

POSITION PAPER ON EU2020 COMPETITIVENESS IN THE DIGITAL ECONOMY

– the European perspective of the business digital economy and ICT market

About DIX – Independent digital innovation cluster advisors in Europe

DIX is a European not for profit networks of experts dedicated stimulating the European local digital and software economy. DIX is a cooperation between national ICT demand side associations, from small and large companies. DIX is NOT speaking on behalf of IT technology and service providers and consultants and importers.

DIX believes the use of software, information and digital technology is crucial for the competitiveness of the European economy. We want companies in Europe to benefit from an excellent digital environment. When it comes to regulations, a lot of attention is given to consumers and ICT service providers. The perspectives of the local European business users are too often ignored.

In our opinion Europe should seek for active competitiveness by urging digital transformation, new skills and education policy, rethinking the legal framework for competition in digital economies, creating new markets, innovations, technologies and endogenous competitiveness. The key priority is visionary create side e-leadership talents rather than use side, a competition framework suited to the digital economy aiming at European competitiveness, and a boost in the requisite talent supply to close the talent gap in Europe.

The key priorities from the business ICT market

Digital is everywhere and pervasive software eating our economy at light speed. It would go too far to bring all the issues companies face in building their digital strategy in this text, so we deliberately limit ourselves to our main priorities in this overall statement. DIX is open to discuss specific topics with representatives from the EC and other stakeholders.

1. The talent gap - Competencies and IT Professionalism

It is important the EU invests in eSkills programmes and frameworks. According to Empirica's working paper of November 2015, Europe has a shortage of 756.000 skilled IT professionals in 2020.

The single biggest gap in skills and competencies is in digital software-based industry creation and product innovations.

There is a gap in skills and competencies when it comes to digital innovation, not only in the software industry, but also in companies from all sectors and in the public institutions that use

digital technologies to innovate and create new business opportunities.

The lack of diversity is a huge problem. Europeans are over-educated but at the same time under-skilled in applying digital tooling and incompetent in competing in the current post-industrial era. We are over managed and under led, and we need more women in IT.

Europe needs leadership that believes in our future, believes in our own EU post-industrial skills & competencies to create and develop the future of Europeans, delivered primarily by Europe's own industry. We look to the new vice-president for '**A Europe fit for the digital age**' to provide leadership in transforming the European economy as a whole to the needs and opportunities of this digital age.

DIX is dedicated to create an new 21st century e-leadership skills education agenda consisting of a tech savvy business creators with T-shaped portfolio of skills with foundation on horizontal "**developing software-based digital business creation**" (software market and business engineering leadership) and vertical "**software-based service, product, experience, platform and technology ecosystem**" (software systems and technology engineering expertise).

2. Driving Digital Innovation – software is key for the economy

Software is an integral part of today's society. Software is as important as air, water and space. Software is the key enabling general-purpose technology basically defining how communication takes place and how value is created, controlled and governed.

Sustainable business models are based on European innovation and ownership. DIX believes the ethical dimension of software, especially with Artificial Intelligence, is very important, and expects guidance on a European scale on this meaningful challenge.

3. Worries about competition in the software market and where are the European providers for major needs of the business market?

European companies heavily depend on non-European providers for key elements of their business IT. On top of this, there is a serious market concentration, especially for Cloud infrastructure and enterprise-level software solutions. The market is highly concentrated with a small number of players. But also for smart collaboration, digital marketing, etc. the concentration is growing.

This is in our view not a healthy situation and policy is needed to counter these concentrations from becoming too powerful.

4. Businesses suffer from non-transparent software licensing conditions

It should be clear businesses rely on software. Many of the major software vendors change unilaterally their terms and conditions, the metrics, prices and other key elements of the use of

their software. It is very difficult to comply with non-transparent and complex software licensing schemes, which leads to unintended incompliance and large claims.

Due to the prohibitive costs involved with changing to a competing product/service (de facto lock in) major vendors can get away with changing prices and terms and conditions.

The traditional competition laws or the enforcement thereof fails to notice or prevent this, when it only looks at ex ante situations (only looking if there are multiple suppliers of a certain service on the market). The benefits that economic theory would ascribe to such a multi-vendor market, i.e. customer focus, low prices etc., do not apply when lock in is such, that transfer to another provider is not a viable option for customers.

DIX intends to support a Vendor Survey in 2020 to focus on this topic. We want to make sure we get some representative results that are of interest to our members and usable in communications with suppliers and EU representatives.

5. Network Security and procurement and geo-political/strategic concerns

In the current international geo-political and strategic landscape, much is changing that has for a long time been taken for granted. China and other Asian economies are much more influential than they have been for decades or centuries. The alignment in interests between Europe and the US is showing signs of change. This, together with the increasing reliance of our European economies and societies on technologies that are imported from these competing regions, has implications for our companies. Our ability to be autonomous is seriously threatened due to the reliance on digital technologies that originate outside of Europe. Policy is needed to make sure we don't make ourselves too dependent on other centres of power.

6. Cyber security act implementation

In the coming years, the Cybersecurity Act will be implemented in the Member States. Cyber security is a high priority for our member companies.

The Cybersecurity act gives a stronger basis for ENISA in the new cybersecurity certification framework to assist Member States in effectively responding to cyber-attacks with a greater role in cooperation and coordination at Union level.

DIX hopes there will be a lot of international harmonisation, because of the international dimension of cyber security.

The promises are high, as a one-stop shop for cybersecurity certification. Companies have a lot of questions about the EU framework for cybersecurity certification.

The Cybersecurity Act creates a framework for European Cybersecurity Certificates for products, processes and services that will be valid throughout the EU. The creation of such a cybersecurity

certification framework incorporates security features in the early stages of their technical design and development (security by design). It also enables their users to ascertain the level of security assurance and ensures that these security features are independently verified.

7. The economic potential of 5G is huge - a prosperous environment for 5G is a necessity

5G offers a lot of opportunities for companies to come with new, innovative services and to improve their operational working. 5G will be in the first place a story for the business market and is key for digital innovation. 5G will be crucial to facilitate our future economy.

Almost all companies have projects to automate processes, introduce new digital tools or develop new services. The development of internet of things, big data, artificial intelligence, virtual reality, etc. etc. implies we need 5G-networks. No one doubts the importance of mobile communications. But, the existing networks are only “best effort”. The 5G-networks will bring a huge number of new possibilities with the promise of service level guarantees.

Our companies will need an excellent 5G-environment to handle the competition with other continents. 5G is the infrastructure of the future.

8. The digital transformation of the Government and public services as a lever

The public services should be a role model for digitizing. The necessary financial resources should be made available. All companies and citizens benefit from a well-functioning, digitized government at all levels.

Governments can play a very important role in the encouraging of new technologies also. With pilot projects, innovation funds or their own digitization projects the government can be a lever for innovations.

9. How cross-sector regulation creates challenges for the IT business user

In this complex, interlinked regulatory environment, it is important not to forget how the regulation impact organizations that use IT.

The current regulatory situation is creating complexity and uncertainty for our members.

New challenges in privacy, cybersecurity and data protection are requiring regulators to reach into domains beyond their traditional competencies.

Many companies today operate in more than one country, and thus face multiple regulatory regimes. Even with the EU's General Data Protection Regulation (GDPR), rules vary by country. But each company has the responsibility to comply with the different requirements.

Within one country, multiple regulators can come up with different implementations on overlapping topics. For example, in Europe, the Network and Information Security (NIS) Directive and General Data Protection Regulation both require companies to report security and data breaches, but each has different reporting forms, deadlines, and so on. There is a risk therefore that we don't arrive at the most efficient implementation.

At the same time, technology continues to evolve faster than legislation. Companies face major ambiguity on essential questions: who owns what data? Who may commercialise data? And how can we ensure data is well-protected?

With GDPR the protection of personal data is the responsibility of the data controller. These organizations generally depend on others, like software vendors, to deliver secure data processing solutions. The case of the Dutch government's DPIA regarding i.a. Microsoft Windows 10 Enterprise and Office 365 Pro Plus has shown that this is not always a given and requires a prohibitive amount of research and negotiation costs to assure GDPR compliance. This is not a viable or affordable example for all data controllers to follow, for all software solutions they use. A European level compliance testing for software and contract clauses are the only way to ensure personal data is taken proper care of.

DIX sees a need for cooperation between regulators, not only from different countries, but also from different sector and competences, e.g. from the regulators of electronic communications, competition and data protection.

10. Seize the Digital Economy Opportunity

Now is the time for Europe's leadership to create policies for pushing autonomy and sovereignty in the software based digital economy. Europe needs a fresh start in gaining competitiveness in software innovation, growth and sustainability. It's time to fund feasible initiatives for the years ahead by teaming up the local, national and EU level demand side organizations. The European digital economy needs to be in the hands of Europe. This will bear fruit and save European culture, economy and the values of our peoples.

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