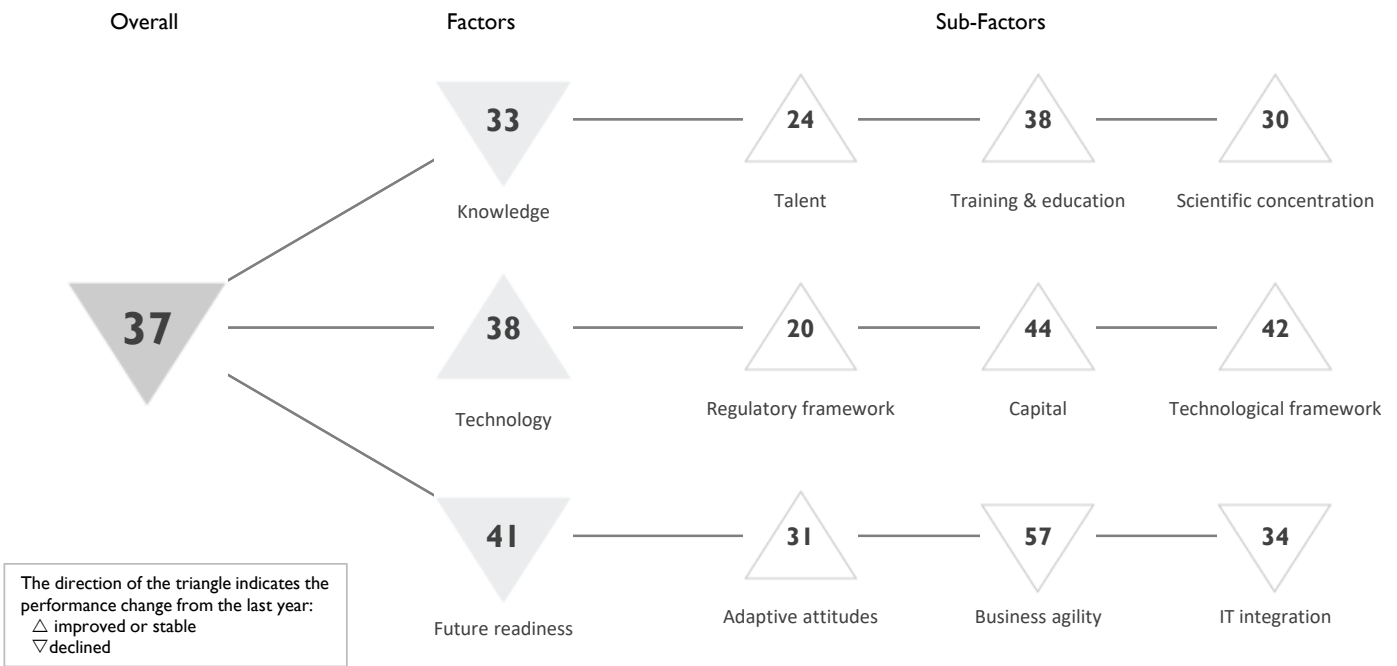


PORTUGAL

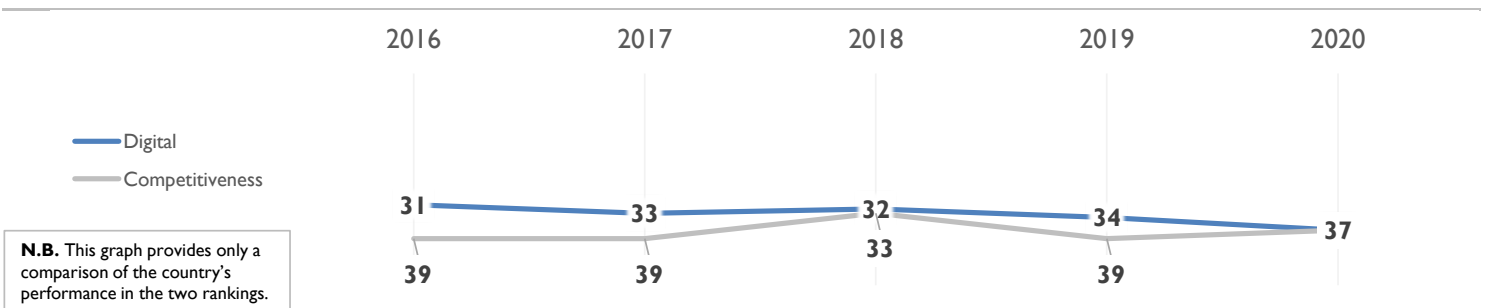
OVERALL PERFORMANCE (63 countries)



OVERALL & FACTORS - 5 years

	2016	2017	2018	2019	2020
OVERALL	31	33	32	34	37
Knowledge	31	31	27	31	33
Technology	35	37	36	38	38
Future readiness	31	35	32	34	41

COMPETITIVENESS & DIGITAL RANKINGS



PEER GROUPS RANKINGS

EUROPE - MIDDLE EAST - AFRICA (40 countries)



POPULATIONS < 20 MILLION (34 countries)



► Overall top strengths

▷ Overall top weaknesses

KNOWLEDGE

Subfactors	2016	2017	2018	2019	2020
Talent	31	30	23	26	24
Training & education	21	18	27	39	38
Scientific concentration	35	36	34	32	30

Talent	Rank
Educational assessment PISA - Math	27
International experience	48
Foreign highly-skilled personnel	35
Management of cities	24
Digital/Technological skills	14
Net flow of international students	28

Training & education	Rank
▷ Employee training	58
Total public expenditure on education	31
Higher education achievement	42
► Pupil-teacher ratio (tertiary education)	13
► Graduates in Sciences	13
Women with degrees	39

Scientific concentration	Rank
Total expenditure on R&D (%)	29
Total R&D personnel per capita	23
Female researchers	18
R&D productivity by publication	32
Scientific and technical employment	33
High-tech patent grants	41
Robots in Education and R&D	34

TECHNOLOGY

Subfactors	2016	2017	2018	2019	2020
Regulatory framework	20	19	19	21	20
Capital	50	50	45	48	44
Technological framework	38	43	39	45	42

Regulatory framework	Rank
Starting a business	33
Enforcing contracts	30
► Immigration laws	4
Development & application of tech.	18
Scientific research legislation	30
Intellectual property rights	29

Capital	Rank
IT & media stock market capitalization	34
Funding for technological development	30
Banking and financial services	42
Country credit rating	46
Venture capital	42
Investment in Telecommunications	39

Technological framework	Rank
► Communications technology	5
▷ Mobile Broadband subscribers	59
Wireless broadband	52
► Internet users	12
Internet bandwidth speed	23
▷ High-tech exports (%)	55

FUTURE READINESS

Subfactors	2016	2017	2018	2019	2020
Adaptive attitudes	31	34	35	32	31
Business agility	27	40	27	52	57
IT integration	32	32	30	29	34

Adaptive attitudes	Rank
E-Participation	35
Internet retailing	35
Tablet possession	32
Smartphone possession	41
Attitudes toward globalization	19

Business agility	Rank
Opportunities and threats	50
World robots distribution	31
▷ Agility of companies	53
▷ Use of big data and analytics	55
Knowledge transfer	32
Entrepreneurial fear of failure	49

IT integration	Rank
E-Government	32
Public-private partnerships	41
Cyber security	41
Software piracy	28