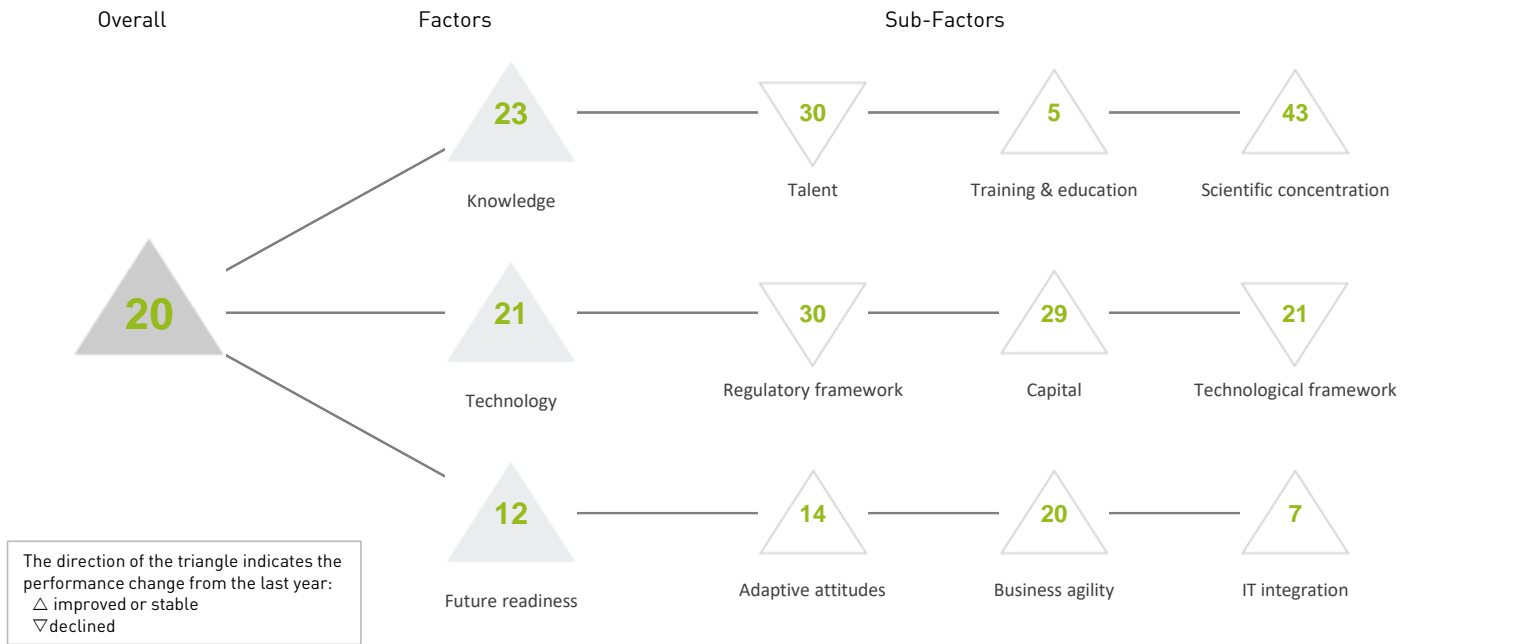


ESTONIA

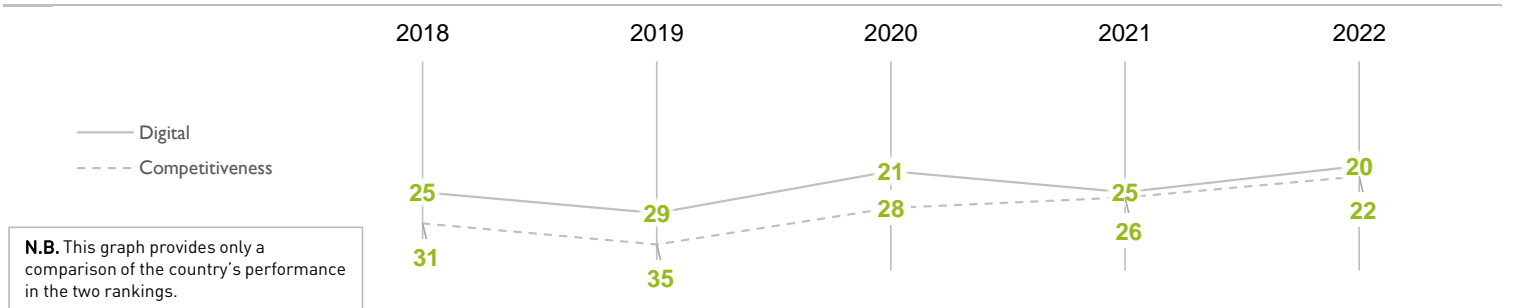
OVERALL PERFORMANCE (63 countries)



OVERALL & FACTORS - 5 years

	2018	2019	2020	2021	2022
OVERALL	25	29	21	25	20
Knowledge	29	30	23	27	23
Technology	20	22	23	25	21
Future readiness	26	30	20	20	12

COMPETITIVENESS & DIGITAL RANKINGS

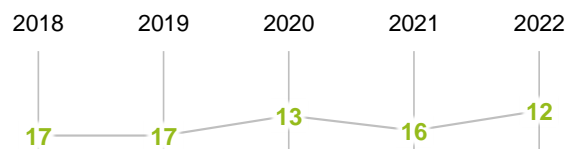


PEER GROUPS RANKINGS

EUROPE - MIDDLE EAST - AFRICA (40 countries)



POPULATIONS < 20 MILLION (36 countries)



ESTONIA

▶ Overall Top Strengths

▷ Overall Top Weaknesses

KNOWLEDGE

Sub-Factors	2018	2019	2020	2021	2022
Talent	34	37	31	29	30
Training & education	17	10	03	08	05
Scientific concentration	39	46	47	45	43

Talent	Rank
Educational assessment PISA - Math	07
International experience	37
Foreign highly-skilled personnel	26
Management of cities	42
Digital/Technological skills	44
Net flow of international students	28

Training & education	Rank
Employee training	08
Total public expenditure on education	09
Higher education achievement	33
Pupil-teacher ratio (tertiary education)	14
Graduates in Sciences	17
Women with degrees	12

Scientific concentration	Rank
Total expenditure on R&D (%)	21
Total R&D personnel per capita	29
Female researchers	18
▷ R&D productivity by publication	59
Scientific and technical employment	29
High-tech patent grants	16
▷ Robots in Education and R&D	48

TECHNOLOGY

Sub-Factors	2018	2019	2020	2021	2022
Regulatory framework	25	31	30	28	30
Capital	21	24	29	33	29
Technological framework	15	16	17	20	21

Regulatory framework	Rank
Starting a business	07
Enforcing contracts	08
▷ Immigration laws	53
Development & application of tech.	23
Scientific research legislation	36
Intellectual property rights	25

Capital	Rank
▷ IT & media stock market capitalization	48
Funding for technological development	22
Banking and financial services	16
Country credit rating	24
Venture capital	10
Investment in Telecommunications	45

Technological framework	Rank
Communications technology	37
Mobile Broadband subscribers	46
▷ Wireless broadband	04
Internet users	12
Internet bandwidth speed	27
High-tech exports (%)	20

FUTURE READINESS

Sub-Factors	2018	2019	2020	2021	2022
Adaptive attitudes	24	26	18	20	14
Business agility	29	43	26	25	20
IT integration	22	26	22	25	07

Adaptive attitudes	Rank
▷ E-Participation	01
Internet retailing	24
Tablet possession	07
Smartphone possession	13
Attitudes toward globalization	34

Business agility	Rank
Opportunities and threats	28
World robots distribution	46
Agility of companies	11
Use of big data and analytics	22
Knowledge transfer	25
▷ Entrepreneurial fear of failure	07

IT integration	Rank
▷ E-Government	03
▷ Public-private partnerships	50
Cyber security	16
Software piracy	30
▷ Government cyber security capacity	02
Privacy protection by law content	09