



LONGOPS RESEARCH & DEVELOPMENT OPPORTUNITIES

Supplier Engagement Event – 24th June 2021

UK Atomic Energy Authority

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Development of Next Generation- Digital Mock Up

Budget	Estimate Tender Publication	Estimate Contract Duration
£500k - £700k	October 2021	November 2021 – January 2024

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**For any questions please email:
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WP3.2 – DMU Design and Build

Aims

- Develop a software system: digital twin for decom @ Sellafield, Fukushima Daiichi, JET
 - For training, developing, executing and reviewing remote handling tasks
 - Full operations lifecycle
- Innovate – “Next Generation”
 - Relative to other decom digital twins
 - E.g. live sensing, physics sim, extensible architecture...
- Deliver something useful & flexible to all partners
 - Platform to build off
 - Open to extension
 - Not a bespoke system

WP3.2.3 – DMU Design and Build

Strategy

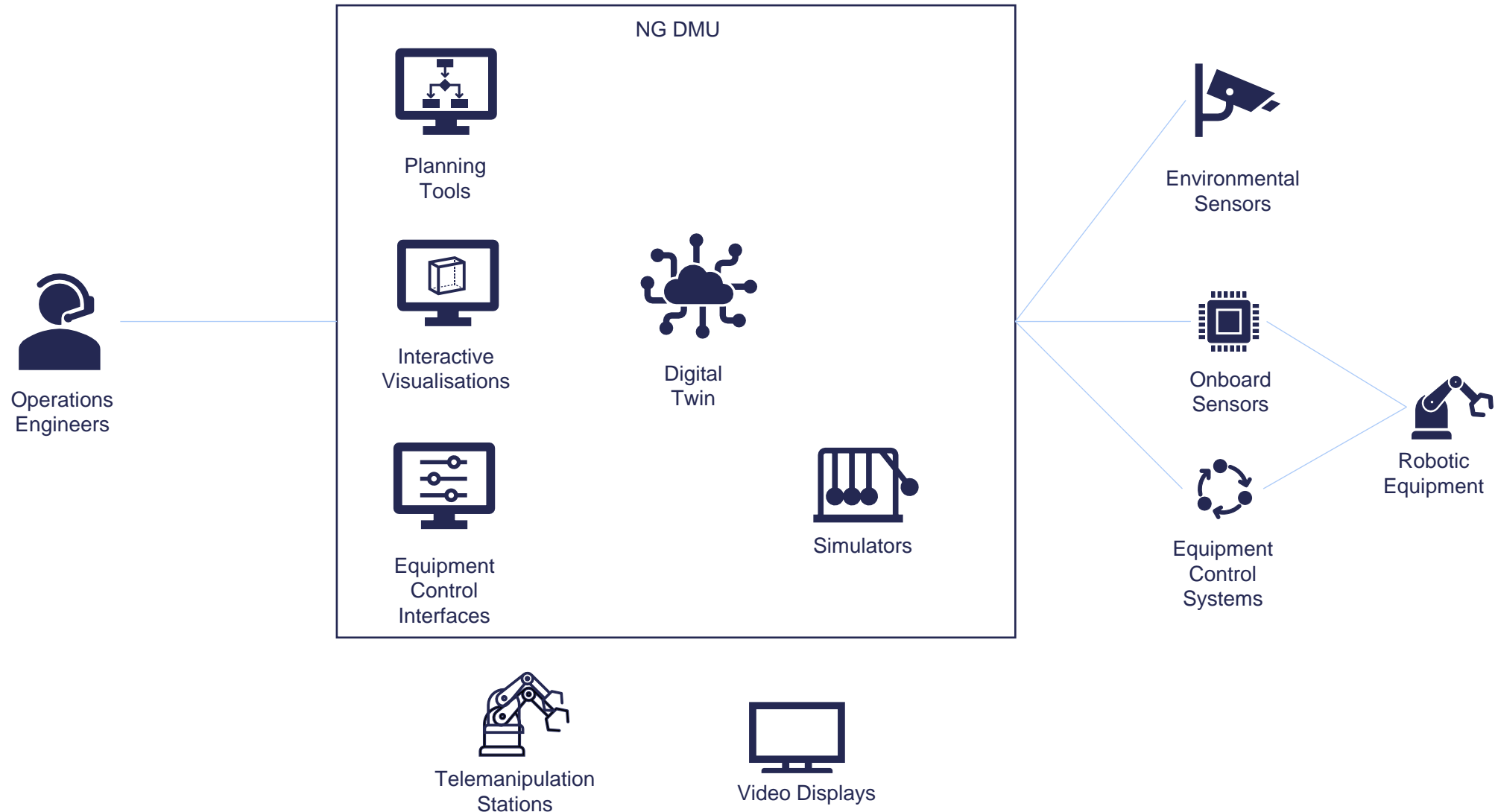
- Prior Information Notice (PIN) to be issued by UKAEA procurement soon
- RACE to act as product owner of DMU on behalf of end-users

Requirements

The NG-DMU shall

- Provide an interactive visualisation of an environment incl. live representations of robots
- Allow unknown / unstructured environments to be represented
- Simulate kinematics and dynamics of long-reach manipulators
- Support the planning, review and execution of structured task sequences
- Use open interfaces, loose coupling to allow interoperability, extension, ease of replacement of modules procured by diverse group of suppliers.

WP3.2.3 – DMU Design and Build



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Desired Skills

- Agile software delivery
- Integrating COTS software
- Developing open APIs
- Relevant technologies
 - E.g. GUIs, physics simulators, data distribution, databases

Outputs

1. Core DMU software prototypes (source code, binaries & docs)
 1. v0.1 – 2022
 2. v0.2 – 2023
 3. v0.3 – 2024
2. Demonstration of the system for the TEPCO, Sellafield Ltd and JET use cases