# **Metrology for the Future of Space Craft Testing**

# **An ECSSMET (NPL facilitated) Workshop 28th May – 1 June 2018**

# **Pre-workshop anonymous questionnaire – ideas for future challenges and solution options**

Please complete the table below with suggested spacecraft testing challenges for the future or measurement technologies that could change the future of space craft testing.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Priority of challenge**  | **Type of organisation**  | **Description of future spacecraft testing challenge / Solution** | **Technical or science domain or area needing research**  | **Comment – e.g. target application**  |
| Example | Consultancy / Space test House / etc | A need to reduce the time and cost and duplication of effort in managing thermal, dimensional and electrical testing environments and relating the tests to models. | Digital Twins for test simulation and modelling linking multiple test domains into one integrated model for comparison with test data. | Needs a cross disciplinary approach with standards adopted by the industry. |
| P1 |  |  |  |  |
| P2 |  |  |  |  |
| P3 |  |  |  |  |
| P4 |  |  |  |  |

Your organisation will remain anonymous in the collated results presented at the workshop, but we would also like to know more about your views on the current testing situation you see in the industry. The following additional questions are optional.

|  |  |  |
| --- | --- | --- |
| **Q** | **Question** | **Answer / Comment** |
| 1 | What is your view on the current cost /time of spacecraft testing? |  |
| 2 | Will the amount of testing/ simulation increase, decrease or stay the same in future?  |  |
| 3 | What is your view on the importance of knowing the test uncertainty and confidence of the measurements? |  |
| 4 | What is your view on the value of accreditation to international recognised standards in testing? |  |
| 5 | How important is improved quality or reduced uncertainty in testing to your activities? |  |

Please complete as much as you can and return to NPL for collation on behalf of ESA by 12th April – following the example in row 1.

Each row would contain another challenge or technology or metrology domain where solutions may lie, in your order of priority as a challenge or priority to address.

Please return the questionnaire to Andy Grey at NPL andy.grey@npl.co.uk and (cc) ESA at Rafael Bureo Dacal at Rafael.Bureo.Dacal@esa.int - any questions to +44 2089 436 326.