Research Data Handling Project. Implementation Roadmap (version 1.0, 10-August-2021)

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Research Data Handling (RDH) Development

This roadmap sets out a high level plan for delivery of RDH services highlighted in the associated RDH Policy. Major objectives and broad timeline dates are set across FIVE strategic areas, following the life of data through a research project:

1. Planning and Designing Data Processes

2. Collecting and capturing data

3. Processing, and Analysing data

4. Storing and Preserving data

5. Sharing, Publishing and and Discovering data

A further FIVE strategic areas cover centralised features of operation a developing Centre.

6. Governance

7. Operations

8. Training

9. Research Programme

10. Sustainability

This roadmap covers the 5-year period from 2021 to 2025. These 60-months cover the first FOUR project phases, along with Phase 0, which is mostly complete:

Phase 0 (2019 – 2021): largely a planning phase, with some pilot activity and early deliverables.

Phase 1 (2021 - 2022): Initial rollout of primary services. Identification of data resources.

Phase 2 (2022 - 2023): Further development + rollout of services. Consolidation of early services. Initiation of related research. Data showcasing.

Phase 3 (2023 - 2024): Further development + rollout + consolidation of services. Begin sustainability planning.

Phase 4 (2024 - 2025): Further consolidation of services. Formalise sustainability. Regional Data Sharing conference.

OVERVIEW OF PROJECT TASK AND TIMELINE

Phase	Timeframe	See Key	Description	Comment
Phase 0	2019-2021	G1	Establish UWI RDH Committee	Complete
		G2	Develop Data Handling Policy	Complete
		C1	Pilot operation of REDCap software	Complete
		C2	Complete technical assessment of REDCap prior to REDCap campus rollout	80% complete
		T1	REDCap training	Training course developed & delivered
Phase 1	2021-2022	OP1	Establish website and shared working environment	
		P1	Develop online data management planning tool	
		C3	Investigate options for maintaining data-security chain during storage of active data	
		C4	Investigate specific active data needs for qualitative reseach data	
		SU1	Identify priority "show case analyses" using exisiting data	
		SU2	Identify and collate national and regional data assets based on planned analyses	
		SP1	To investigate options for a data repository for enhanced deposit and discovery of data collections generated by University researchers	
		P2	Tailored DMP assistance for PIs submitting research proposals	
		G3	Embedding RDH questions and guidance within local ethics approval processes	
		C5	Formal approval of REDCap as UWI Cave Hill software for research data collection and active data storage	
		C6	REDCap campus rollout (Faculty by Faculty)	
		R1	Develop publication & research strategies	
		R2	Investigate impact/need for regional data sharing conference with key stakeholders	
		T2	Conduct training needs assessment	
Phase 2	2022-2023	OP2	Expand website to include data storytelling / showcasing of secondary data analyses	
		T3	Design and begin implementation of RDH training programme	
		T4	Design RDH mentoring programme	
		C7	Investigate SharePoint as an additional service for cross-platform storage of active data	
		C8	Investigate mechanisms for active data backups	
		G4	Establish in-house best practice guidance	
		SU3	Publish "showcase" analysis with associated UWI TV session	
		SU4	Identify other potential data sources	
		G4	Investigate establishing advisory committee	
		R3	Publish 2 articles based on secondary data or RDH	
		R4	Plan for regional data handling conference in 2024/5	

NOTE: During Phase 0 work has started on guidance documents to improve knowledge and practices around data handling. They are all based around the phases of the data lifecycle and will remain a cross-cutting activity throughout the life of the project

Phase 3	2023-2024	A1	Investigate the need for Institutional source code control system
		A2	Investigate options for proving Institutional solutions for the analysis of <u>quantitative</u> research data
		C9	Explore need for additional integration of REDCap with Cave Hill Research Computing infrastructure
		C10	Investigate mechanisms for data access supporting mobile devices
		R5	Publish a further 2 articles on RDH methodologies or using shared data
		SU5	Develop sustainability plan based on finds from yr1-3 operations
		SU6	Identify additional stakeholders/funders
		SU7	Publish another "showcase" analysis with associated UWI TV session
		SU8	Investigate possibility of fee for service data monitoring services
		T5	Continue implementation of RDH training programme
		T6	Begin implementation of RDH mentoring programme
Phase 4	2024-2025	C11	Investigate options for an institutional Electronic Lab notebook (ELN) service
		R6	Regional data sharing conference
		SU9	Publish another "showcase" analysis with associated UWI TV session
		SU10	Investigate options for a bespoke secure data service
		A3	Investigate options for proving Institutional solutions for the analysis of <u>qualitative</u> research data
		SH1	To provide a registry of research data assets in support of the RDH policy
		SU11	Update sustainablity/business plan
		T7	Identify core and priority training needs from T2 and administrative data
		T8	Establish schedule of courses to address needs from T2 and T4

BUDGET

Phase	Timeframe	Line item	Cost (USD)	Cost per Phase (USD)
Phase 0	2019–2021	Phase 0 was possible as IH was on sabbatical, so no additional costs were incurred		
Phase 1	2021–2022	Server	9,000	
		Systems admin	15,240	
		Project lead (IH)	60,000	
		Data handling specialist/project manager	15,000	99,240
Phase 2	2022–2023	Server	11,000	
		Systems admin	15,240	
		Project lead (IH)	60,000	
		Analyst/trainer	8,000	
		Data handling specialist/project manager	18,000	112,240
Phase 3	2023–2024	Server	13,000	
		Systems admin	20,000	
		Project lead (IH)	50,000	
		Data handling specialist/project manager	15,000	
		Analyst/trainer	12,000	110,000
Phase 4	2024–2025	Server	15,000	
		Systems admin	25,000	
		Project lead (IH)	45,000	
		Data handling specialist/project manager	15,000	
		Analyst/trainer	15,000	115,000
		Total cost for five years	**436,480**	

KEY TO PROJECT TASK CODES

Workstream	Phase of Data Lifecycle	Abbreviation in Overview
Process & analysis	Yes	A
Collect & Capture	Yes	C
Governance		G
Operations		OP
Plan & design	Yes	P
Research		R
Share, publish & discover	Yes	SH
Store & preserve	Yes	SP
Sustainability		SU
Training		T

NOTE: Activities in Workstreams that are part of the data lifecycle will be technical in nature and have associated guidance documents and training courses