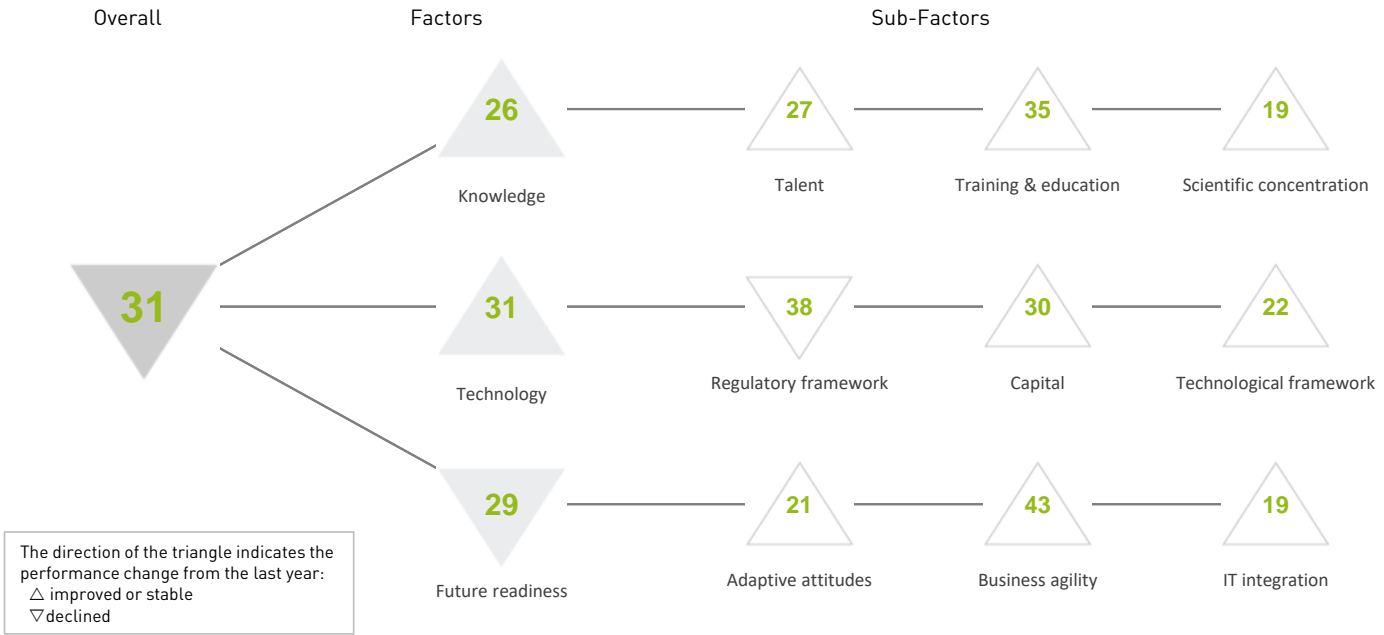


SPAIN

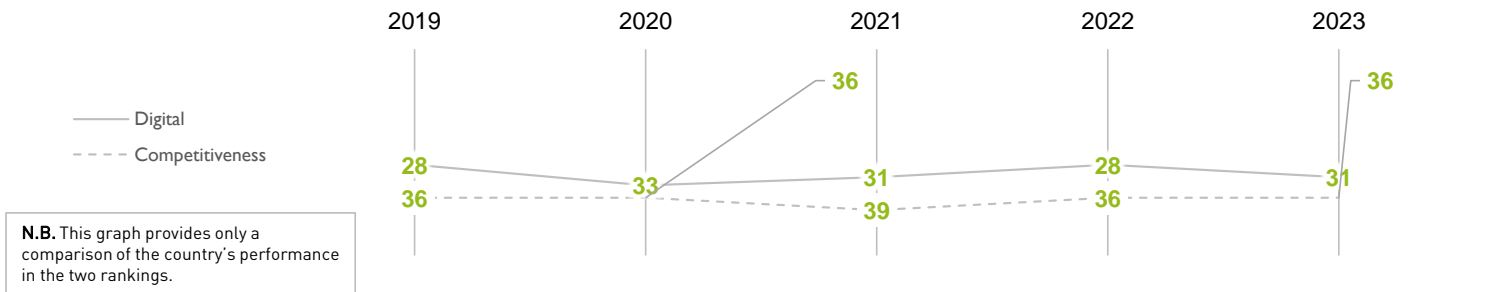
OVERALL PERFORMANCE (64 countries)



OVERALL & FACTORS - 5 years

	2019	2020	2021	2022	2023
OVERALL	28	33	31	28	31
Knowledge	28	32	31	27	26
Technology	29	33	33	33	31
Future readiness	27	40	35	27	29

COMPETITIVENESS & DIGITAL RANKINGS



PEER GROUPS RANKINGS

EUROPE - MIDDLE EAST - AFRICA (41 countries)



POPULATIONS > 20 MILLION (27 countries)



▶ Overall Top Strengths

▷ Overall Top Weaknesses

KNOWLEDGE

Sub-Factors	2019	2020	2021	2022	2023
Talent	29	32	31	31	27
Training & education	40	42	40	35	35
Scientific concentration	20	20	23	20	19

Talent	Rank
Educational assessment PISA - Math	32
International experience	31
Foreign highly skilled personnel	18
Management of cities	29
Digital/Technological skills	37
Net flow of international students	33

Training & education	Rank
Employee training	40
Total public expenditure on education	38
Higher education achievement	26
Pupil-teacher ratio (tertiary education)	21
▷ Graduates in Sciences	43
Women with degrees	27

Scientific concentration	Rank
Total expenditure on R&D (%)	31
Total R&D personnel per capita	31
Female researchers	23
▶ R&D productivity by publication	08
Scientific and technical employment	24
High-tech patent grants	40
▶ Robots in Education and R&D	07

TECHNOLOGY

Sub-Factors	2019	2020	2021	2022	2023
Regulatory framework	34	36	37	35	38
Capital	33	34	34	31	30
Technological framework	23	27	24	28	22

Regulatory framework	Rank
Starting a business	41
Enforcing contracts	22
Immigration laws	30
Development & application of tech.	35
▷ Scientific research legislation	54
Intellectual property rights	29

Capital	Rank
IT & media stock market capitalization	21
Funding for technological development	39
Banking and financial services	33
Country credit rating	38
Venture capital	25
Investment in Telecommunications	24

Technological framework	Rank
Communications technology	13
Mobile broadband subscribers	40
Wireless broadband	34
Internet users	18
▶ Internet bandwidth speed	07
▷ High-tech exports (%)	43

FUTURE READINESS

Sub-Factors	2019	2020	2021	2022	2023
Adaptive attitudes	25	35	33	25	21
Business agility	38	48	49	44	43
IT integration	25	30	29	20	19

Adaptive attitudes	Rank
E-Participation	22
Internet retailing	30
Tablet possession	18
▶ Smartphone possession	10
Attitudes toward globalization	34

Business agility	Rank
Opportunities and threats	34
▶ World robots distribution	10
Agility of companies	34
▷ Use of big data and analytics	58
▷ Knowledge transfer	44
Entrepreneurial fear of failure	42

IT integration	Rank
E-Government	17
Public-private partnerships	24
Cyber security	41
Software piracy	32
Government cyber security capacity	12
Privacy protection by law content	13