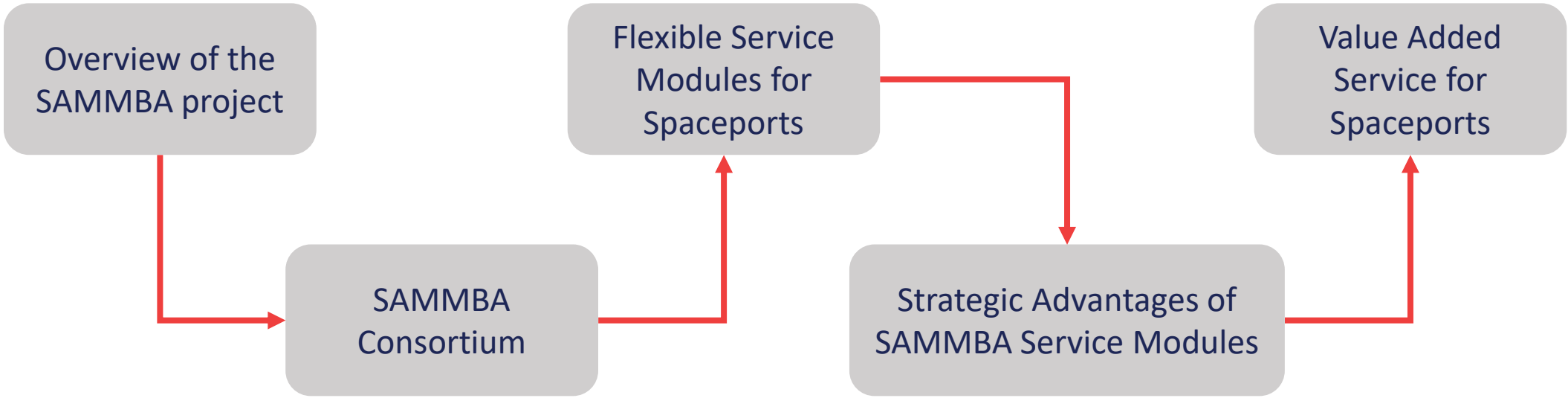
SAMMBA

SAMMBA high-level presentation

This project has received funding from the European Union's H2020 research and innovation programme under grant agreement No 870451

Outline of the presentation



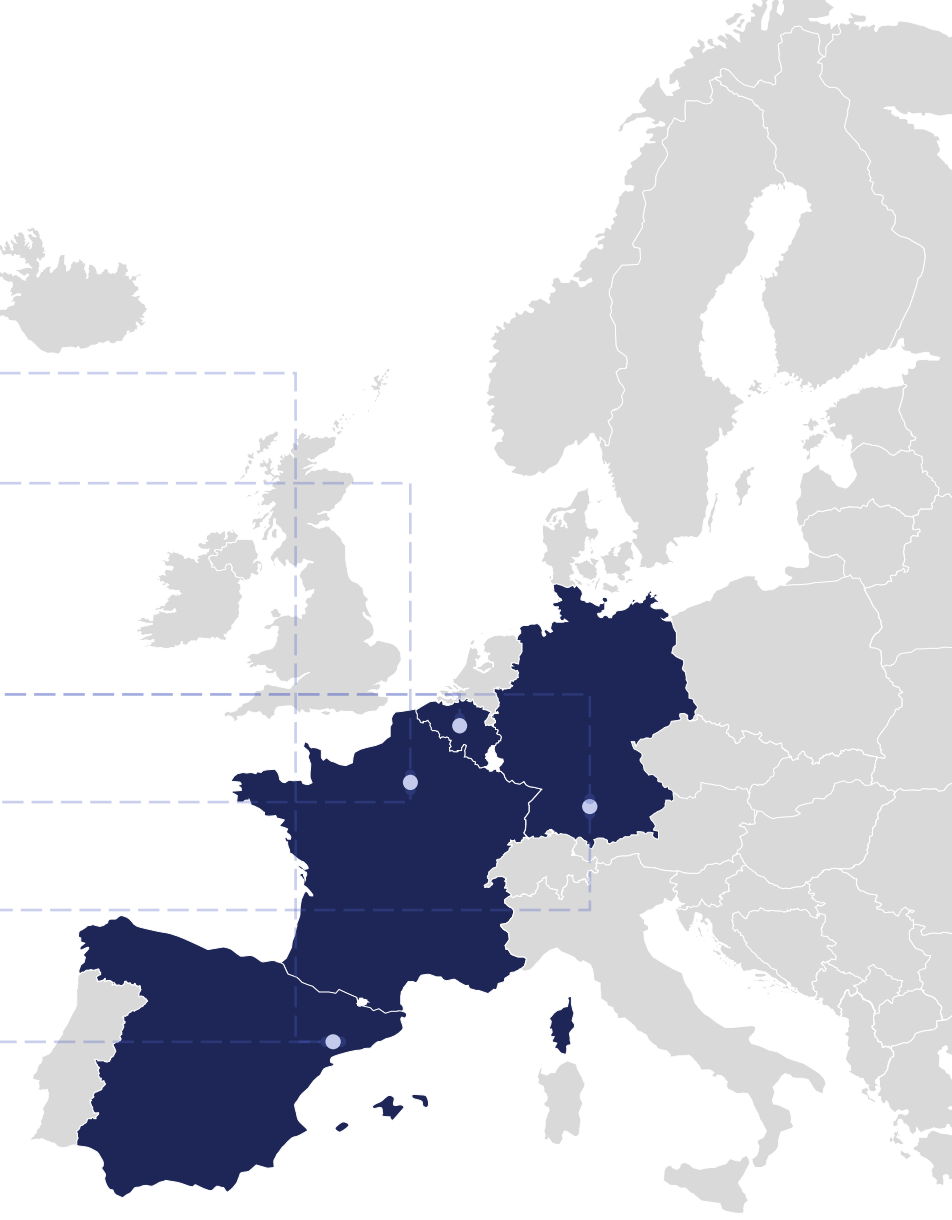
Overview of the SAMMBA project

- The SAMMBA project aims to **develop generic and modular launch services** that can be used by **various Spaceports and Launch Operators** for small launch vehicles in the NewSpace ecosystem.
  - SAMMBA services will enable **high launch cadencies** of several MLVs while **reducing operational costs**.
  - SAMMBA services will enable a shorter **time-to-market** for spaceport and microlauncher deployment.

- The SAMMBA project started in January 2020 for a duration of 3 years.

The SAMMBA consortium

- **GTD System and Software Engineering (ESP)**
- **Air Liquide Advanced Technology (FRA)**
- **EURECAT (ESP)**
- **SpaceTec Partners (BEL)**
- **CT Ingénierie (FRA)**
- **MT Aerospace (GER)**



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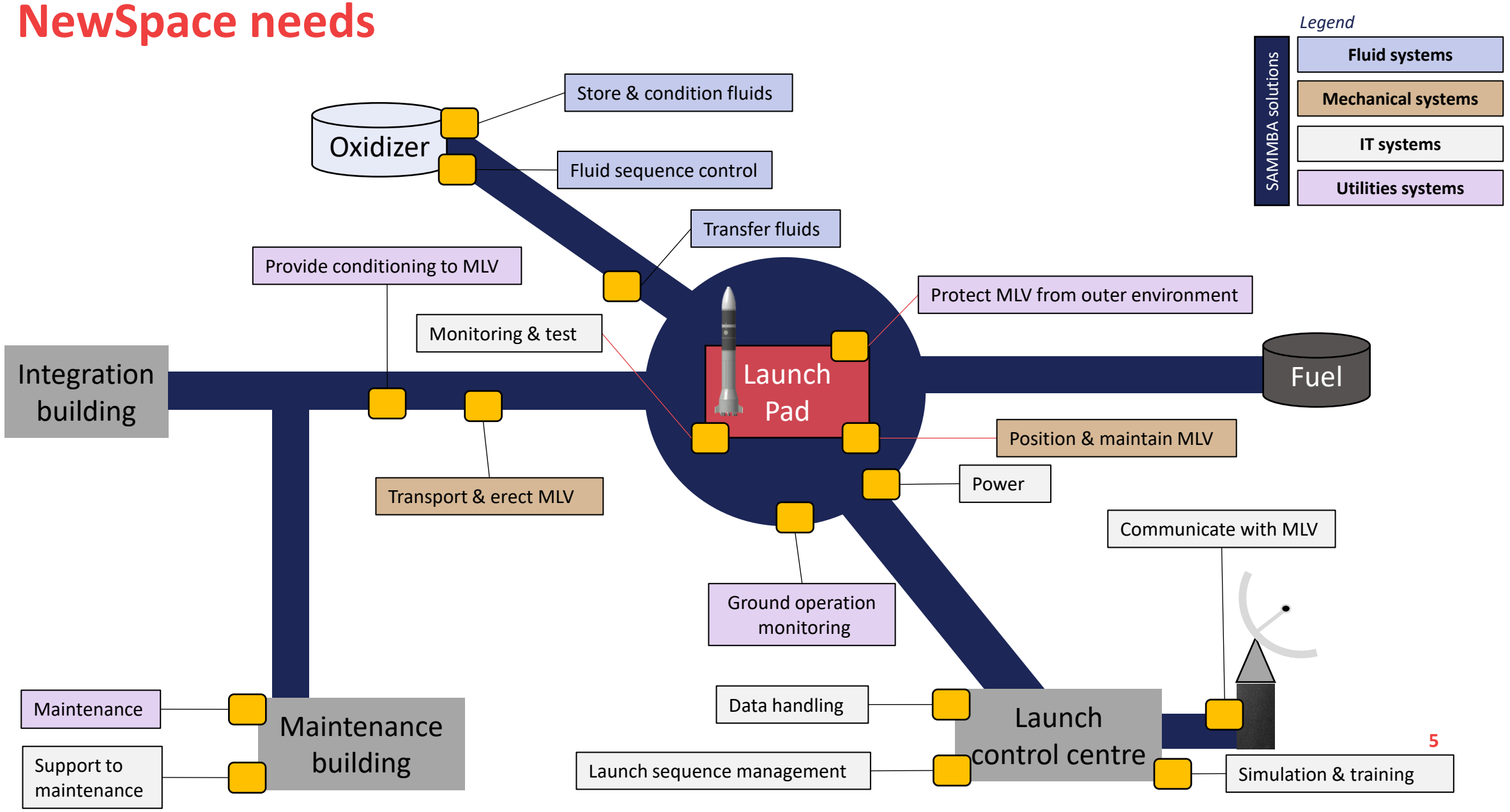
SAMMBA offers flexible, standard and modular solutions adapted to NewSpace needs

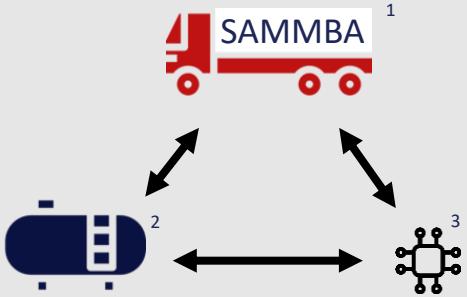


SAMMBA systems are modular and interoperable

SAMMBA services

Interoperable

SAMMBA systems are interoperable with each other and with any traditional ground equipment.

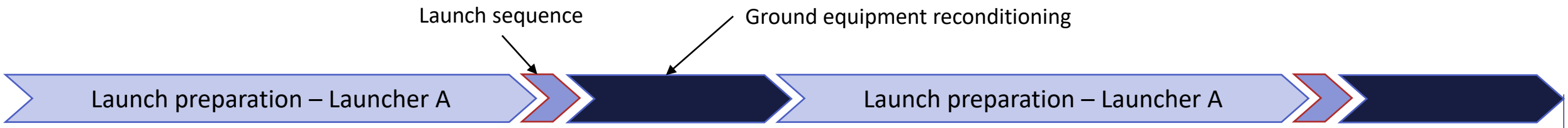


Modular

SAMMBA systems are modular and can be readily plugged in into any existing traditional spaceport infrastructure

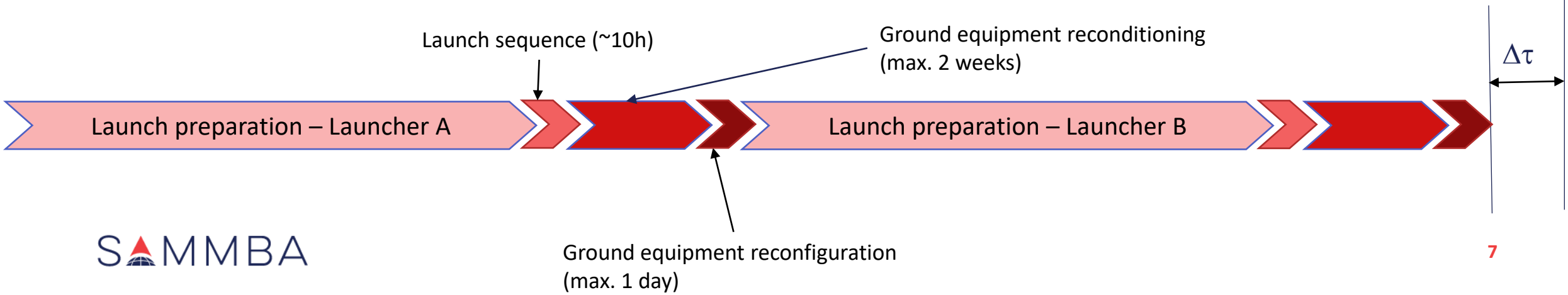
[1]Launcher Transportation (from SAMMBA)
[2]Fluid Operation Infrastructure (e.g. from supplier XYZ)
[3]IT Infrastructure (e.g. from supplier XYZ)

SAMMBA's plug & play and scalability features enables a shorter overall launch campaign



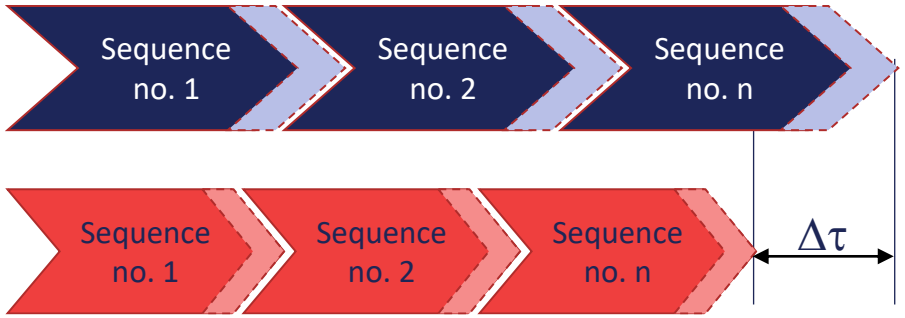
- A typical launch campaign can start while another one is **ongoing**, but the second launch sequence will not be able to start before the ground equipment is **reconditioned**

- SAMMBA systems and services are designed to have a maximum **reconditioning time of 2 weeks**
- A launchpad made out of SAMMBA systems will be compatible with **several launchers**, the time it takes to go from one configuration to another one is **1 day**



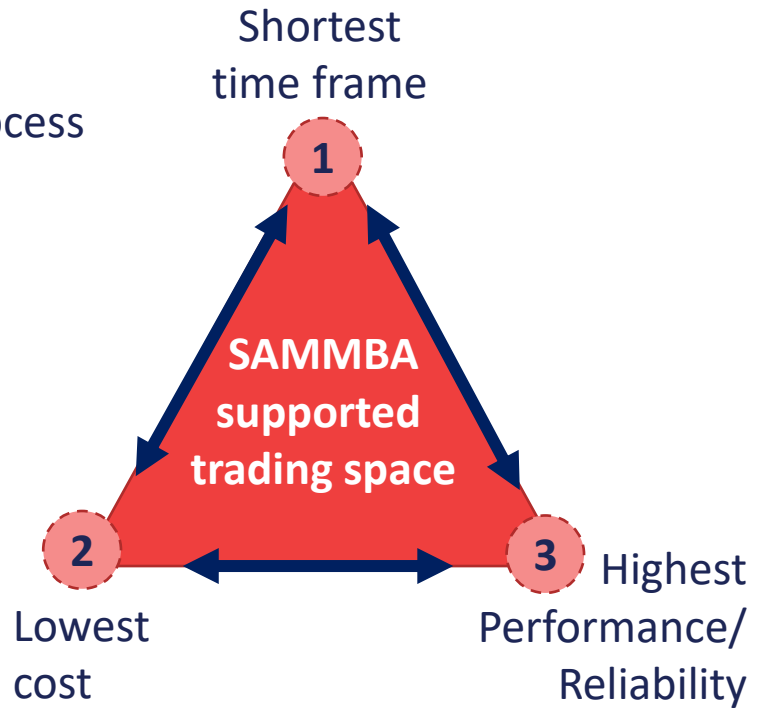
SAMMBA

This shorter time frame can be traded for lower costs or higher performance



… classical launch campaign process

… optimised scalable SAMMBA launch campaign process



- Case 1: Shortest time frame ($\Delta\tau=\Delta t$)
  - SAMMBA-induced **time reduction** is used to the **fullest extent**
  - Personnel costs are kept at the same level
- Case 2: Lowest costs ($\Delta\tau=\Delta€$)
  - SAMMBA-induced time reduction is traded vs. **lower labour intensity**
  - Personnel costs are reduced accordingly
- Case 3: Highest performance/reliability ($\Delta\tau=\Delta\eta$)
  - SAMMBA-induced time reduction is utilised to **perform extra checks and tests**
  - Personnel costs are kept at the same level

In essence, SAMMBA provides a number of strategic advantages to spaceports

Increases Cost Competitiveness

- Multi-launcher compatibility
- Less infrastructure

Supports New Business Models

- Fewer operators required
- Decentralised systems

Enables Higher Launch Rates

- Agile Operations
- Operations flexibility and Responsiveness

Reduces Launch Campaign Durations

- Safer operations
- Distributed data in real-time

SAMMBA

Thank you

Visit us for more information!

https://sammba.eu/

https://www.linkedin.com/company/sammba-h2020/

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