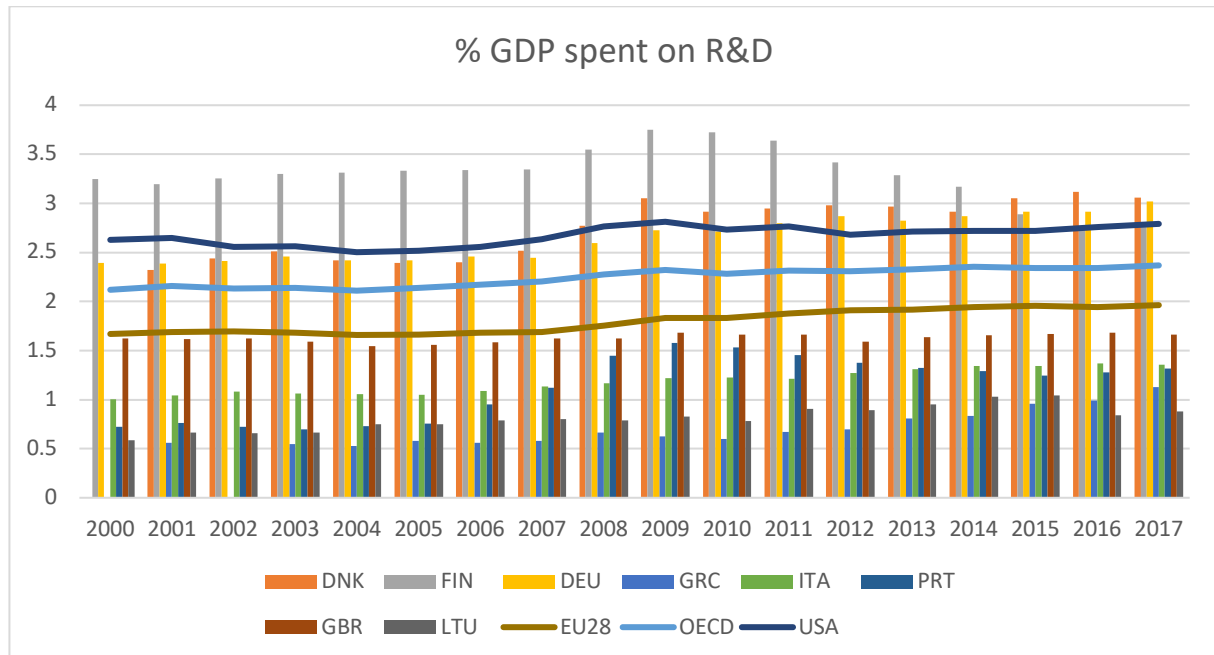
Amongst the project member states Portugal, Denmark and the UK lead the table, with 95 and 94% provision, whilst Greece is at the bottom of the European table with only around 50% provision.

Data on use of Digital technology in the marketplace - European level (from Eurostat?)



The innovation scoreboard data<sup>iii</sup> demonstrates that Innovation is happening in all the partner states. Each area has differing strengths, and this can indicate some opportunities to encourage growth.

OECD Gross Domestic Spending<sup>iv</sup>



Compared to International levels, however there is definite room for improvement. Other than in a Finland, Germany and Denmark investment as a percentage of GDP lags behind the averages for the EU, the OECD and for the USA. If we wish to be ahead in innovative businesses and systems then we need to at least match the spending in other nations or we risk a drain of the most innovative companies and minds to the areas where there is more investment.

Level – can use local stats for each region here.

### 3) Current Approach

There are multiple sources of funding available to support and encourage innovation in Coventry and Warwickshire. They are focused on business growth and definitely encompass digital development. In exploring the range of products to support business it is important to keep in mind that use of digital technologies to improve innovation and R&D is only one part of the needs for businesses and that other issues need to be covered. In amongst the wide range of funding projects that support businesses

- Infrastructure – Access to broadband/5g
- Funding programmes to achieve uptake of digitisation targets are achieved.
- Funding for digitisation in Manufacture– medium and large scale funding
- Funding programmes for innovation – From Start up through to Scale up programmes for high growth businesses.
- Funding programmes for digital innovation – software programming

Market failure:

The Coventry and Warwickshire ESIF document for 2014-2020 describes market failures in this area as<sup>v</sup>

- Technological or knowledge spill overs – where there is no incentive for companies to exploit or share innovation which does not have a direct potential to increase its profitability
- Coordination and network failures – where factors including lack of trust high transaction costs or asymmetric information reduces collaboration to achieve innovation.
- Asymmetric information – related to the above where SMEs often struggle to find investors for innovative projects.

These areas have not been well addressed by the current programme of projects.

#### 4) Best Practice

In addressing this we will highlight best practices from the present funding system drawn from:

- Innovate 2 Succeed – Consultancy aimed at bringing ideas to market
- Proof of Concept – 40% funding of up to £10,000 for innovative projects
- Innovation networks – Funding of up to £10,000 for collaborative projects
- Focus Digital – Funding and support to increase digitisation in Business.

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<sup>i</sup> Oxford English Dictionary (en.oxforddictionaries.com)

<sup>ii</sup> Special Report Broadband in the EU Member States, European Court of Auditors 2018, [https://www.eca.europa.eu/Lists/ECADocuments/SR18\\_12/SR\\_BROADBAND\\_EN.pdf](https://www.eca.europa.eu/Lists/ECADocuments/SR18_12/SR_BROADBAND_EN.pdf)

<sup>iii</sup> <https://interactivetool.eu/EIS>

<sup>iv</sup> <https://data.oecd.org/rd/gross-domestic-spending-on-r-d.htm>

<sup>v</sup> European Structural and Investment Funds 2014 to 2020 Coventry and Warwickshire European Structural and Investment Funds Strategy: ERDF, EAFRD and ESF Priority Descriptors