

**Opinion of the European Committee of the Regions — Digitising European industry**

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**Rapporteur:** Kieran McCarthy (IE/EA), Cork City Council**Reference document:** Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Digitising European Industry Reaping the full benefits of a Digital Single Market

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**POLICY RECOMMENDATIONS**

## THE EUROPEAN COMMITTEE OF THE REGIONS

*Creating a society of change and innovation: the challenge ahead*

1. welcomes the communication from the European Commission on *Digitising European Industry: Reaping the full benefits of a Digital Single Market* and the package of enabling measures it proposes towards unlocking the opportunities that arise from the Digital Single Market strategy. Europe's future economic growth and employment prospects, but also social cohesion, increasingly depends on the ability to understand, embrace and utilise all aspects of the innovation society within its regions;
2. underlines that the EU's Digital Single Market is underpinned by its 500 million consumers and is the single most powerful policy instrument for the EU and its Member States and regions to stimulate innovation, growth and jobs;
3. notes that the continuing industrial revolution, driven by new generations of digital technologies such as big data, and by new and different ways of applying digital technologies to sectoral and local problems, is taking place. The challenge ahead is for European industry to seize fully and swiftly these digital opportunities. The opportunities for companies in traditional and non-technological industries, particularly SMEs, to fully embrace digitisation as a means of enhancing and securing their competitiveness cannot be overstated;
4. recognises that the EU ICT sector represents an important share of the economy employing more than 6 million people and accounting for about 4 % of GDP. Recent studies estimate that the digitisation of products and services has the potential, if fully embraced, to add more than EUR 110 billion of revenue for industry per year in Europe in the next five years;

*Converging all sectors*

5. agrees that two particularly key success factors for reaping the full benefits of a Digital Single Market are (a) a highly competitive European digital industry; coupled with (b) the readiness of the private and public sectors to adapt accordingly by integrating the resultant digital innovations into their activities in order to ensure high-quality services for all citizens. Underlines that removing regulatory barriers, cutting red tape and modernising EU regulation is also a key factor;
6. highlights that businesses of all sizes across all regions and sectors can build on European ICT strengths by constructing digital industrial platforms in order to develop digital technologies from components to devices and software, for consumer markets and in web and data platforms and relevant applications and services;
7. underlines that the Digital Single Market strategy, especially the pillar on 'maximising the growth potential of the digital economy', contains all the major levers for improving industry digitisation with actions in areas such as the data economy, internet of things (IoT), cloud computing, skills and e-government. The convergence of a number of additional technologies is increasingly driving the digital change, notably robotics and artificial intelligence, and 3D printing;

8. encourages continued investments in three of the cross-cutting contractual public-private partnerships under Horizon 2020 — Factories of the future (FoF), Sustainable Process Industry through Resource and Energy Efficiency (SPIRE) and Bio-Based Industries Joint Undertaking (BBIJU);

*Recognising disparity*

9. recognises that most decision-makers in industry have difficulties in deciding when to invest, up to what level and in which technologies. Around 60 % of large industries and more than 90 % of SMEs feel that they are lagging behind in digital innovation;

10. emphasises that the rapid development and widening use of digital technologies also urgently requires modernisation of the current regulatory framework in order to keep pace with an unprecedented rate of innovation;

11. agrees that more should also be done to facilitate coordination of the large but fragmented European research, development and innovation efforts in other key digital technology fields;

12. insists that a broader understanding of interoperability as something not only relevant to public administration but to all sectors (e.g. as a means of ensuring consumer freedom is not compromised by the restrictions imposed by individual technology businesses' proprietary systems) is essential for the deployment of the IoT and the seamless flow of data across all regions. Availability of common formats, standards and specifications are clear requirements;

13. considers it essential that the European Commission's Better Regulation REFIT programme will focus on barriers to innovation and discuss how they can be removed or reduced through new regulatory approaches as set out in the Single Market Strategy. In this regard, stresses that local and regional authorities must be treated as key partners in the REFIT process and not as stakeholders, given that they enforce most of the decisions taken at the EU level;

14. calls on the Commission to work more closely with industries and businesses of all sizes, all levels of government and stakeholders in identifying and cutting regulatory barriers to digitising European industry as well as simplifying existing regulations;

15. argues that an effective ICT standardisation environment is crucial for digitising European industry and is key for the Digital Single Market in allowing devices and services to connect seamlessly across borders and between technologies. Efforts in this regard need to be strategically focused on five priority areas for standardisation efforts — 5G, cloud computing, IoT, data technologies and cybersecurity;

16. underlines that priority ICT standards for the Digital Single Market should aim at ensuring a fair return on investment to incentivise global R & D and innovation, and for a sustainable standardisation process, whilst ensuring wide availability of technologies in an open and competitive market;

17. notes that in many industrial domains, the traditional cycle of development, testing and standardisation is no longer adequate for the fast evolving and complex converged technologies;

18. points out that work in a digitised economy will also involve ever greater emphasis on new skills and capacities including more creativity, communication and adaptability requiring a massive upskilling of the workforce at all levels;

19. stresses that the further development of IoT and big data also pose significant trust and security challenges for any company and for public acceptance;

*Recognising the need for synergies*

20. urges that every feasible effort should be made to create strong focussed partnerships at regional, national and EU level in this field to bring about considerable private investments and achieve ground-breaking impact on competitiveness via the development of commercialised products and services. This will also allow for productive exchanges of experience, knowledge and ideas between these partners, with a view to making the most of synergies and avoiding the duplication of efforts, including through the creation of a network of partnerships;

21. encourages further investigation of the added value of enhanced cooperation between national and regional innovation policymakers taking into account the Smart Specialisation concept and emerging bottom-up interregional initiatives;

22. considers that investment from private and public sources including wider contribution from business and institutional players such as the European Investment Bank (EIB — including through the European Investment Plan/EFPI) — should be encouraged and the importance reaffirmed of synergies between Horizon 2020, the Startup Europe and FIWARE initiatives, the ESIFs, and regional and national policy instruments in relation to the broader EU objectives of competitiveness and cohesion;

23. acknowledges and welcomes the European Commission's plans to focus EUR 500 million investment from Horizon 2020 on the widespread roll-out of digital innovation hubs, although it must be ensured that the hubs are financed from resources under the second pillar of Horizon 2020 ('Industrial leadership') and are not taken from the budget for other parts of the Horizon 2020 programme; emphasises that local and regional authorities (LRAs) are well placed to contribute to this form of competence centre and technological one-stop-shop on behalf of industrial end-users; points out that scientific excellence is still an important criterion when selecting candidates for support and that the key role of universities in knowledge transfer and the innovation process must be adequately considered so that the impact of planned investment under Horizon 2020 can be further optimised. In this context the desired impact of activities relating to digital innovation hubs should be specified and if necessary reviewed;

24. reiterates its call that the necessary resources for digital investments should continue to be guaranteed as a core component of a forward-looking EU cohesion policy, preferably with a significantly higher investment than the EUR 14 billion share of ESIF spending on this topic between 2007 and 2013;

*Financing ICT in our regions*

25. points out that the openness of the internet and the impressive rise in supply of and demand for content and services now represents key driving forces for competitiveness, economic growth, social development and innovation in Europe. However, due to the handicap of lingering infrastructural deficits — particularly in rural contexts considered unprofitable by private operators — many LRAs remain currently unable to take full advantage of these developments;

26. asks the European Commission to support such LRAs in their financing activities, firstly by continuing to authorise priority deployment of the ESIF towards digital infrastructure in all European regions, and secondly by recognising technological barriers to digital development projects in rural and sparsely-populated areas, and regions facing other demographic challenges, which should be seen as services of general economic interest;

27. continues to share the worries of the European Parliament about the ramifications of the February 2013 decision of the European Council to reduce the budget for digital infrastructure and services under the Connecting Europe Facility, from EUR 9,2 billion to only EUR 1 billion, thereby causing the European Commission to fundamentally reorient it plans;

*Fostering innovation and competitiveness through ICT infrastructure*

28. stresses that LRAs are in a position to foster innovation and competitiveness through tailored demand-and-supply-side solutions including broadband roll-out, the digital economy, e-inclusion and e-government. Moreover, they provide education and training facilities, implement EU funding initiatives and facilitate beneficial cooperation and exchange with other public authorities including across borders;

29. welcomes the opportunities offered through the European Investment Bank, which has committed to increasing its loans for broadband infrastructure to EUR 2 billion per year and which has explicitly underlined the important role of the local and regional level in this type of growth-oriented investments. Also underlines the importance of encouraging community-led efforts, such as community enterprises;

30. urges that new investment tools should also be supported to accelerate the roll-out of infrastructure capable of achieving the broadband speed targets of the Digital Agenda for the Europe element of the Europe 2020 strategy, and to accelerate the full deployment of 4G (in advance of newer technologies, such as 5G), while maintaining technology neutrality, as well as allowing effective competition between operators;

*Developing the potential of e-government and e-commerce*

31. insists that LRAs can make it a priority to provide people with the digital and entrepreneurial skills that will enable them to make full use of new technologies, understand issues of cybersecurity and the need for personal data protection, increase their employability and create new business opportunities, including through the analysis of big data;

32. considers that e-commerce remains a missed opportunity for many smaller businesses, especially due to the prohibitive costs involved: 65 % of European internet users shop online, but this very significant demand is responded to by only 16 % of SMEs selling online — and less than half of those sell online across borders (7,5 %);

33. calls for prioritisation of the impediments to e-commerce arising from issues such as geo-blocking and the absence of a secure online credit card payment system. These issues present unnecessary costs, complications and risks of exposure to fraud for potential online retailers, particularly those who are engaged in cross-border selling;

34. emphasises the importance of the European Commission's e-Government Action Plan, on modernising public services through digitisation — specifically the accessibility of public institutions for private individuals and businesses via electronic means, irrespective of the physical location — and therefore underlines its support for the development of interoperable and multilingual cross-border public services (notably exchange of information) as a functional means of overcoming perceived peripherality;

35. points out that, when it comes to using the potential of e-government to provide societal benefits such as reducing the carbon footprint, simplifying procedures for businesses, fostering tourism or highlighting cultural heritage assets, it is often LRAs that are playing a large leadership role in identifying ICT opportunities and actors, sharing technological best practices, allocating funding to invest in ICT tools, measuring progress and communicating success;

36. points out that, as businesses improve their digital skills and make more use of digital media, their requirements for digital solutions in their contacts with public authorities will increase. Properly functioning digitised public administration means that businesses, organisations and individuals can be provided with efficient e-services and digital processes, which improves accessibility, facilitates procedures and reduces processing times for their dealings with the public sector. Greater digitisation provides greater opportunities for public stakeholders at central, regional and local level to free up resources, so that more time can be spent on client meetings and less on administration and verification;

37. underlines that the interoperability of e-government requires not only system compatibility but also the capacity of public administration to work in close cooperation with information systems, as well as public awareness of the possibilities that such systems offer. The CoR therefore suggests adding human capacity-building, both in terms of digital and language skills, and awareness-raising components to the ISA<sup>2</sup> programme for interoperability solutions to support the modernisation of public administration;

38. welcomes the proposed measures concerning the internal market for e-communications designed to promote dynamic and sustainable growth in all economic sectors and to create jobs, as well as to ensure that copyright rules are modernised in light of the digital revolution and changes in consumer behaviour;

39. acknowledges the potential that can be derived from the Knowledge Exchange Platform (KEP) cooperation between the European Committee of the Regions (CoR) and the European Commission's Directorate-General for Research and Innovation (DG RTD) as a means to promote new research and innovation (R&I) solutions, innovative products and best practice in response to societal challenges facing LRAs in Europe;

*Providing education and skills matches*

40. stresses that some of the priorities of the Digital Agenda for Europe — notably addressing digital literacy and skills shortfalls as well as missed opportunities in tackling societal challenges — are fundamentals for the quality of life and social and economic activity, which can be best dealt with at local and regional level to stimulate more efficient and personalised services for the public as well as local businesses;

41. acknowledges that with regard to ICT professionals, more than a million additional jobs have been created in Europe over the last three years. Despite this, it is expected that rapidly growing demand will lead to more than 800 000 unfilled vacancies in this sector by 2020;

42. urges the further development of the European Commission's *Grand Coalition for Digital Jobs* as a cross-European, multi-stakeholder initiative to reconcile the imbalance of these skills shortages and ICT-related job vacancies by means of offering appropriate training, apprenticeships, placements, actions to facilitate mobility and/or carrying out awareness-raising activities to encourage young people to study and pursue careers in the sector;

43. recalls that it is at the sub-national level that the most accurate and timely information on labour markets can be sourced and where LRAs can play a significant role in identifying skills mismatches by supporting the development of appropriate vocational programmes and incentivising investment in response to local demand;

44. calls for education providers to develop focused and more flexible training approaches in ICT. Future jobs will require an appropriate mix of basic, soft and technical skills, notably the digital and business-specific skills, that education and training systems are not yet fully addressing. Thus, the foundations need to be laid for an education and training system in which pupils/students focus on practice rather than theory;

45. acknowledges the creation and importance of the European Commission's *New Skills Agenda for Europe* and how it will provide a comprehensive framework for employability, including the need for digital and complementary key enabling skills;

46. emphasises the enormous importance of providing digital literacy and skills necessary for citizens, workers, students and jobseekers to be part of the comprehensive implementation of digitalisation in the economy and society;

47. reaffirming European cooperation in the youth field (2010-2018), stresses the importance of developing a basic package that each Member State would guarantee to young pupils by providing access to broadband within the education system, thus providing young people with a minimum guarantee regarding digital qualifications and skills. This should be applied not only during compulsory education but also in the course of lifelong learning, through innovative programmes and further training that keeps pace with the development of technology;

48. cautions that aside from the economic and employment perspective, the increasing influence of digital technologies, particularly amongst young people, must not be allowed to undermine fundamental human skills such as literacy and person-to-person interaction;

49. concludes that further acknowledgement in relation to the sustainable roll-out of the Digital Agenda needs to be given to the EU's regions. LRAs are amongst the main target audience of the agenda's recommendations and must be seen as key drivers and partners for its implementation.

Brussels, 11 October 2016.

*The President  
of the European Committee of the Regions*

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