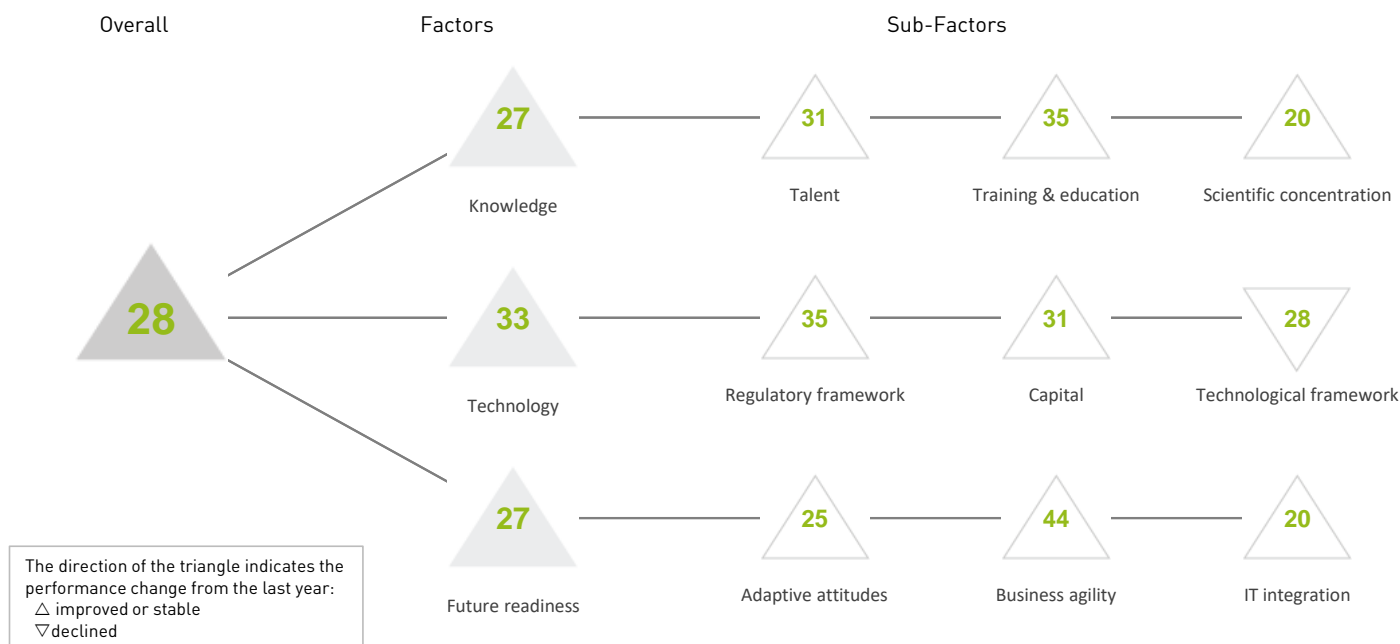


# SPAIN

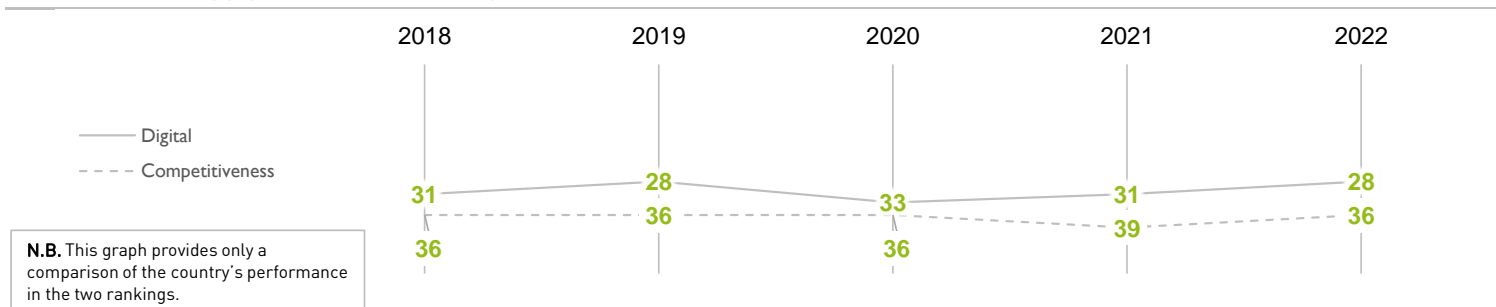
## OVERALL PERFORMANCE (63 countries)



## OVERALL & FACTORS - 5 years

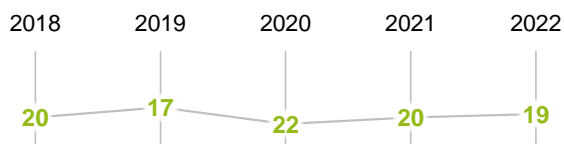
	2018	2019	2020	2021	2022
OVERALL	31	28	33	31	28
Knowledge	31	28	32	31	27
Technology	33	29	33	33	33
Future readiness	30	27	40	35	27

## COMPETITIVENESS & DIGITAL RANKINGS

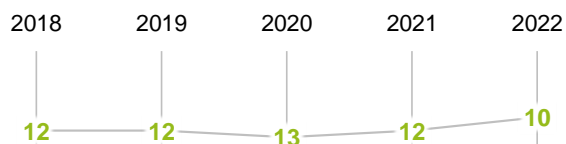


## PEER GROUPS RANKINGS

### EUROPE - MIDDLE EAST - AFRICA (40 countries)



### POPULATIONS > 20 MILLION (27 countries)



▶ Overall Top Strengths

▷ Overall Top Weaknesses

## KNOWLEDGE

Sub-Factors	2018	2019	2020	2021	2022
Talent	32	29	32	31	31
Training & education	40	40	42	40	35
Scientific concentration	27	20	20	23	20

Talent	Rank	Training & education	Rank	Scientific concentration	Rank
Educational assessment PISA - Math	32	▷ Employee training	50	Total expenditure on R&D (%)	31
▷ International experience	46	Total public expenditure on education	38	Total R&D personnel per capita	28
Foreign highly-skilled personnel	23	Higher education achievement	24	Female researchers	21
Management of cities	25	Pupil-teacher ratio (tertiary education)	19	▶ R&D productivity by publication	09
Digital/Technological skills	30	Graduates in Sciences	39	Scientific and technical employment	23
Net flow of international students	31	Women with degrees	28	High-tech patent grants	40
				▶ Robots in Education and R&D	09

## TECHNOLOGY

Sub-Factors	2018	2019	2020	2021	2022
Regulatory framework	36	34	36	37	35
Capital	37	33	34	34	31
Technological framework	29	23	27	24	28

Regulatory framework	Rank	Capital	Rank	Technological framework	Rank
Starting a business	40	IT & media stock market capitalization	21	Communications technology	17
Enforcing contracts	22	Funding for technological development	43	Mobile Broadband subscribers	38
Immigration laws	20	Banking and financial services	38	Wireless broadband	33
Development & application of tech.	35	Country credit rating	37	Internet users	17
▷ Scientific research legislation	54	Venture capital	28	Internet bandwidth speed	15
Intellectual property rights	31	Investment in Telecommunications	17	▷ High-tech exports (%)	50

## FUTURE READINESS

Sub-Factors	2018	2019	2020	2021	2022
Adaptive attitudes	26	25	35	33	25
Business agility	44	38	48	49	44
IT integration	27	25	30	29	20

Adaptive attitudes	Rank	Business agility	Rank	IT integration	Rank
E-Participation	33	Opportunities and threats	44	E-Government	17
Internet retailing	28	▶ World robots distribution	10	Public-private partnerships	25
Tablet possession	27	Agility of companies	32	Cyber security	39
▶ Smartphone possession	07	▷ Use of big data and analytics	55	Software piracy	32
Attitudes toward globalization	33	Knowledge transfer	46	▶ Government cyber security capacity	12
		Entrepreneurial fear of failure	41	Privacy protection by law content	13