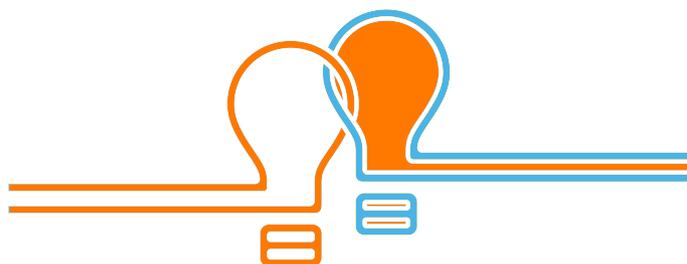# Committed to Europe

Digital skills for EU growth and competitiveness

In a nutshell

While the EU economy is expected to reach in 2018 its highest ever growth rate, the digital skills challenge has become a daily reality for many European industries.

In order to fully benefit from the ongoing digital transformation, developing digital acumen in our society as well as re-shaping the way we cultivate skills among workers, citizens or researchers for technological excellence and digital entrepreneurship are key steps Europe cannot afford to miss. Our capacity not only to adopt but also to create the next generation of digital services is at stake. In Europe, developing these skills has become a priority over the past few years. Even still, currently, according to the European Commission[1], 44% of European citizens do not have basic digital skills. This figure only represents the 'tip of the iceberg' as the need to understand and master ICT concerns society as a whole, with specialised skills being needed in new fields (e.g. artificial intelligence or big data) as well as a general digital know-how in order to ensure that none are left behind.

This paper looks at current proposals to increase digital skills among all Europeans with reference to lessons learned by Orange during its transformation from a telecom operator to a truly digital company – and through its involvement as a partner in civil society, and as a 'digital coach'.

Enabling the digitisation of European business through a digital-savvy workforce

We have to facilitate the spread of digital skills, so that everyone can adapt to and benefit from digitisation. Their development should be part of early education – a Member State's competence – but should also be a cornerstone of 'lifelong learning', to ensure Europe's workforce adapts through their careers to the evolving needs of the wider economy.

European Institutions can facilitate digital take-up by adding clearer structure to the way skills are managed, in particular by: encouraging the provision of training resources and commitments; ensuring greater consistency of training and recognition of that through, for example, certification schemes throughout the Union. This ambition is reflected in the Commission's latest set of initiatives[2] which comprises a Digital Education Plan (supporting schools to adapt curricula and teaching methods) along with a Recommendation to EU Member states on key competences for lifelong learning.

A first step in awareness-raising was the 'Grand coalition for Digital Jobs', gathering many different stakeholders ('pledging organisations') - including the European Telecommunications Network Operators' Association (ETNO) - with the idea to use their respective know-how and network at the service of digital skills development. Yet, training itself is not sufficient for digital momentum: workforce mobility is also important. This may be improved by wider recognition of skills across the Single Market and industry sectors: a meaningful step, the common European framework for

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[1] https://ec.europa.eu/digital-single-market/digital-skills-jobs-coalition
[2] EC press release, 17 January 2018, « New measures to boost key competences and digital skills, as well as the European dimension of education» http://europa.eu/rapid/press-release_IP-18-102_en.htm

ICT Professionals provides a unified language for competences, skills and proficiency levels, which could be extended to all industry sectors.

Beyond training and mobility considerations, digital tools can also help transforming skill-management in a workforce, improving employee's empowerment to manage their skills and job opportunities. For instance, Orange has developed new innovative HR tools:

- Under the '*My Skills*' initiative, staff can assess their skills and learn how to develop them. The tool enables employees to opt-in for specific training programmes and HR to plan resources accordingly;
- New career paths have been designed, allowing employees to broaden their potential through HR processes that favour mobility across divisions - but also across specialties.

Leaders from business and politics also need to embrace a 'digital mindset'. All sectors now rely on Information and Communications Technology (ICT) to engage with customers, improve business intelligence or streamline value chains. To transform business models, organisations, need to engage the whole workforce with the help of digital leaders and ambassadors, offering digital insights across organisations and promoting ICT to achieve business aims. The *High-Tech Leadership Skills For Europe* report of March 2017[3] estimates that 50,000 new high-tech leaders would be needed in Europe each year till 2025. This need has also been recognised in the founding of the e-skills forum and the creation of guidelines and quality labels for new curricula that foster e-leadership skills.

⊕ Orange digital learning schemes: turning digital from inside

To ensure all employees feel involved, Orange developed the *Digital Leadership Inside* programme which built a common grounding of digital know-how for the Group's 152,000 employees, irrespective of their occupation.

As of today (end of 2017), 80,000 employees passed their 'Digital Passport' certification, demonstrating a targeted level of digital literacy.

More recently, to address the existing shortage of cybersecurity specialists right away, Orange decided to set up its own learning center: the *Orange Cyberdefense Academy*. The idea is to offer a fast-track learning scheme open to all to foster skills development in this field.

Digital excellence: developing specialised skills & appetite for digital entrepreneurship

Europe's digitalisation should not be limited to the adoption of digital solutions. Indeed, a European Digital Single Market would benefit from having capabilities to create digital technologies, with for example specific roles such as software engineers and programmers, but also data scientists to explore opportunities in a data-driven economy, as well as researchers and developers on artificial intelligence. To these may be added cybersecurity experts needed to protect assets which have become so vital to the functioning of our economy and civil infrastructure.

The example of cybersecurity

These specialised skills are of particular importance when it comes to cybersecurity, as managing risk in an interconnected world has become a central concern.

Telecom operators play a key role on these issues as networks, on which relies a Gigabit Society, are amongst the targets for attacks, in particular 'Denial-of-Service' attacks. Moving from a prevention strategy to a cyber risk-management strategy requires the continuous development of tools and expertise to secure infrastructure and supervise, detect, defend and prevent. In this context, '*Orange cyberdefense*' is our division dedicated to the handling of cyber-risks and concentrating know-how, skills and talents in a single organisation.

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[3] See: http://eskills-scale.eu/fileadmin/eskills_scale/all_final_deliverables/scale_e-leadership_agenda_final.pdf

Another example: software development

Fostering digital skills of the workforce should be achieved globally. For example, future graduates need to have a better grasp of software capabilities and development: this is why initiatives such as the European code week[4] –embraced by Orange in its '#SuperCoders' programme[5] – helped raise awareness among young people of the importance and opportunities opened by software development.

Promoting coding at all levels of education broadens career opportunities and helps digital integration by turning digital consumers into digital transformers. This is why coding is promoted in several European countries, with 12 of them having coding as part of their school curriculum. This coding knowledge could boost the app economy with a surge in app development offering a wealth of useful new tools. This would also empower aspiring digital entrepreneurs to start developing inventive platforms or services in Europe.
It should also be noted that the majority of European ICT graduates come from 3 countries only (France 18%; UK 17%; Germany 15%) which poses another challenge in terms of promoting digital/ICT curricular in all EU member states, going beyond coding sessions.

Technological excellence, entrepreneurship and beyond

In view of the benefits, promoting the development of specialised skills should be a policy priority at European level. For companies such as Orange, it is clearly of general interest to see the potential of European talent being developed and unleashed. But supporting the creation of startups requires first and foremost developing entrepreneurial skills. The ambitious goals enshrined in the Entrepreneurship 2020 Action Plan, aiming to «revolutionise the culture of entrepreneurship in Europe», could be greatly strengthened with an added digital perspective. Improved links between schools and private/public bodies would also ensure that all partners keep up with the latest evolutions.

Paving the way to digital inclusion: digital skills for all

Europe cannot face all its future challenges unless digital tools are widely adopted. A major target for policy makers should therefore be to ensure that all citizens fully benefit from involvement in the economy and society, via digital means. In this respect, we totally share Commissioner Mariya Gabriel's view that «it is not just those who work in IT that will need to be alert of the digital transformation»[6].

While society is ageing at great pace, our continent cannot afford to miss the digital inclusion of its senior population. Recent studies reveal an increase in the uptake of digital solutions by seniors, which is very good news considering that digital tools can make their life easier: they can for instance help them keep in touch with their relatives living far away and facilitate health monitoring. This is well-reflected in the study carried out by the Michigan State University researcher William Chopik[7], who found out that «social technology use among older adults is linked to better self-rated health and fewer chronic illnesses and depressive symptoms». In

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[4] EU Code Week web portal: http://codeweek.eu/

[5] The SuperCoders web portal: http://supercoders.orange.com/en/home

[6] Quote form the EC press release of 17January 2018: http://europa.eu/rapid/press-release_IP-18-102_en.htm

[7] What digital divide? Seniors embrace social technology : http://msutoday.msu.edu/news/2016/what-digital-divide-seniors-embrace-social-technology/

order to further encourage digital take-up among this category of the population, access to training should be made easier and adapted equipment should be proposed at a larger scale.

Owing to its primary activity of connecting communities, Orange is naturally inclined to foster digital inclusion and literacy; which is one of the core activities of the *Orange Foundation*[8]. The other important factor in digital inclusion is to use digital tools to provide more inclusive education services, as technology can greatly reduce barriers to education and allow a more flexible and creative way of learning.

Massive Open Online Course (MOOC) is a perfect tool to achieve this. Since everything is made available online, these courses reach a greater audience, with individuals benefiting from a tailored-made curriculum offering the capacity to learn at their own pace. It has become very popular and many platforms, including highly ranked universities or public bodies are now proposing MOOCs. To tackle the surge of the MOOC offer, Orange has developed the Solerni[9] platform which hosts MOOCs developed by external contributors. The next step would be to formally recognise the value of MOOCs, granting them the same importance as on-site traditional courses.

Following the Gothenburg Social Summit of November 2017 and the European Council conclusions of the 14th of December 2017, the European Commission came forward with a Recommendation to promote a «European dimension of teaching». Indeed, to prepare individuals for active citizenship and changing the labour market, ensuring the good command of digital tools is required. A very good illustration of digital tools helping to achieve this goal is found in the *e-Twinning*[10] network which increases virtual exchanges among European schools.

Europe needs digital skills to foster innovation and regain its edge in a competitive world, as set out in the Juncker Commission's work programme. Indeed, digital skills development throughout Europe will play a key role in ensuring our future: empowering Europeans with the relevant skills would not only address the high unemployment rates but also drive the creation of an innovative digital economy. Digital literacy naturally leads to the skills which propel digitalised business and entrepreneurship.

To meet these objectives, Europe should actively commit to skills development. While policy makers at European and national levels can pull many levers, this transformation will be successful only if developed and shared together with companies and citizens.

For more information: www.orange.com/committedtoeurope, or follow us on Twitter: @Orange_Brussels

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[8] The Orange Foundation web portal: https://www.fondationorange.com/en

[9] https://solerni.org/mooc/

[10] For more information: https://www.etwinning.net/en/pub/index.htm