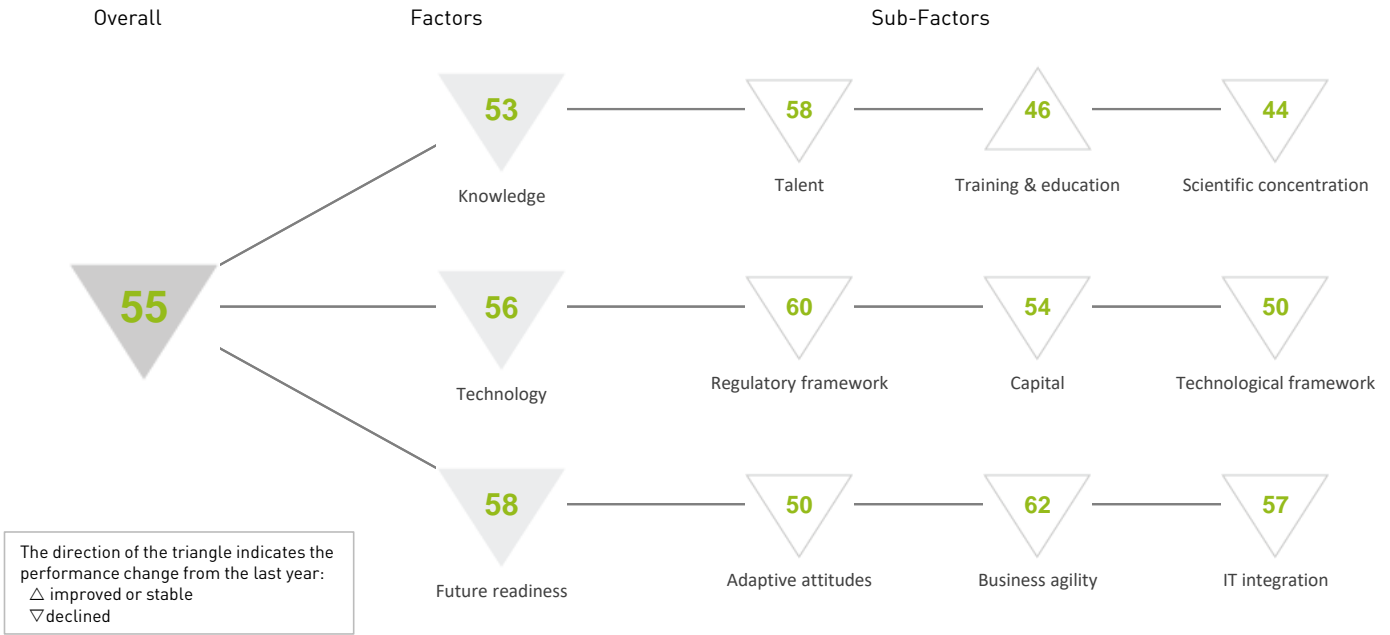


BULGARIA

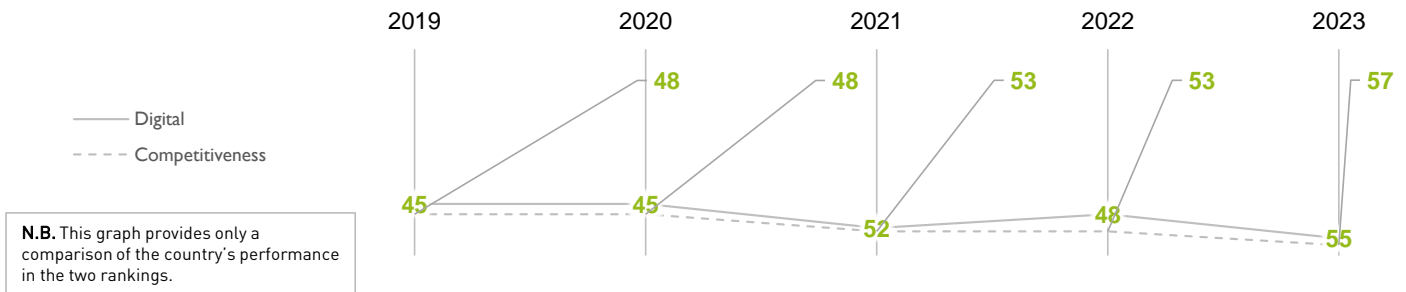
OVERALL PERFORMANCE (64 countries)



OVERALL & FACTORS - 5 years

	2019	2020	2021	2022	2023
OVERALL	45	45	52	48	55
Knowledge	46	47	53	48	53
Technology	42	45	51	51	56
Future readiness	48	44	55	50	58

COMPETITIVENESS & DIGITAL RANKINGS



PEER GROUPS RANKINGS

EUROPE - MIDDLE EAST - AFRICA (41 countries)



POPULATIONS < 20 MILLION (37 countries)



BULGARIA

► Overall Top Strengths

▷ Overall Top Weaknesses

KNOWLEDGE

Sub-Factors	2019	2020	2021	2022	2023
Talent	50	48	54	56	58
Training & education	46	50	53	52	46
Scientific concentration	37	42	46	40	44

Talent	Rank	Training & education	Rank	Scientific concentration	Rank
Educational assessment PISA - Math	42	Employee training	61	Total expenditure on R&D (%)	44
International experience	61	Total public expenditure on education	41	Total R&D personnel per capita	39
▷ Foreign highly skilled personnel	63	Higher education achievement	47	▶ Female researchers	12
Management of cities	48	▶ Pupil-teacher ratio (tertiary education)	14	R&D productivity by publication	45
Digital/Technological skills	43	Graduates in Sciences	47	Scientific and technical employment	41
Net flow of international students	52	Women with degrees	36	▶ High-tech patent grants	14
				Robots in Education and R&D	48

TECHNOLOGY

Sub-Factors	2019	2020	2021	2022	2023
Regulatory framework	46	55	55	52	60
Capital	42	48	53	52	54
Technological framework	44	39	42	46	50

Regulatory framework	Rank	Capital	Rank	Technological framework	Rank
Starting a business	47	IT & media stock market capitalization	43	Communications technology	48
Enforcing contracts	31	Funding for technological development	54	Mobile broadband subscribers	39
▷ Immigration laws	63	Banking and financial services	54	Wireless broadband	22
Development & application of tech.	57	Country credit rating	44	Internet users	56
Scientific research legislation	61	Venture capital	46	Internet bandwidth speed	48
Intellectual property rights	61	Investment in Telecommunications	39	High-tech exports (%)	37

FUTURE READINESS

Sub-Factors	2019	2020	2021	2022	2023
Adaptive attitudes	43	41	45	39	50
Business agility	56	40	61	56	62
IT integration	47	47	53	49	57

Adaptive attitudes	Rank	Business agility	Rank	IT integration	Rank
E-Participation	26	▷ Opportunities and threats	63	E-Government	45
Internet retailing	50	World robots distribution	43	Public-private partnerships	56
Tablet possession	42	Agility of companies	62	▷ Cyber security	62
Smartphone possession	30	Use of big data and analytics	55	Software piracy	51
▷ Attitudes toward globalization	62	Knowledge transfer	60	Government cyber security capacity	60
		▶ Entrepreneurial fear of failure	06	▶ Privacy protection by law content	20