INDICATOR FRAMEWORK FOR RCI 2.0, 2022 EDITION

Pillar name	Indicator name	Description	Unit of measurement	Source	Reference year	Geographical level	Present in RCI 2019
Institutions – regional	Corruption	Pillar of the European Quality of Government Index: aggregate of survey questions assessing corruption in the provision of public services.	z-scores (the higher the better)	Quality of Government Index by the Quality of Government Institute (University of Gothenburg)	2021	NUTS 2 HR02, HR_C: value of the former HR04 region	Yes
Institutions – regional	Quality and accountability	Pillar of the European Quality of Government Index: aggregate of survey questions assessing the quality of public services.	z-scores (the higher the better)	Quality of Government Index by the Quality of Government Institute (University of Gothenburg)	2021	NUTS 2 HR02, HR_C: value of the former HR04 region	Yes
Institutions – regional	Impartiality	Pillar of the European Quality of Government Index: aggregate of survey questions assessing impartiality in the provision of public services.	z-scores (the higher the better)	Quality of Government Index by the Quality of Government Institute (University of Gothenburg)	2021	NUTS 2 HR02, HR_C: value of the former HR04 region	Yes
Institutions – regional	Individuals who used the internet for interaction with public authorities	Percentage of individuals who say they used the internet to interact with public authorities in the last 12 months.	% of respondents who agree	Eurostat (code: ISOC_R_GOV_I)	2021	NUTS 2	No
Institutions – national	Presence of corruption in the national public institutions in the country	Percentage of individuals who agree there is corruption in the national public institutions.	% of respondents who agree	Special Eurobarometer 470	2020	Country	Yes
Institutions – national	Presence of corruption in the local or regional public institutions in the country	Percentage of individuals who agree there is corruption in the local or regional public institutions.	% of respondents who agree	Special Eurobarometer 470	2020	Country	Yes
Institutions – national	Ease of doing business	This indicator benchmarks economies with respect to their proximity to the best performance on each area measured by doing business. For instance, a score of 75 means an economy was 25 percentage points away from the best regulatory performance constructed across all economies.	Score ranging from 0 (worst) to 100 (best)	Worldbank – Doing Business	2020	Country	Yes

Pillar name	Indicator name	Description	Unit of measurement	Source	Reference year	Geographical level	Present in RCI 2019
Institutions – national	Property rights	The extent to which property rights, including financial assets are protected.	1–7 (best)	World Economic Forum – Global Competitiveness Index 4.0	2019	Country	Yes
Institutions – national	Intellectual property protection	The extent to which intellectual property is protected.	1–7 (best)	World Economic Forum – Global Competitiveness Index 4.0	2019	Country	Yes
Institutions – national	Efficiency of legal framework in settling disputes	The efficiency of the legal and judicial systems for companies in settling disputes.	1–7 (best)	World Economic Forum – Global Competitiveness Index 4.0	2019	Country	Yes
Institutions – national	Efficiency of legal framework in challenging regulations	How easy is it for private businesses to challenge government actions and/or regulations through the legal system.	1-7 (best)	World Economic Forum – Global Competitiveness Index 4.0	2019	Country	Yes
Institutions – national	Organised crime	To what extent does organised crime (mafia-oriented racketeering, extortion) impose costs on businesses?	1–7 (best)	World Economic Forum – Global Competitiveness Index 4.0	2019	Country	Yes
Institutions – national	Reliability of police services	Reliability of police services to enforce law and order (survey question).	1–7 (best)	World Economic Forum – Global Competitiveness Index 4.0	2019	Country	Yes
Institutions – national	Judicial independence	How independent is the judicial system from influences of the government, individuals or companies?	1–7 (best)	World Economic Forum – Global Competitiveness Index 4.0	2019	Country	No
Macroeconomic stability	General government deficit/surplus	General government (central government, state government, local government and social security funds) net lending (+) / net borrowing (-). Average 2019–2021.	% of GDP	Eurostat (code: gov_10dd_edpt1)	Average 2019–2021	Country	Yes
Macroeconomic stability	National savings	Aggregate savings as share of GDP.	% of GDP	Eurostat (codes: nasa_10_nf_tr, nama_10_gdp)	Average 2018–2020	Country	Yes
Macroeconomic stability	Government bond yields	Central government bond yields on the secondary market, gross of tax, with around 10 years' residual maturity.	economic and monetary union convergence criterion bond yields	Eurostat (code: irt_lt_mcby_a)	Average 2019 – 2021	Country	Yes
Macroeconomic stability	Government debt	Ratio of government debt outstanding at the end of the year to GDP at current market prices.	% of GDP	Eurostat (code: gov_10dd_edpt1)	Average 2019 – 2021	Country	Yes
Macroeconomic stability	Net international	The net international investment position provides an aggregate	% of GDP	Eurostat (code: tipsii10)	Average 2019 – 2021	Country	Yes

Pillar name	Indicator name	Description	Unit of measurement	Source	Reference year	Geographical level	Present in RCI 2019
	investment position	view of the net financial position (assets minus liabilities) of a country vis-à-vis the rest of the world.					
Infrastructure	Road transport performance	Population accessible within 1h30 by road in a neighbourhood within a 120 km radius.	% of population	DG Regional and Urban Policy	2018	NUTS 2	Yes
Infrastructure	Rail transport performance	Population accessible within 1h30 by rail (using optimal connections) in a neighbourhood within a 120 km radius.	% of population	DG Regional and Urban Policy	2019	NUTS 2	Yes
Infrastructure	Accessibility to passenger flights	Daily number of passenger flights.	Number	Eurostat / EuroGeographics / national statistical institutes	2019	NUTS 2	Yes
Health	Road fatalities	Number of deaths in road accidents per million inhabitants.	Number	Eurostat (code: tran_r_acci)	3-year average 2018-2020	NUTS 2	Yes
Health	Healthy life expectancy	Number of years of healthy life expected.	Number	Eurostat (codes: demo_r_mlifexp & hlth_silc_17), DG Regional and Urban Policy elaboration	3-year average 2017–2019	NUTS 2	Yes
Health	Infant mortality	Number of deaths of children under 1 year of age during the year to the number of live births in that year (per 1 000 live births).	Rate	Eurostat Regional Statistics (code: demo_r_minfind)	3-year average 2017–2019	NUTS 2	Yes
Health	Cancer disease death rate	Standardised cancer death rate for population under 65 (neoplasm C00-D48).	Rate	Eurostat (code: hlth_cd_ysdr2)	3-year average 2015–2017	NUTS 2	Yes
Health	Heart disease death rate	Standardised heart diseases death rate for population under 65 (diseases of the circulatory system I00-I99).	Rate	Eurostat (code: hlth_cd_ysdr2)	3-year average 2015–2017	NUTS 2	Yes
Health	Suicide death rate	Standardised death rate for suicide for population under 65 (intentional self-harm X60-X84).	Rate	Eurostat (code: hlth_cd_ysdr2)	3-year average 2015-2017	NUTS 2	Yes
Basic education	Low achievement in reading (15-year-olds)	% of 15-year-old students with reading proficiency level 1a or lower.	Percentage % of 15-year-old students	PISA 2018 / OECD	2018	Country	No
Basic education	Low achievement in maths (15-year-olds)	% of 15-year-old students with math proficiency level 2 or lower.	Percentage % of 15-year-old students	PISA 2018 / OECD	2018	Country	No

Pillar name	Indicator name	Description	Unit of measurement	Source	Reference year	Geographical level	Present in RCI 2019
Basic education	Low achievement in science (15-year-olds)	% of 15-year-old students with science proficiency level 1a or lower.	Percentage % of 15-year-old students	PISA 2018 / OECD	2018	Country	No
Higher education and lifelong learning	Higher educational attainment	Population aged 25–34 with tertiary educational attainment.	% of population aged 25–34	Eurostat (codes: EDAT_LFSE_04 & LFST_R_LFSD2POP)	2021	NUTS 2	Yes
Higher education and lifelong learning	Lifelong learning	Adult population participation in lifelong learning (i.e. received education or training in the 4 weeks preceding the survey).	% of population aged 25–64	Eurostat (code: TRNG_LFSE_04 & LFST_R_LFSD2POP)	Average 2019–2021	NUTS 2	Yes
Higher education and lifelong learning	Early school leavers	Early leavers from education and training, i.e. those having attained at most lower secondary school and not going further.	% of the population aged 18–24 with at most lower secondary school	Eurostat (code: EDAT_LFSE_16 & DEMO_R_D2JAN)	Average 2019–2021	NUTS 2	Yes
Higher education and lifelong learning	University accessibility	Arithmetic average of the share of population within 45 minutes by car from nearest university main site and/ or campus.	Share of population	DG Regional and Urban Policy (Poelman and Dijkstra,2018)	2016 (2018 for population grid data)	NUTS 2	Yes
Higher education and lifelong learning	Lower-secondary completion only	Percentage of people aged 25–64 who have successfully completed at most lower secondary education (ISCED 0-2).	% of population aged 25–64	Eurostat: edat_lfse_04	Average 2019–2021	NUTS 2	Yes
Labour market efficiency	Employment rate (excluding agriculture)	Percentage of people aged 15–64 that are currently employed in all economic sectors excluding agriculture	% of population 15–64 years	Eurostat Regional Labour Force Statistics (LFS) (codes: LFST_R_LFE2EN2 & LFST_R_LFSD2POP)	2021	NUTS 2	Yes
Labour market efficiency	Long-term unemployment	Percentage of unemployed people actively looking for a job (in the last 12 months or more)	% of labour force	Eurostat Regional Labour Force Statistics (LFS) (codes: LFST_R_LFU2LTU & LFST_R_LFP2ACT)	2021 and last available year	NUTS 2	Yes
Labour market efficiency	Unemployment rate	Share of unemployed persons aged 15–74 as a percentage of the labour force (given by the total number of people employed and unemployed).	% of active population	Eurostat Regional Labour Force Statistics (LFS) (codes: LFST_R_LFU3PERS & LFST_R_LFP2ACT)	2021 and last available year	NUTS 2	Yes

Pillar name	Indicator name	Description	Unit of measurement	Source	Reference year	Geographical level	Present in RCI 2019
Labour market efficiency	Labour productivity	GDP (in terms of PPS) relative to the number of hours worked.	Index (PPS) EU-27=100	Eurostat and DG Regional and Urban Policy: (codes: nama_10r_2emhrw & NAMA_10R_2GDP)	2019	NUTS 2	Yes
Labour market efficiency	Gender balance unemployment	Difference between female and male unemployment rates (in absolute value) as an indicator of the distance from gender parity.	Rate difference	Eurostat and DG Regional and Urban Policy (codes: LFST_R_LFU3PERS & LFST_R_LFP2ACT)	2021 and last available year	NUTS 2	Yes
Labour market efficiency	Gender balance employment	Difference between female and male employment rates (in absolute value) as an indicator of the distance from gender parity.	Rate difference	Eurostat and DG Regional and Urban Policy (codes: LFST_R_LFE2EMP & LFST_R_LFSD2POP)	2021	NUTS 2	Yes
Labour market efficiency	NEET	NEET rate of young people (aged 15–29).	% of population aged 15–24	Eurostat and DG Regional and Urban Policy (codes: EDAT_LFSE_22 & LFST_R_LFSD2POP)	3-year average 2019–2021 and last available year	NUTS 2	Yes
Labour market efficiency	Labour market slack	The unmet demand for employment as a percentage of the extended labour force (persons aged 15-74).	% of extended labour force	Eurostat and DG Regional and Urban Policy (codes: LFST_R_SLA_GA)	2021 and last available year	NUTS 2	No
Labour market efficiency	Temporary employment	Temporary employees as a percentage of the total number of employees aged 20–64.	Share of employed people aged 20–64	Eurostat (code: LFST_R_LFE2EFTPT)	Average 2018–2020	NUTS 2	Yes
Market size	Disposable income per capita	Net adjusted disposable household income in purchasing power consumption standards (PPCS) per capita (index EU-27=100).	Index (PPCS) EU-27=100	Eurostat (code: nama_10r_2hhinc & nama_10r_3popgdp)	2020 and last available year	NUTS 2	Yes
Market size	Potential market size expressed in GDP	Index GDP (PPS) EU-27=100 – EU-27 average computed as population weighted average of the NUTS 2 values.	Index GDP (PPS) EU-27=100	Eurostat, DG Regional and Urban Policy elaboration	2020	NUTS 2	Yes
Market size	Potential market size expressed in population	Potential market size expressed as index population EU-27=100.	Index GDP (PPS) EU-27=100	DG Regional and Urban Policy elaboration	2020	NUTS 2	Yes

Pillar name	Indicator name	Description	Unit of measurement	Source	Reference year	Geographical level	Present in RCI 2019
Technological readiness – regional	Households with broadband access	Share of households with broadband access (%).	% of total households	Eurostat regional information statistics (code: isoc_r_broad_h)	2021	NUTS 2	Yes
Technological readiness regional	Individuals buying over internet the last year	Percentage of individuals who ordered goods or services over the internet for private use in the last 12 months.	% of individuals	Eurostat Regional Information Statistics (code: isoc_r_blt12_i)	2021 or last available year	NUTS 2	Yes
Technological readiness – regional	Access to high-speed broadband	Percentage of population that lives in a Local Administrative Unit (LAU), where a (fixed or mobile) broadband speed of at least 100 Mbps has been observed.	% of population	DG Regional and Urban Policy elaboration	2018	NUTS 2	No
Technological readiness – regional	Individuals with above-basic overall digital skills	Individuals with above-basic overall digital skills converted to an index of the EU average of 2021 (EU average = 100).	Index of EU-27 2021 (EU-27 average = 100)	Regional Innovation Scoreboard, DG Internal Market, Industry, Entrepreneurship and SMEs and DG Regional and Urban Policy elaboration	2020	NUTS 2	No
Technological readiness – national	Enterprises having received orders online (at least 1 %)	% of enterprises with at least 10 persons employed in the given NACE sectors, by size class (NACE Rev 2 since 2009) having received orders online (at least 1 %).	% of enterprises	Eurostat Community Survey on ICT usage and e-commerce (code: tin00111)	Average 2019–2021	Country	Yes
Technological readiness – national	Enterprises with fixed broadband access.	Enterprises that are connectable to an exchange which has been converted to support xDSL-technology, to a cable network upgraded for internet traffic, or to other broadband technologies. It includes fixed and mobile connections.	% of enterprises	Eurostat Community Survey on ICT usage and e-commerce (code: tin00090)	Average 2016–2017	Country	Yes
Business sophistication	Employment (K-N sectors)	Employment in the 'Financial and insurance activities; real estate activities; professional, scientific and technical activities; administrative and support service activities' sectors (K-N) as % of total employment.	% of total employment	Eurostat Regional Statistics (code: ESTAT_NAMA_1 0R_3GVA)	Average 2017–2019	NUTS 2	Yes

Pillar name	Indicator name	Description	Unit of measurement	Source	Reference year	Geographical level	Present in RCI 2019
Business sophistication	Gross value added (GVA) (K-N sectors)	GVA in the 'Financial and insurance activities; real estate activities; professional, scientific and technical activities; administrative and support service activities' sectors (K-N) as % of total GVA.	% of total GVA	Eurostat Regional Statistics: ESTAT_NAMA_1 0R_3GVA	Average 2017–2019	NUTS 2	Yes
Business sophistication	Innovative SMEs collaborating with others	SMEs with innovation cooperation activities as % of total number of SMEs. Joint European Innovation Scoreboard (EIS) and Regional Innovation Scoreboard (RIS) data are presented as performance scores compared to the EU performance (EU-27=100).	% of total SME	Regional Innovation Scoreboard, DG Internal Market, Industry, Entrepreneurship and SMEs, – based on the Community Innovation Survey	RIS 2021	NUTS 2 NUTS 1 level: AT, BE, FR NUTS 0 level: NL	Yes
Business sophistication	Marketing or organisational innovators	SMEs introducing marketing or organisational innovation (i.e. SMEs introducing business process innovations in the RIS database) as a share of total number of SMEs (indicator 3.1.2). Joint EIS+RIS data are presented as performance scores compared to the EU performance (EU-27=100).	% of total SME	Regional Innovation Scoreboard (RIS) , DG Internal Market, Industry, Entrepreneurship and SMEs – based on the Community Innovation Survey	RIS 2021	NUTS 2 NUTS 1 level: AT, BE, FR NUTS 0 level: NL	Yes
Innovation	Total patent applications	Number of total patent applications per million inhabitants.	Average number 2017–2018	DG Regional and Urban Policy, based on OECD REGPAT database August 2022; population data: JRC – Annual Regional Database of the European Commission's Directorate General for Regional and Urban Policy, based on Eurostat data (nama_10r_3po pgdp)	Average 2017–2018	NUTS 2	No
Innovation	Core creative class employment	Population aged 15–64 classified as being a part of the core creative class according to the international standard classification	% of population aged 15–64	Eurostat (LFS): ad hoc extraction	Average 2019–2021	NUTS 2	Yes

Pillar name	Indicator name	Description	Unit of measurement	Source	Reference year	Geographical level	Present in RCI 2019
		of occupations, as % of population aged 15–64					
Innovation	Knowledge workers	Population aged 15–64 with an ISCO code classified as knowledge workers, as % of population aged 15–64 excluding non-stated ISCO code.	% of total employment	Eurostat (LFS): ad hoc extraction	Average 2019–2021	NUTS 2	Yes
Innovation	Scientific publications	Total publications per capita (fractional count).	Number of publications per capita	DG Regional and Urban Policy elaboration, based on Science-Metrix (Elsevier Scopus Database). Main bibliometric indicators in all fields of science by NUTS region, 2000–2020	2000–2020	NUTS 2	Yes
Innovation	Total intramural research and development expenditure	Total intramural expenditure in research and development by NUTS 2 regions as a percentage of GDP.	% of GDP	Eurostat regional science and technology statistics	2019 and last available year	NUTS 2	Yes
Innovation	Human Resources in Science and Technology	Share of persons with successfully completed tertiary education and/or those without tertiary education but employed in a science and technology occupation where tertiary education normally required.	% of active population	Eurostat regional science and technology statistics	2021 and last available year	NUTS 2	Yes
Innovation	Employment in technology and knowledge-intensive sectors	Employment in technology and knowledge-intensive sectors by NUTS 2 regions.	% of total employment	Eurostat regional science and technology statistics	2021 and last available year – we need to calculate the 3-year average	NUTS 2	Yes
Innovation	Trademark applications	Number of trademark applications applied for at European Union Intellectual Property Office per billion regional GDP (in PPS).	Index of EU-27 2021 (EU-27 average = 100)	Joint European Innovation Scoreboard (EIS) and Regional Innovation Scoreboard, DG Internal Market, Industry,	Joint EIS 2021 and RIS 2021	NUTS 2	No

Pillar name	Indicator name	Description	Unit of measurement	Source	Reference year	Geographical level	Present in RCI 2019
				Entrepreneurship and SMEs			
Innovation	Design applications	Number of individual design applications applied for at the European Union Intellectual Property Office per billion regional GDP (in PPS).	Index of EU-27 2021 (EU-27 average = 100)	Joint European Innovation Scoreboard and Regional Innovation Scoreboard, DG Internal Market, Industry, Entrepreneurship and SMEs	Joint EIS 2021 and RIS 2021	NUTS 2	No
Innovation	Sales of new-to-market and new-to-firms innovation	Sales of new-to-market and new-to-firm innovations as % of turnover: it captures both the creation of state-of-the-art technologies (new-to-market products) and the diffusion of these technologies (new-to-firm products).	% of turnover	Regional Innovation Scoreboard, DG Internal Market, Industry, Entrepreneurship and SMEs – Based on the Community Innovation Survey	RIS 2021	NUTS 2 NUTS 1 level: AT, BE, FR NUTS 0 level: NL	Yes