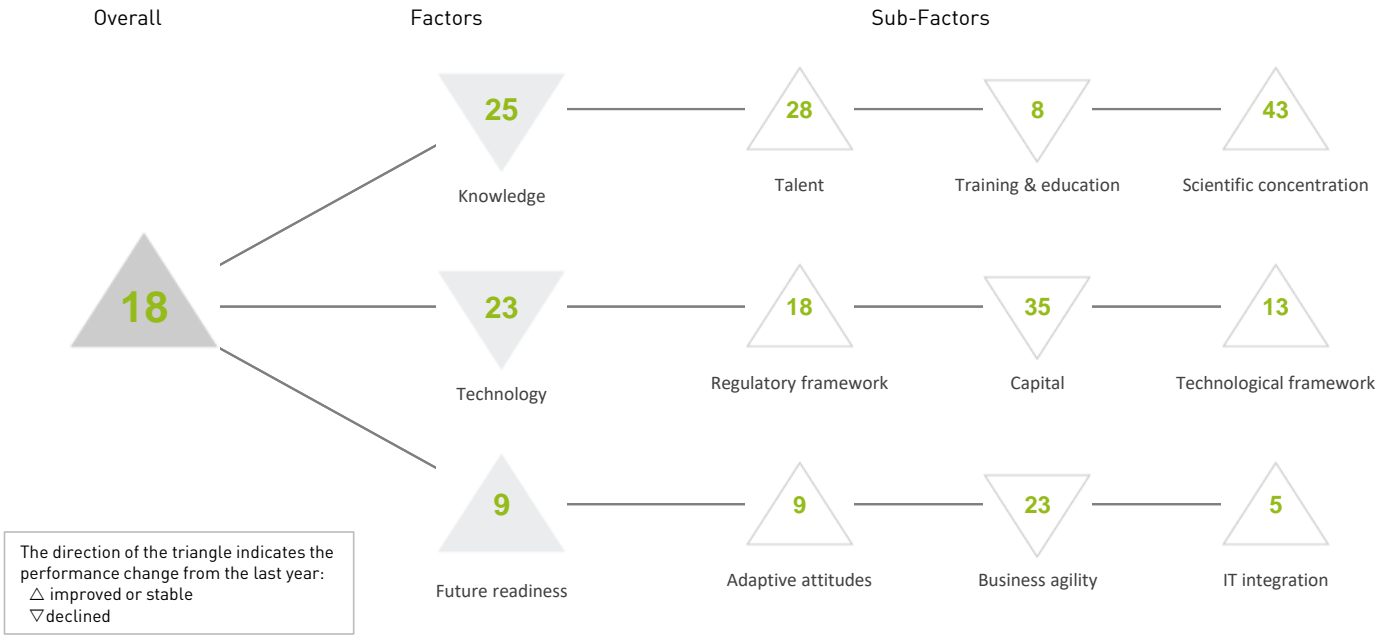


ESTONIA

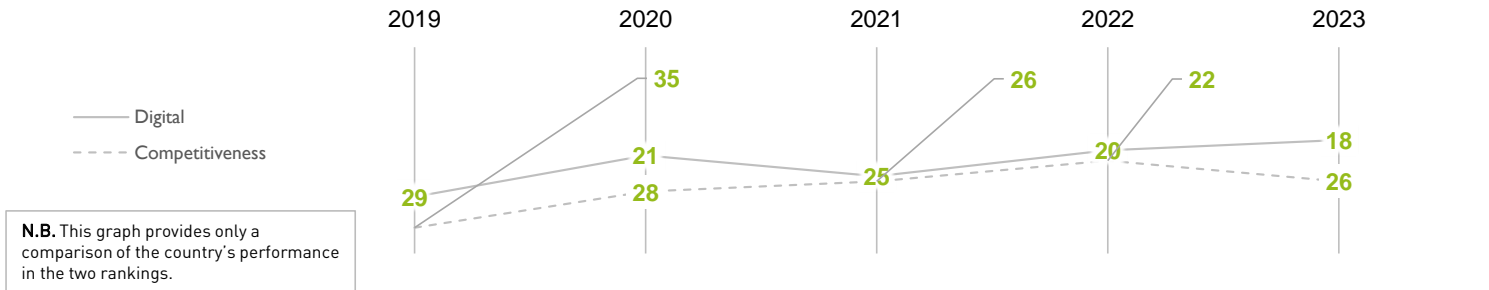
OVERALL PERFORMANCE (64 countries)



OVERALL & FACTORS - 5 years

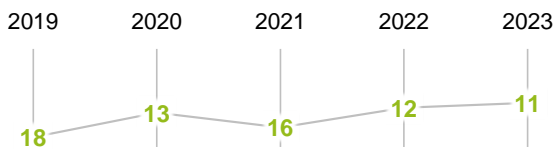
	2019	2020	2021	2022	2023
OVERALL	29	21	25	20	18
Knowledge	30	23	27	23	25
Technology	22	23	25	21	23
Future readiness	30	20	20	12	09

COMPETITIVENESS & DIGITAL RANKINGS

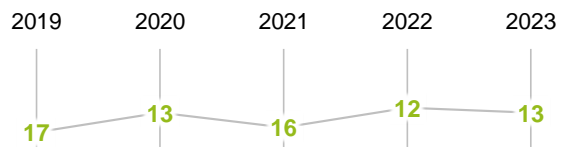


PEER GROUPS RANKINGS

EUROPE - MIDDLE EAST - AFRICA (41 countries)



POPULATIONS < 20 MILLION (37 countries)



ESTONIA

► Overall Top Strengths

▷ Overall Top Weaknesses

KNOWLEDGE

Sub-Factors	2019	2020	2021	2022	2023
Talent	37	31	29	30	28
Training & education	10	03	08	05	08
Scientific concentration	46	47	45	43	43

Talent	Rank
Educational assessment PISA - Math	07
International experience	45
Foreign highly skilled personnel	32
Management of cities	37
Digital/Technological skills	38
Net flow of international students	28

Training & education	Rank
Employee training	12
Total public expenditure on education	10
Higher education achievement	34
Pupil-teacher ratio (tertiary education)	13
Graduates in Sciences	17
Women with degrees	16

Scientific concentration	Rank
Total expenditure on R&D (%)	23
Total R&D personnel per capita	32
Female researchers	20
▷ R&D productivity by publication	58
Scientific and technical employment	36
High-tech patent grants	11
▷ Robots in Education and R&D	48

TECHNOLOGY

Sub-Factors	2019	2020	2021	2022	2023
Regulatory framework	31	30	28	30	18
Capital	24	29	33	29	35
Technological framework	16	17	20	21	13

Regulatory framework	Rank
Starting a business	07
Enforcing contracts	08
Immigration laws	36
Development & application of tech.	17
Scientific research legislation	28
Intellectual property rights	23

Capital	Rank
▷ IT & media stock market capitalization	51
Funding for technological development	30
Banking and financial services	27
Country credit rating	26
Venture capital	24
Investment in Telecommunications	43

Technological framework	Rank
▷ Communications technology	46
Mobile broadband subscribers	07
▶ Wireless broadband	05
Internet users	13
Internet bandwidth speed	35
High-tech exports (%)	22

FUTURE READINESS

Sub-Factors	2019	2020	2021	2022	2023
Adaptive attitudes	26	18	20	14	09
Business agility	43	26	25	20	23
IT integration	26	22	25	07	05

Adaptive attitudes	Rank
▶ E-Participation	03
Internet retailing	19
▶ Tablet possession	04
Smartphone possession	19
Attitudes toward globalization	24

Business agility	Rank
Opportunities and threats	22
▷ World robots distribution	46
Agility of companies	09
Use of big data and analytics	34
Knowledge transfer	35
▶ Entrepreneurial fear of failure	07

IT integration	Rank
E-Government	08
Public-private partnerships	44
Cyber security	15
Software piracy	30
▶ Government cyber security capacity	02
Privacy protection by law content	09