



BSGN Business in Space Growth Network

Advanced Materials and In-Orbit Manufacturing **Accelerator**

Hamid Soorghali – Lead Strategy Consultant, **Satellite Applications Catapult**



The Satellite Applications Catapult in Numbers



£700.3M

Total Private Sector Funding Secured By Supported Companies



508

Industry Collaboration



836

SMEs Supporte d



111Internation al Projects



Over

£15M

Of Research and Development Facilities



242

Academic Collaboration s



200

Employee s



The accelerator



A European-wide multidisciplinary accelerator dedicated to new materials and in-orbit engineering solutions

Accelerator at a glance

Generates, **co-funds** and **de-risks commercial projects** developing breakthrough materials and manufacturing solutions using in-orbit R&D and microgravity engineering platforms.

Current project portfolios





Developing an in-space R&D and production unit for space stations, capable of manufacturing silicon carbide components.

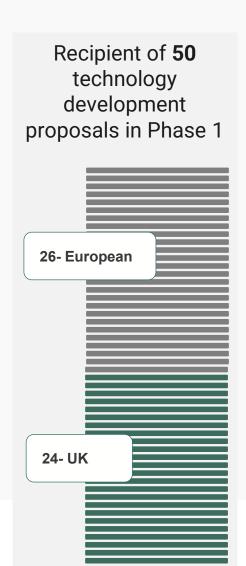


Integrating in-orbit manufactured solution in productisation of roll-out solar arrays for LEO spacecrafts and small satellites.





Advancing capabilities and commercial applications of in-orbit manufacturing and microgravity R&D



Four diverse yet interrelating segments of interest



 Testing and qualification of new materials, components, subsystems –"space heritage"



- Micorgravity R&D on speciality chemicals, novel materials and processing technologies
- E.g. Space-grade semiconductors



- Multipurpose in-orbit R&D and production facilities
 - Furnaces, combustion reactors, 3D printers, thin film deposition facilities and etc



- Manufacturing of large structures for enabling new in-orbit infrastructures
- Innovative utilisation of ISM in enabling new or improving of existing applications

Priority areas for the accelerator



Future preparedness



The comemrcial opportunities for In-space R&D and production will evolve rapidly with the expansion of the supply chain in the coming years

2023-2026 2027-2035 2035-2040

International Space Station

- Limited in scope
- of facilities, capcity and relevant hardware
- Long waits for access
- Lack of sufficient automation



Planned Commercial Space stations



MOIXN









Potential new stations Potential new stations

Thank you

Hamid Soorghali

hamid.soorghali@sa.catapult.org.uk

