

SOCCI: A Multi-Mission Software Engineering Platform for Science Operations



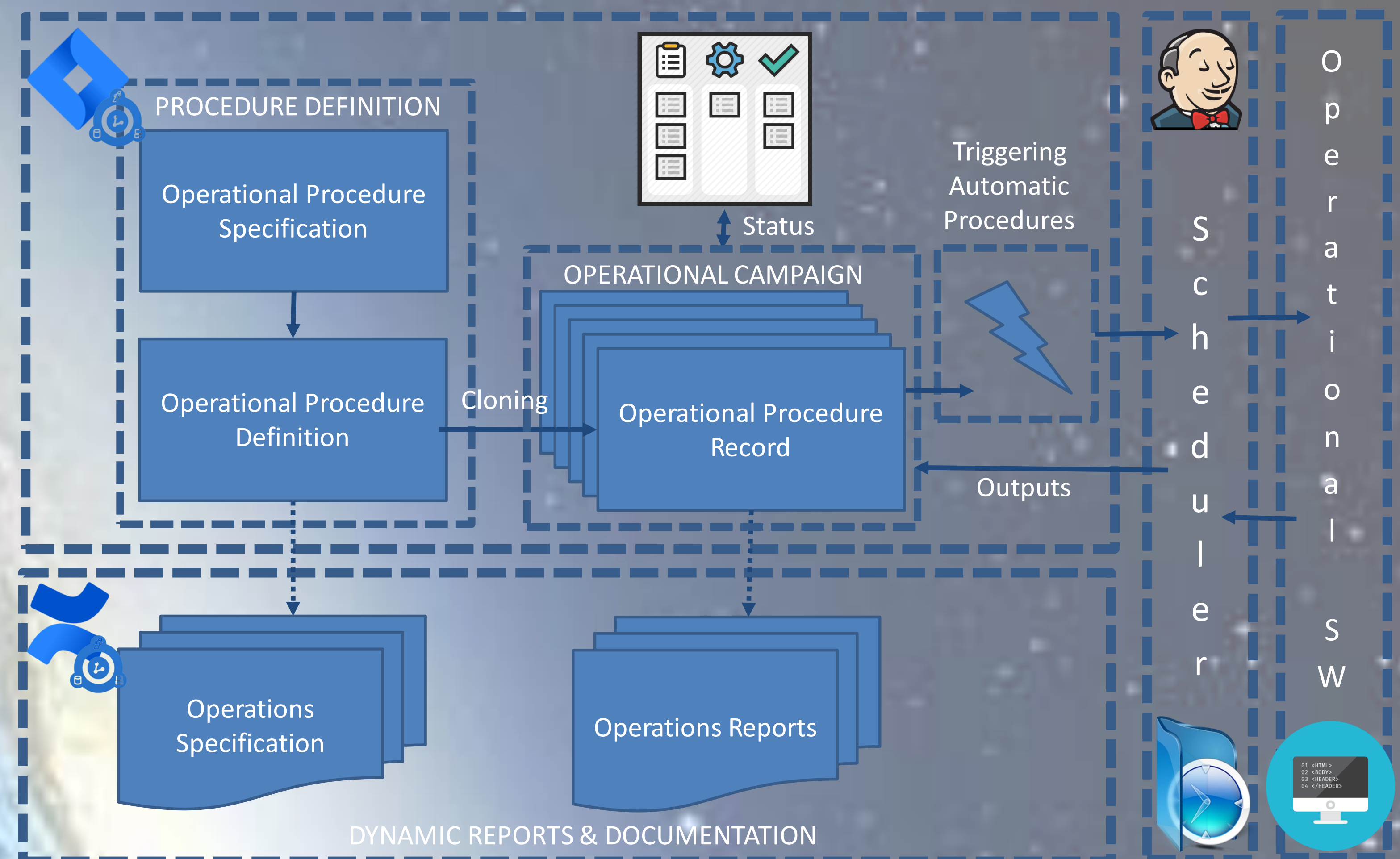
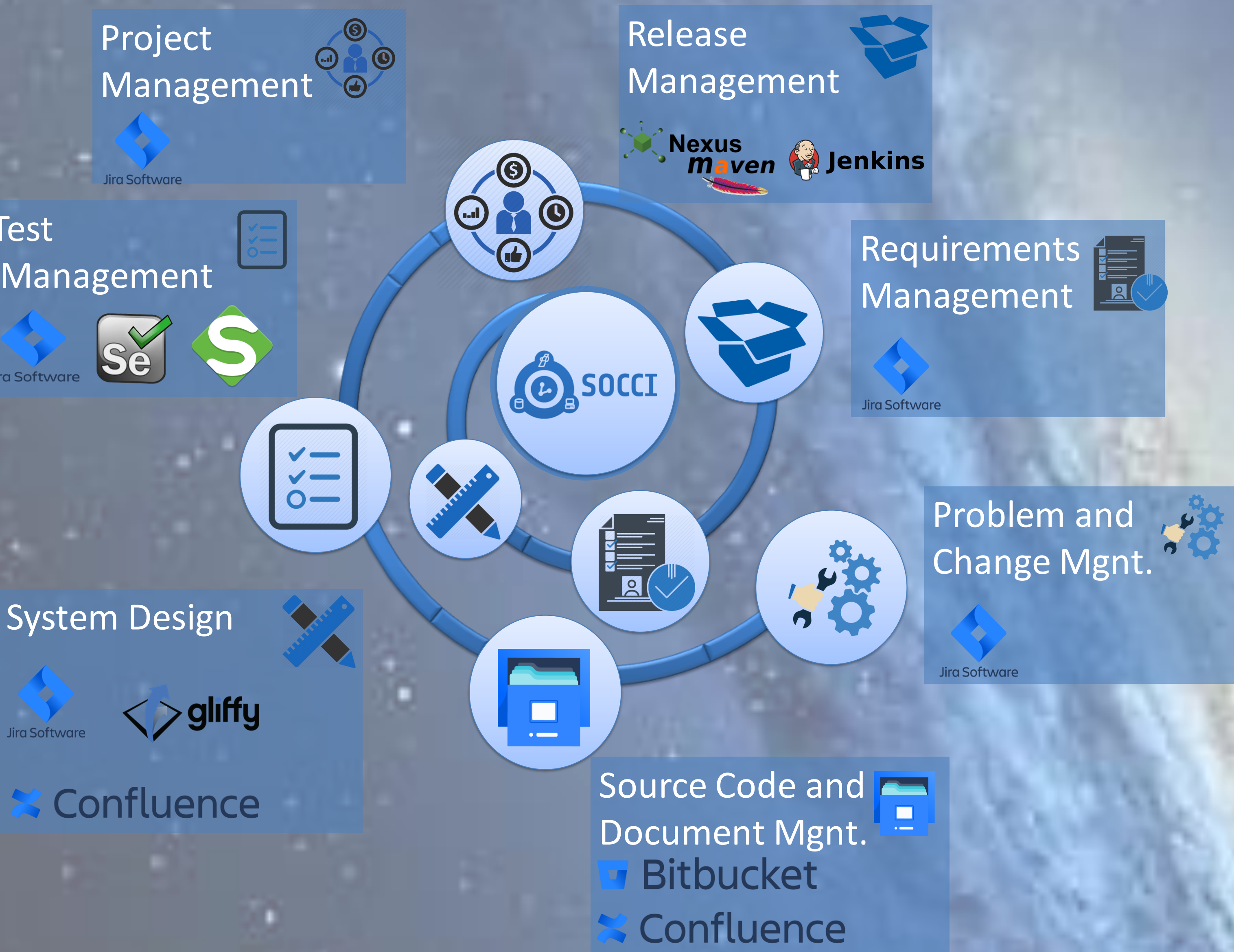
S. Del Río¹, V. Navarro², Kaarel Lumi³, Kaarel Hanson³, Edgar Pašenkov³, Marti Mutso³, and Ann Lember³
 (1) Rhea for ESA, (2) European Space Agency - ESA, (3) CGI Finland

The purpose of the Science Operations Configuration Control Infrastructure (SOCCI) is to support the software development and maintenance processes of all SCI-O units at ESA's European Space Astronomy Center (ESAC). SOCCI provides a uniform environment for System Engineering activities in SCI-O.

SOCCI offers a suite of products covering every aspect of software engineering, from requirements management to testing. The environment is based on existing state-of-the-art technologies such as Jira, Confluence, Bitbucket, SonarQube and Nexus, among others.

Procedure Management in SOCCI

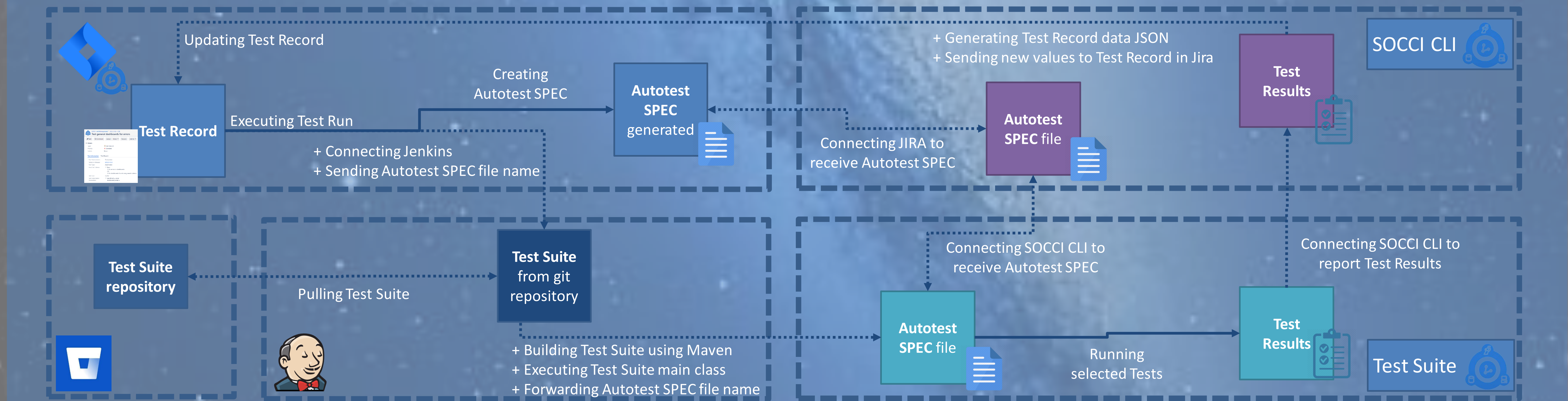
- + Allows to automate repetitive tasks in Operational Procedures.
- + Procedure Specifications group procedure definitions. These definitions are instantiated by procedure records for each operational campaign.
- + Procedure execution status can be monitored using JIRA's Kanban board and their execution can be scheduled and automated when possible.



Automated Testing in SOCCI

- + Allows to run related test-suite test(s) from Test Record and Test Specification/Design view.
- + JIRA will take Test Records information and forward it to a specific Jenkins job, the job will run test-suite main method, which will execute the test.

Automated Testing



Model-Based Software Engineering (MBSE) concept is one of the new relevant features that SOCCI will offer. The goal is to integrate the architecture description of a system modelled using MBSE tools in SOCCI Jira and Confluence. The whole system will be fully available by mid 2020.

Model-Based Software Engineering

