

The future digital agenda:

an industry perspective

Digital Future for Europe coalition

Executive Summary

This paper is a report of an opinion research project, conducted by Public First, on the views of industry within the Digital 9 group of governments (D9) that are concerned with digital policy. The participants included trade associations, start-ups, and unicorns. The paper is a report of their combined views - clearly, individual participants had differing views and this should not be considered as any one company or association's official position.

The context - what does industry think of the current and emerging landscape?

Attracting the best people.

Access to talent remains a fundamental issues for startups, scaleups, and unicorns.

Participants agreed that the European Union (EU) remained a **great place to live** and, in part because of that, a **magnet for talent**. **Freedom of movement** within the EU was another **enormous advantage** for companies starting in the D9 and looking to rapidly hire highly skilled specialists. Domestic governments which had increased local **labour market flexibility** (for example trial periods for new workers) were praised for their support for start-ups.

However organisations reported that lack of labour market flexibility in some countries - and rules preventing the recruitment of non-European staff - were a major barrier to growth. They were also concerned by a growing **STEM skills gap** and - for many countries - growing **weaknesses in the education and skills system**. Coding and algorithmic thinking in the curriculum was a priority.

Funding to grow

Participants reported that **access to finance was much less of a barrier** than it used to be in Europe. However, **early stage, very high risk ventures needed more state support**. A number of ideas emerged to support this - including from some the implementation of a "DARPA" style system. European funds - including from the EIF - were targeted as a source.

There was particular concern over lack of **early stage funding for AI** compared to the major clusters in, for example, Boston or in China.

Growing and scaling

The single market - both its achievements to date and its potential - was regarded as Europe's greatest strength and opportunity.

D9 participants said that the **export-oriented, nimble environment** of their countries made them grow and scale much more rapidly. This was enormously **strengthened by the EU and single market** - a large, wealthy market it was easy to export into.

However, they universally felt the **single market was not a true reality for digital and digitised companies. They did not support the concept of a separate digital single market - but rather a single market that reflects a digitised economy.**

The major barriers to the single market in the discussions were:

- **Lack of regulatory and legal harmonisation**, including in new proposals;
- **Data localisation**;
- **An excessive focus on intervention on a small number of companies** with specific business models, rather than industry as a whole and the European “SME ecosystem”

Participants therefore felt - while they appreciated the EU having a strategy on digital - that it was fundamentally inconsistent. Our (qualitative) survey reflected this - a limited enthusiasm for many of the changes recommended under the Digital Single Market, but enormous enthusiasm for the Single Market.

They also worried that the way in which law was considered and made in Brussels poorly matched the speed of technological change and was insufficiently iterative once real world problems emerged.

Finally, the companies and associations we interviewed - including unicorns - all felt that there was an “**SME ecosystem**” within Europe that needed to be the focus of **positive, stimulating** action by the EU. They were concerned about **adverse unintended consequences** to this ecosystem from recent and future regulations.

What should underpin the future agenda?

Participants wanted to shift the approach and focus of the EU’s agenda.

There was a desire for a more D9 approach across Europe, with all new regulations and laws based on high quality impact-assessments and evidence and with a long-term commitment and impact.

In terms of focus, they recommended:

- Completing the single market
- Reinforcing the SME ecosystem by:
 - A focus on interventions that positively impacted jobs and growth, and stimulated the adoption and use of digital technologies throughout the economy;
 - In part through the contribution of AI to productivity throughout the economy;
- Providing the underpinning infrastructure and environment to support this.

Completing the single market

Policy recommendations focused on the flow of data through the EU - which some recommended should be a “fifth freedom” within the single market - and between the EU and other countries with free trade agreements. Resolving tensions between ePrivacy and GDPR was a focus.

Reinforcing the SME ecosystem

The role of domestic governments and the EU in using public funds to support SMEs was a focus, including:

- Changing the public procurement environment to support SMEs;
- Opening up public services including through data standards and open APIs; and
- Making sure the public sector becomes universally “cloud first” to unlock innovation.

The participants suggested that D9 become the pilot hub of Europe and that programmes successful in D9 countries needed to be scaled across Europe.

On AI an EU wide strategy was recommended, supported by a new high-risk investment and innovation centre in Europe, modelled on DARPA and IARPA and focused on AI and new technologies.

A better underlying environment

The groups considered 5G to be a priority for states and the EU, and some recommended that digital infrastructure be classified as a basic good - a utility - alongside electricity and water.

Some participants felt particularly strongly that the tax environment for start-ups needed to be made dramatically more competitive. There was universal support for programmes on the implementation of coding in schools, and an EU-wide programme on reskilling the current workforce.

Introduction

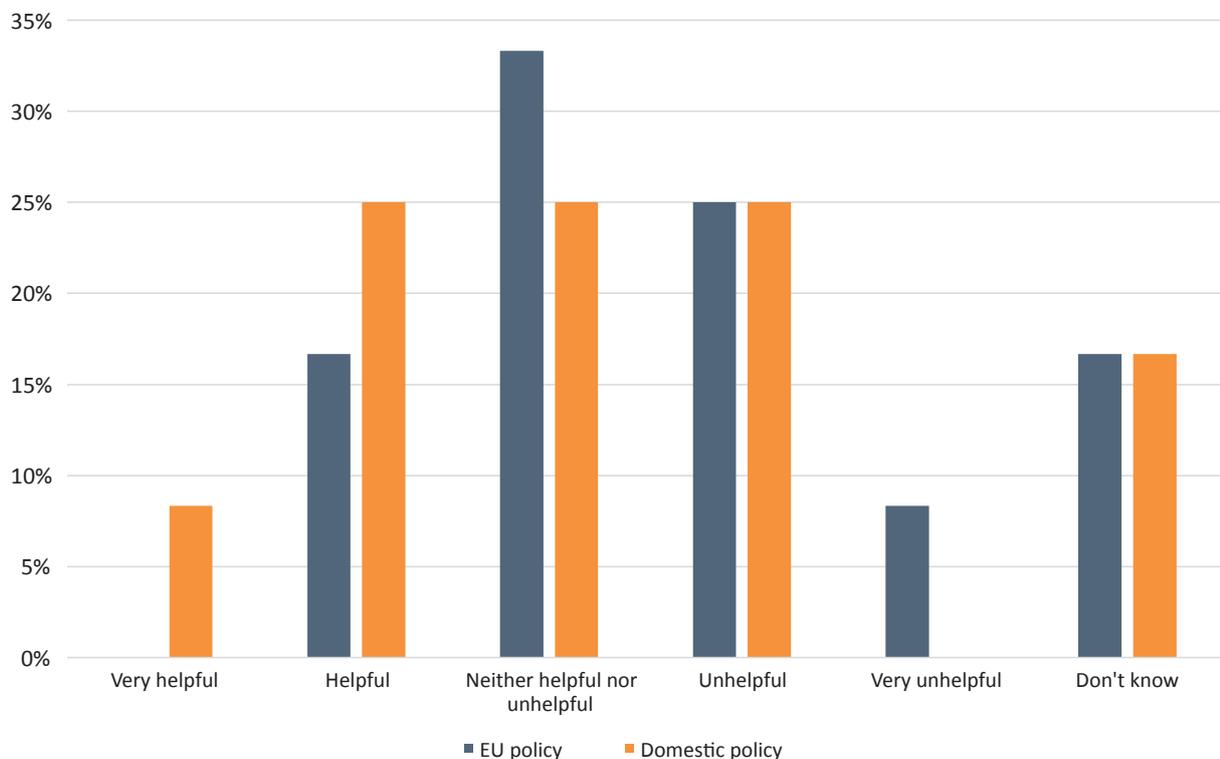
The Digital 9 group of governments (D9) are the most digitally advanced in the European Union (EU) and stand to gain enormously from future technological change - particularly automation. The Estonian government - as hosts of this year's D9 meeting - asked Public First to report on the views of industry concerned with digital policy within the D9.

The objective of this project was therefore to understand how companies and those representing the tech sector in the D9 countries see policy evolving, and what they think the EU and domestic governments should focus on in the next several years. This is fundamentally, about presenting opinion - and so we have reflected views verbatim.

The context has been, throughout, that the D9 are the Digital Frontrunners of Europe. The D9 has a higher representation of unicorns than the rest of Europe. The Nordics have a higher share of billion-dollar exits relative to GDP than any other region in the world - with 2% of global GDP but 7% of BUSD exits¹. They also have a higher percentage of startups.

The participating organisations' chief focus was therefore on shifting Europe's digital agenda rather than domestic policy - they almost universally saw their home country's policy environment as more helpful than the EU's as a whole. This was reflected in the (qualitative) survey we ran that compared EU and domestic policy impact on businesses.

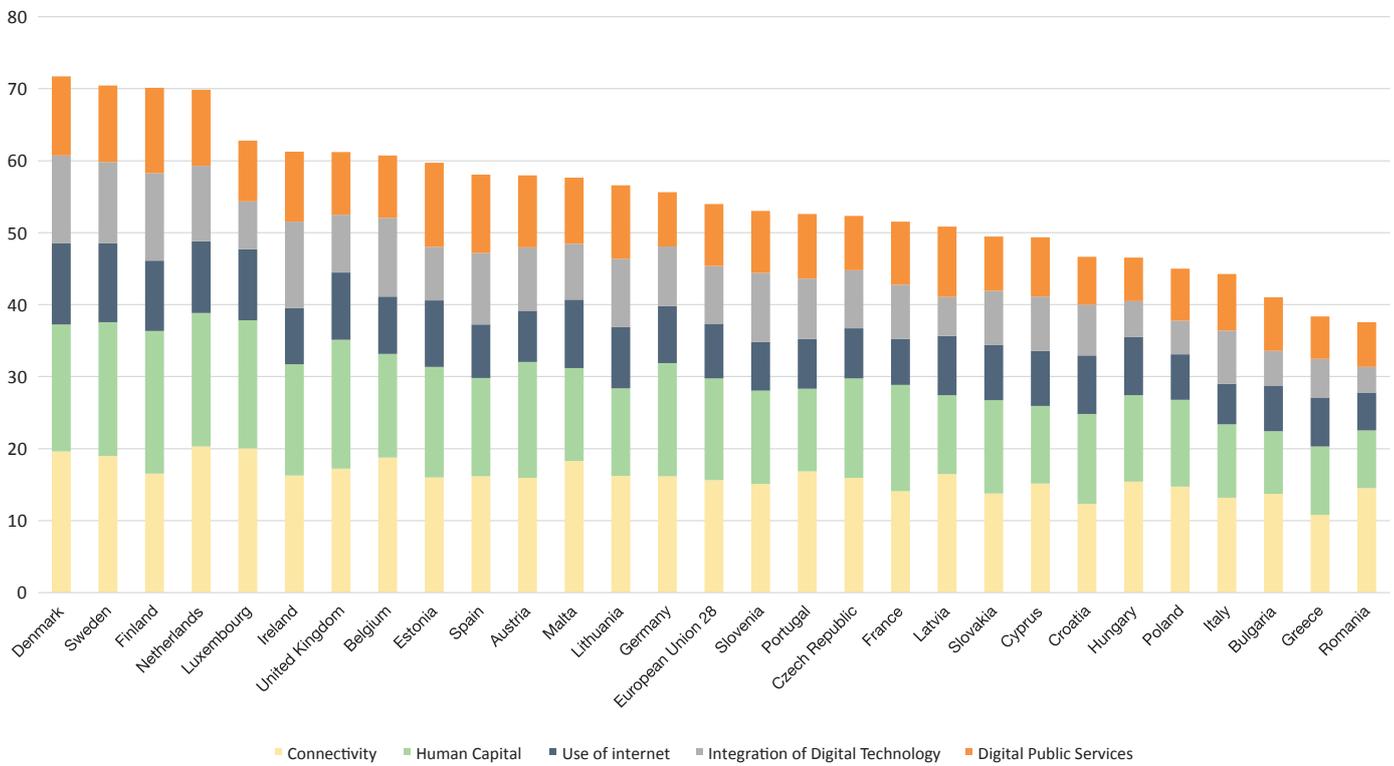
Impact policy on ability of business to grow and create jobs



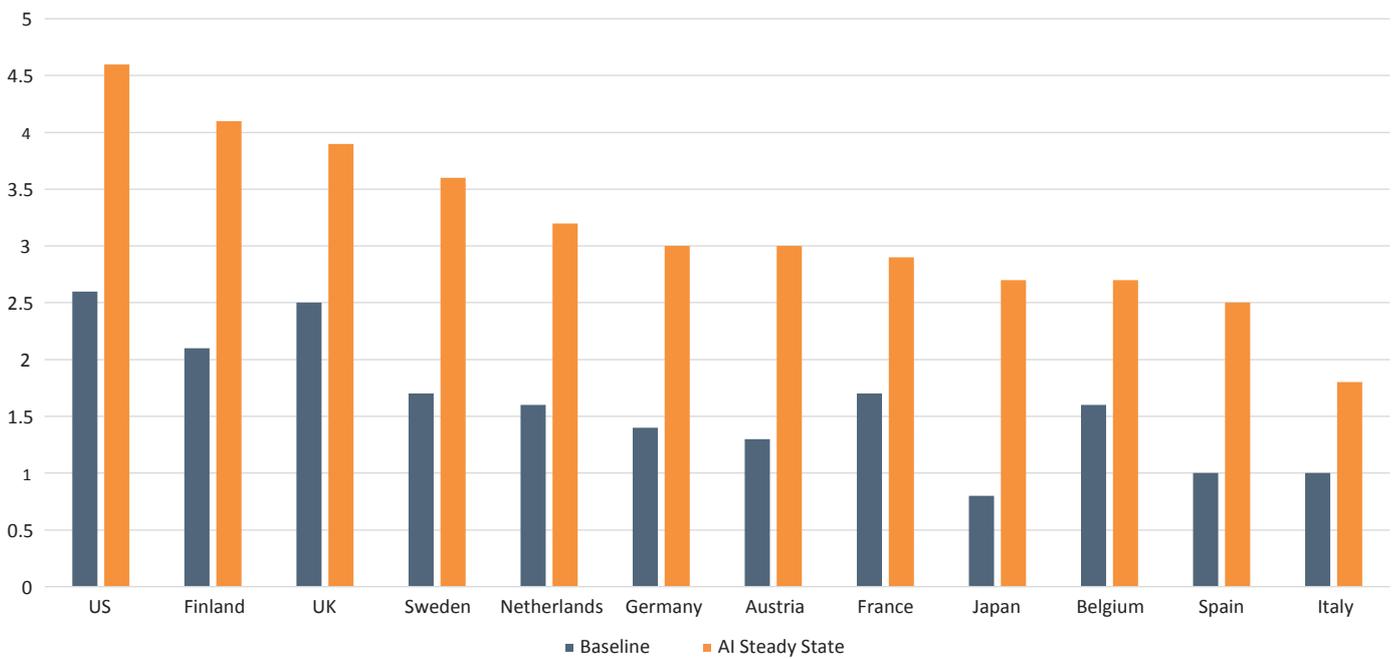
¹Creandum, Nordic Tech Exit Report, 2016

The current and future position of the D9

Digital Economy and Society index (2018)



AI as driver of growth



¹ DESI index 2018

² Accenture and Frontier Economics

Methodology and participants

At the Estonian Government's request, we have conducted a short exercise gathering the views of trade associations, start-ups, scale-ups, and unicorns in different D9 countries on current digital policy, opportunities for the future, and how those opportunities could be maximised.

This document represents the conversations we have had and the direction they supported. It is presented as a piece of opinion research with quotes from participants in italics throughout.

Methodology

The project has been conducted over 5 weeks using:

- Workshops;
- 1:1 interviews;
- A supplementary survey

The workshops and interviews used a consistent structure that examined:

- The current landscape: strengths; weaknesses; opportunities; and threats;
- The future direction: principles and values that should be adopted;
- Future policies: possible future policies that could be adopted by domestic governments and the EU

The workshops were held under Chatham House rules – comments were recorded and are found throughout this document without attribution.

About Public First

Public First is an opinion research and policy agency based in the UK. It has done opinion research and policy projects for, among others:

- UK government;
- Trade associations in the tech sector including TechUK (representing the tech sector in the UK); and Coadec (representing startups)
- A wide range of tech companies including Deliveroo; Google; Amazon; and Microsoft.

The lead on this project has been Rachel Wolf, the former innovation and skills adviser to UK Prime Ministers David Cameron and Theresa May.

Participants in workshops and interviews

BeCentral, Belgium

Billy, Denmark

Clio Online, Denmark

Confederation of Danish Industry, Denmark

Danish Association of Entrepreneurs, Denmark

BrandBastion, Finland

Deliveroo, United Kingdom

Digital Infrastructure Netherlands (DINL), The Netherlands

Dutch Startup Association, The Netherlands

Epicenter Stockholm, Sweden

Estonian Chamber of Commerce and Industry, Estonia

Ibec, for Irish Business, Ireland

King, United Kingdom and Sweden

LucidWeb, Belgium

Solita, Finland

Supercell, Finland

Technology Industries of Finland, Finland

The Coalition for a Digital Economy (Coadec), United Kingdom

TransferWise, Estonia

Worksome, Denmark

The context - what does industry think of the current and emerging landscape?

Attracting the best people

Our participants agreed that the single most important determinant of industry's success was talent - the best people, educated to the highest possible standard. Europe and the D9 in particular had great strengths in this regard - but also some weaknesses.

"Access to talent is the single most important thing to my company"

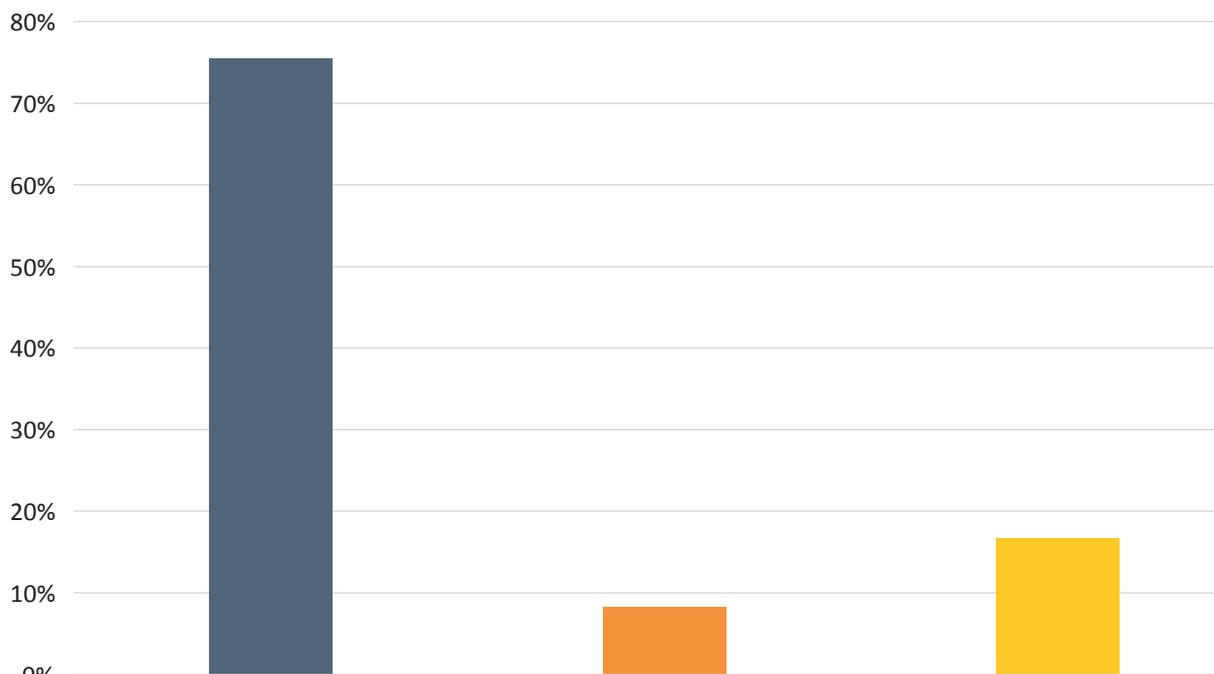
A great place to live - and to attract talent

For companies the fact that Europe continued to have so many cities that were pleasant to live in, with stable free governments, was an enormous asset in attracting and retaining talent.

"When we were hiring people from the Asia or the US giving them the option of some amazing cities really helped."

"The living conditions can be complemented by relatively low salary engineers in Europe than in Silicon Valley because the living costs are cheaper"

How is the EU changing as a place for people to live and work?



Survey participants

Rank	City
1	Vienna
2	Zurich
3	Auckland
3	Munich
5	Vancouver
6	Dusseldorf
7	Frankfurt
8	Geneva
9	Copenhagen
10	Basel
10	Sydney
12	Amsterdam
13	Berlin
14	Bern
15	Wellington

Country	Ranking
Switzerland	1
Singapore	2
USA	3
Norway	4
Sweden	5
Finland	6
Denmark	7
UK	8
Netherlands	9
Luxembourg	10

Six of the D9 countries are in the top ten in the Global Talent Competitiveness Index (Insead, 2018)

12 of the 15 cities with the best living standards are in Europe (Mercer index, 2018)

This is backed by external data which shows European cities consistently scoring top on quality of life, and the D9 dominating the Global Talent Competitiveness Index.

Freedom of movement within Europe is an enormous asset

Participants unanimously agreed that the Single Market – both in its achievements to date and its potential – remained one of Europe’s greatest strengths. This was particularly true in terms of mobility of people – the ability to hire people from across Europe into, for example, skilled engineering roles.

“Recruiting engineers from a tonne of different countries has been a huge advantage because Finland is a small market - although recruiting from outside the EU has been quite tricky”

“It has been fast and easy to relocate engineers from other EU countries to our HQ”

And the relative flexibility of the labour market is a key point on domestic policy

When we asked those who completed our survey for specific domestic policies that were important to their businesses, talent came up frequently.

“In Sweden there are high taxes to battle and also migration issues that led to restricted access to Sweden and prolonged periods for applying for Uppehållstillstånd. These things led to international talent having it harder to apply for exciting jobs in Tech Sweden and this is a challenge due to Startups being one of the most open forces in Sweden for foreign talent.”

“Recently the Finnish government extended trial periods to 6 months which was very helpful especially for start-ups as wrong hires can be very expensive.”

With spillover effects from previous tech success

One unicorn made the point that existing D9 success then cascaded into future success.

“It’s still so important to have a healthy tech ecosystem - digital companies breed other digital companies. The Skype mafia have spawned taxify and transfer wise - and those companies themselves have spawned new entrants...this also supports service jobs like law that need tech specialism”

But recruiting from outside the EU remains a challenge...

“What we struggle with as well is employing people from outside the European market”

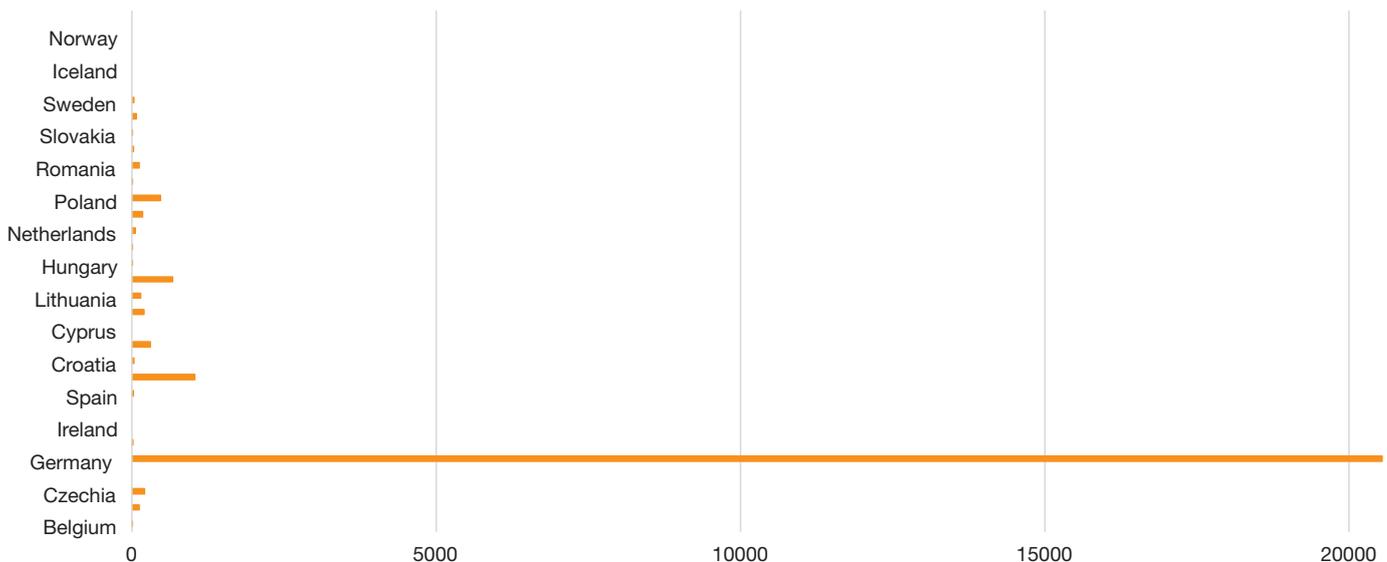
“Recruiting someone from the US was quite a hassle...particularly trying to bring a spouse. In my country [Denmark] when you’re a company of more than 20 people it becomes easier which is totally weird...and we should be able to use equity in the calculation of hiring those people”

“Stock options and making it possible to attract talent when you don’t have as much money in the bank as the bigger companies is still one of the most critical issues in my home country”

Startups, in particular, reported a challenge managing the bureaucracy and cost of hiring top people from outside the EU. Participants thought this was likely to be more acute as the need for AI specialists increased. Some estimate that fewer than 10,000 people worldwide have the necessary skills to undertake serious Artificial Intelligence research.⁴

Participants did not think the Blue Card was working as a solution - this may be because Germany remains the dominant country for use of the Blue Card - with 85% of the 2017 awards - and also because for small companies the salary requirements are restrictive (at 1.5 times country average salary). Several D9 countries, of course, do not use the Blue Card.

Blue card awards 2017



(Eurostat).

...with a potentially weakening skills base

“Where we do not have a single market is in skills [and the education system]...with the policies in China in algorithmic thinking in education. A few countries are implementing that but most are not preparing the next generation for future jobs. In the current job market we lack an integrated policy in terms of reskilling and upskilling the current workforce...we see both the US and China moving fast on that.

The growing reliance on STEM skills - and the resultant skills gap - is well documented. From 2003-13 the number of people working in occupations related to STEM in Europe grew by 12%, three times faster than total employment in the EU.⁵ By 2020, the EC estimates there will be over 750,000 job vacancies for coders, engineers and tech specialists.⁶

Although there have been moves across most of the D9 to integrate computational thinking, computer science, and coding into the curriculum, the participants felt this did not go far enough. There have been substantial implementation issues - for example in the UK, the first to mandate coding in the curriculum, has major teacher shortages in the subject, uneven geographical distribution, and girls represent only 20% of those taking a qualification at 16.

⁴The New York Times, ‘Tech giants are paying huge salaries for scarce AI talent’

⁵ EU STEM coalition, 2016

⁶ EC, June 2016

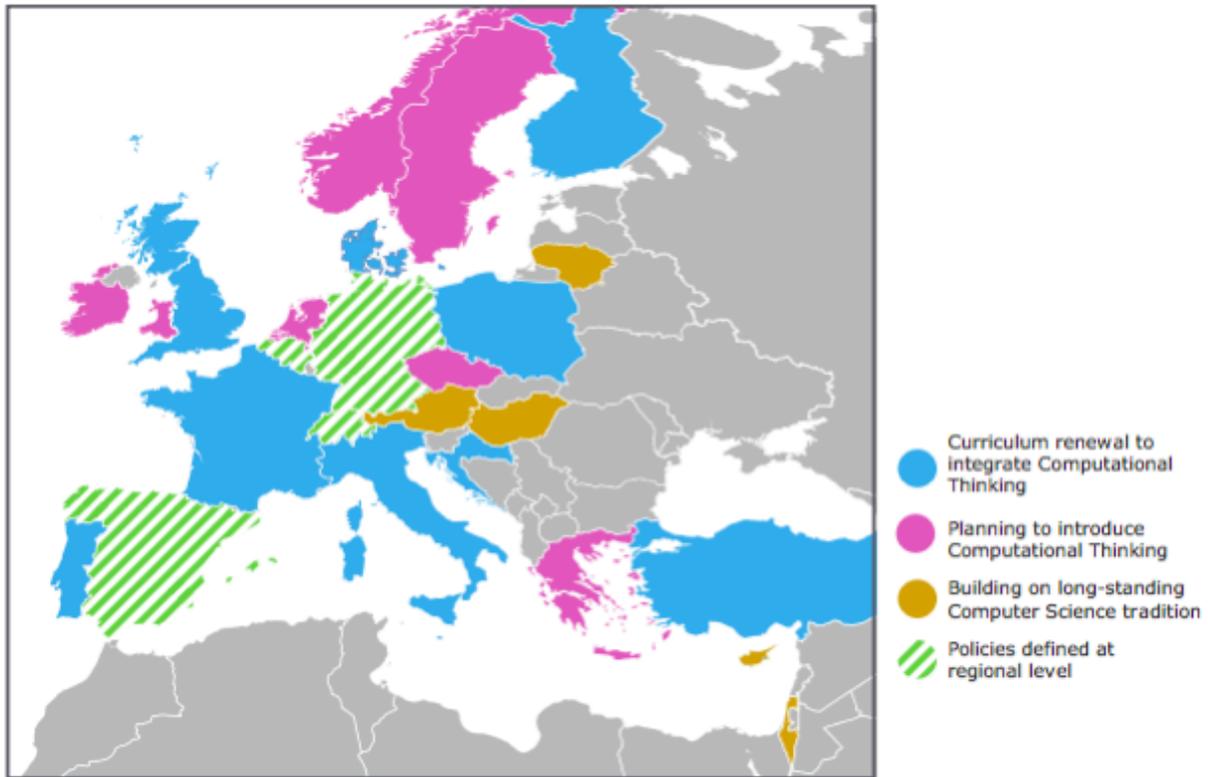
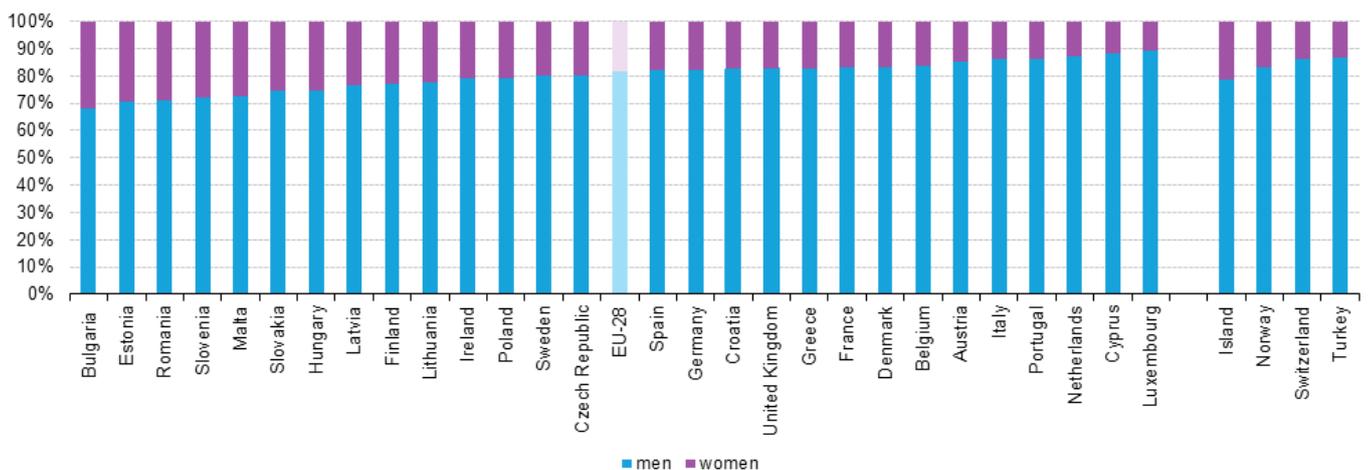


Figure 4. Prevailing approaches in integrating CT in compulsory education⁷

Diversity was - to the participants - both a concern and an opportunity. Across the EU-28 as a whole, 14% of female students graduate with a STEM qualification, compared to 40% of male students.

“There must be diversity and inclusion in tech...it’s an opportunity [in Europe]”

Encouraging more European women into ICT could [boost](#) the EU’s GDP by €16 billion a year. Yet women currently only make up 30% of the 7 million people working in Europe’s digital sector, and they are under-represented at all levels, especially in decision-making positions ([link](#)).



Proportion of female tech workers in different EU countries.⁹

⁷ EC, Developing Computational Thinking in Compulsory Education, December 2016

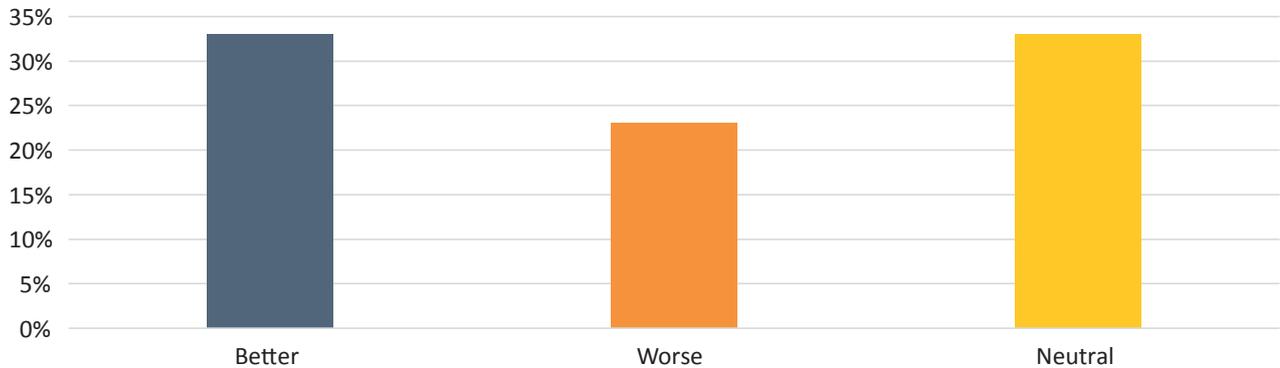
⁸ EC, 2018

⁹ World Economic Forum, 2016

Reflecting more ambivalence about workforce quality

Those who responded to our survey were more ambivalent about the EU environment on workforce than 'as a place for people to live and work'.

Is the EU workforce improving?



The money to grow

Participants felt that a focus on SME and their growth - and their transition into scale-ups - was the right reflection of Europe's strengths.

Access to Finance is much less of a barrier than it used to be

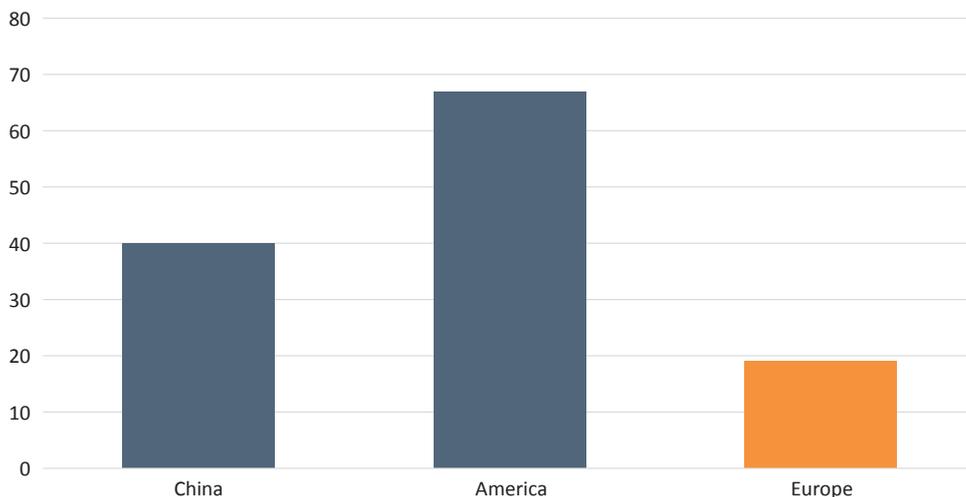
Participants noted that there was more money available to new and growing companies than in any time in Europe's history.

"There's far more VC funding than there has ever been..10.6 billion euros raised across 198 funds which is an absolute record in Europe"

"When we ask our members the problem is always bureaucracy and administration, it is never finance that are in the way"

Last year, 3,500 European companies received a combined \$19 billion in venture investment.

VC Investment (\$ billion)



Although that pales next to China and America, it's a record for Europe and four times greater than the figure from five years ago. 33% of investments made by European VCs are now into companies based in countries outside of the VC's domestic market.

But high risk early stage ventures do not get the right support

Where there was a need for improvement, in the view of those taking part, was in the use of European funds to stimulate the "SME ecosystem" more effectively.

"European investment should focus on concrete growth"

"[There's a risk] that all the good really new ideas move outside the EU, to for example the US, where they have an ecosystem that works much better, because of capital and the speed of putting technology into the market"

A number of ideas emerged, including using the defence industry - as for example is done in Israel and the US - as a galvaniser of innovation in startups.

"One of the reasons Europe is not good in terms of new technologies is we are still too fragmented in defence. Even compared to Israel...we don't have a European DARPA. It gets back to the point that digital is much broader than the digital sector - the questions around more integrated defence in Europe? That could have a big impact in the next decade in terms of digital technology in Europe"

"There is not enough risk bearing money for scale ups - but there is plenty of money [in EU programmes]. But what I see as a weakness is that the programmes are very scared to apply that money to specific success stories...it's lots of people writing interesting reports but not changing companies...the equivalent darpa programme doesn't exist"

What impact will this have on AI?

Although there was a view that larger companies would adopt AI, there was still support for the use of high risk venture capital to support for more fundamental research.

"When they see other companies create value and make money with AI, I think larger companies will start looking into this - the free market will do it"

Some were also extremely concerned about the lack of application of AI in traditionally non-digital sectors, and thought this should be a focus for EU funds.

"Applying AI and machine learning technology is still a huge challenge for companies in my home country"

"We are lagging behind...in China they are going all the way when it comes to AI"

Growing and scaling - the strength of the single market

A culture that is nimble and export-oriented

For our participants - who came from D9 countries - the relatively small size of their domestic markets led them to be much more globally oriented.

"In the smaller countries of Europe, we are very used to thinking abroad very quickly, because we have such small home populations, so if you develop a game in Finland you don't really develop it for the Finnish market you would develop it for world market"

D9 exports per capita ranking

Country	Rank (exports per capita)
Netherlands	10
Luxembourg	12
Belgium	13
Ireland	14
Sweden	17
Denmark	18
Finland	26
Estonia	35
United Kingdom	47

D9 countries tend to rank very highly in exports per capita (World Bank) - ranking of over 200 countries

Enormously strengthened by the EU and single market

The ease of exporting to the rest of Europe - which was large, with wealthy consumers - was a foundational strength for the companies and associations we spoke to.

"if you do something right here, that product can go to a lot of different markets quickly"

"In terms of numbers, and in terms of buying power, Europe is a very wealthy area"

"Europe has a lot of people with a lot of money"

In fact the **single market** - both its achievements to date and its potential - was regarded as Europe's greatest strength.

But the Single Market is not a true reality...

If participants had one message from the entire process, it is that the Single Market is insufficiently complete for the digital sector - and in fact there should be no 'digital single market' but a single market that reflects a digitised economy.

There were three key points made.

1. **Too much differentiation of rules and regulation.**

Individual domestic governments interpreted EU regulations differently, and therefore companies couldn't operate easily across borders. Participants kept coming back to this point

"The room that EU regulations offer to local countries could result in a 'splinternet'. Different detailed regulations as a result of EU regulations lead to fragmentation. A lot of proposals still in negotiation stages have articles referring to national law that will vary."

"Fragmentation is an immediate threat"

"In China for example, they put a framework in place and then they are off, whilst here in Europe we are still discuss do we need a cookie policy on our website, this is quite a dilemma (...) from a business this is a disadvantage"

In fact the **single market** - both its achievements to date and its potential - was regarded as Europe's greatest strength.

This was particularly stressed by start-ups. At the October 2014 European Parliament of Enterprises (EPE), 84% of the participating entrepreneurs voted "No" to the question: "Is the EU Single Market sufficiently integrated, allowing your company to operate and compete freely?" Because start ups are less able to absorb administrative costs, the burden of different regulations, reporting standards, and laws prohibits expansion.

Obviously, however, the participants did not want harmonisation to mean a lowest common denominator.

"Harmonisation is great - but I'd rather have divergence than the worst rules everywhere"

2. **Data localisation.**

Participants thought major progress had been made on non-personal data

"The free flow of non personal data is a really good starting point to start to defeat a growing trend of data localisation so the EU should continue to look at this issue";

but they thought this trend needed to be "intensified" - data localisation policies raise the cost of hosting data by 30-60%.¹⁰

3. **A "Digital Single Market" that was not about the single market.**

Participants made two points in our sessions. First, that separating 'digital companies' from the rest of the economy was a poor reflection of how the economy actually worked and how digitised it was becoming.

"There's a tendency to see digital as separate from the rest of the economy. There's the single market and then there's the digital single market - but for the next four or five year it should be a digitised single market."

"We share more issues with traditional companies in our sector than 'digital'"

¹⁰ Leviathan group

They wanted to see the Digital Single Market wrapped into the overarching Single Market's aims. This in part reflects the view that the use of ICT rather than the ICT industry itself, is likely to drive future growth and productivity.

Second, that the focus of the DSM had become too much on a small number of companies - to the detriment of the existing European ecosystem.

"[The DSM is about] acting against the big guys... We're seeing business-model specific legislation...four to five key business models are being looked at without taking into account where EU's ecosystem is going and the impact it will have on our sector"

"there is a tendency in Europe to regulate big businesses but you are killing the SMEs and start ups as big businesses have the financial back up to survive. SMEs and startups don't."

"Sometimes it feels like the focus of the regulator or the EU is to fight with the American big boys, instead of help the smaller companies to grow. The focus should be to nurture and bring up European companies, rather than fight the Americans"

"There is so much energy put towards regulating the giants, to stop their growth and stop them building monopolies (...) instead of focusing on doing lots of stuff that would make it easier for a small start-up to grow. This applies to hiring talent, taxes, migration – support the start-up instead of regulating the big ones. If we shift that focus I think everyone would benefit"

"We are aware that there has been a lot of focus on recent years on tech firms - and generally lumped together as one homogenous group which isn't always identify the different kinds of businesses and what they do..We find when we meet European or domestic policy makers they haven't got a very clear understanding of how different business models work. "

...with an inconsistent EU strategy

Participants felt that the existence of an EU strategy was a strength.

"We do have a strategy...I'm not saying it's complete or anything but it's a positive that you have a starting point"

"We are good in Europe at working together and helping to put together ecosystems"

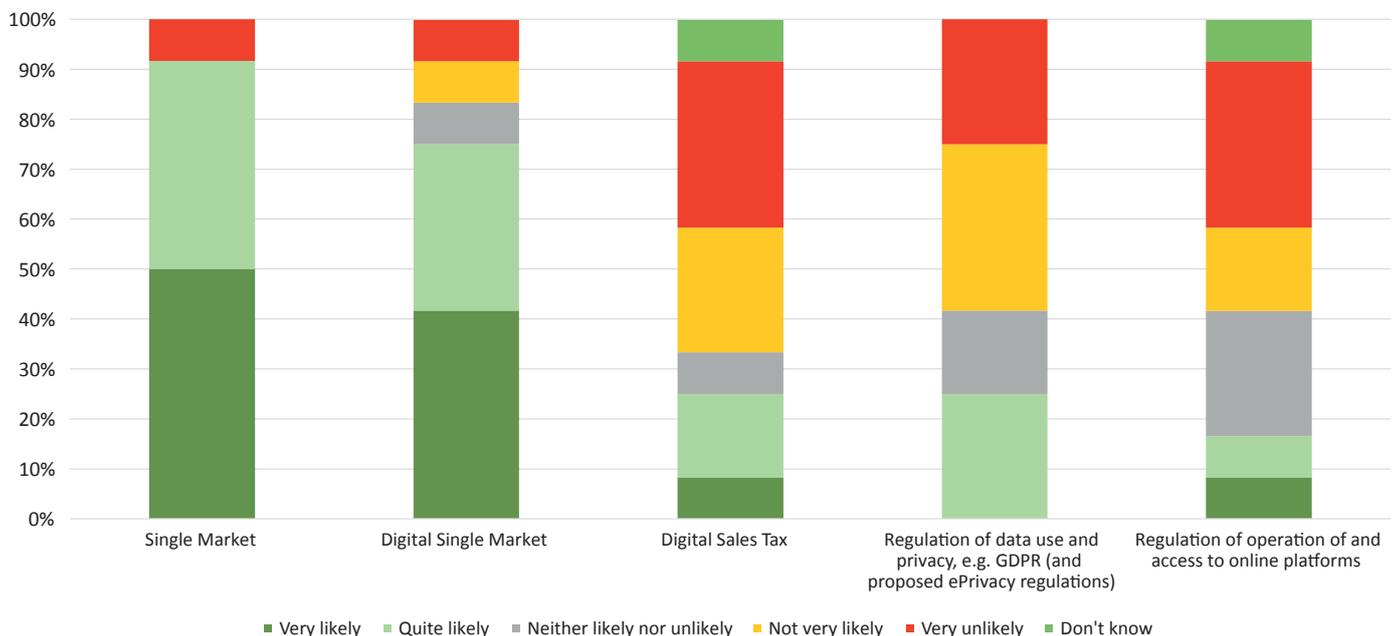
However there seemed an inconsistency in that strategy. For some, there was a sense that Europe simultaneously wanted to be ahead of China and America, but not copy anything they were doing without articulating a clear third way. This had resulted in DSM interventions focused on restricting big global companies.

"there are competing visions for the future"

"The weaknesses perhaps is that we are having competing visions of what a single market could be. That's natural perhaps in a democracy but an example is e-privacy...which is an absolute car crash vs GDPR"

This was reflected in our survey which suggested limited enthusiasm for some of the changes the EU is suggesting - but enormous support for the single market.

Will policy priorities improve economic competitiveness, jobs and the environment for industry?



...insufficiently innovation-friendly policy making

Many of those we spoke to were concerned that the way in which law was approached - particularly by the EU - was poorly matched to technological change and speed. This created large uncertainty for companies pioneering new ideas and models.

“I think the law-makers are always running behind, which creates a lot of uncertainty (...) you have no idea if a new legislation will be passed or not”

“We are protecting what is existing, not stimulating what is new and needed”

“The policy-makers don’t recognise the speed of technology”

Some suggested that this was particularly problematic for fast growing companies.

“Many of us don’t have policy people...we’re too small...and when the policy first started being debated we didn’t even exist.”

“We were told...you need to wait three years for this to come round again...because we were too small three years ago when this started going through the machine to explain how bad it was”

One suggestion was to formalise iteration into the process - both by embedding “consumer insights” into policy making and making it more standard to adapt legislation if it was operating poorly.

...and a lack of focus on the SME ecosystem

The view of the participants was that the focus of Europe's strategy should not be intervention on existing companies but the encouragement of the "SME ecosystem". This issue excited the most comment in our workshops.

"Europe is very strong on the translation of technology into highly successful SME service companies...the SME ecosystem"

"Principles that sound healthy to protect consumers are being transferred into regulations that are killing the ecosystem. There are a long list of regulations, GDPR, ePrivacy, copyright, which have a tremendous negative effect on the ecosystem...it is misdirected and a leaning towards a regulation-first approach that has a negative effect."

"How do you keep the ecosystem healthy? It's like plants - you can't say 'oh we've regulated the sunlight away but we still have fertiliser so it will grow 75% of the original...you need all the growth factors"

"When you look at GDPR, you can clearly see that what the regulators had in mind was the Facebooks and not smaller companies, so it is not only that implementation costs are really heavy for a smaller company but also that some parts of that legislation are focused on certain larger companies that don't even come from Europe"

"I think it is obvious that the smaller companies struggle with this"

This was, in the room and also in our survey, contrasted with some domestic governments' approach.

(Q. Can you name one thing that your domestic government has done that has had a particular impact on jobs and growth?)

A: Refraining from strong telco-like regulation and showing some understanding of the value of digital ecosystems)

There was a favourable response to regulations that leveled the playing field for SMEs - by bringing clarity and, for example, creating open APIs that allowed other companies to provide better services and products.

What should underpin the future agenda?

We asked participants what they wanted to see underpin a future approach to policy in the D9 and in the EU.

The approach

A more “D9 approach”.

The approach of D9 governments was favourably contrasted to other EU countries.

“There’s a political culture difference - for example in the nordics when they apply legislation they look at how much capacity they have for enforcement where in other countries they opt for deterrent legislation but they lack enforcement: they don’t care if it happens. Copyright is a good example”

An evidence-based approach.

There was a desire for clear, consistent, high-quality measurement of the impact on European companies (particularly SMEs) in all new regulations and programmes.

“it feels like there is a real variance in the quality of EU impact assessments”.

A long-term approach

Participants wanted to see a long term commitment and a greater degree of stability:

“Politicians need to intensify the long term political commitment. Changes in government and in the EU institutions mean there is no guarantee that there is going to be political impetus from 2019 onwards...”

“We would like to see a policy roadmap, looking ahead – what is coming up and so on, today politicians are always catching up with regulation instead of looking ahead”

“We want them to establish a framework – sometimes that understands when to put regulation in place and when not”

“I think what has been lacking in the last couple of years is reg certainty”

The focus

Completing the single market.

There was unanimous support for the aims of the single market and a desire to see it completed for the digital sector and digitised companies- meaning the frictionless movement of people and services across borders and the regulatory environment to support this. In particular, the value of harmonised rules (although not if the most interventionist countries became the standard) and the ability to move data, services, and people across borders was a major focus.

“it should be a digitised single market”

Reinforcing the SME ecosystem.

For many of those we spoke to, Europe’s enormous strengths in creating successful SMEs that deliver high quality services should not be considered secondary to the invention of new technologies or unicorns - this was an important and value-creating ecosystem that should be supported. This meant that pursuing an American style ecosystem is not necessary.

“The political obsession about building the next Google misses the point...the traditional ecosystem is SME and that’s where digital will go too. SMEs are the beating heart of the digital market...”

“There’s a joke that the US innovates, the Chinese imitate and the Europeans regulate...but my view is that Europe is already behind [at invention] and would continue to be behind a running train on this...but there are other strengths”

Including through recognising the contribution of AI to productivity throughout the economy;

Unsurprisingly, those we spoke to thought AI was a huge opportunity that must be supported. This meant recognising its value to society, and accelerating its adoption in non-digital sectors.

“We should view AI as something that can be used for the public good”

“We need to focus on adopting AI in services...not just as a fundamental technology”

“Our AI strategy...should accelerate the adoptions of AI in services and the use of AI...there I think Europe can compete with the US and China”

An emphasis on jobs; growth; and impact on people's lives.

Participants wanted a focus on how interventions, and their impact on digital companies, would impact the number of jobs, productivity growth, and practical benefits for people's lives.

The view of the group is that there was cause for optimism in terms of the impact of digital companies and growth, and that this shouldn't be lost in a desire to reduce potential harms. Attendees pointed to the strong narrative around jobs and growth when the DSM was first launched, which has now turned into a focus on consumer trust and protection.

"In recent proposals we are not seeing a focus on jobs and growth".

"Stimulation rather than regulation"

"While if you look at the EU they acknowledge the tech businesses are growing significantly faster for traditional economy businesses with all the good things that means for growth and jobs, their main concern is regulation ...for harm"

Providing the right infrastructure and in particular hard infrastructure such as 5G alongside access to capital and a skilled population. This was the role, in the view of participants, of states and without it companies couldn't thrive.

"[they should] provide digital infrastructure or incentivise investment"

Policies

We have described below the policies that align to the focus areas above. For the avoidance of doubt, these should be considered policies that were treated positively in group discussions - but not necessarily policies that individual organisations would place in their own manifestos.

Completing the single market

Data

Free data flows, it was agreed, underpinned a truly European digital ecosystem and rules excessively impacted SMEs.

“The principle of GDPR - which is protection, regardless of location - should be protected and not eroded by data localisation laws...preventing organisations from bidding into public sector procurement for example because they have to personalise the data must be avoided”

“The EU has made a good start on defeating a growing trend on data localisation - better than many other jurisdictions...we’d like to see this intensified”.

Proposal 1: The groups discussed:

- Free flows of data for non-personal data should be included within Free Trade Agreements (FTAs);
- Consistent adequacy decisions complementing FTAs for personal data.
- A review to barriers in achieving cross-border data flows across the EU

Proposal 2: Participants also proposed:

- Greater consistency and clarity over the classification of different kinds of data and how they should be managed, given that within companies data is usually managed within a single system. Alignment between ePR and GDPR was considered helpful.

Proposal 3: The free flow of data should be considered a fifth freedom within the Single Market.

Boosting the SME ecosystem

Public procurement across the EU

The view of the groups were that across the EU public procurement (including, but not limited, to specific funds like EIF) could be designed to be easier for SMEs to compete for (some public sector frameworks in specific states have attempted to do this, but it is virtually impossible at EU level). This included bureaucracy; the challenge of getting onto frameworks; and criteria for compliance.

Proposal 4: There should be a review of how the EU can encourage more SMEs to pitch for public contracts.

It could also be used to stimulate invention and innovation - as has been done in Israel or America - some suggested either through defence or more general procurement. This was an opportunity to reach scale in, for example, AI through a strategy across Europe on accelerating adoption across the economy.

“In Europe today, we don’t have MIT-scale investments...the political discourse is still about having a national plan but what about an AI strategy for Europe”

Proposal 5: The EU should develop a cross-Europe AI strategy.

Proposal 6: Develop a new high-risk investment and innovation centre in Europe modelled on DARPA and IARPA focused on AI and new technologies.

Opening up public services

The development and publication of open API specifications and data standards by the EU and domestic governments was considered one of the best ways of opening up opportunities for European SMEs and improving the quality of public services.

“just ask a start-up, they can solve a thousand ideas in society, but they need the data from the government”

Proposal 7: Domestic and EU governments should

- Set a target for each of the EU28 to open up data sets;
- Commit to the development and publication of open API specifications and data standards across the most important public sector data sets including health and transport.

Public procurement came up again in this context, and specifically using it to pilot programmes, particularly in countries like the D9 where they are likely to be more innovative and interested in piloting ideas - that could then be spread across the EU;

“I would like for government to accelerate the digitalisation of their services. The EU should fund pilots and programmes because it is very expensive for governments to use their own national funds to fund this, unfortunately they tend to not use their fund for it due to public opinion.”

“Testing is how you build great companies...and great solutions”

“A proactive and promoting approach from the EU could help to take the last fears away regarding centralisation and big brother government.”

“Testing is about doing a lot of things in the wrong way, to find the right solution, but that is not the culture across European countries”

Proposal 8: The D9 should become the pilot hub of Europe in improving public services through technological solutions.

Proposal 9: Existing successful programmes should be scaled across Europe. For example, the group propose an extension of the programmes delivered in Estonia to other countries to allow people to identify themselves and intersect with the public sector online.

The group agreed that across Europe, transferring to “cloud first” would unlock innovation.

“We need to transfer our workforce from traditional technologies to cloud based technologies.”

A better underlying environment

Capital and infrastructure

The group considered universal 5G to be an enormous underlying priority for states and the EU.

“Is telecom a utility or a luxury good? For so long it has been seen as a luxury and not as something every European citizen needs in order to survive in the current digital economy (...) It should be seen as electricity and water (..) and the EU should approach it as a utility”

“Connectivity built at a national level is going to support [growth] at a European level”

However, some proposed a test on the marginal benefit of increased broadband in some very highly rural areas.

Proposal 11: Telecoms should be classified as a basic good - a utility - alongside electricity and water.

VC Capital could be stimulated by the right public sector approach to capital. This has been covered in an earlier section, but the fundamental point made by the group is that EU funds needed to focus on high risk early innovation - because that is where the private sector capital gap existed.

“For a small organisation that wants to innovate on tech, it is really hard to get into EU funding (...) the administrative costs are enormous”

Tax

One of our workshops felt particularly strongly about the tax environment for start-ups and proposed a dramatic lowering or even removal of taxation for SMEs. At the same time there was opposition to a Digital Services Tax.

“the startups don't have the resources to move around the tax issues (...) financials is often a problem for the start-ups and SME's (...)”

“I think the only solution to solve this problem is to make SMEs not pay taxes”

Skills

For our participants, the EU could have a stronger view on how to support greater skills acquisition, and in particular sponsor programmes that supported reskilling; diversity in tech; and coding. The approach taken successfully through the Erasmus programme was seen as a model for EU funding and soft power that did not supersede state control.

Proposal 12: All states should implement coding in the curriculum with coverage across their countries.

Proposal 13: The EU should investigate an EU-wide programme for re-skilling.

Conclusion

The participants we spoke to in general saw enormous opportunities in Europe, and felt that the countries in which they worked were leading the way in supporting the digitisation of the economy.

But they were enormously concerned about the failure to capitalise on the EU's strengths - and in particular the potential of a true Single Market. Startups, scaleups, unicorns and trade associations all agreed there had been an excessive focus on a tiny number of companies with 'business-model specific legislation' that had adverse and unintended consequences on other European companies, especially small and medium-sized businesses. While the movement of people within the EU had worked well for them - allowing those in small countries to hire talented people and grow - the movement of digitised services (in part because of data) was less successful and at risk of becoming impeded further.

Their primary desire, therefore, was a future EU agenda that was focused on the potential of European companies to grow and support jobs, productivity, and public service improvement - which the tech sector does to a greater degree than the 'traditional' economy.

The "SME ecosystem" which they felt underpinned the European economy had, in their view, been insufficiently stimulated in recent years. As AI becomes a more pivotal technology, the potential to cascade AI through all sectors was an enormous opportunity and one that relied on that stimulation - including at very early stages.

The role of domestic governments and the EU in using their enormous public procurement potential - including through early stage support; general procurement; and the opening up of public services and the use of APIs and data standards - was, in their view, still under developed. Finally, there was more that could be done to improve the underlying environment - in broadband infrastructure, taxation, and skills for the young and the existing workforce.

Most of our conversations focused on Europe - this is in part a testament to the D9 domestic policy agendas, and also a recognition that for our participants the EU's combined power remained an enormous opportunity and one that must not be squandered.

Appendix - participants

BeCentral, Belgium

BeCentral is a new non-for-profit digital campus located in Brussels Central Station. Cofounded & backed-up by more than 40 entrepreneurs, they are on a mission to close the digital skills gap and help to accelerate Belgium's Digital Transformation.

BrandBastion, Finland

BrandBastion is a company that offers automated global real-time support on social media 24/7. Their solution is offered on Facebook, Instagram and YouTube and their proprietary technology utilises artificial intelligence, natural language processing and machine learning.

Billy, Denmark

Billy is an accounting software that brings all your financials together. No more spreadsheets with expenses, Word invoices, bank statements and paper receipts all over the place. Have all your numbers in one place so you can see the whole picture of your business.

Clio Online, Denmark

A digital learning portal for primary and lower secondary schools. Clio Online has approximately 2,000 customers, including 90% of all Danish primary and lower secondary schools.

Confederation of Danish Industry, Denmark

Confederation of Danish Industry is a trade organisation and an employers' association. Currently 10,000 companies have chosen to join forces within DI.

Danish Association of Entrepreneurs, Denmark

Danish Entrepreneur Association is a non-profit organization that works to strengthen entrepreneurship in Denmark. It does this primarily in three areas: political interests of disabled persons, analysis on entrepreneurship, and its news portal Crowd News.

Deliveroo

Roofoods Ltd. (branded as Deliveroo) is a British online food delivery company founded in 2013 by Will Shu and Greg Orlowski. Based in London, it operates in two hundred cities. Orders are placed through its app or website and then self-employed couriers transport orders from restaurants to customers.

Digital Infrastructure Netherlands (DINL), The Netherlands

Digital Infrastructure Netherlands unites the leading parties in the Dutch Digital Infrastructure sector. DINL brings structure to complex themes and contributes to sector and society with practical solutions to challenges in the online world.

Dutch Start-up Association, The Netherlands

The Dutch Startup Association represents start-ups in the Netherlands and gives them a voice in the public debate. The DSA lobbies for startup-friendly legislation towards European, national and regional governmental bodies

Estonian Chamber of Commerce and Industry, Estonia

The Estonian Chamber of Commerce and Industry (ECCI) is a business network in Estonia. It is the largest in the country and has over 3000 members.

Epicenter Stockholm, Sweden

Epicenter is a Digital House of Innovation. At Epicenter, members are invited to innovate alongside the world's fastest growing digital companies and creative corporate initiatives. Within Epicenter, local and international entrepreneurs and companies meet to collaborate, learn and grow their businesses.

Ibec for Irish Business, Ireland

Ibec is the largest business lobby group and largest lobbying organisation in Ireland. It represents business of all sizes spanning every sector of the economy, together employing 70% of the private sector workforce in Ireland.

King, United Kingdom

King.com is a European video game developer based in London that specialises in the creation of social games. King develops games for the web, for mobile (iOS, Android, Windows Phone), Facebook, and Windows 10. King gained fame after releasing the cross-platform title Candy Crush Saga in 2012.

LucidWeb, Belgium

LucidWeb is a VR/AR/MR (XR) and WebVR/WebAR consulting and software development company. LucidWeb aims to democratise XR discovery by leveraging the power of today's mobile browsers to attract and guide the viewer into the XR headset. LucidWeb Pro provides publishers with the tools to manage and publishes WebVR/WebAR experiences, uniquely made accessible via a browser, 1 URL and instantaneously across platforms (mobile, desktop and VR/AR headsets).

Solita, Finland

Solita is a digital transformation company driven by data and human insight, they create culture, services and tech solutions. Their services range from strategic consulting to service design, digital development, data, AI & analytics and managed cloud services.

Supercell, Finland

Supercell Oy is a Finnish game development company based in Helsinki. Founded in May 2010, the company's debut game was the browser game Gunshine.net, and after its release in 2011, Supercell started developing games for mobile devices.

Technology Industries of Finland, Finland

Technology Industries of Finland is the lobbying organisation for technology industry companies. They promote competitiveness and the operational preconditions for this, the largest and most important export sector in Finland. Technology Industries of Finland has over 1,600 member companies.

The Coalition for a Digital Economy (Coadec), United Kingdom

The Coalition for a Digital Economy is a non-profit that campaigns for policies to support digital start-ups in the UK. They also conduct research, host events, and run campaigns on behalf of the UK's start-up community.

TransferWise

TransferWise is an Estonian developed and UK-based money transfer service launched in January 2011 by Kristo Käärmann and Taavet Hinrikus. TransferWise supports more than 300 currency routes across the world as well as providing multi-currency accounts.

Worksome, Denmark

Worksome connects highly skilled consultants and specialists with companies wanting access to flexible talent to solve their critical business issues. Worksome is a platform that makes companies' recruitment quick, efficient and agile, by matching talent and competencies with companies' demand.