



EU-H2020- SHARE-Decommissioning
DigiDecom March 2021



SHARE - WP3 Introduction

WP Leader : NNL (UK)

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n° 847626.



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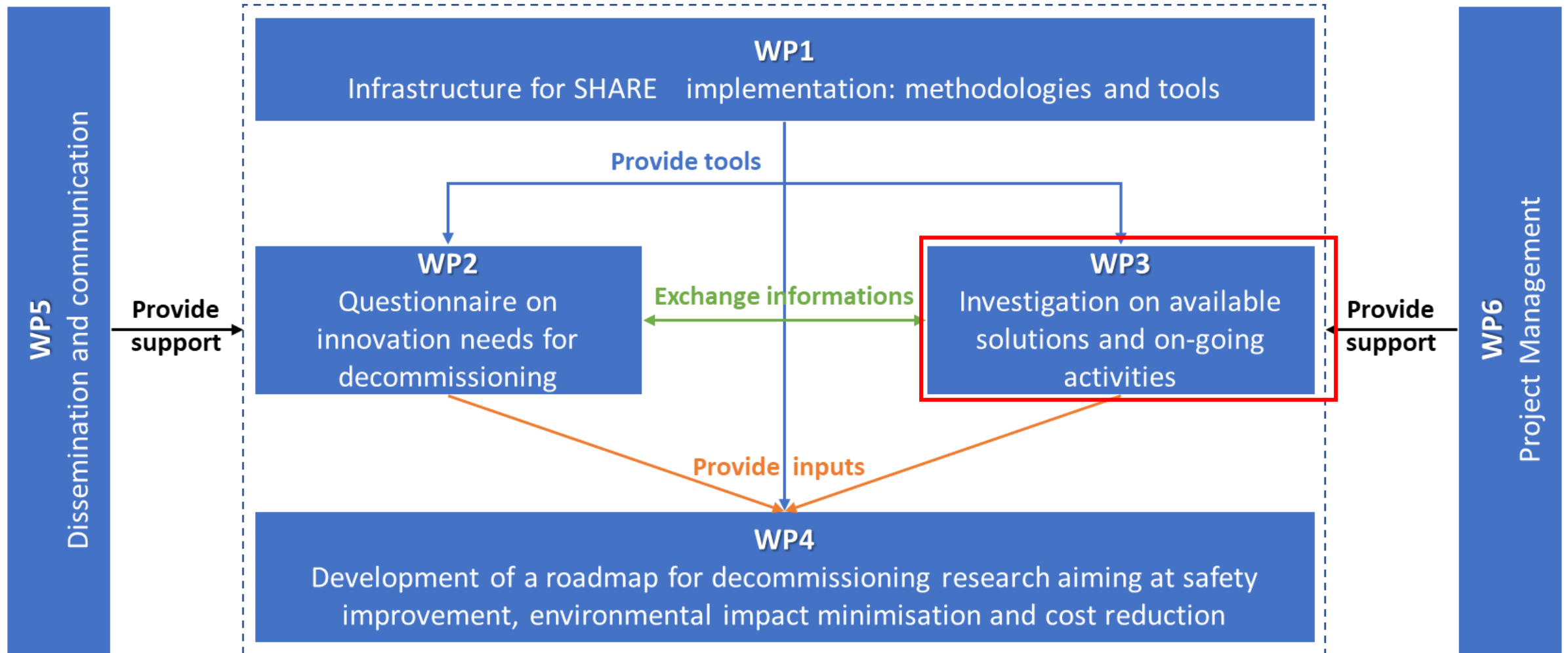


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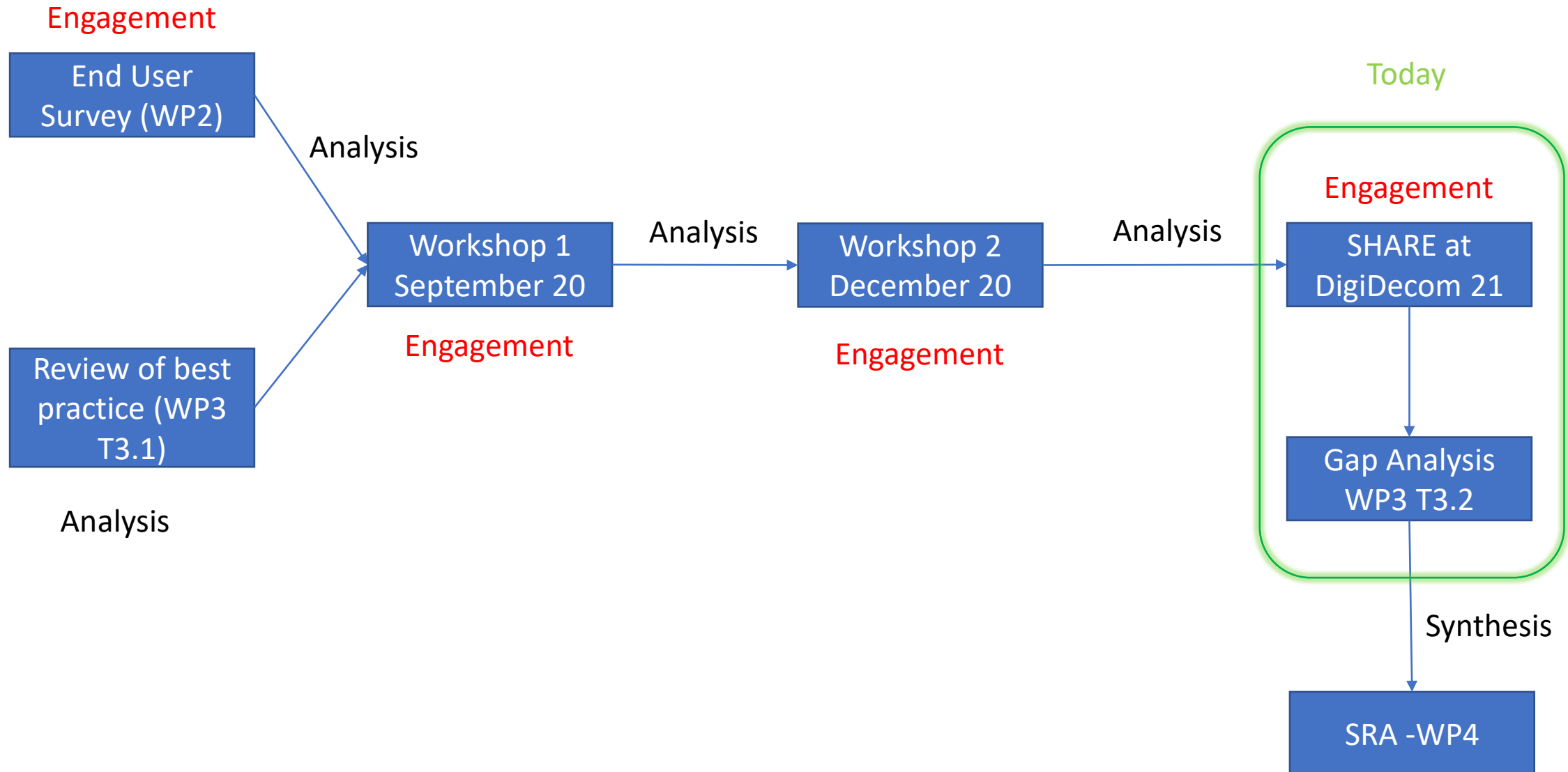
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WP3 in the PERT chart



- **Task 1** : Review of international best practice and advanced technologies in radioactive waste management, environmental remediation and decommissioning
 - Task Leader Sogin
- **Task 2** : Assessment and comparison of technology/ work practices – GAP Analysis/ Benchmark
 - Task Leader KIT
- **Task 3** : International collaborative technology development initiatives
 - Task Leader NNL

Route map to today



Strategic overview (Example)

Sub-thematic area	What are the NEEDS in R&D, new methodologies, standards, and cross-cutting technologies?	Comment (clarification on the need/ cluster made)	Desired state/ available solutions (Are they implemented or under development)	Review from D 3.1	What is the Gap?
Q60. Robots and remote controlled tools for dismantling	Remote cutting systems	<ul style="list-style-type: none"> - Heavy gauge stainless steel cutting capability 	<ul style="list-style-type: none"> - Sellafield have size reduced a dissolver vessel with laser snake (Implemented) - Sellafield have 3 active demonstrators for remote cutting of large metal items using robots and lasers 6 months from active testing (Under development) - RPV internals cut remotely by multiple vendors for many years now (Implemented) 	A lot of initiatives linked to remote cutting technologies (Ni2050) as well as experiences written in 6.1 chapter regarding RPV internals cutting remotely.	No gap regarding the technology as many new projects and initiatives are already working.
	Simplistic database of existing robotics and technologies with evaluation to specific tasks.		<ul style="list-style-type: none"> - Cogetus database available - US DOE has robot list, but it is not relational. 	IDN Wiki: a Web based tool to support information sharing among its members. Large part is dealing with remote systems and associated lessons learned.	Gap is related to have an interactive database that performs evaluation as well.

Gap analysis outcomes

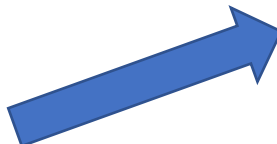
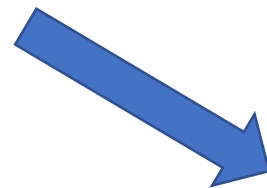
	A	B	C	D	E	L	M	N
1	SHARE - Identification of Gaps							
2	Environmental Remediation and Site Release							
3		Cluster	Needs, Challenges, Problems, missing	Objectives	Desired state	Type of action proposed	Impact/ reason/ outcome of proposed action on:	Global ranking of sub-hematic from survey (importance/ Urgency)
19	Q64 Modelling and statistical tools to analyse contaminant transport in subsurface soil and groundwater	improve accuracy of predictive modelling	need for improved models to determine how radionuclides behave over the long term, suring site stewardship	improvements in the predictive modeling to determine contaminant transport and radionuclide behaviour in longer term	Research and developments required to facilitate the predictive modeling for contaminant transport and radionuclide behaviour in longer term	Research and development	of digital tools to facilitate the predictive modeling for contaminant transport, radionuclide behaviour in longer term and underground contamination	56/58
20			need for modelling and statistical tools to analyse contaminant transport and also related to management plans					
21			combination between deterministic model and probabilistic approach (geostatistics)					
22		Optimize iterative borehole sampling						
23		Lack of good predictive (deepness of contamination) methodology for concrete and soils contamination						
24	exchange experiences among different countries in different situations for the model building and for long time follow-up	exchange of experiences to validate models	Experience exchange among the stakeholders to validate the models used	Database that provides the experience exchange on different models implemented in the projects	Dissemination	of experience exchange among the stakeholders on models used		
25			Database on practical experiences on following historical model results along time after remediation					
26		develop a multi criteria analysis to optimise the decision making process	Overall optimisation taking into account costs, end state and protection of the natural habitats (remediation is not always good for environment protection). Need for multi criteria analysis.	To develop a multi criteria analysis considering cost, end state and environmental protection for soil remediation	Development of multi criteria analysis to optimise the decision making for choosing technologies	Guidance and development	of multi criteria analysis to optimise the decision making towards soil remediation technologies	

Discussion of outcomes by thematic area in break out groups

DO YOU AGREE with the PROPOSALS, CAN YOU think of ANY OTHER ACTION?



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Thanks for your attention

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