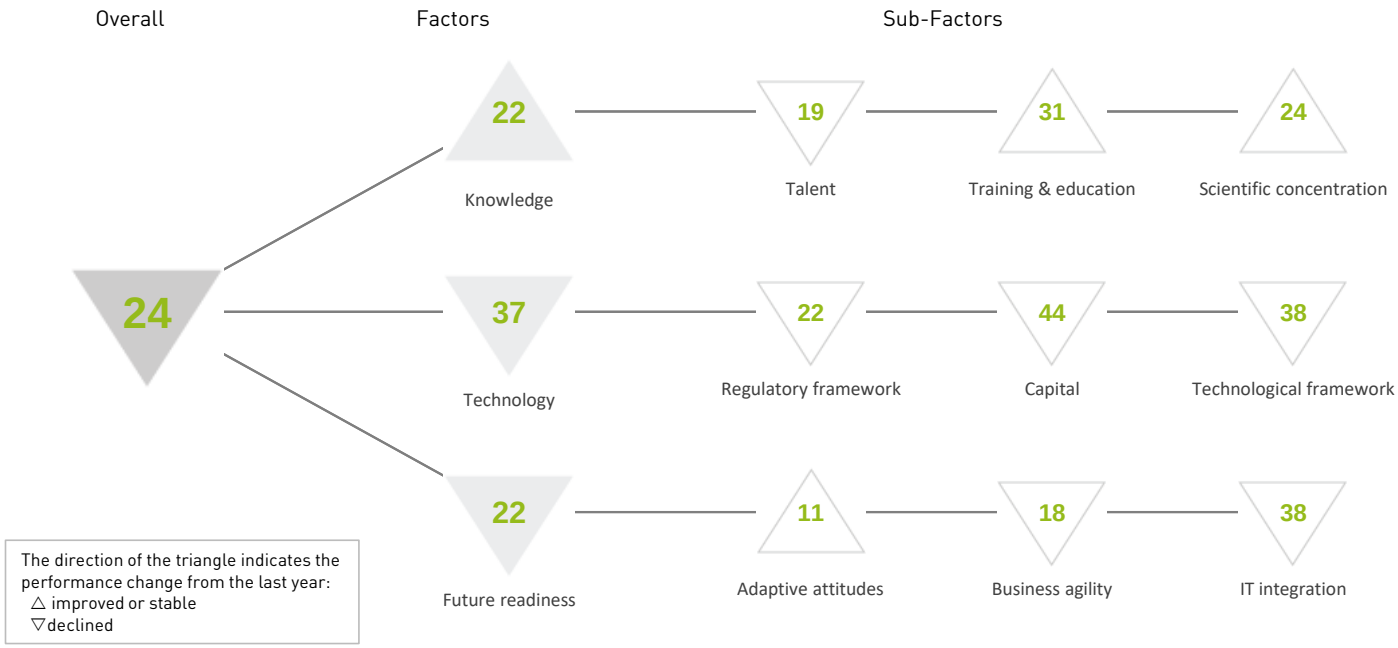
IRELAND

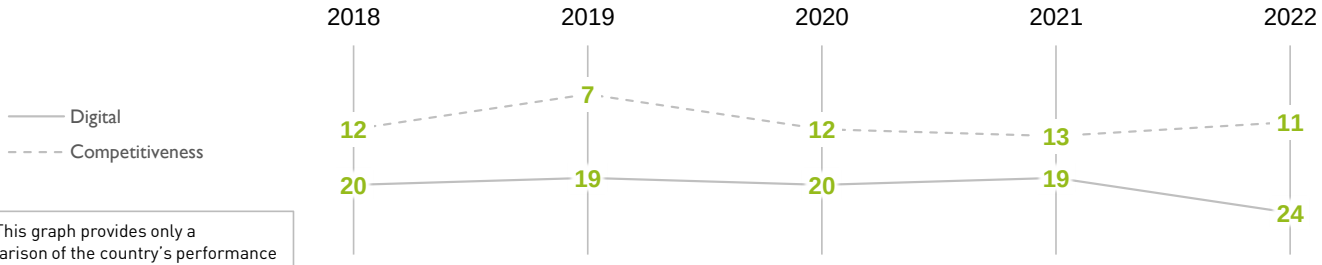
OVERALL PERFORMANCE (63 countries)



OVERALL & FACTORS - 5 years

	2018	2019	2020	2021	2022
OVERALL	20	19	20	19	24
Knowledge	22	24	24	23	22
Technology	29	28	30	28	37
Future readiness	13	05	14	14	22

COMPETITIVENESS & DIGITAL RANKINGS



N.B. This graph provides only a comparison of the country's performance in the two rankings.

PEER GROUPS RANKINGS

EUROPE - MIDDLE EAST - AFRICA (40 countries)

POPULATIONS < 20 MILLION (36 countries)

IRELAND

▶ Overall Top Strengths

▷ Overall Top Weaknesses

KNOWLEDGE

Sub-Factors	2018	2019	2020	2021	2022
Talent	14	10	19	18	19
Training & education	34	30	35	32	31
Scientific concentration	24	29	25	26	24

Talent	Rank
Educational assessment PISA - Math	20
International experience	13
▶ Foreign highly-skilled personnel	09
Management of cities	38
Digital/Technological skills	34
Net flow of international students	20

Training & education	Rank
Employee training	15
▷ Total public expenditure on education	58
Higher education achievement	09
Pupil-teacher ratio (tertiary education)	48
Graduates in Sciences	27
▶ Women with degrees	09

Scientific concentration	Rank
Total expenditure on R&D (%)	35
Total R&D personnel per capita	21
Female researchers	26
R&D productivity by publication	36
Scientific and technical employment	17
High-tech patent grants	10
Robots in Education and R&D	30

TECHNOLOGY

Sub-Factors	2018	2019	2020	2021	2022
Regulatory framework	20	13	14	19	22
Capital	53	49	45	35	44
Technological framework	13	24	30	34	38

Regulatory framework	Rank
Starting a business	12
Enforcing contracts	47
Immigration laws	24
Development & application of tech.	18
Scientific research legislation	11
Intellectual property rights	20

Capital	Rank
▷ IT & media stock market capitalization	55
Funding for technological development	20
Banking and financial services	31
Country credit rating	26
Venture capital	14
▷ Investment in Telecommunications	60

Technological framework	Rank
Communications technology	50
Mobile Broadband subscribers	45
Wireless broadband	36
Internet users	20
Internet bandwidth speed	36
High-tech exports (%)	12

FUTURE READINESS

Sub-Factors	2018	2019	2020	2021	2022
Adaptive attitudes	10	03	12	12	11
Business agility	03	09	09	14	18
IT integration	24	20	25	19	38

Adaptive attitudes	Rank
E-Participation	27
▶ Internet retailing	09
Tablet possession	16
Smartphone possession	29
Attitudes toward globalization	10

Business agility	Rank
▶ Opportunities and threats	06
World robots distribution	42
▶ Agility of companies	06
Use of big data and analytics	18
Knowledge transfer	13
Entrepreneurial fear of failure	39

IT integration	Rank
E-Government	25
Public-private partnerships	29
Cyber security	37
Software piracy	19
▷ Government cyber security capacity	56
▷ Privacy protection by law content	51