

ANNEX 1: RCS EVALUATION FRAMEWORK AND INDICATORS VALIDATED THROUGH WORKSHOPS AND INTERVIEWS

**Mapping of indicators within the evaluation framework**

The indicators below are categorised according to the level at which they are targeted (individual, institutional, societal) and the components within the revised and agreed evaluation framework. The definitions used in this report for these levels are:

- Individual – individual members of a research team
- Institutional – institutes and organisations involved in generating research
- Societal (also described as ‘environmental’) – supra-institutional including sub-national, national and international

Level	Component	Impact (or high-level outcome) evaluation indicators	Qualitative or quantitative indicator	Examples of possible sources of evidence <sup>1</sup>	
Individual <sup>2</sup>	Provision and quality of training for the research team	Quality of graduates from RCS programmes (e.g. technical capability, critical thinking skills, confidence, empowerment, employability) appropriate for their career stage <sup>3</sup>	Qualitative		
		Individualised training needs assessments conducted and reviewed	Qualitative		
		High-level mentoring obtained	Qualitative		
		Publication output: quantity and quality	Qualitative and quantitative		
		Tracking of cumulative learning including development of mentoring and ToT skills	Qualitative and quantitative		
		Contribution to post-graduate (research) curriculum design and delivery	Qualitative		
		Recognition of research leadership/esteem	Increase in confidence and empowerment to take leadership positions	Qualitative and quantitative	
			Professional recognition	Qualitative and quantitative	- invitations as a speaker/adviser; - consulted with/by decision makers
			Research meets priority demands	Qualitative	
			Evidence of creating a research team	Qualitative	
		Protected research time	Qualitative	- % of paid versus unpaid time for research activities - time spent on administration versus research	
		Innovate, transform and catalyse research	Qualitative		
		Able to create and/or manage multi-disciplinary teams	Qualitative		
		Ability to obtain nationally/internationally competitive grants	Quantitative		
		Ability to engage the general public in research and ‘public’ communities involved research	Quantitative		
		Career trajectory <sup>4</sup>	Upwards trajectory with evidence of progressing in chosen career (including non-academic)	Qualitative and quantitative	- Career ambitions versus options available - Entrepreneur-ism
			Stories/vignettes showing effects within and beyond academia	Qualitative	
			No of mentees for each RCS individual graduate	Quantitative	
			No of networks and collaborations joined or initiated	Qualitative and quantitative	
			Grants - numbers/value, diversity, trends	Quantitative	
		No of research projects engaged in	Quantitative		

<sup>1</sup> These examples are purely illustrative suggestions that were mentioned during the course of the project; their inclusion does not imply that they have been validated for use in RCS evaluations or that they should be adopted

<sup>2</sup> Gender disaggregated

<sup>3</sup> Generic indicators at individual level should take account of seniority and be appropriate for career stage (i.e. early, mid and late career researchers)

<sup>4</sup> The career of individuals would need to be tracked to document their career pathways. There was a recognition that some funding agencies already have tracking systems in place.

Level	Component	Impact (or high-level outcome) evaluation indicators	Qualitative or quantitative indicator	Examples of possible sources of evidence <sup>1</sup>	
Institutional	Career pathways for the research team	Career development opportunities available and used (by all research team members)	Qualitative and quantitative		
		Transparent and equitable process for selecting students	Qualitative		
		High staff retention rates	Quantitative		
		Transparent, equitable promotion criteria and processes, and career progression	Qualitative		
		Mentoring scheme (inter-generational) available and effective	Qualitative		
		Ability to create new posts and attract diaspora	Qualitative and quantitative		
		Training - Numbers/completions/ trends/ employment	Qualitative and quantitative		
	Sustainable provision of appropriate, high quality training	Quality of courses (including post-graduate and CPD)	Qualitative		
		Courses engage with employers and match their needs	Qualitative		
		Quality of graduates	Qualitative		
		Multi-disciplinary research capability	Qualitative and quantitative		
		% of masters students transitioning to PhD level, and PhDs to post-doc posts	Quantitative		
		Enrolment versus completion rates	Quantitative		
		Courses sustainably embedded in institutions	Qualitative		
		Nationally/internationally competitive research and grants	Consistent quality productivity (grants, publications, patents, start-ups, commercialisation)	Qualitative	
			Size, scope, diversity of funders, with upwards trends	Qualitative and quantitative	
			Institutional ranking (+ trends)	Quantitative	
	Research environment – finance, library, IT, labs etc <sup>6</sup>	Availability, awareness (good internal communications) and utilization of research support systems	Qualitative		
		Diversity of applicants for research team positions	Quantitative		
		Ability (or on a trajectory) to support the ‘research pipeline’ <sup>5</sup> from basic science to community and behavioural change/industry uptake	Qualitative and quantitative	No. of Spin offs, licencing, patents	
		Number, extent and activity of collaborations/networks	Qualitative and quantitative		
		Evidence of being policy-influencers and/or sought after for regional/national expertise	Qualitative		
		Internal research-related policies, SOPs and strategies (e.g. for HR, finance, M+E, ethics/integrity, equity/gender) available, collaboratively developed and revised, and implemented	Qualitative and quantitative		
		RCS strategic plan, with funding, implemented and monitored	Qualitative and quantitative		
	Research environment – finance, library, IT, labs etc <sup>6</sup>	Achievement of relevant standards/accreditation	Qualitative and quantitative		
		Vibrant, multi-disciplinary research culture (e.g. journal clubs, seminars, critiques)	Qualitative		
		Explicit mechanisms for allocating research overheads to support research infrastructure	Qualitative		
% of budget spent on strengthening research systems		Quantitative			

<sup>5</sup>[https://en.wikipedia.org/wiki/Translational\\_research](https://en.wikipedia.org/wiki/Translational_research)

<sup>6</sup> The indicators in this category have been selected to be generic but additional indicators may be needed for specific types of programmes (e.g. those that require laboratory facilities may draw indicators from international standards such as ISO, SLIPTA and GLP)

Level	Component	Impact (or high-level outcome) evaluation indicators	Qualitative or quantitative indicator	Examples of possible sources of evidence <sup>7</sup>	
Societal <sup>8</sup>	National: research councils/research productivity	Researcher: citizen ratio	Quantitative		
		Research collaborations/mobility	Quantitative and qualitative		
		Ability to manage transparent, efficient and competitive processes for allocating national research funds	Quantitative and qualitative		
		Research productivity (funds, publications, patents) + trends	Qualitative and quantitative	Data sharing platforms, biobanks, products to market	
		National research funds (+ trends) and research agencies	Quantitative and qualitative		
		No of government policies on research/science/technology	Quantitative		
		National research portfolio covers research pipeline (i.e. basic science to societal change)	Quantitative		
		Innovations and entrepreneurship	Quantitative and qualitative	Patents, spin-off companies	
		International: networks/ collaborations	Research hubs – number, diversity, esteem, infrastructure	Quantitative and qualitative	
			Research governance systems	Qualitative	
	Bilateral agreements as proxy measures of progress		Qualitative		
	International collaboration trends (north-south and south-south)		Qualitative		
	International researcher mobility		Qualitative		
	International mentorship		Qualitative		
	Research impact and user engagement		Public engagement in research	Quantitative and qualitative	
			Research-influenced policies	Quantitative and qualitative	
			Recognition of role of research in development agendas	Qualitative	
			Perceptions and recognition of strengthening research capacity investments and activities	Qualitative	
			Evidence of local innovations impacting society	Quantitative	

<sup>7</sup> These examples are purely illustrative suggestions that were mentioned during the course of the project; their inclusion does not imply that they have been validated for use in RCS evaluations or that they should be adopted

<sup>8</sup> For less research-mature institutions, the focus of RCS efforts may be at national, or even sub-national level whereas for well-established research institutions there would be an expectation of profile and activities at international level