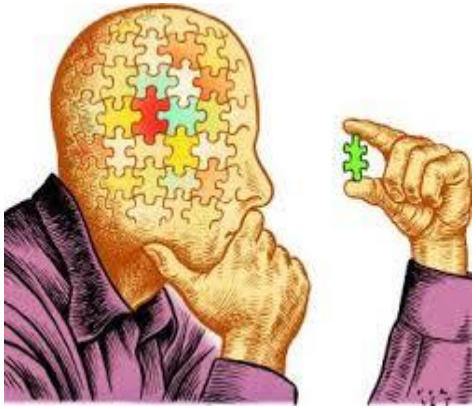
ΕΘΝΙΚΟ ΚΕΝΤΡΟ ΚΟΙΝΩΝΙΚΩΝ ΕΡΕΥΝΩΝ
NATIONAL CENTRE FOR SOCIAL RESEARCH

Is Greece Falling Behind in the E-Economy? Answers from WIP-GR



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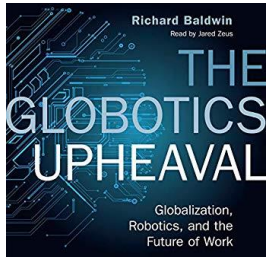
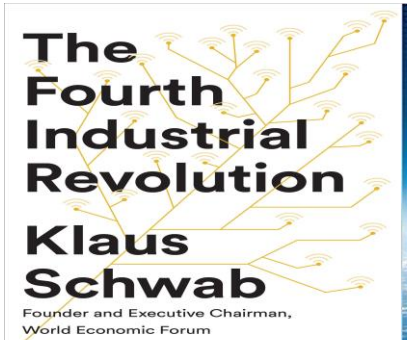
National Centre for Social Research
Athens, Greece

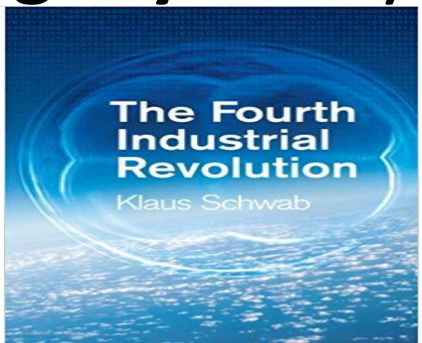
The global context of 21st century Digital Society

- A connected, complex and unpredictable world
- **Industry 4.0 => Future of Democracy**
- **Globalization 4.0 => Future of Work**
- **Shifts in economic structure and Governance**
- **COVID-19 has accelerated hyper-connectivity** and the integration of new technologies affecting the human condition => 175 zettabytes in 2025
- **COVID-19** has shown the **fragility** of key infrastructures

Need for resilience

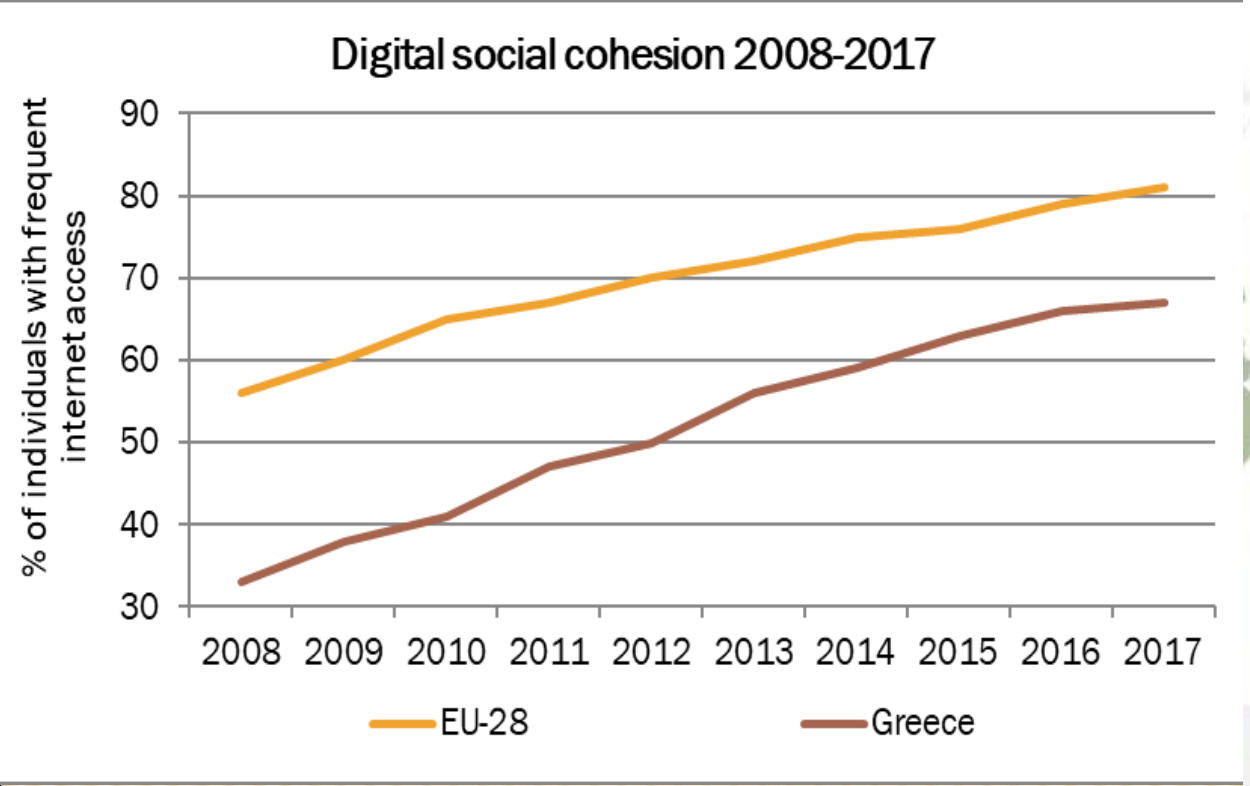


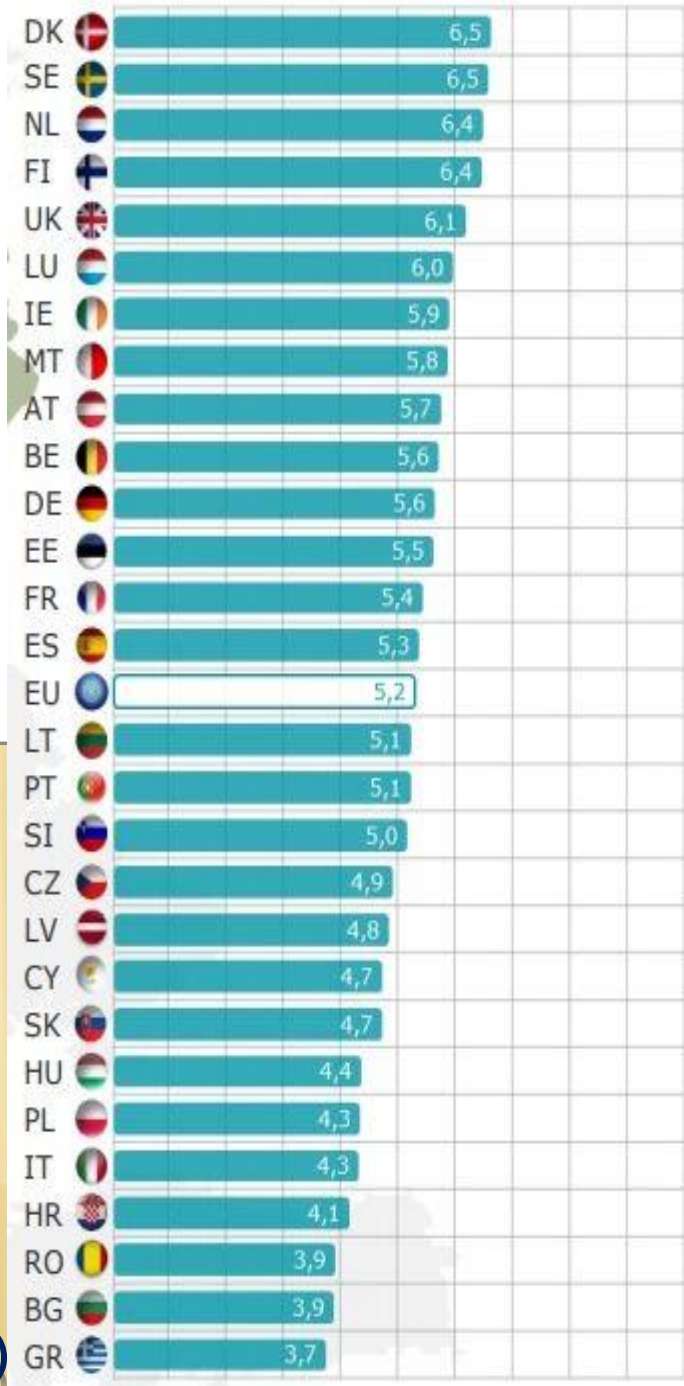




The European context

The **Digital Single Market** is a policy belonging to the European Single Market that covers digital marketing, E-commerce & telecommunications





1.SEV DIGITAL MATURITY INDEX=>

2.Inequality among
regions,
sectors, firms,
gender,
workers & generations

3.COVID19 CRISIS HAS INCREASED SOCIOECONOMIC INEQUALITIES(OECD 2020)

IMD 2020 DIGITAL COMPETITIVENESS RANKING: TECHNOLOGY, KNOWLEDGE, READINESS

Country / Economy	2020	Change	2019
USA	1	— (0)	1
Singapore	2	— (0)	2
Denmark	3	▲ (+1)	4
Sweden	4	▼ (-1)	3
Hong Kong SAR	5	▲ (+3)	8
Switzerland	6	▼ (-1)	5
Netherlands	7	▼ (-1)	6
Korea Rep.	8	▲ (+2)	10
Norway	9	— (0)	9
Finland	10	▼ (-3)	7
Taiwan, China	11	▲ (+2)	13
Canada	12	▼ (-1)	11
United Kingdom	13	▲ (+2)	15
UAE	14	▼ (-2)	12
Australia	15	▼ (-1)	14
China	16	▲ (+6)	22
Austria	17	▲ (+3)	20
Germany	18	▼ (-1)	17
Israel	19	▼ (-3)	16
Ireland	20	▼ (-1)	19
Estonia	21	▲ (+8)	29
New Zealand	22	▼ (-4)	18
Iceland	23	▲ (+4)	27
France	24	— (0)	24
Belgium	25	— (0)	25
Malaysia	26	— (0)	26
Japan	27	▼ (-4)	23
Luxembourg	28	▼ (-7)	21
Lithuania	29	▲ (+1)	30
Qatar	30	▲ (+1)	31
Slovenia	31	▲ (+1)	32
Poland	32	▲ (+1)	33

Country / Economy	2020	Change	2019
Spain	33	▼ (-5)	28
Saudi Arabia	34	▲ (+5)	39
Czech Republic	35	▲ (+2)	37
Kazakhstan	36	▼ (-1)	35
Portugal	37	▼ (-3)	34
Latvia	38	▼ (-2)	36
Thailand	39	▲ (+1)	40
Cyprus	40	▲ (+14)	54
Chile	41	▲ (+1)	42
Italy	42	▼ (-1)	41
Russia	43	▼ (-5)	38
Turkey	44	▲ (+8)	52
Bulgaria	45	— (0)	45
Greece	46	▲ (+7)	53
Hungary	47	▼ (-4)	43
India	48	▼ (-4)	44
Romania	49	▼ (-3)	46
Slovak Republic	50	▼ (-3)	47
Brazil	51	▲ (+6)	57
Croatia	52	▼ (-1)	51
Jordan	53	▼ (-3)	50
Mexico	54	▼ (-5)	49
Peru	55	▲ (+6)	61
Indonesia	56	— (0)	56
Philippines	57	▼ (-2)	55
Ukraine	58	▲ (+2)	60
Argentina	59	— (0)	59
South Africa	60	▼ (-12)	48
Colombia	61	▼ (-3)	58
Mongolia	62	— (0)	62
Venezuela	63	— (0)	63

World Internet Project (founded in 1999)

WORLD INTERNET PROJECT

Center for the Digital Future

Aims & Scope of World Internet Project

The World Internet Project (WIP) is a major, international, collaborative project looking at the social, political and economic impact of the Internet and other new technologies.


EK
KE
2020
The Internet in Greece
World Internet Project
Final Report

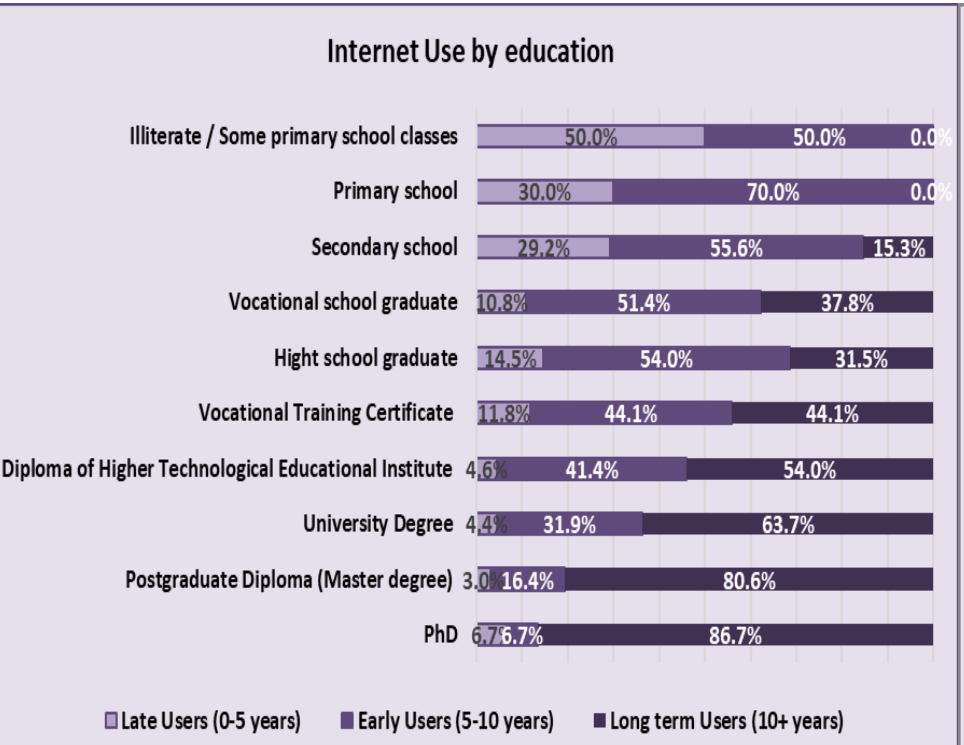
World Internet Project – Greece (2019)

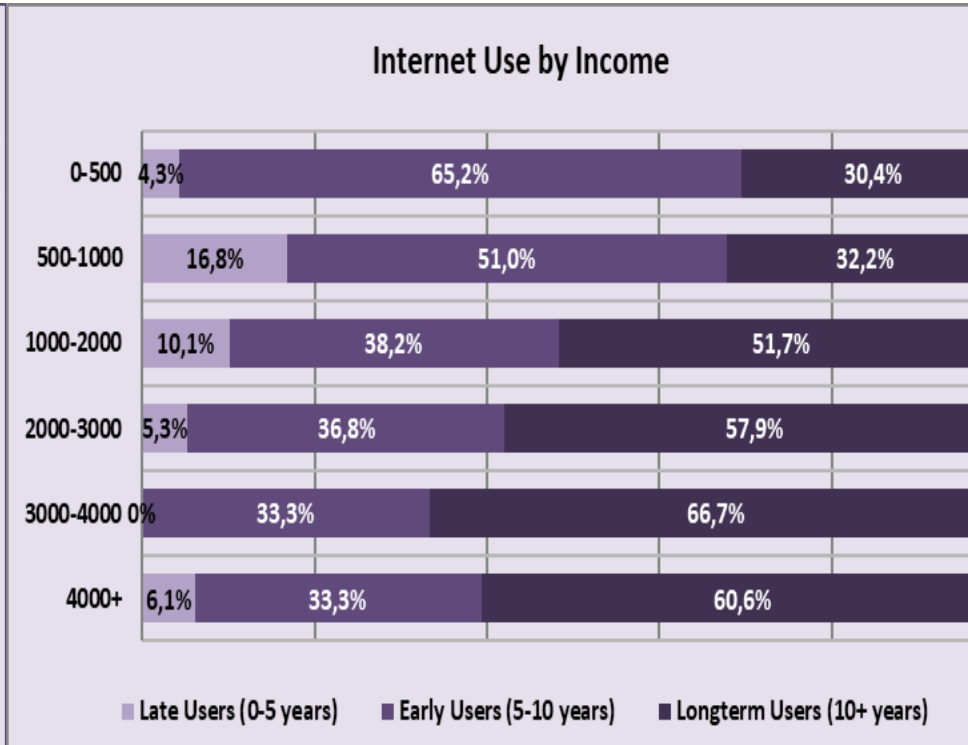
- **The pandemic is a huge accelerator for digital reform in Greece.**
- **COVID-19 highlights the importance of digital infrastructure and digital human & social capital for an inclusive & resilient recovery.**
- **WIP-GR Report first conclusions (written in 2019) anticipated the coronavirus disruption of the Greek digital landscape:**

"…Greece appears as a ***digitally immature, unready and vulnerable society***, with strong internal antinomies, which are in tandem with internet's radical ambivalence in general…" (forthcoming in Hellenic Observatory Discussion Papers Series)

World Internet Project – Greece (2019)

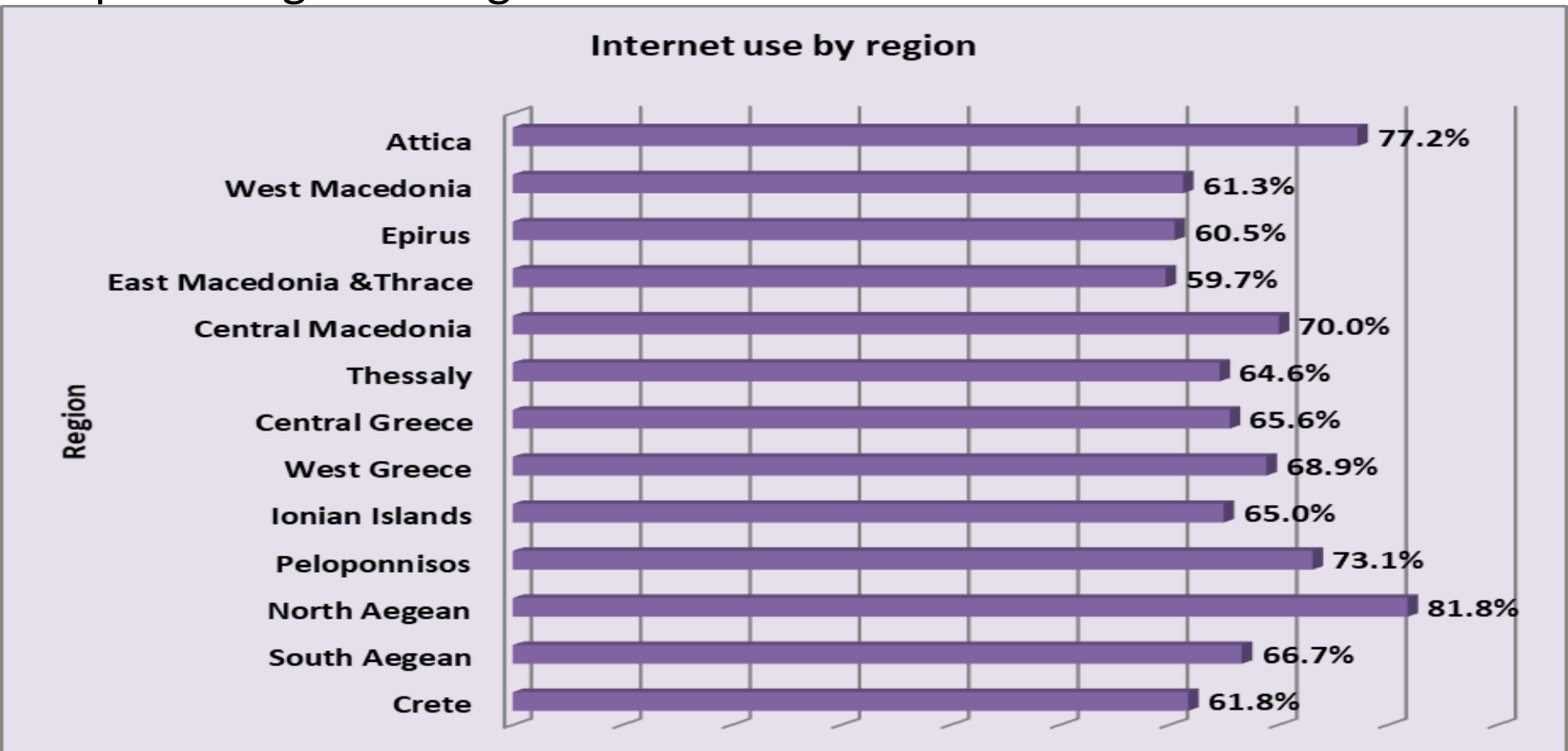
- The internet is mostly used by the **younger, employed and better-educated population, of higher income.**
- Internet use is increasing, although the Greek internet use rate still falls below the EU average (85%). **Over 70% of the population** (aged 15+) report themselves as internet users. The non-users refrain from internet use mainly because they are not interested, or not convinced, about internet's usefulness; or they are afraid of (or confused by) technology; or they lack technical skills.
- **Non-users: 29%; 70% of them dynamic non-users; Digital gap still exists!**





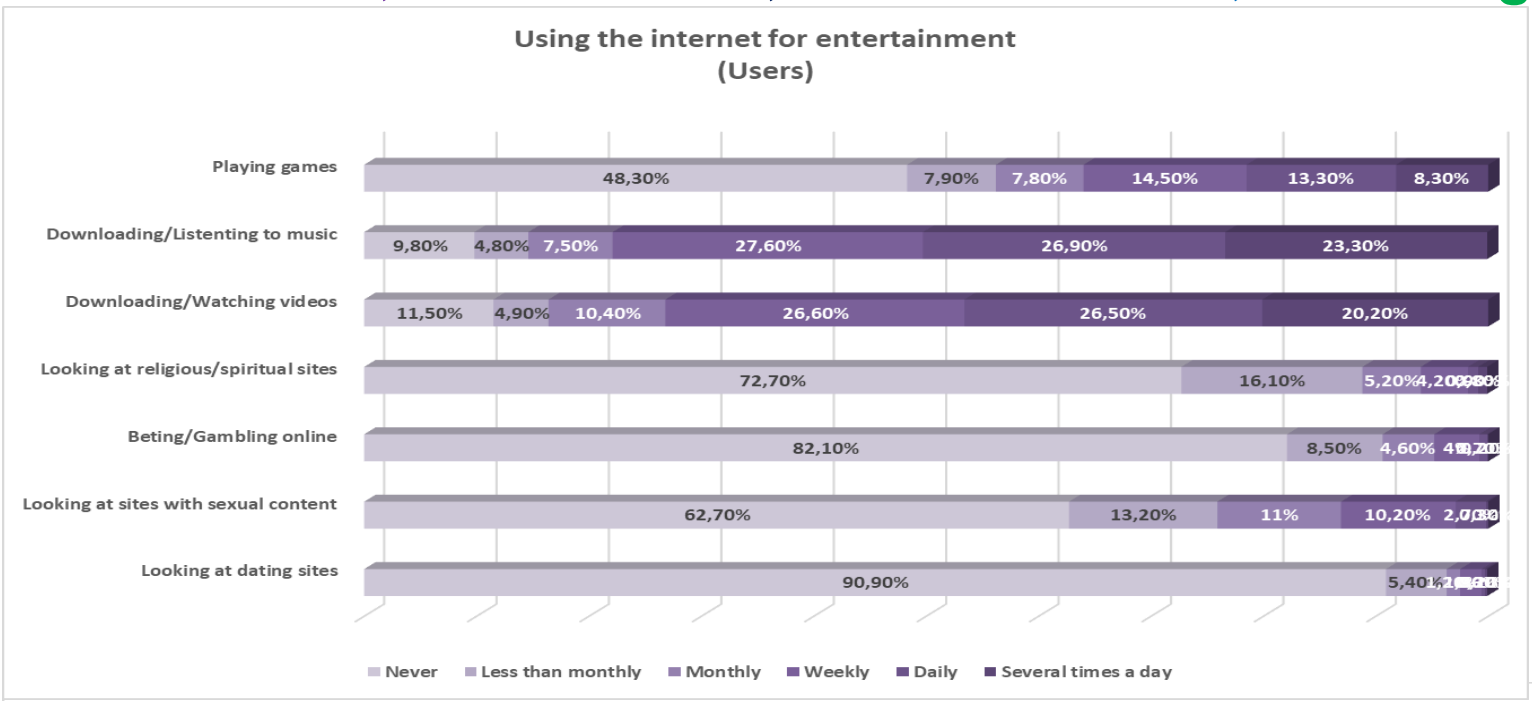
World Internet Project – Greece (2019)

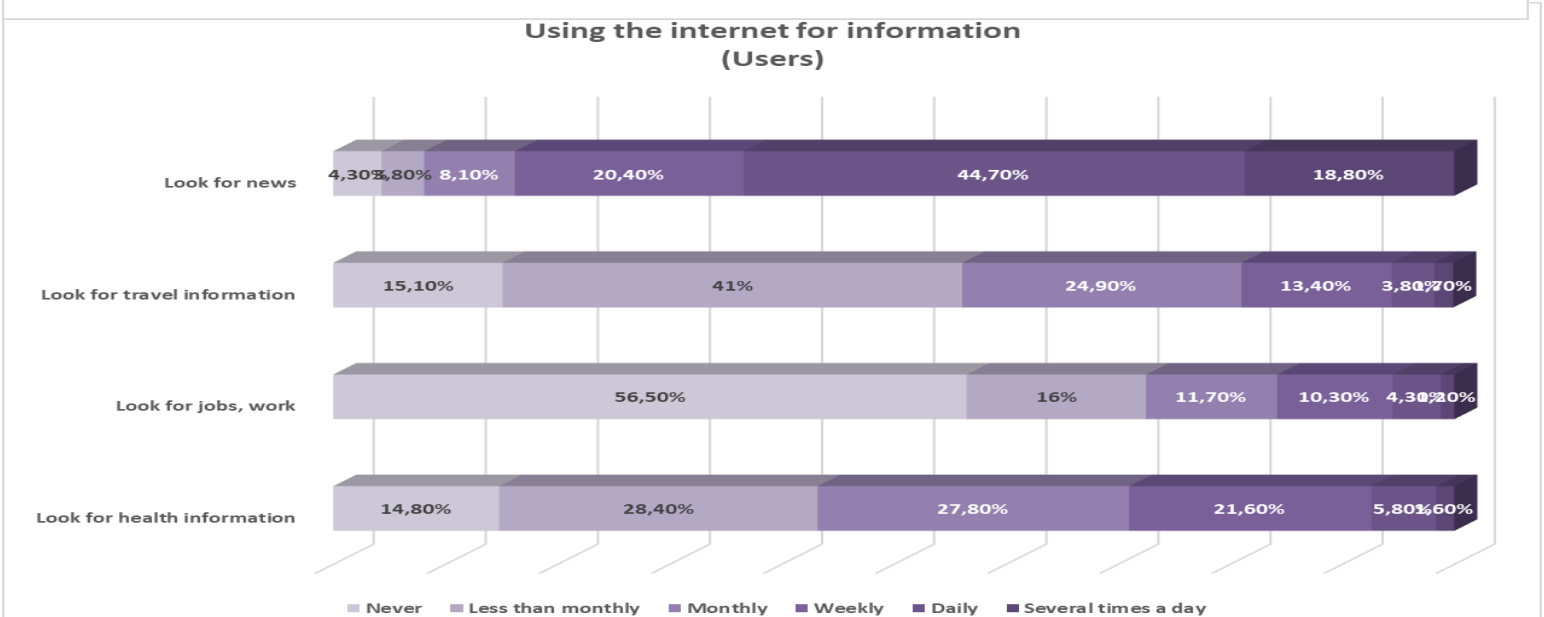
- A **divide in internet use** is noticed between **urban and rural areas**, as urban residents use the internet significantly more than rural residents. In particular, **Attica** has the highest percentage of long-term internet users (56.2%), while regions with high tourism activity, such as **Crete** (45.2%) and **South Aegean** (57.1%), also exhibit high percentages of long-term users.



World Internet Project – Online activities

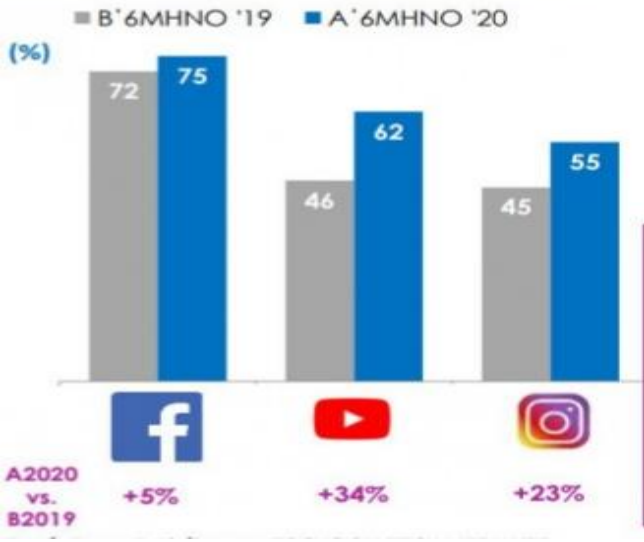
Communication; Information; Entertainment; Learning



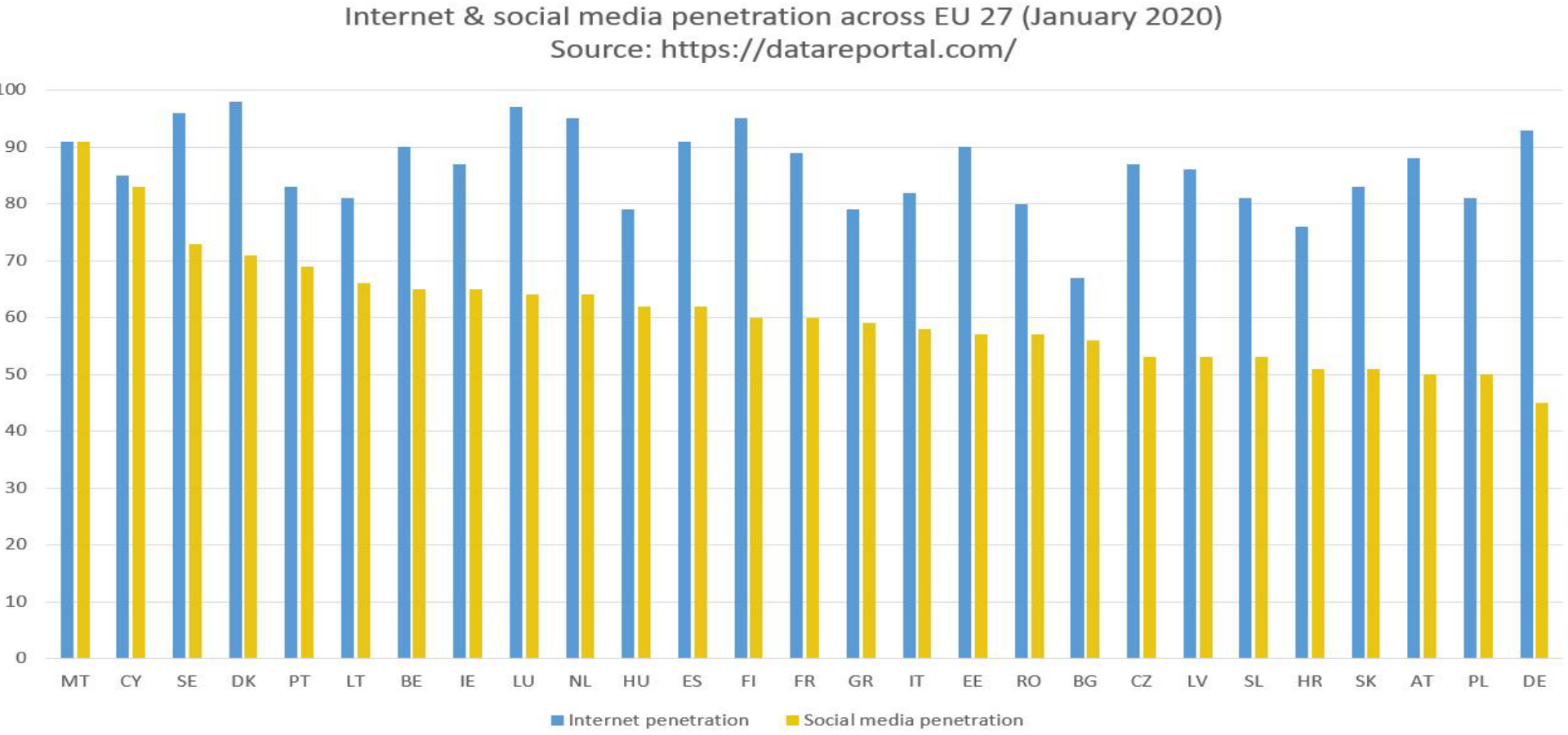


YET, GREECE 6,070,000 FACEBOOK SUBSCRIBERS JAN 2020, SOURCE: INTERNETWORLDSTATS.COM

FOCUS BARI & YOUGOV JOINT RESEARCH
COVID19 DISRUPTION IN GREECE APRIL 2020 =>

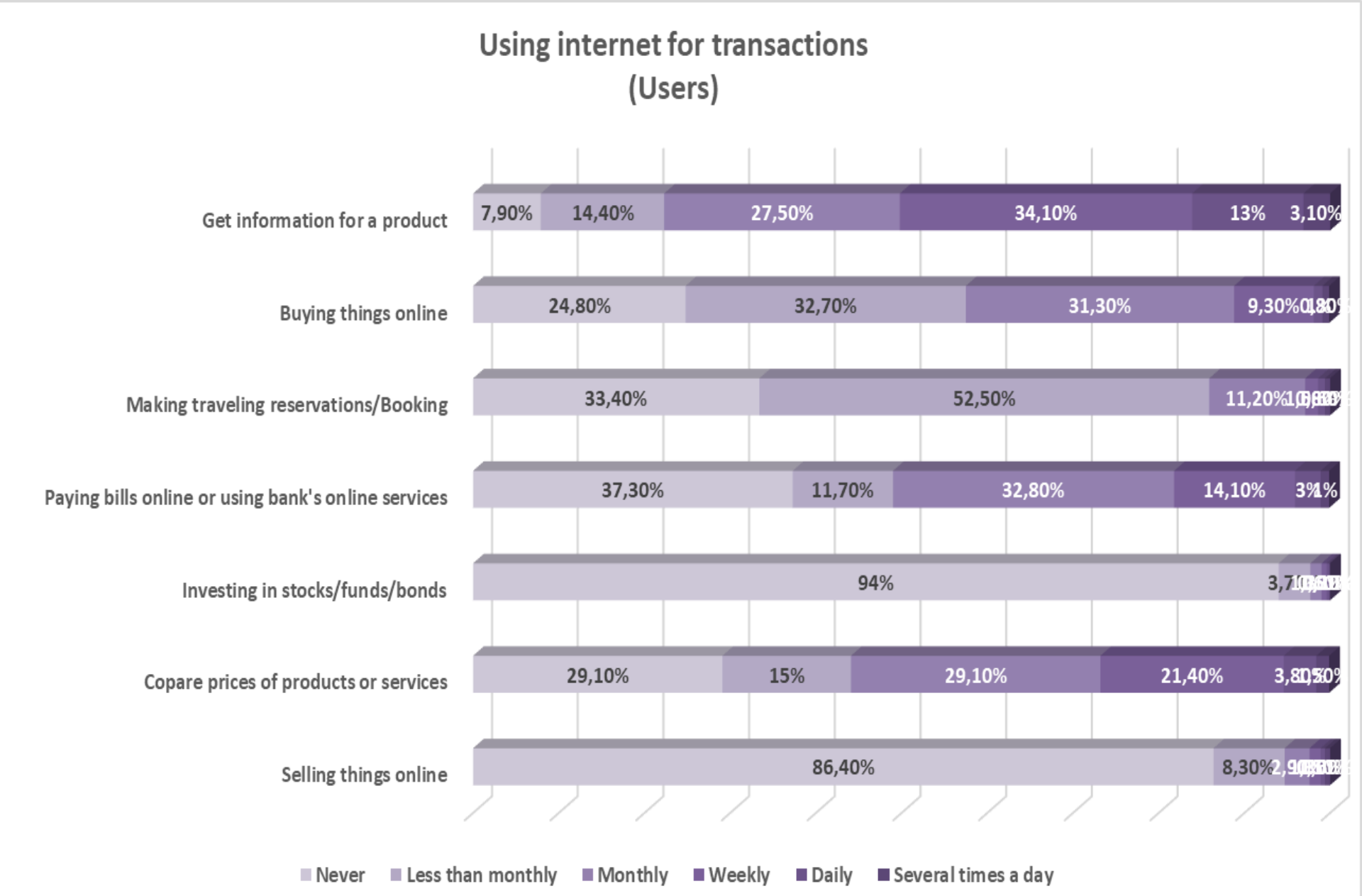


INTERNET AND SOCIAL MEDIA PENETRATION ACROSS EU 27 (JAN 2020)



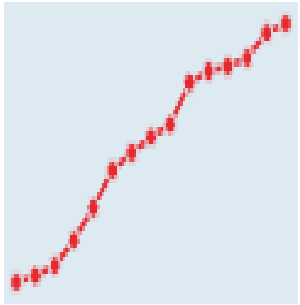
World Internet Project – Online activities

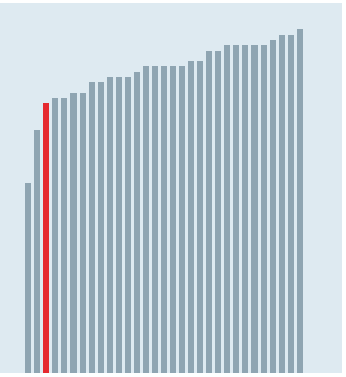
Transactions: info; online buying/selling; e-booking; e-bills



LOW DIVERSITY OF ONLINE ACTIVITIES (OECD 2019) →

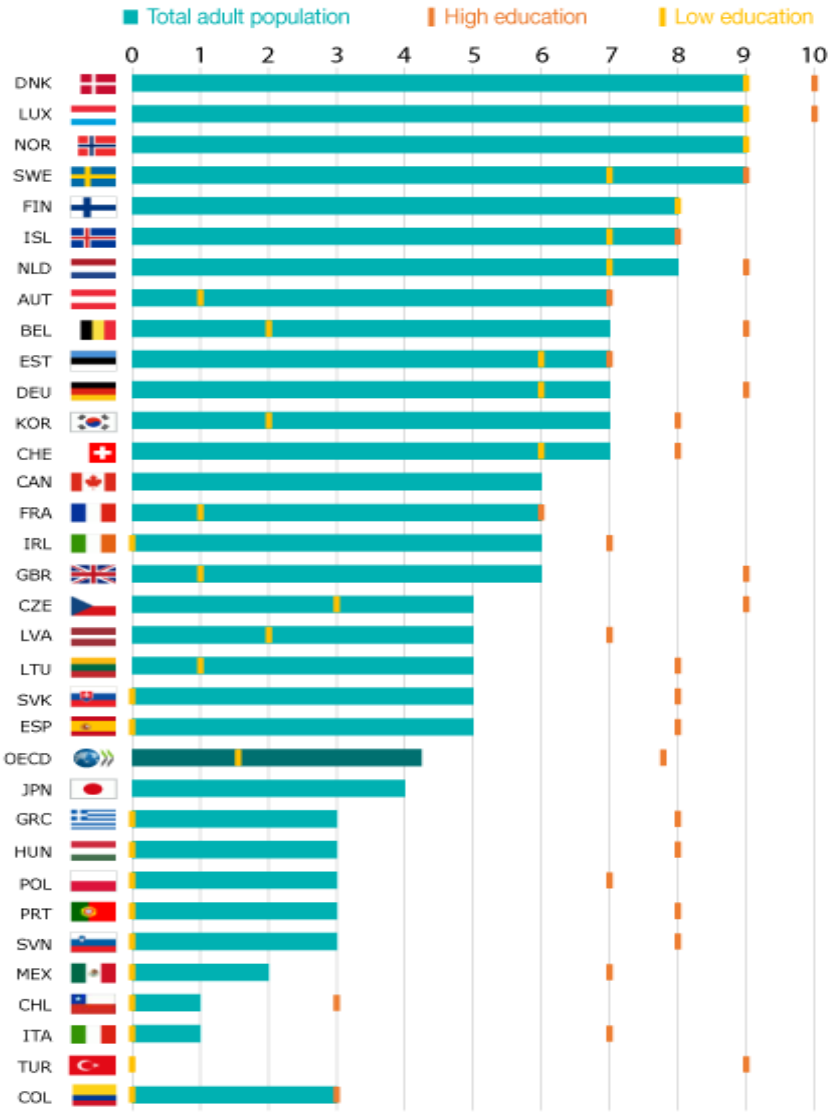
INTERNET ACCESS =>





Number of online activities, 2017 or latest available

Number of online activities used by more that 50% of people



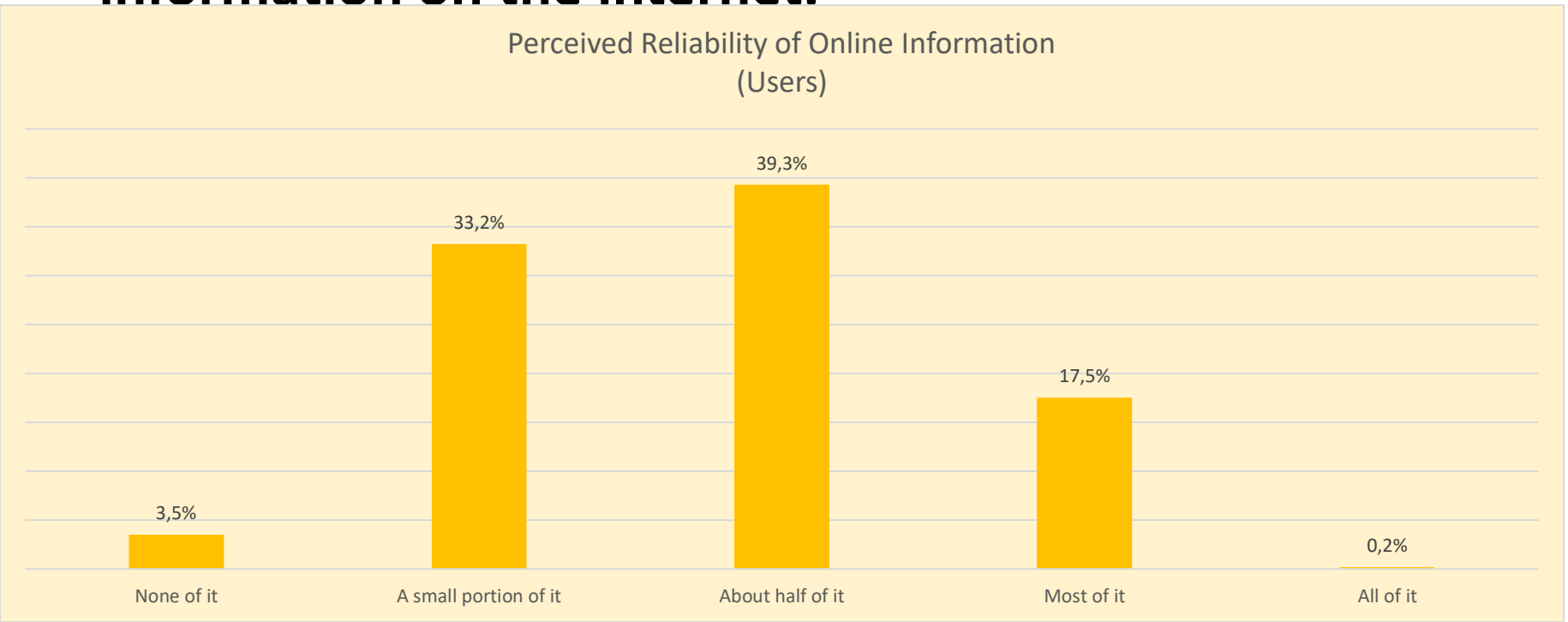
Number of online activities out of 10 possible online activities. For the full list of activities, please see Figure 2.3 "Variety of uses of the Internet"
Source: Based on OECD ICT Access and Usage by Households and Individuals (database), http://oe.cd/hhind.

OECD (2019), How's Life in the Digital Age?
https://doi.org/10.1787/9789264311800-en

World Internet Project – Greece (2019)

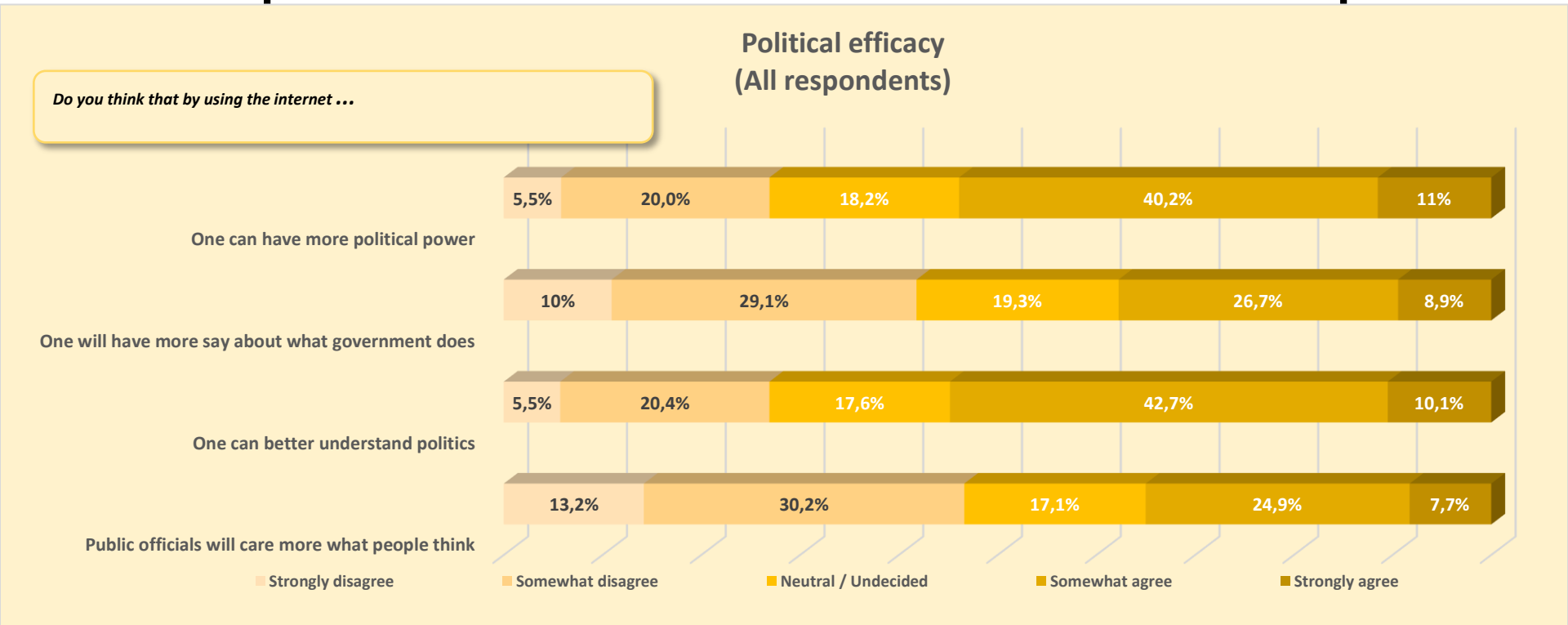
Low diversity of internet uses with **weak demand** for internet services

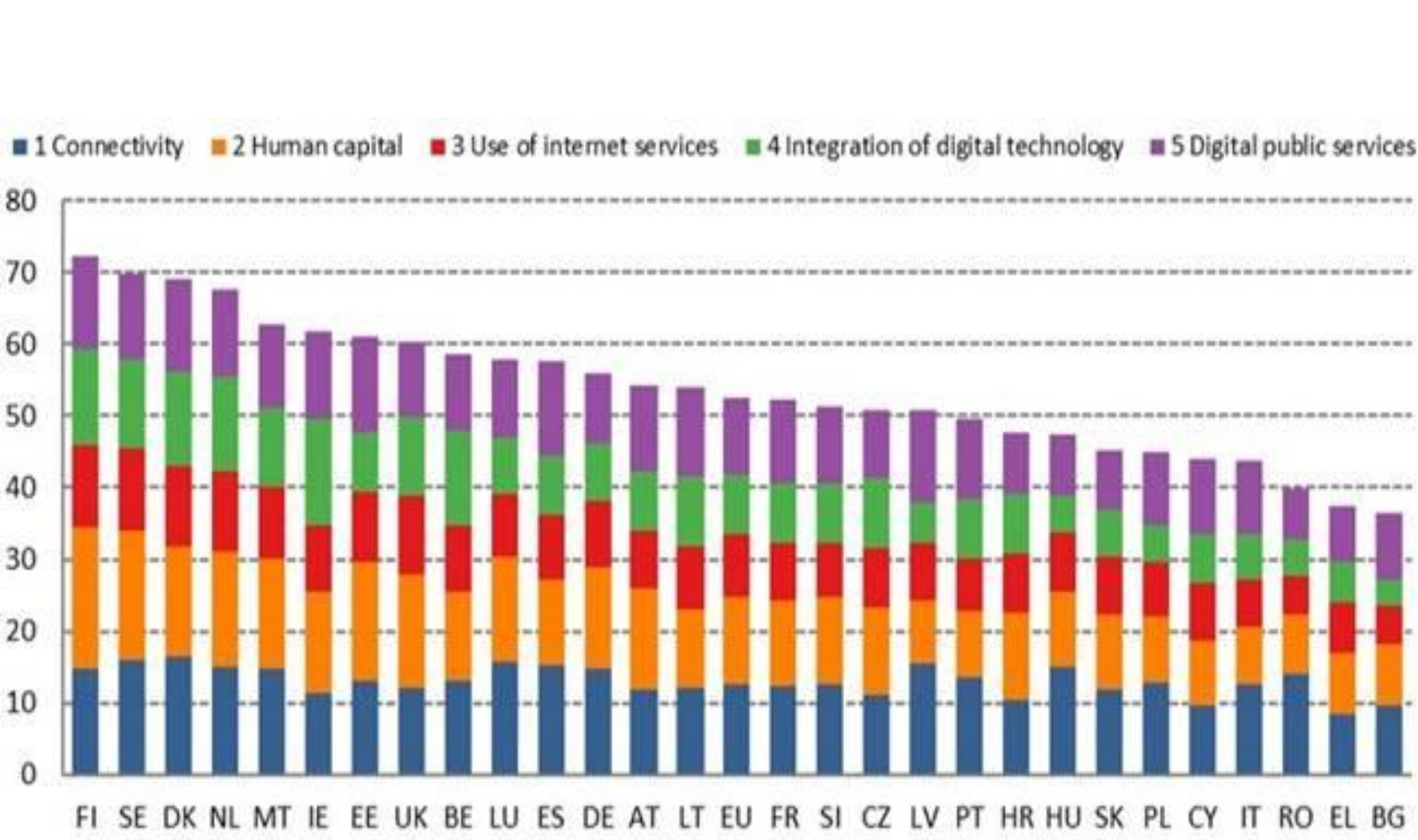
- The internet users possess a relatively higher social capital stock in comparison to the non-users. Nevertheless, **bonding social capital, within the digital world, is much stronger than bridging or linking social capital.**
- **Greek users are highly sceptical regarding the reliability of information on the internet.**



World Internet Project – Greece (2019)

- Most respondents (users) state that they have **nothing to hide** but, at the same time, the majority is actively protecting their privacy online, expressing **strong concerns about privacy violations by corporations and the government**.
- The majority of them **do not expect that online participation will actually increase their ability to influence government decisions, or that public officials will be more interested in their opinions**.



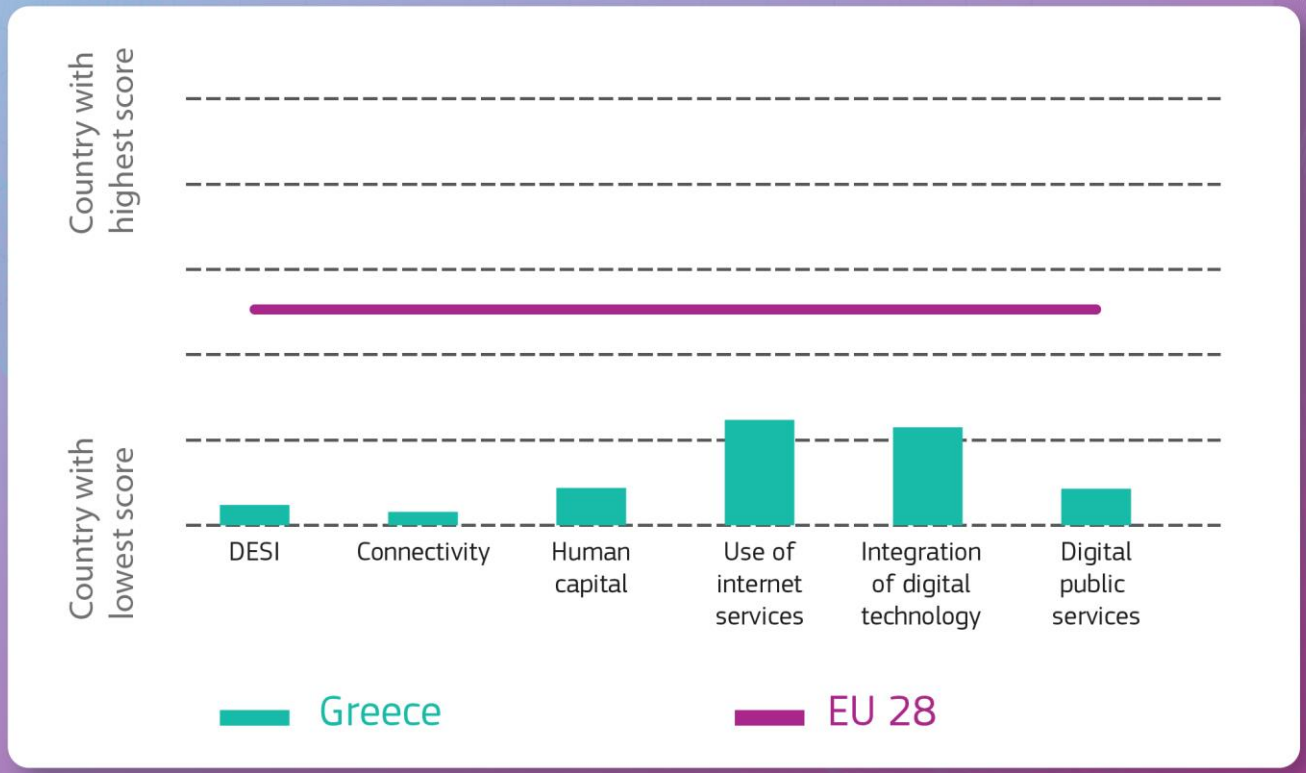

1 Connectivity
2 Human capital
3 Use of internet services
4 Integration of digital technology
5 Digital public services
80
70
60
50
40
30
20
10
0
FI SE DK NL MT IE EE UK BE LU ES DE AT LT EU FR SI CZ LV PT HR HU SK PL CY IT RO EL BG

DESI 2020

Digital Economy and Society Index

GREECE

DESI ranking 27 - DESI score 37.3



#DESIeu #DigitalEU

Digital public services indicators have started to close the gap with EU peers, but remain among the weakest in the EU

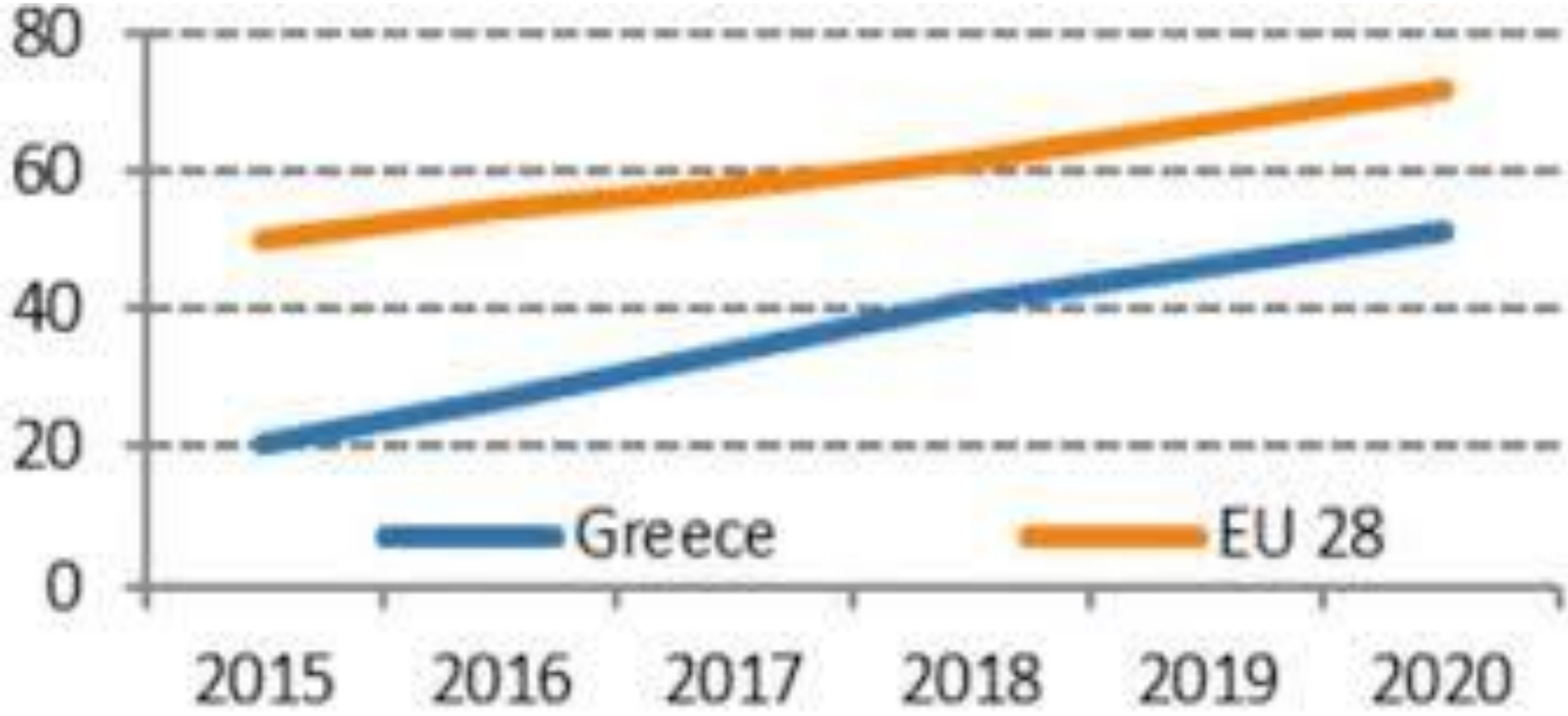


Table 2.5 Countries in Europe with the highest EGDI values

Country	Rating class	EGDI Rank	Sub-Region	EU Group	OSI value	HCI value	TII value	EGDI (2020)	EGDI (2018)
Denmark	VH	1	Northern Europe	Yes	0.9706	0.9588	0.9979	0.9758	0.915
Estonia	VH	3	Northern Europe	Yes	0.9941	0.9266	0.9212	0.9473	0.8486
Finland	VH	4	Northern Europe	Yes	0.9706	0.9549	0.9101	0.9452	0.8815
Sweden	VH	6	Northern Europe	Yes	0.9000	0.9471	0.9625	0.9365	0.8882
United Kingdom of Great Britain and Northern Ireland	VH	7	Northern Europe	No (**)	0.9588	0.9292	0.9195	0.9358	0.8999
Netherlands	VH	10	Western Europe	Yes	0.9059	0.9349	0.9276	0.9228	0.8757
Iceland	VH	12	Northern Europe	No	0.7941	0.9525	0.9838	0.9101	0.8316
Norway	VH	13	Northern Europe	No	0.8765	0.9392	0.9034	0.9064	0.8557
Austria	V3	15	Western Europe	Yes	0.9471	0.9032	0.8240	0.8914	0.8301
Switzerland	V3	16	Western Europe	No	0.8294	0.8946	0.9482	0.8907	0.852
Spain	V3	17	Southern Europe	Yes	0.8882	0.8989	0.8531	0.8801	0.8415
France	V3	19	Western Europe	Yes	0.8824	0.8612	0.8719	0.8718	0.879
Lithuania	V3	20	Northern Europe	Yes	0.8529	0.9218	0.8249	0.8665	0.7534
Malta	V3	22	Southern Europe	Yes	0.8118	0.8290	0.9232	0.8547	0.8011
Slovenia	V3	23	Southern Europe	Yes	0.8529	0.9256	0.7853	0.8546	0.7714
Poland	V3	24	Eastern Europe	Yes	0.8588	0.9001	0.8005	0.8531	0.7926
Germany	V3	25	Western Europe	Yes	0.7353	0.9362	0.8856	0.8524	0.8765
Ireland	V3	27	Northern Europe	Yes	0.7706	0.9494	0.8100	0.8433	0.8287
Liechtenstein	V2	31	Western Europe	No	0.6588	0.8489	1.0000	0.8359	0.8204
Luxembourg	V2	33	Western Europe	Yes	0.7647	0.8097	0.9072	0.8272	0.8334
Portugal	V2	35	Southern Europe	Yes	0.8353	0.8463	0.7948	0.8255	0.8031
Russian Federation	V2	36	Eastern Europe	No	0.8176	0.8833	0.7723	0.8244	0.7969
Italy	V2	37	Southern Europe	Yes	0.8294	0.8466	0.7932	0.8231	0.8209
Czech Republic*	V2	39	Eastern Europe	Yes	0.7235	0.9030	0.8140	0.8135	0.7084
Belarus	V2	40	Eastern Europe	No	0.7059	0.8912	0.8281	0.8084	0.7641
Belgium	V2	41	Western Europe	Yes	0.6588	0.9521	0.8033	0.8047	0.808
Greece	V2	42	Southern Europe	Yes	0.7059	0.8905	0.8100	0.8021	0.7833
Bulgaria*	V1	44	Eastern Europe	Yes	0.7706	0.8408	0.7826	0.7980	0.7177
Slovakia*	V1	48	Eastern Europe	Yes	0.7176	0.8286	0.7988	0.7817	0.7155
Latvia*	V1	49	Northern Europe	Yes	0.5824	0.9172	0.8399	0.7798	0.6996
Croatia*	V1	51	Southern Europe	Yes	0.7529	0.8414	0.7293	0.7745	0.7018
Hungary*	V1	52	Eastern Europe	Yes	0.7471	0.8509	0.7255	0.7745	0.7265
Romania*	V1	55	Eastern Europe	Yes	0.7235	0.7995	0.7586	0.7605	0.6671

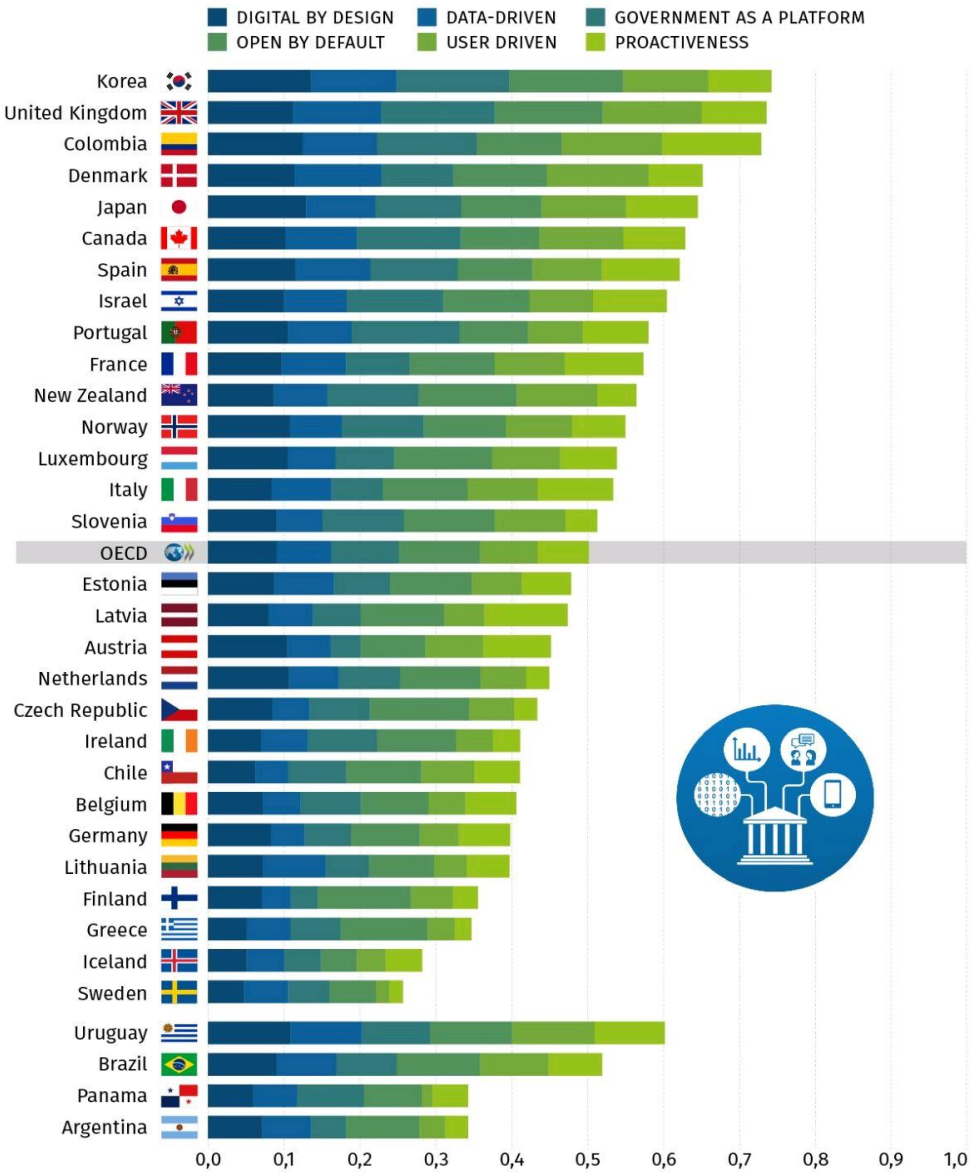
* Countries that moved from the high to the very high EGDI group in 2020.

(**) Seceded from the EU

Source: 2020 United Nations E-Government Survey

How are countries progressing towards digital government?

OECD Digital Government Index 2019

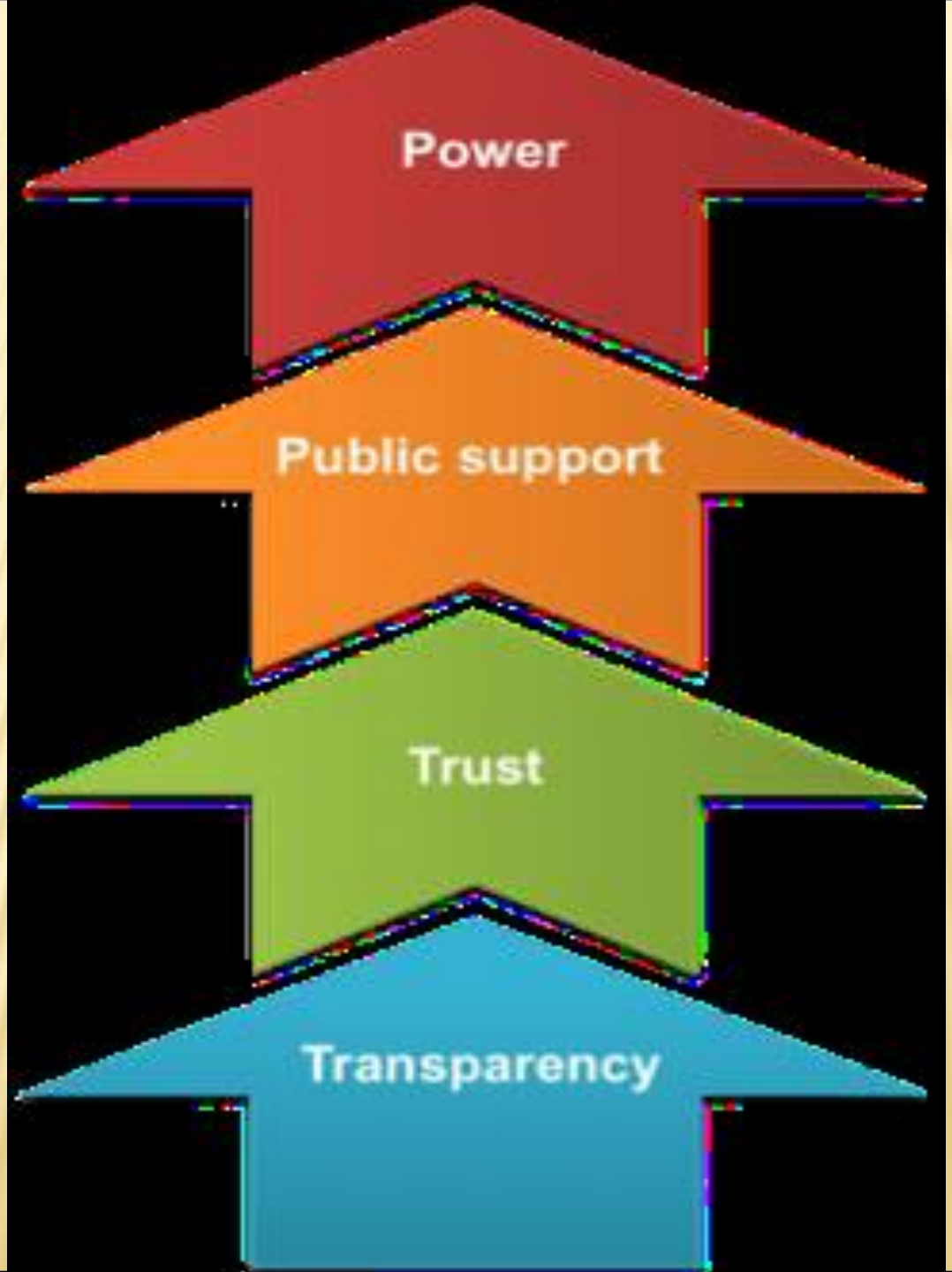


Note: Data are not available for Australia, Hungary, Mexico, Poland, Slovakia, Switzerland, Turkey and the United States of America.
Source: OECD Digital Government Index 2019 – Policy Paper

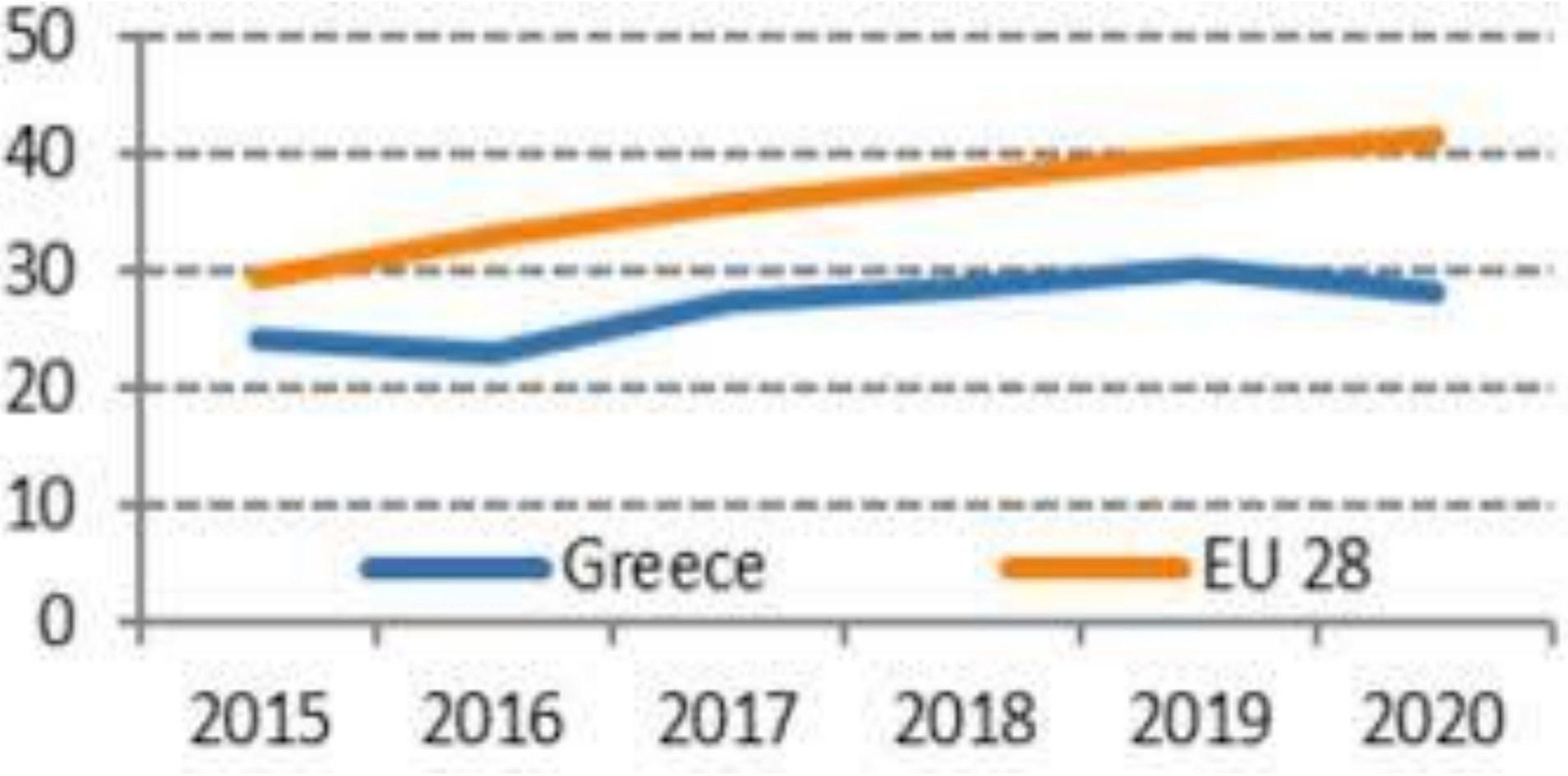
OECD

1. The digitisation of the public services has been accelerated with the launch of the governmental portal **gov.gr** (Ministry of Digital Governance) providing more than 500 e-services.

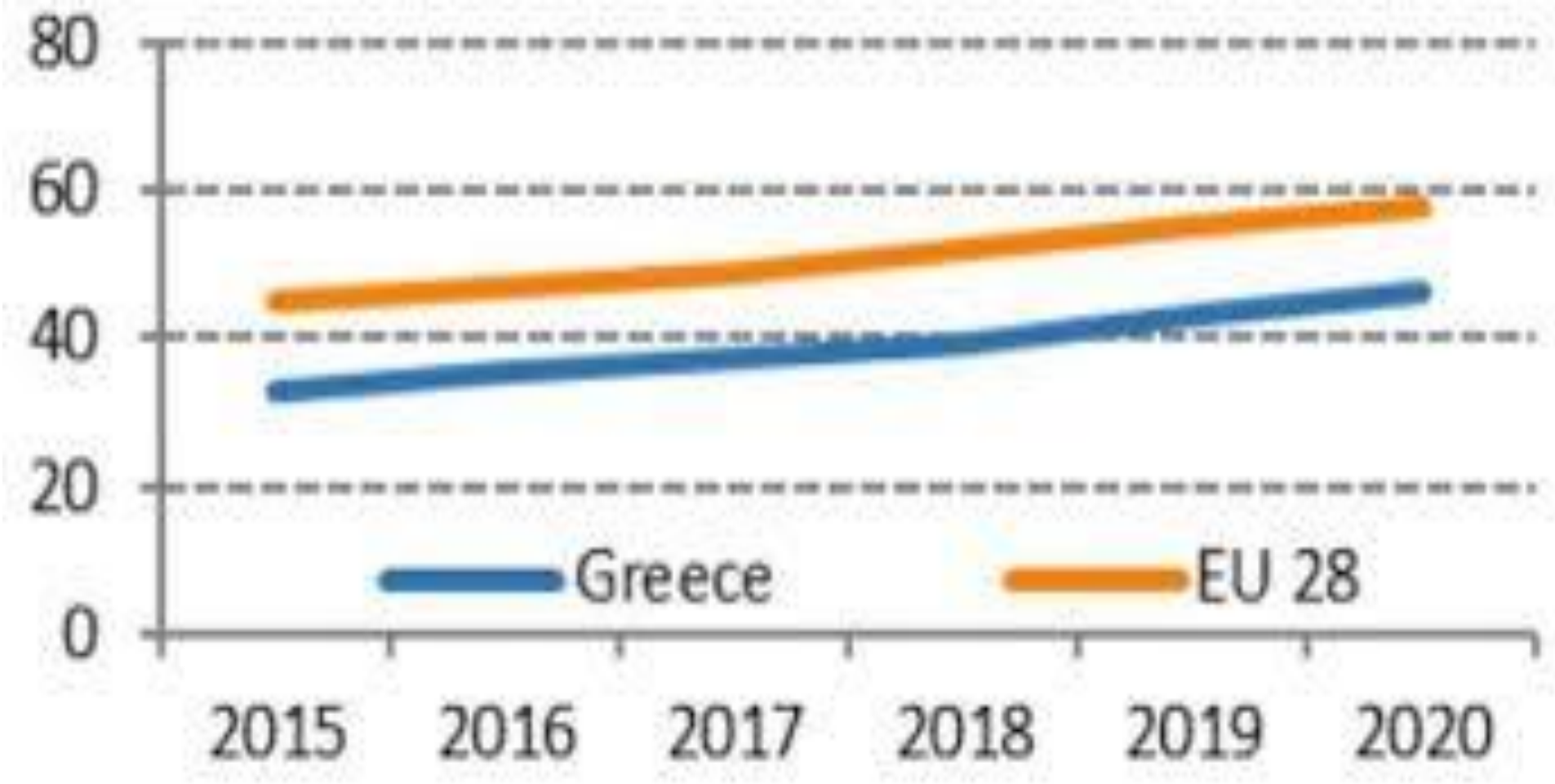
2. The Ministry of Digital Governance **helped teleworking of critical public services** to 10,000 employees and provided a platform for all public bodies to conduct secure and high-quality **teleconferences.**


Power
Public support
Trust
Transparency

but…Greek businesses ranked 24th in the EU regarding the integration of digital technology, compared to 22nd a year ago: the use of cloud services (by only 7% of firms versus 18% in the EU) **and SMEs selling online** (only 9% of total SMEs versus 18% in the EU) **are still Greek businesses' weakest digital dimensions.**



Overall **use of internet services** in Greece remains below the EU average, continuing to rank **25th** in the EU



Greece converged to the EU average on **digital skills** (human capital dimension), albeit it continues to rank only **25th** in the EU.

Need to confront phobic & defensive cultural attitudes toward technology & innovation.

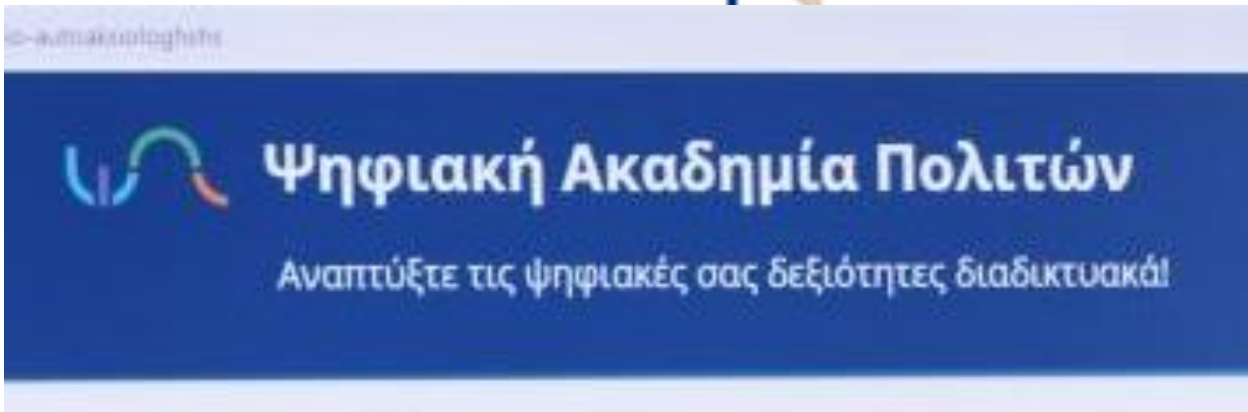
Greece has been a digital laggard also because of its model of productivity.

European Commission

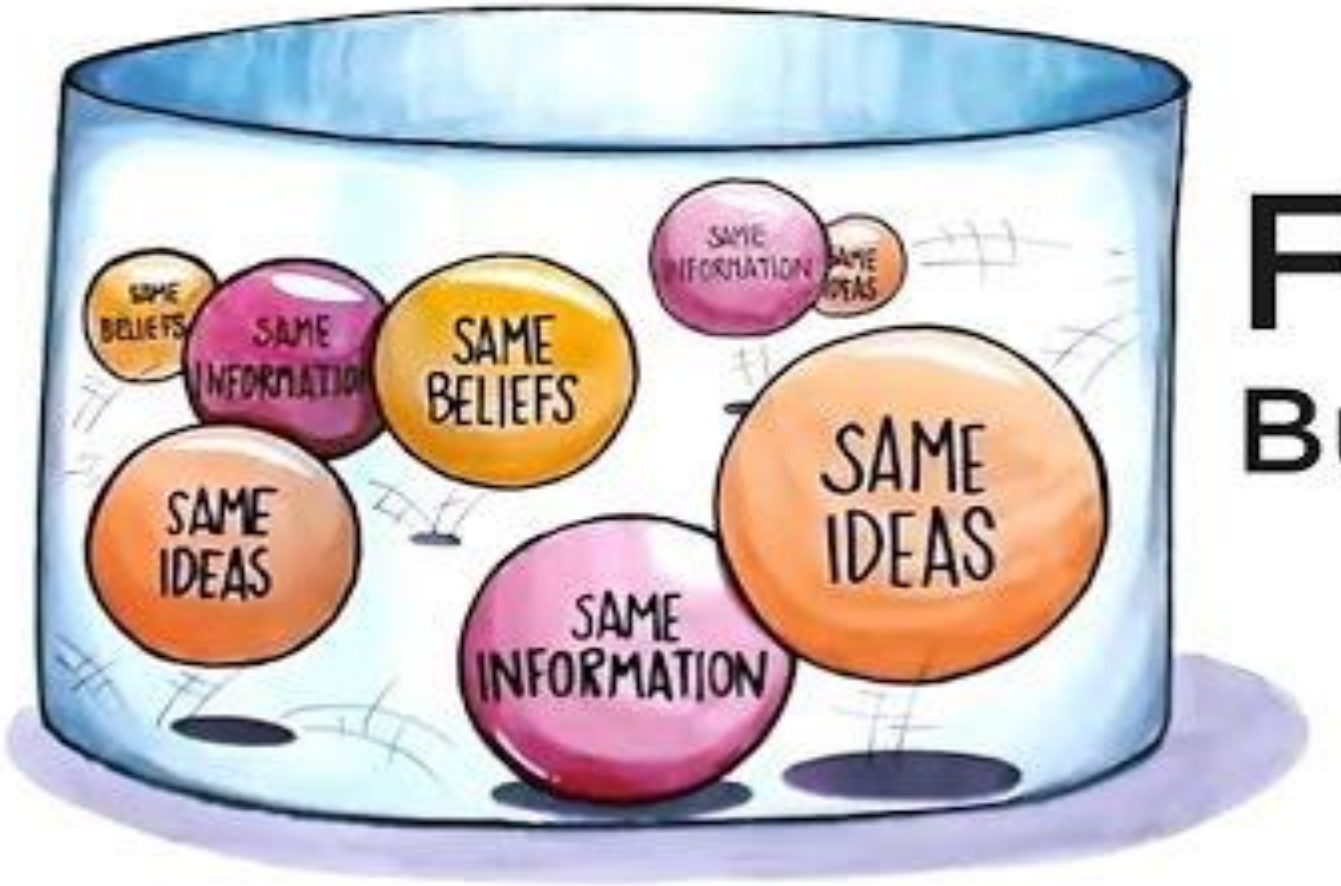
Digital Skills and Jobs Coalition

GREEK DIGITAL

Skills & Jobs Coalition

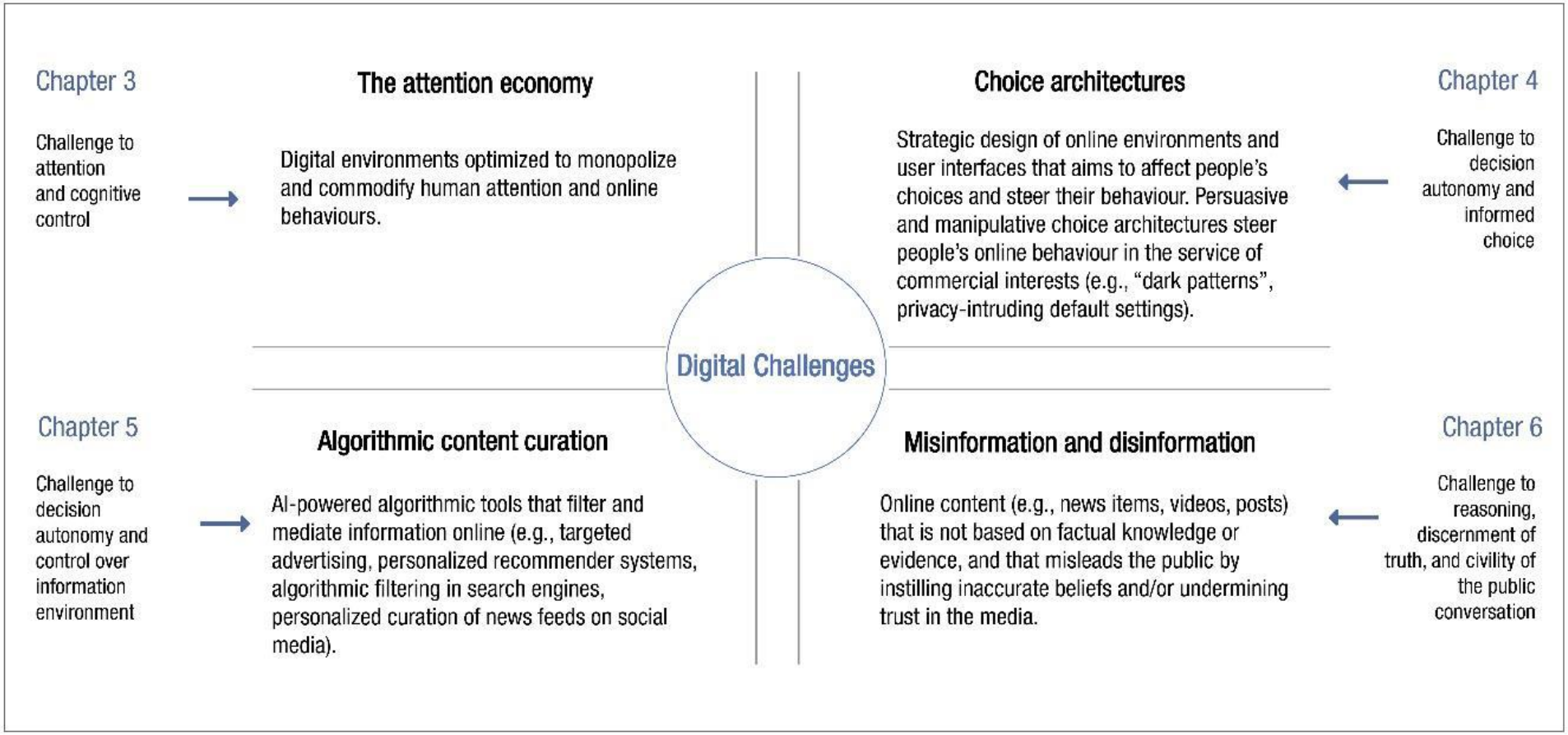


Need for **critical** digital skills



Filter Bubbles

TECHNOLOGY AND DEMOCRACY, JOINT RESEARCH CENTRE 2020



HUMAN AGE SERIES

ManpowerGroup

A Skills Revolution:

FROM CONSUMERS OF WORK TO BUILDERS OF TALENT

WORLD ECONOMIC FORUM

Reskilling needs

50%

of all employees will need reskilling by 2025.

Source: Future of Jobs Report 2020, World Economic Forum.

Digital Intelligence (DQ) is the sum of social, emotional, and cognitive abilities that enable individuals to face the challenges of and adapt to the demands of digital life.

Digital Citizenship

The ability to use digital technology and media in safe, responsible and effective ways.

Digital Creativity

The ability to become a part of the digital eco-system by co-creating new content and turning ideas into reality by using digital tools.

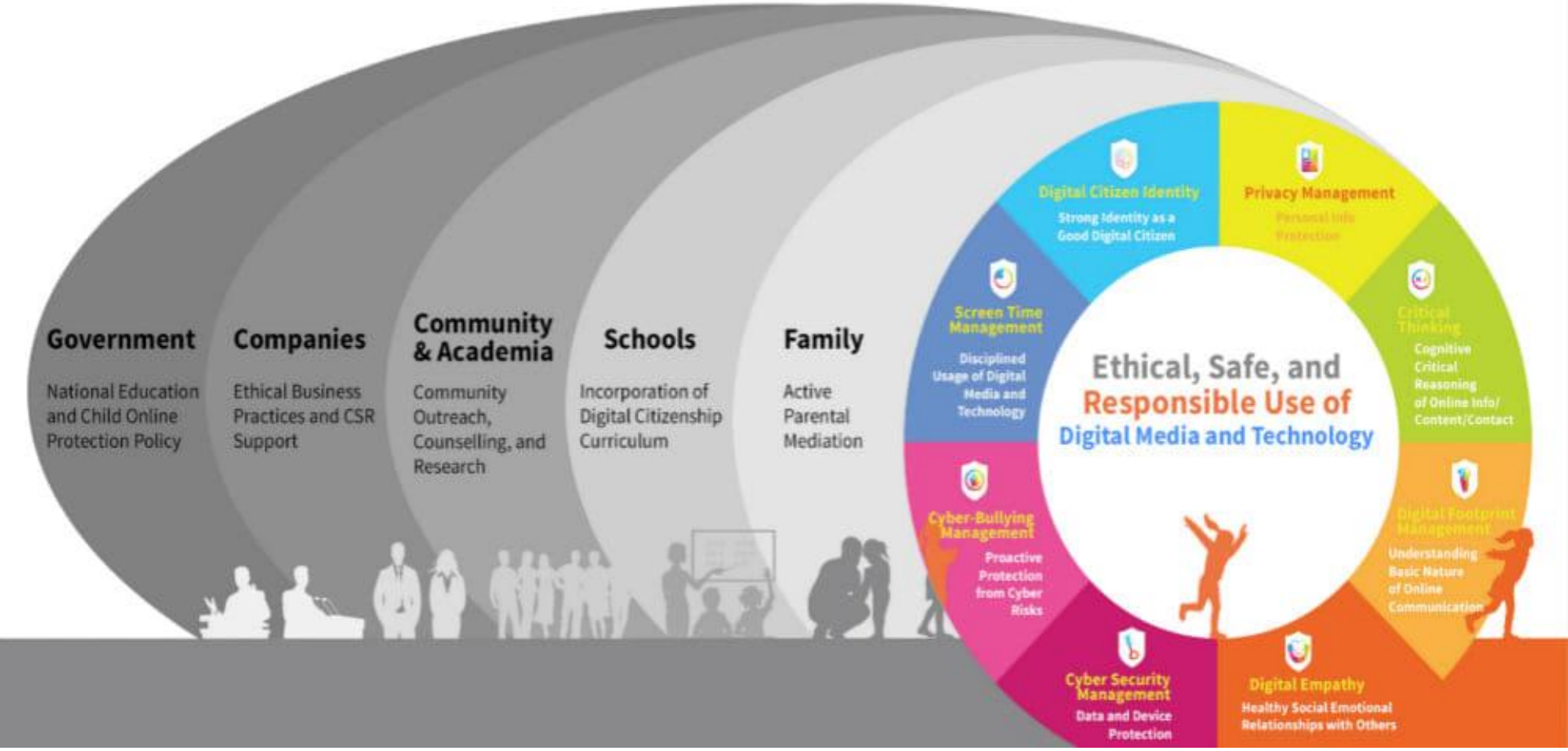
Digital Entrepreneurship

The ability to use digital media and technologies to solve global challenges or to create new opportunities.

Community-Based Values


Digital Identity
Digital citizen
Digital co-creator
Digital entrepreneur
Digital Rights
Freedom of speech
Intellectual property rights
Privacy
Digital Literacy
Computational thinking
Content creation
Critical thinking
Digital Communication
Online collaboration
Online communication
Digital footprints
Digital Emotional Intelligence
Empathy
Emotional awareness/regulation
Social & emotional awareness
Digital Security
Password protection
Internet security
Mobile security
Digital Safety
Behavioral risks
Content risks
Contact risks
Digital Use
Screen time
Digital health
Community participation

Building an Ethical Digital Ecosystem as a Collective Responsibility



The World's First Global Standards for Digital Literacy, Digital Skills, and Digital Readiness

IEEE 3527.1-2020

1. Digital literacy and digital skills are **MUST-HAVES** in the A.I. age.

2. COVID-19 rushed nations into digitization. **DIGITAL SKILLS GAPS** continue to increase.

3. The Coalition for Digital Intelligence launched **DQ STANDARDIZATION** efforts in 2018.

OECD · WORLD ECONOMIC FORUM · IEEE SA STANDARDS ASSOCIATION · DQ Institute

4. **GOOD NEWS!**
DQ Global Standards for Digital Literacy, Skills and Readiness are now official.
(IEEE 3527.1-2020)

IEEE SA STANDARDS ASSOCIATION

5. DQ Global Standards now provide a **GLOBALLY ACCEPTED SET OF DEFINITIONS AND CONCEPTS** for "digital literacy" and "digital skills".

6. With DQ, nations can rapidly incorporate **DIGITAL LITERACY EDUCATION.**

7. With DQ, industries can implement more effective **DIGITAL SKILLS TRAINING.**

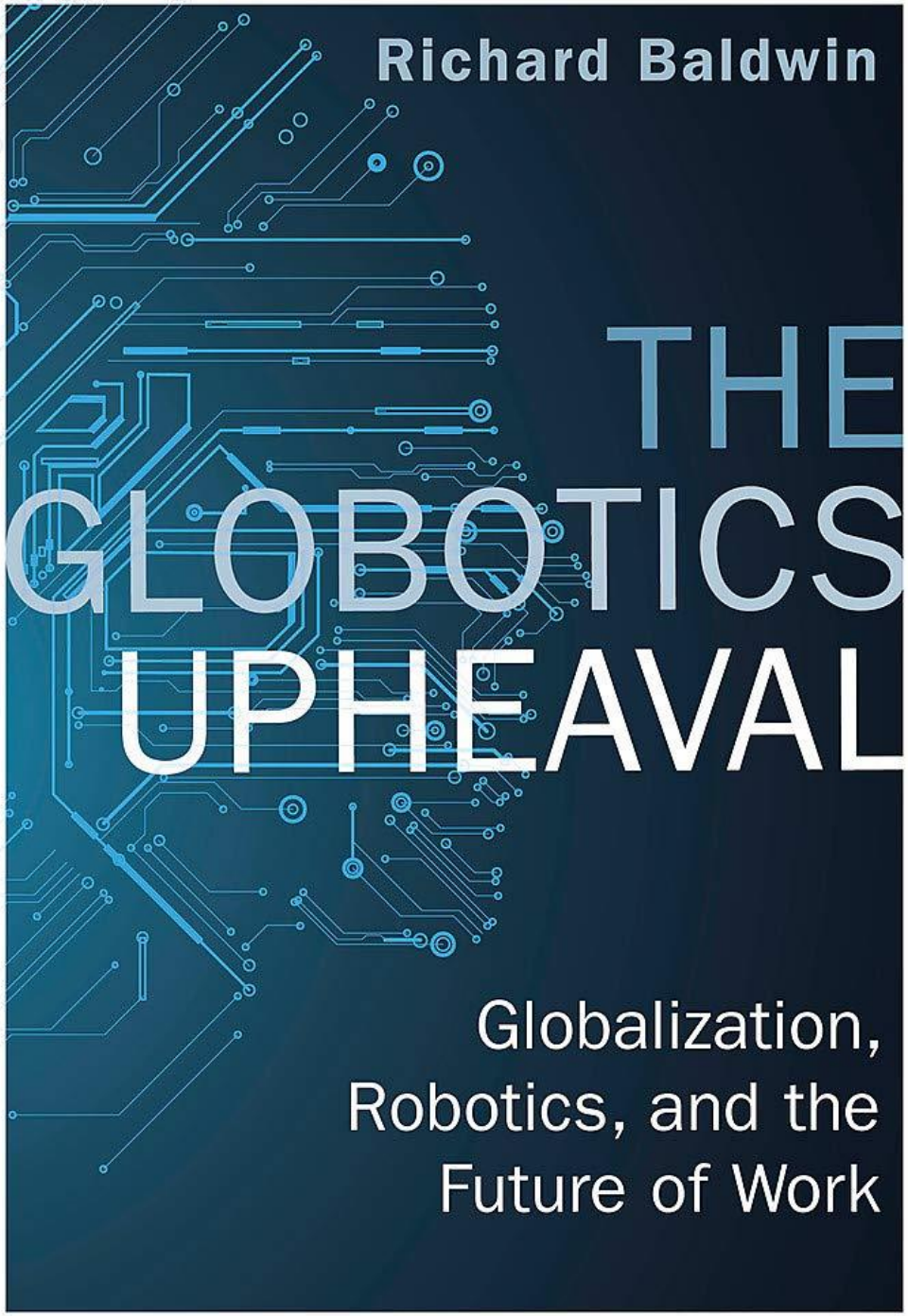
8. **DIGITAL SKILLS CERTIFICATES** can increase job opportunities and mobility in the post-COVID-19 era.

9. **GLOBAL COORDINATION, MONITORING,** and **REPORTING** can be improved.

10. **DQ WILL HELP BRIDGE GLOBAL DIGITAL SKILLS GAP.**

If you want to learn more about the DQ Global Standards, please contact us at **contact@dqinstitute.org.**

DQ Institute in collaboration with Singtel · SkillsFuture SG


Richard Baldwin
THE GLOBOTICS UPHEAVAL
Globalization, Robotics, and the Future of Work

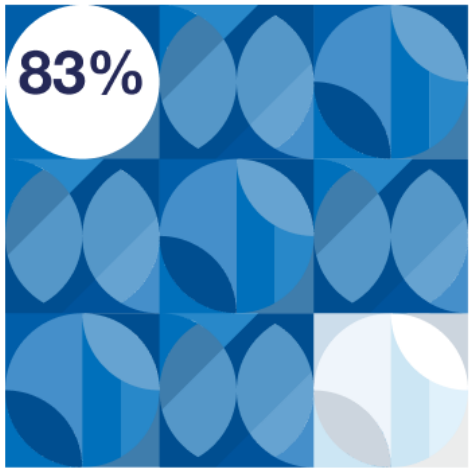
WORLD ECONOMIC FORUM

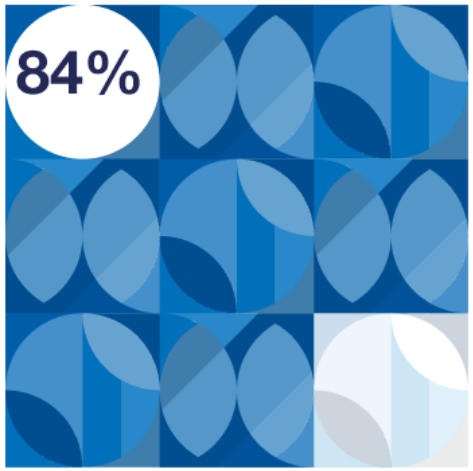
COVID-19 is pushing companies

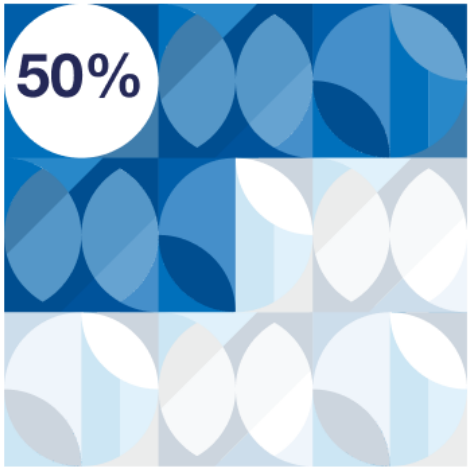
to scale remote work

to accelerate digitalization

to accelerate automation



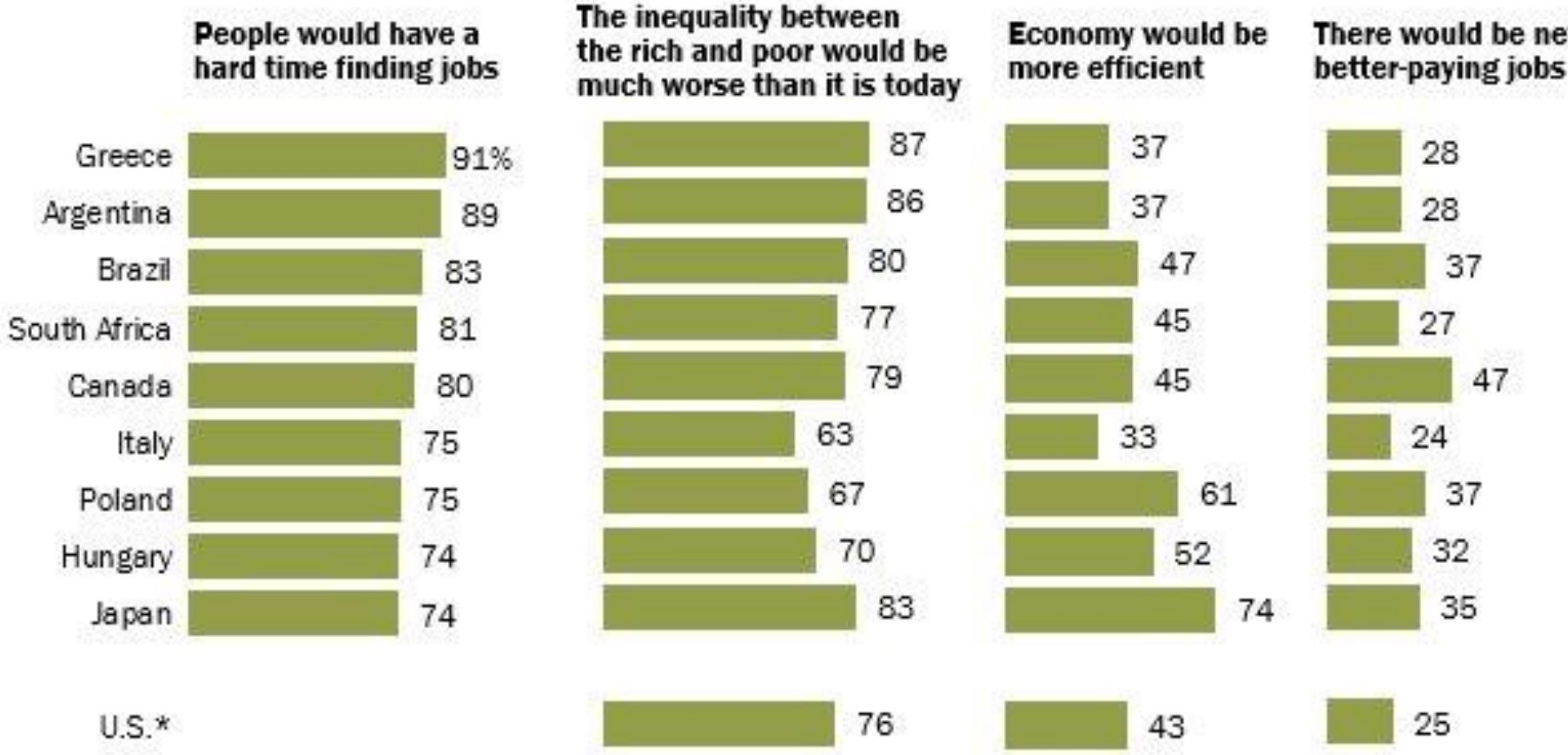




Source: Future of Jobs Report 2020, World Economic Forum.

Publics more convinced of the downsides than potential upsides of job automation

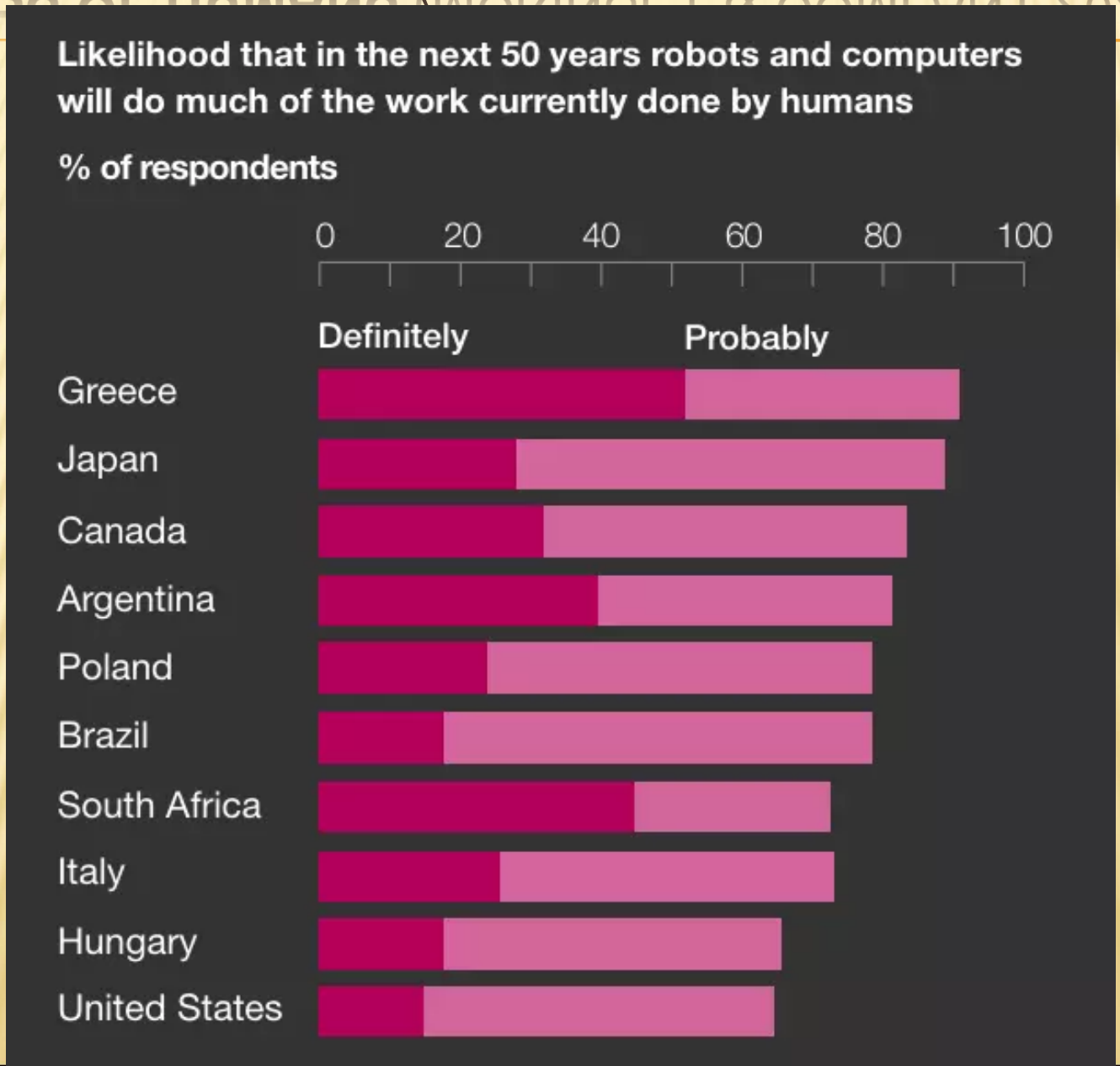
% of adults who think it is likely that ___ if robots and computers were able to do much of the work currently being done by humans



Note: U.S. data from Pew Research survey conducted May 1-15, 2017. No U.S. data for "people will have a hard time finding jobs." In the U.S., the efficiency question referred to "economy as a whole" and the jobs question read "economy will create new, better-paying jobs."
Source: Spring 2018 Global Attitudes Survey. Q81a-d.

PEW RESEARCH CENTER

THERE'S WIDESPREAD BELIEF THAT ROBOTS WILL TAKE THE JOBS OF HUMANS (MCKINSEY & COMPANY 2020)



SOURCE: OECD, 2018, JOB CREATION AND LOCAL ECONOMIC DEVELOPMENT

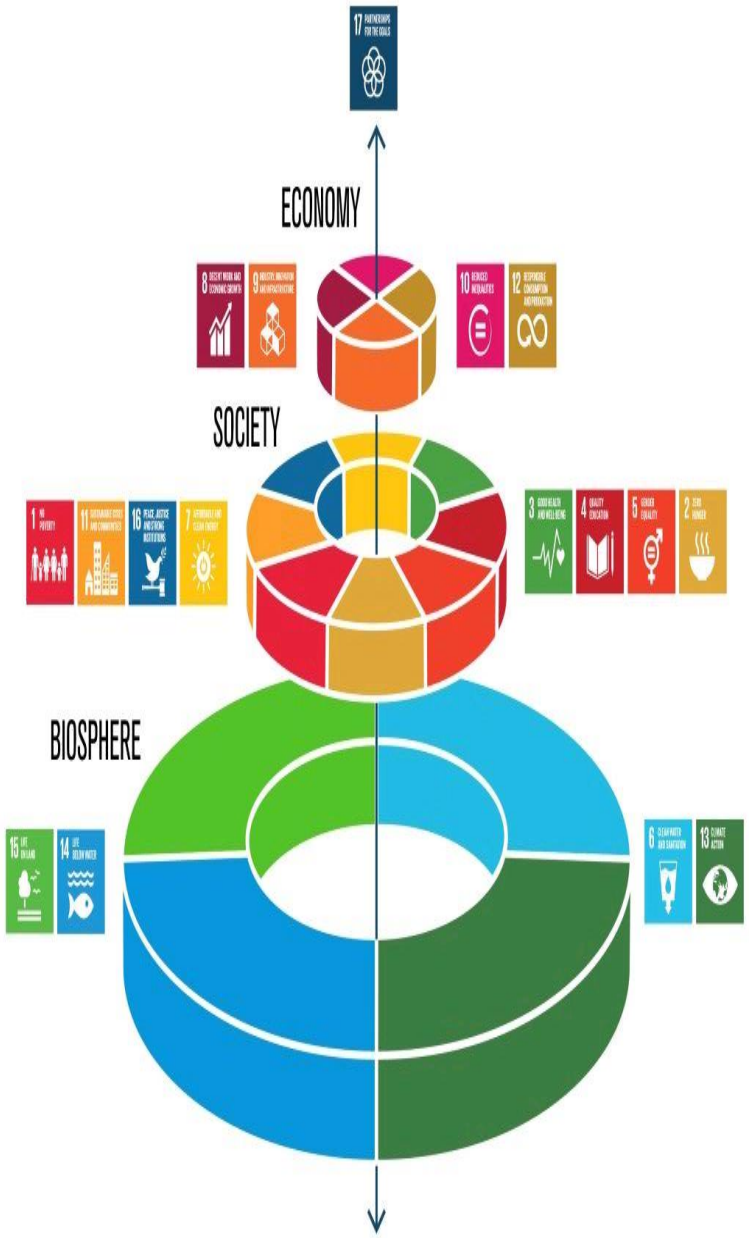
Digital human capital + Digital social capital + Digital institutional capital = Sustainable digital future

RECOMMENDATIONS

- Further simplification of administrative procedures by ensuring **interoperability amongst all administrative platforms**
- Public administration must open all anonymous data
- **Public & private sectors collaboration** in upgrading & exploiting further digital infrastructure and technology; **competition-enhancing policies**
- **More Digital Innovation Hubs** covering all e-economy sectors (only 9 Hubs fully operational so far); blockchain & cryptocurrency research
- **National plan for investments in Industry 4.0** (see agreement with Microsoft)
- Local government must leverage **smart city technologies**
- Adaptation of current **innovation model of manufacturing**
- Media multiliteracies & factchecking; Technoethics & regulation
- Framework of digital policies; **digital trust;**digital inclusion & cohesion

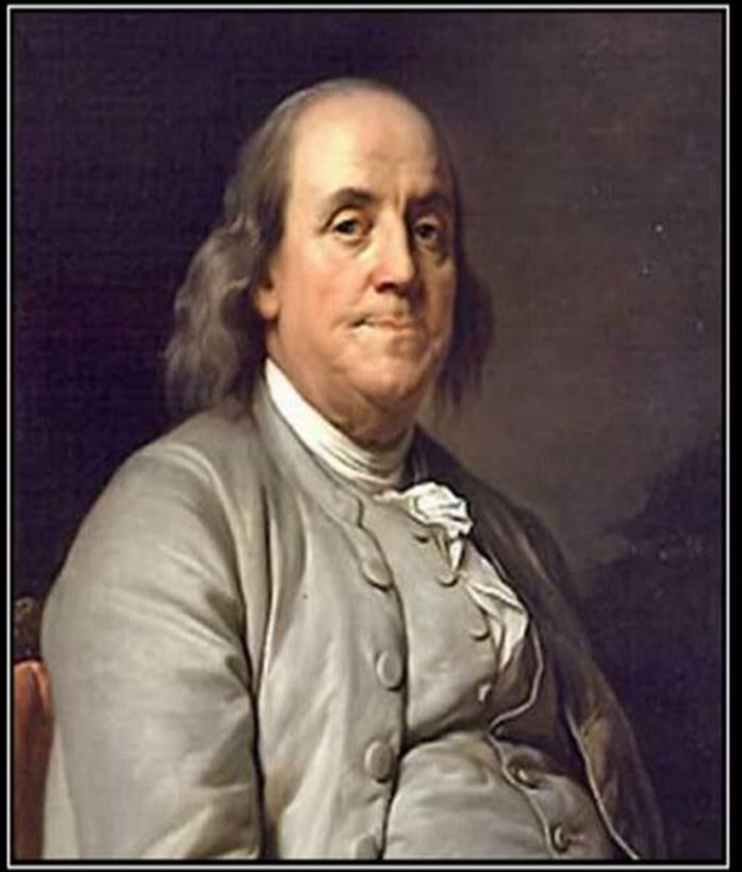
Innovation & responsibility

E-ECONOMY MUST MEET UN **SUSTAINABLE DEVELOPMENT** GOALS



Foresight is the ability to plan for the future. It is a mix of mindset and methodology: a view of the future and the practice of looking forward.

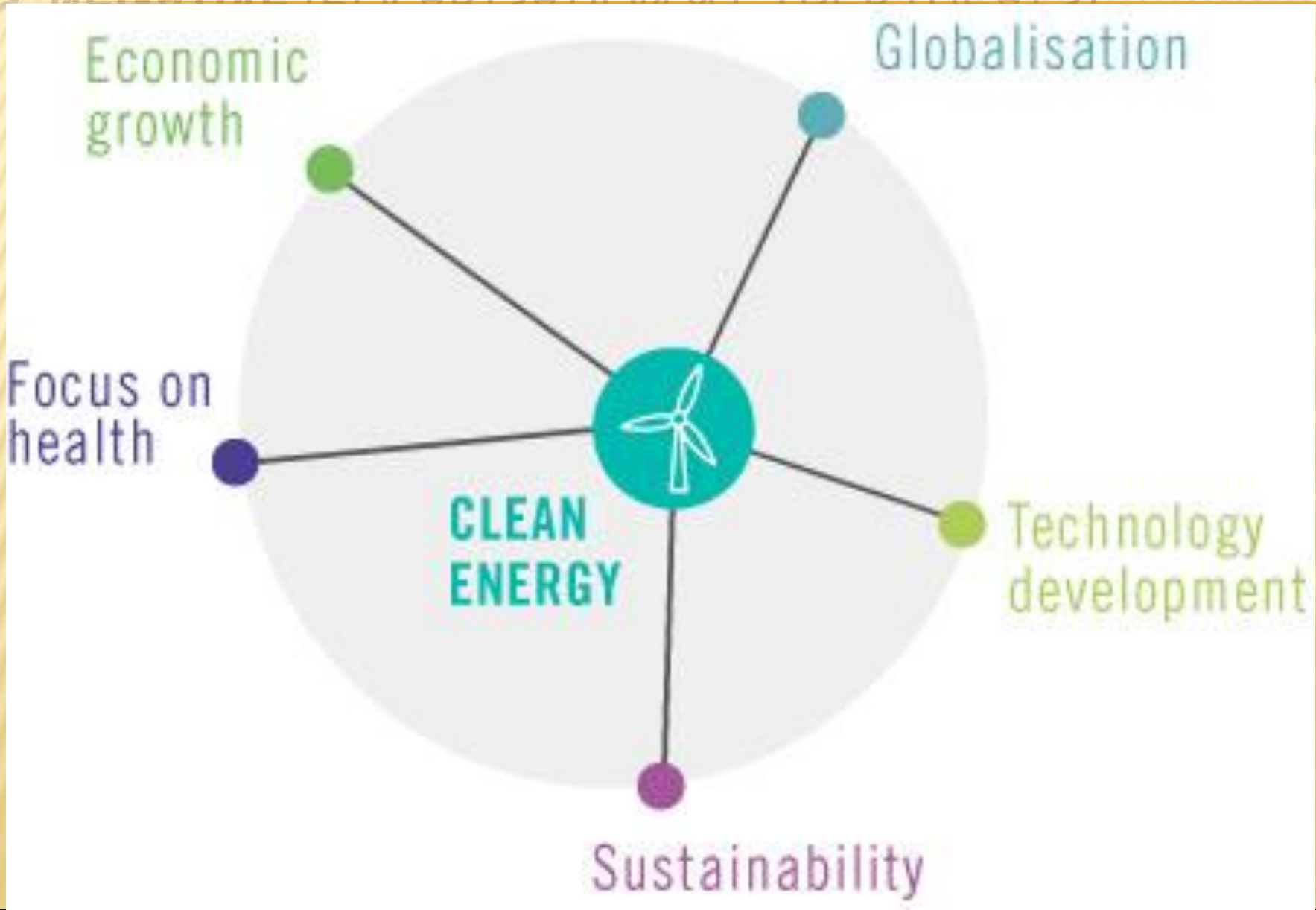
Stanford's Playbook for Strategic Foresight and Innovation (2013)



FORESIGHT

"By failing to prepare, you are preparing to fail."
-Benjamin Franklin

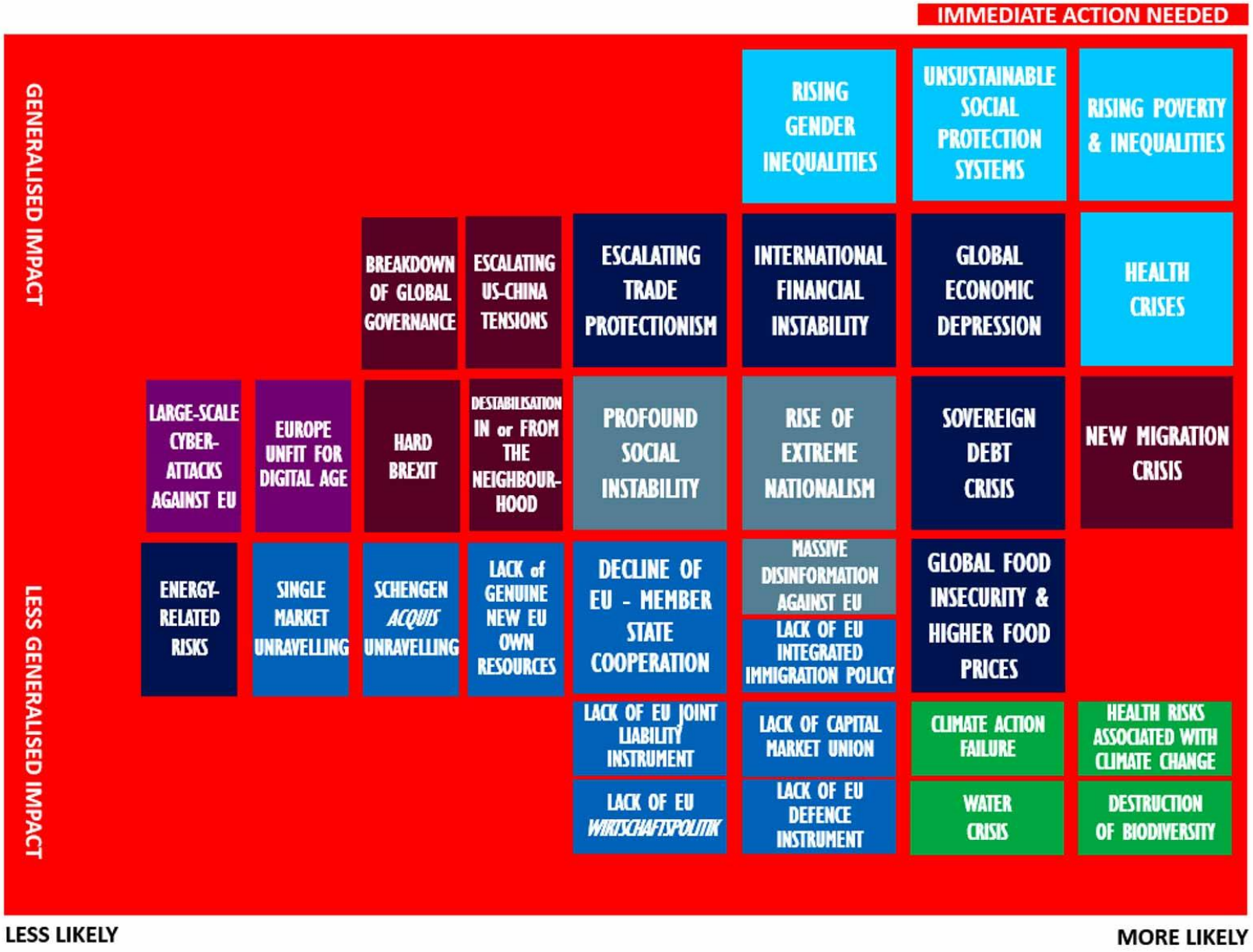
E-ECONOMY AS MEGA-TREND: POSITIVE (ANTI-FRAGILITY) VS. NEGATIVE (POLARISATION & CYBERTHEATS)



2020 Strategic Foresight Report

CHARTING THE COURSE TOWARDS A MORE RESILIENT EUROPE

MAPPING of STRUCTURAL RISKS facing the EU




EU
Recovery plan for Europe
Plan de relance pour l'Europe
Herstelplan voor Europa


WE NEED TWINNING OF THE
DIGITAL & GREEN TRANSITIONS
& COOPERATION BETWEEN
STAKEHOLDERS OF THE
INDUSTRY & THE STATE TO
TACKLE INDUSTRY4.0
CHALLENGES