

The QA/PA Role in the Service Transformation of ESAC Science Data Centre

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and



AURORA TECHNOLOGY

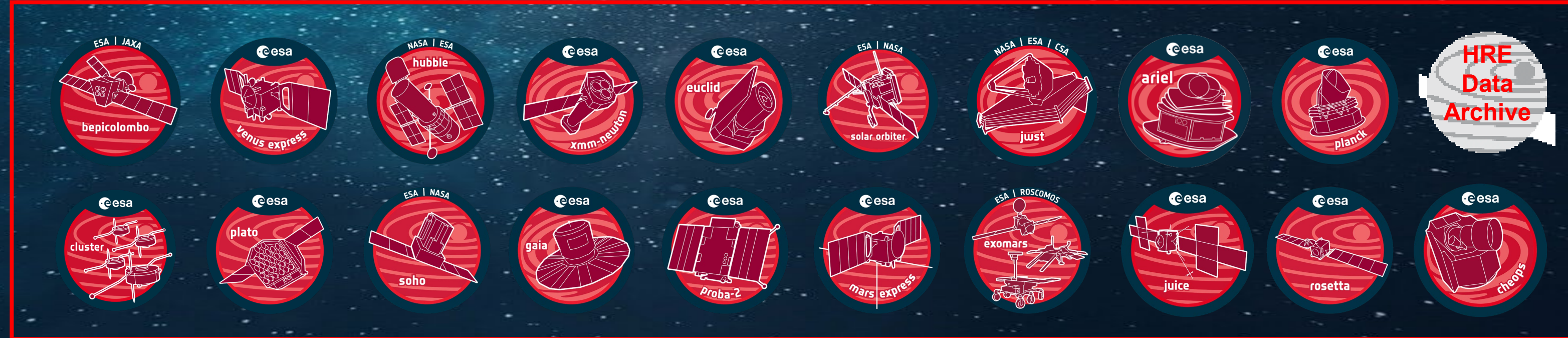
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Starting point

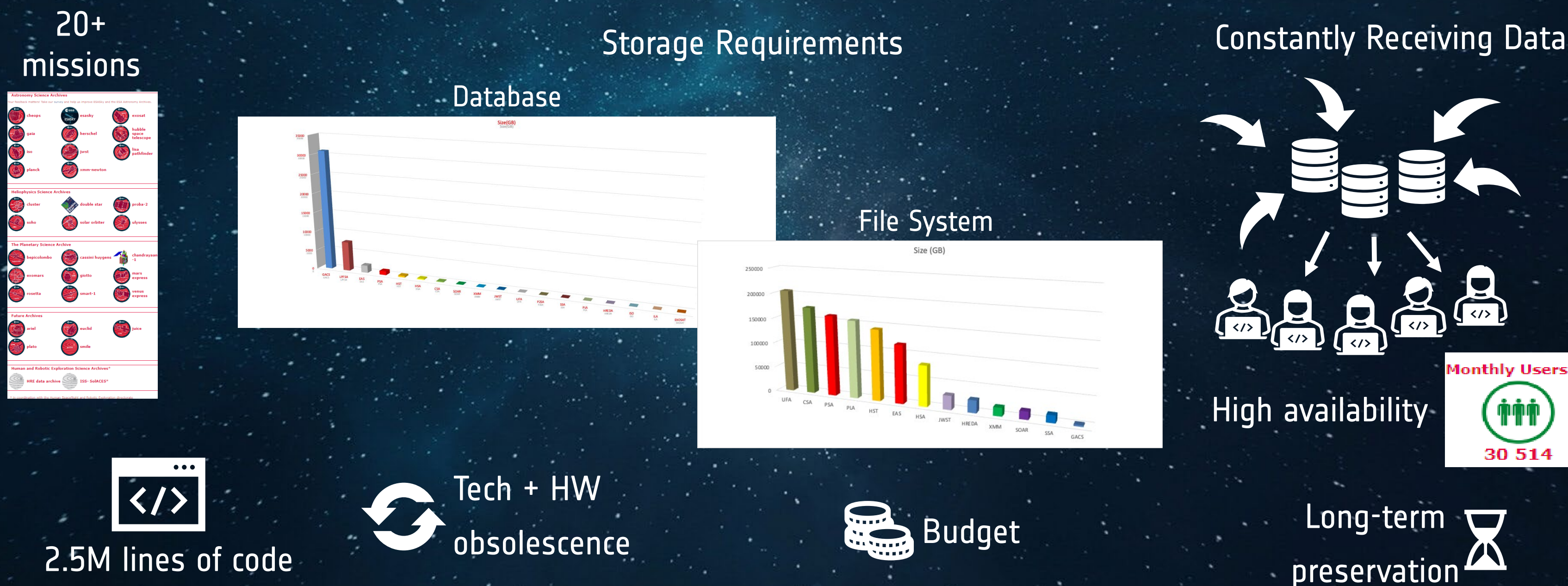
ESAC Science Data Centre (ESDC) main responsibilities are storing, preserving, and **making available the data from all ESA missions to the scientific community**. In the context of the ESA Frame Contract 2 (EFC2), RHEA Group and Aurora Technology are the service providers for SCO-08 area (“Archives and SPICE Software Development and Operations”). In the last two years there has been a **significant transformation in the ESDC**, and SCO-08 **Product Assurance/Quality Assurance (PA/QA)** has had a **key role** leading this process.

Prior to EFC2, there was little or no cohesion in the archives. Even some of the astronomy archives had no PA/QA. There was a so-called “on demand” culture in the definition and evolution of the software involved.



Challenges

ESDC commitment is to **preserving data** for the scientific community to use it



Goals

A long-term roadmap is needed, adopting an **industrial approach**:



Overcoming Resistance to Change

Individuals and organizations need to **adapt** to new circumstances

From an on-demand “right now” model to **planning and prioritization**

New **clear roles and responsibilities**

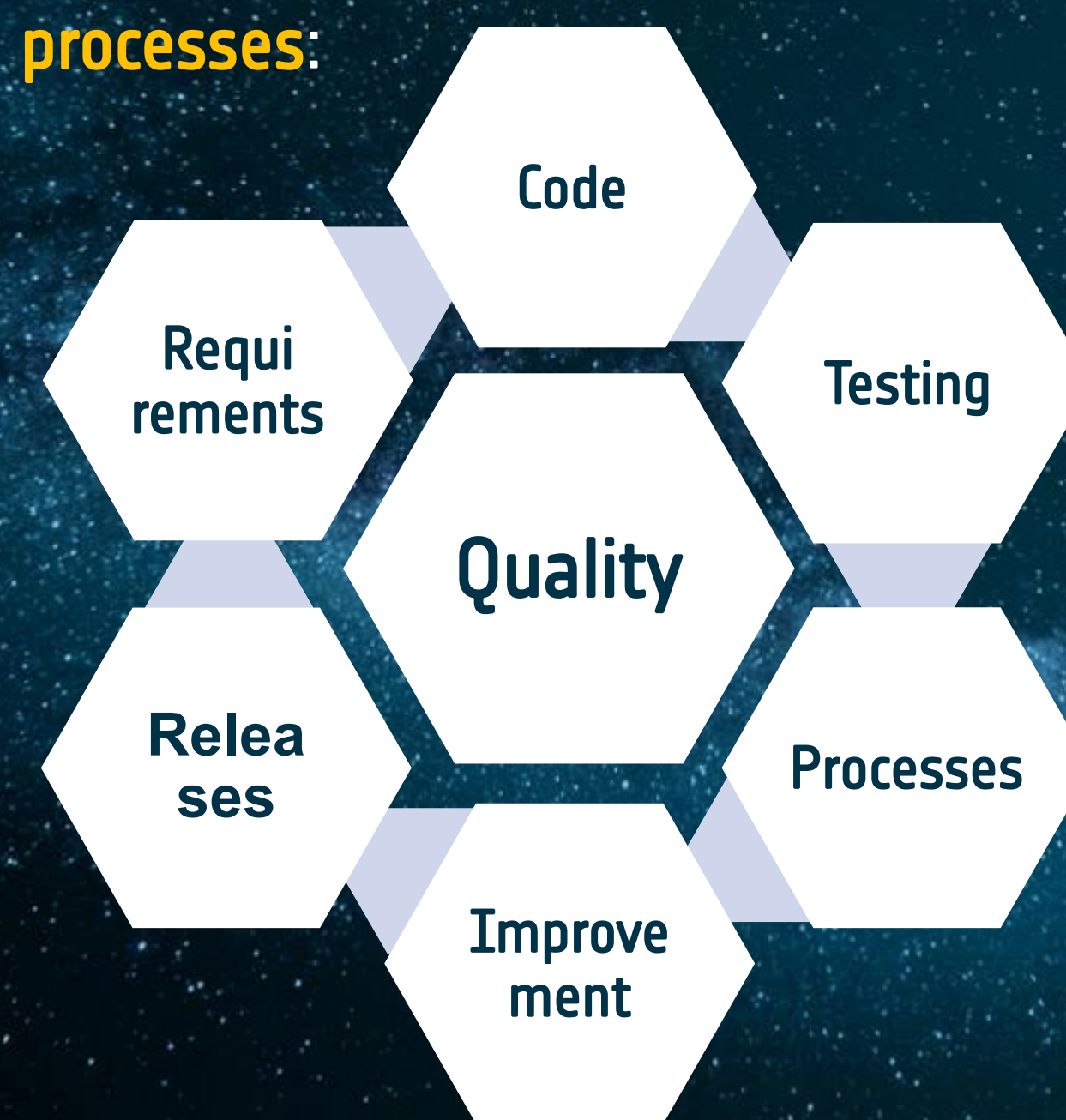


Boosting Quality

From initial requirements to software increment and documentation, **quality must be at the core of all the processes**:

Better requirements

Plans for overall **long-term quality improvements**



Early detection of quality issues

Fix before software release

Legacy code

What to do?
Cost to benefit approach

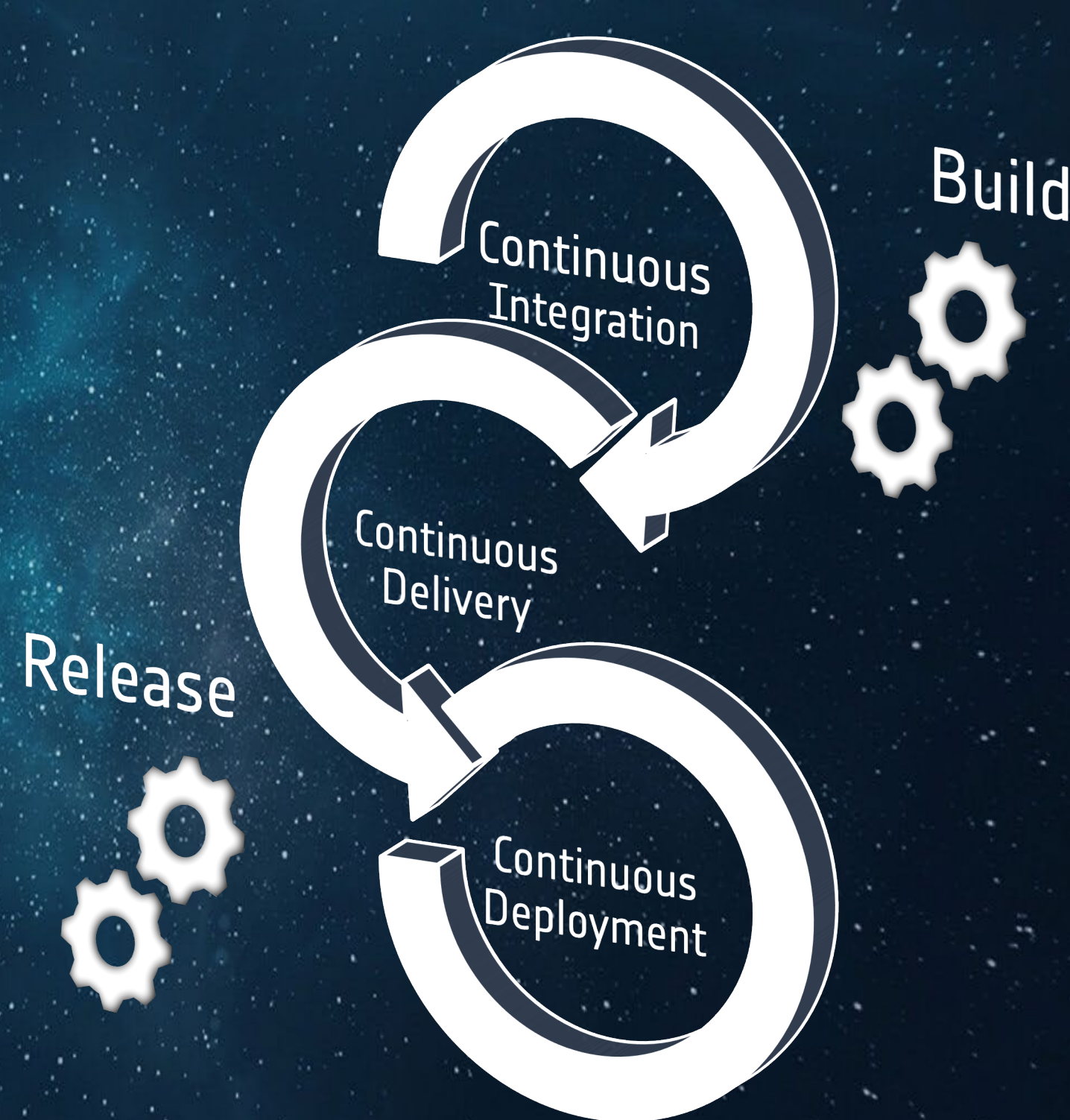
Stressing the Importance of Automation

Developing **automated processes** and getting **early quality feedback**

Testing and deployment **automation add value** and reduce failures

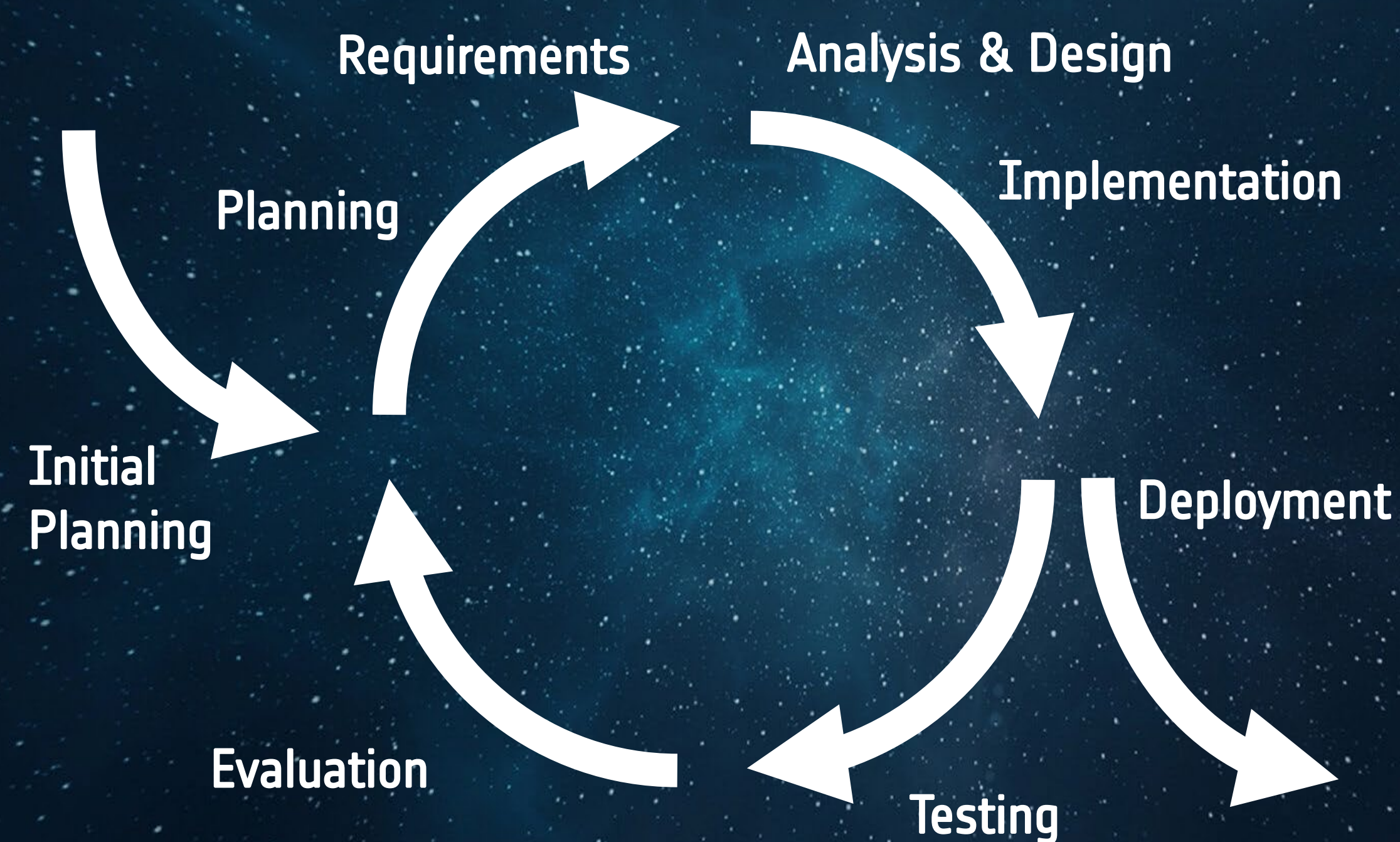
Reliable CI/CD process:

- **Frequent releases**
- Adapt to **changing needs**
- Builds **confidence**



On the way to success!

PA/QA team **driving this transformation** in collaboration with the entire ESDC team



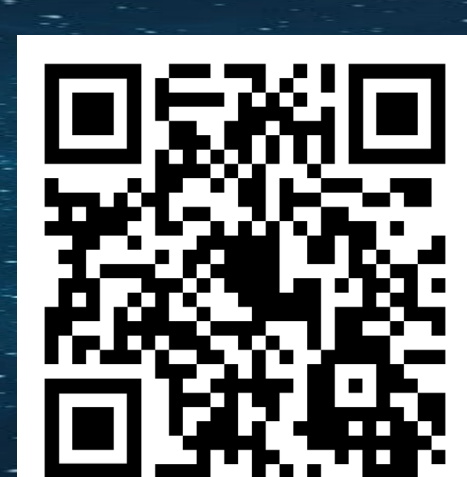
Agile Software Development Life Cycle is **proving to be effective**

PA/QA: **Scrum coaches** helping ESDC to embrace agile principles

Smooth changes preferred to disruptive evolutions



ESAC Science Data Centre
<https://www.cosmos.esa.int/web/esdc>



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