



SmartCLIDE

Service Composition and Creation

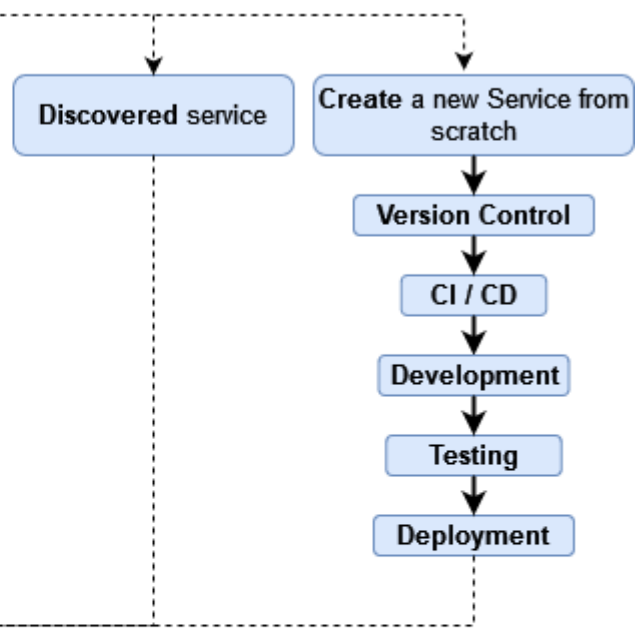
General knowledge

- **Cloud applications**

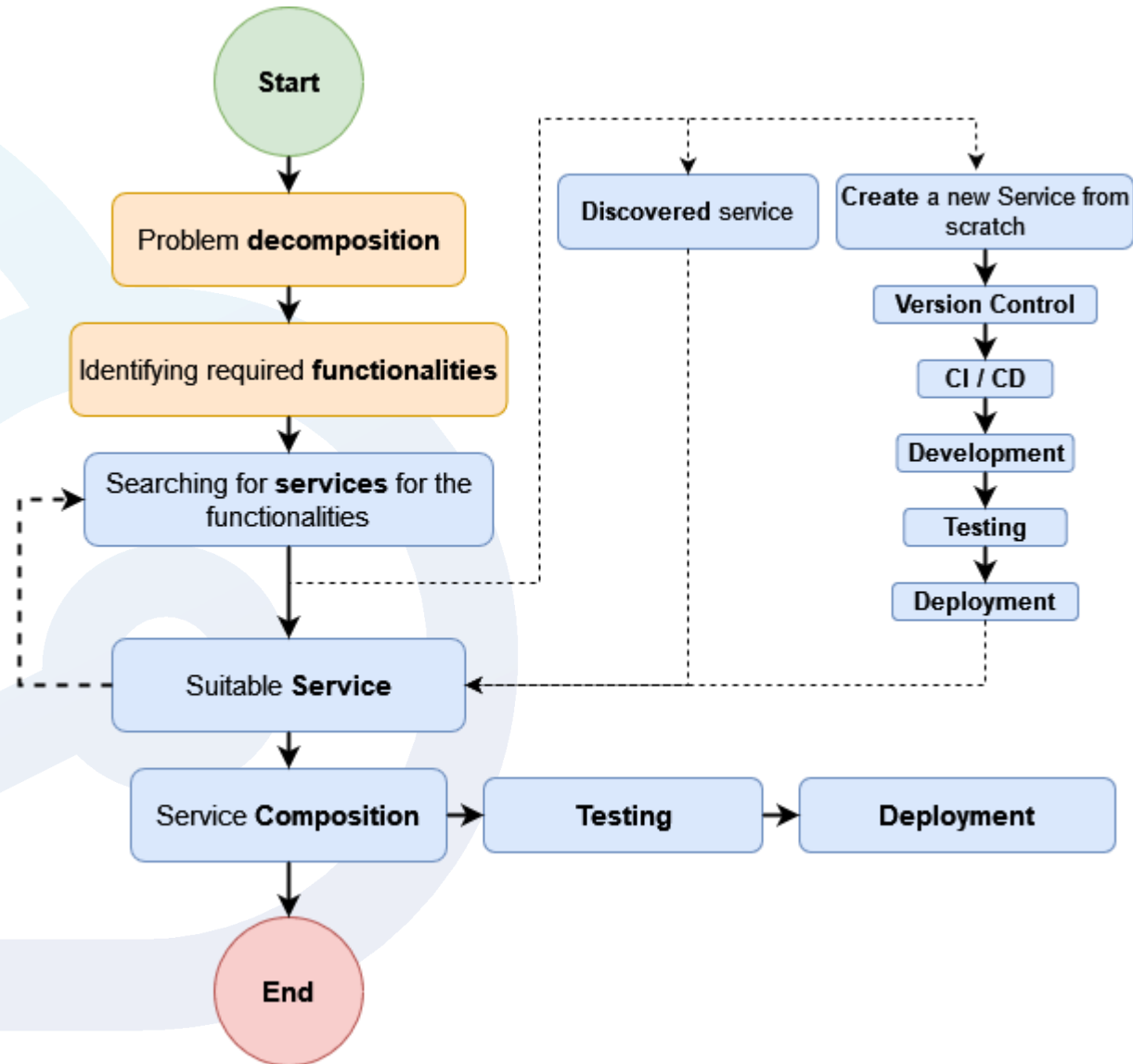
- Majority of cloud applications use Service-Oriented Architecture (SOA).
- Large applications are built as a collection of embedded services.
- Available through a public or private network.

- **Development**

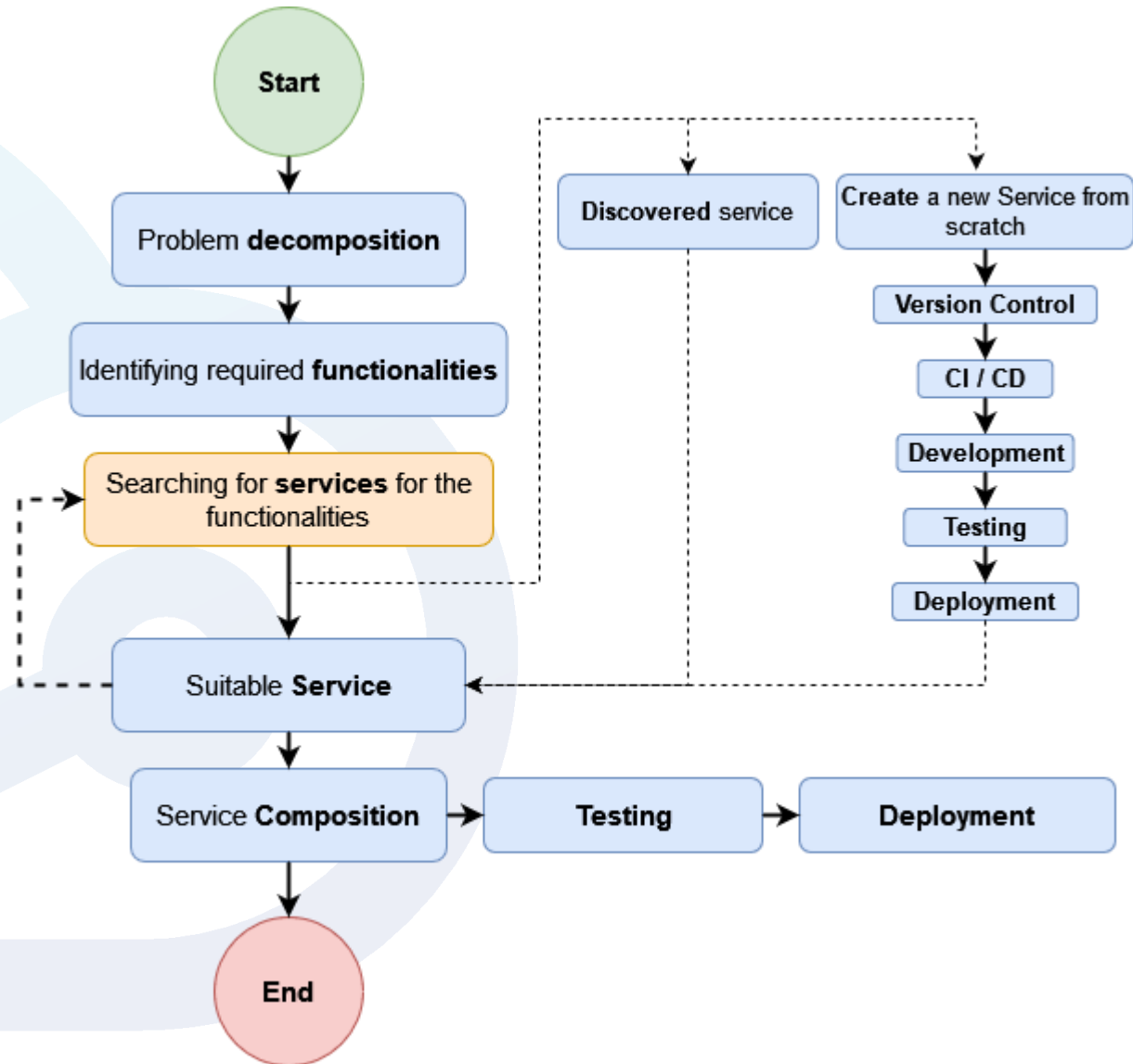
- Complicated development process.
- Use of complex technologies.



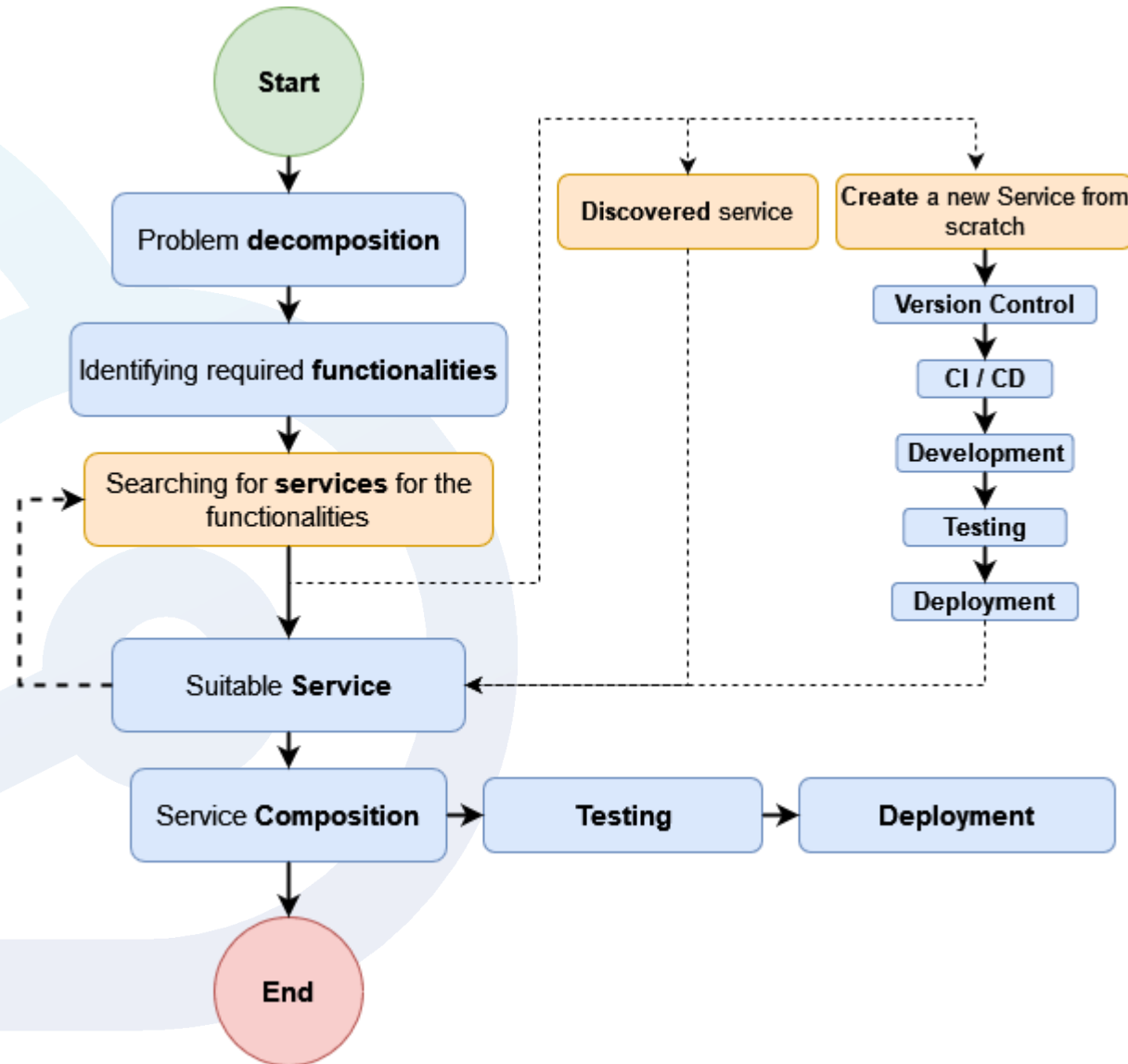
Development Flow



Development Flow



Development Flow



Service Discovery

SOA requires the use of many distinct services

The process of finding them is tedious and requires:

- Extensive manual search
- Navigation and search of multiple service registries
- Evaluation of a lot of documentations

For all the required services , the developer needs to:

- Repeat the above steps
- Test their function
- Evaluate their results and characteristics

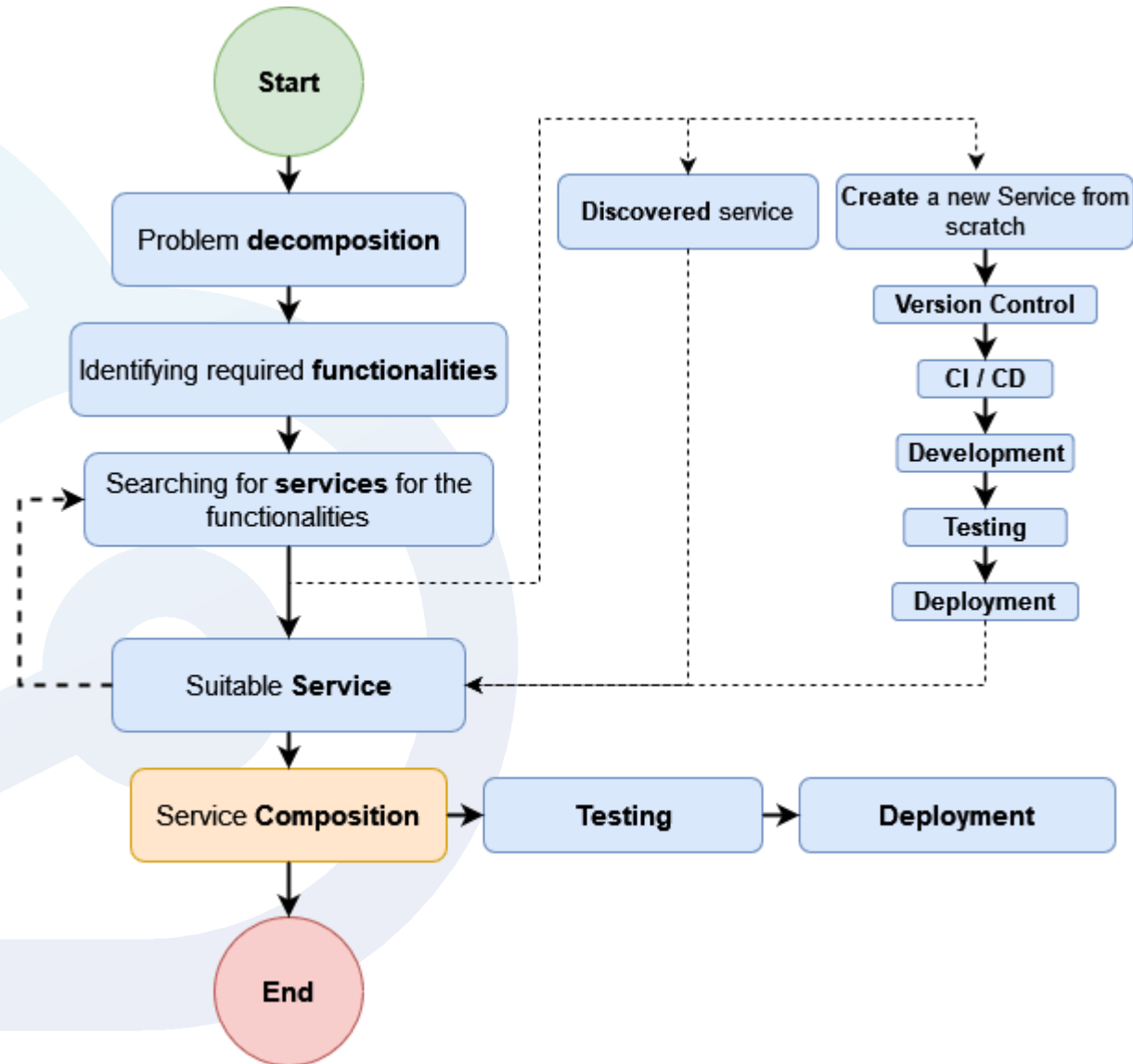
Service Creation

The from scratch development of a new service

During the creation the developer needs to:

- Create the necessary software development structure
 - Version Control
 - CI/CD
- Implement the required functionality by writing code
 - Code quality control
 - Code testing
 - etc
- Writing the endpoints and the documentation of the service

Development Flow





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the Stairway to Cloud



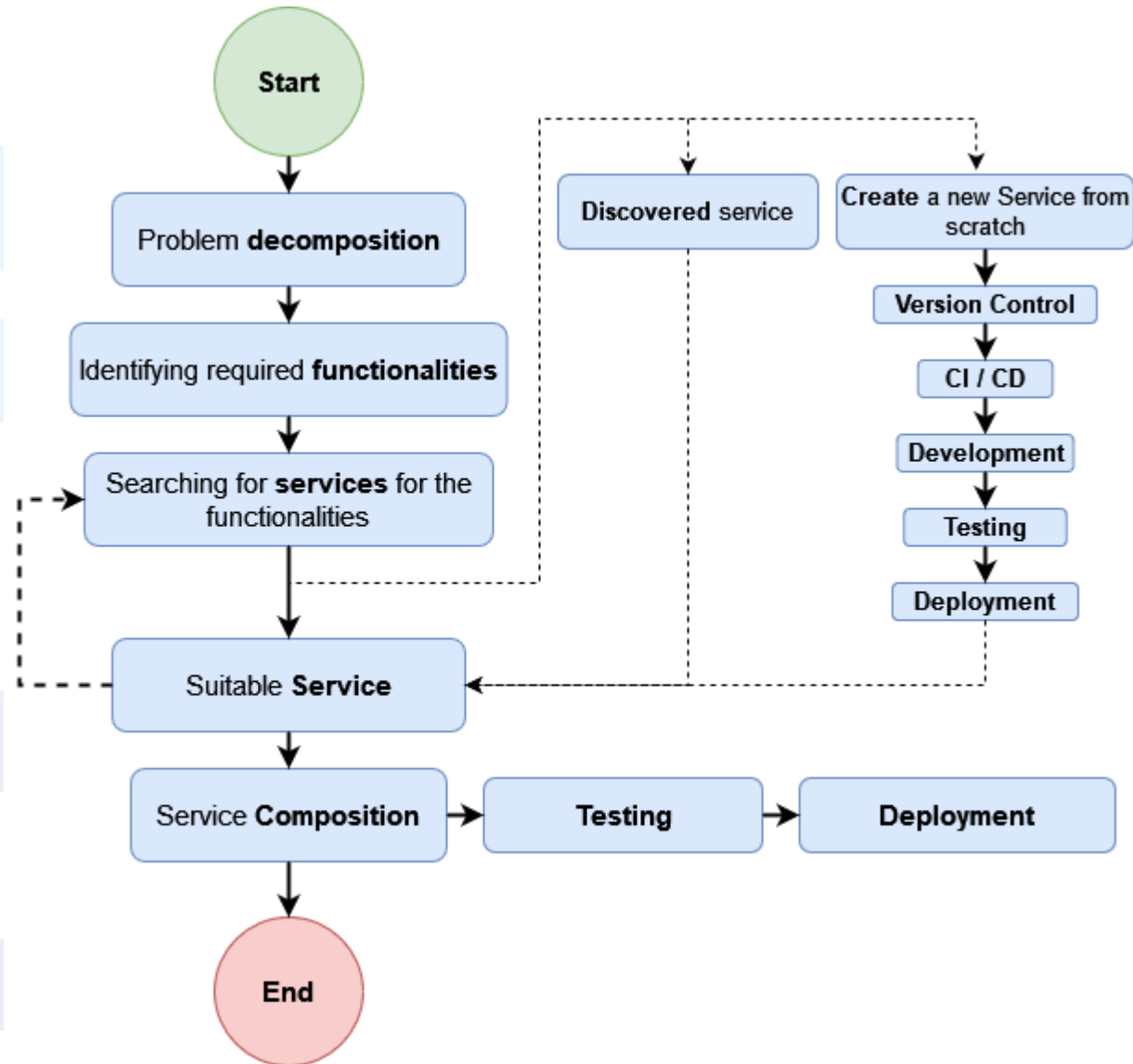
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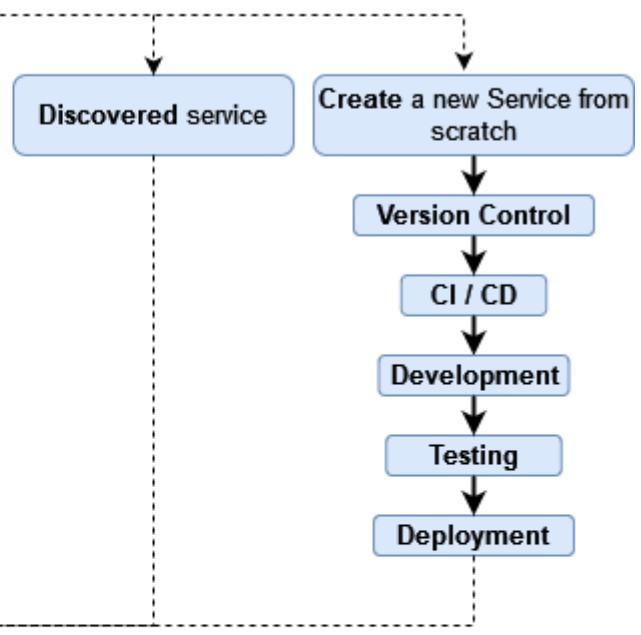
- **Low code approach**
- **The platform aims to provide:**
 - Faster development of cloud applications
 - Facilitate the development of new services
 - Hide complexity
 - Reduction of the required level of knowledge

Desired outcome:

Improving the productivity of developers

Development Flow



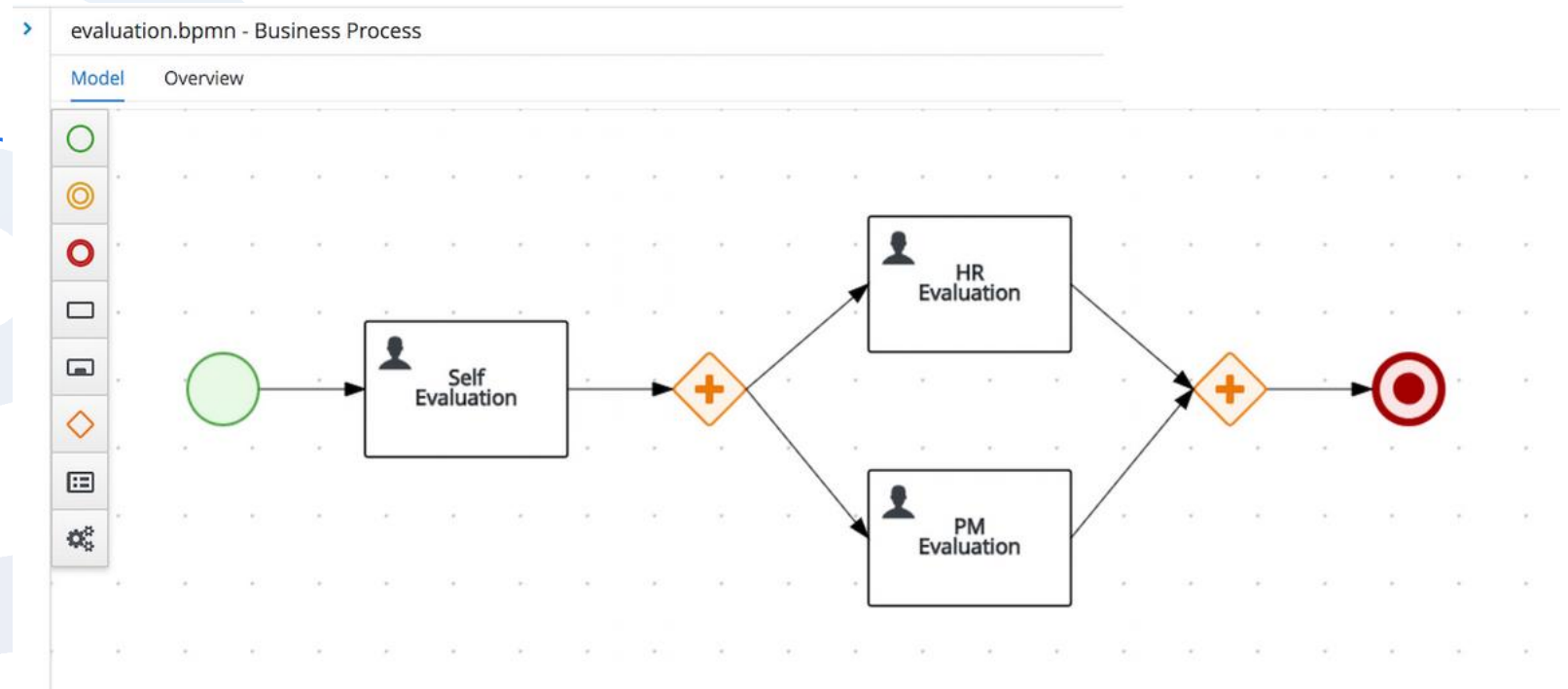


SmartCLIDE Service Composition

Business Process Model and Notation (BPMN)

Tool: jBPM Workbench

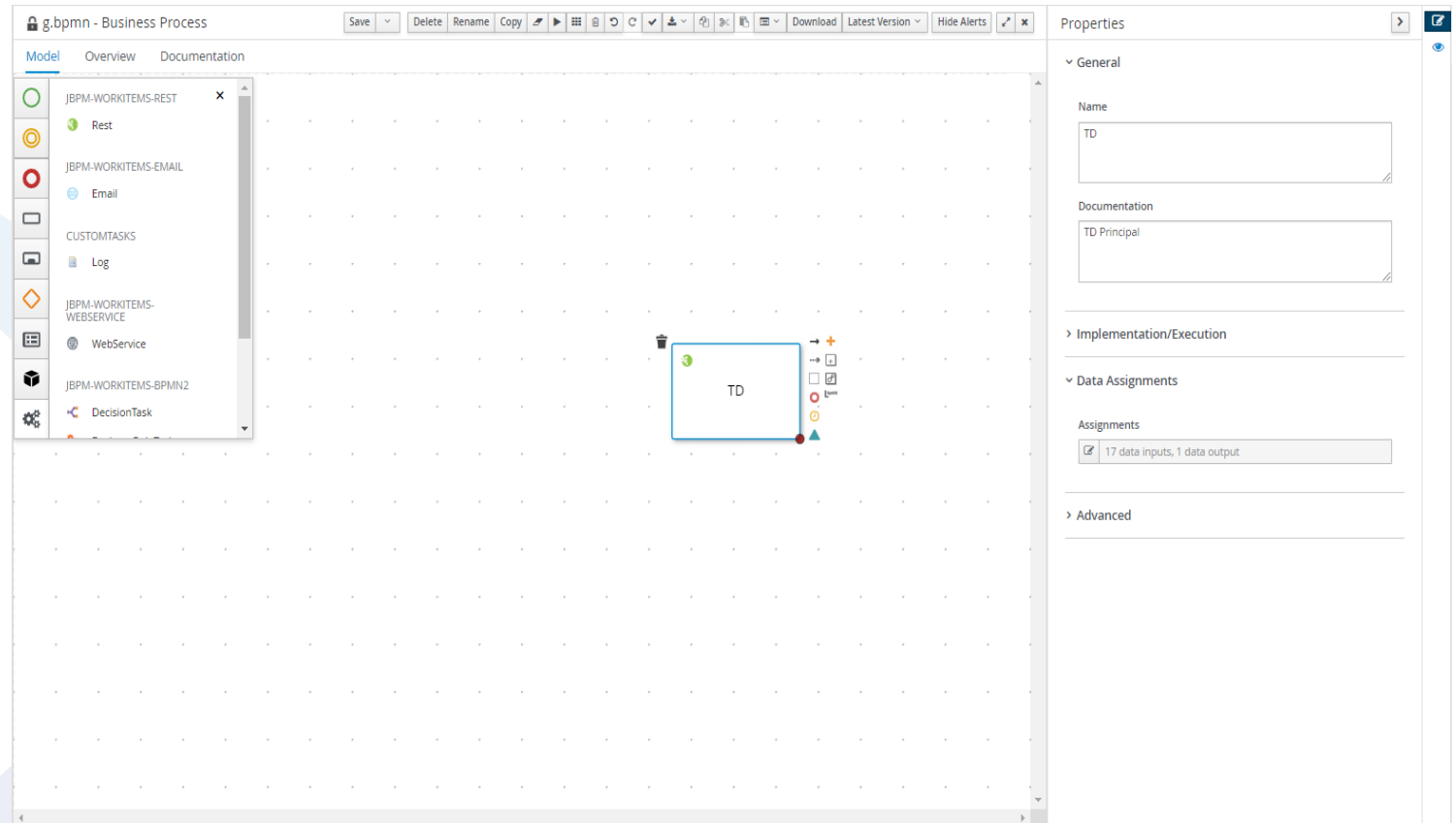
- KIE Workbench
- Business Central
- WildFly Application Server



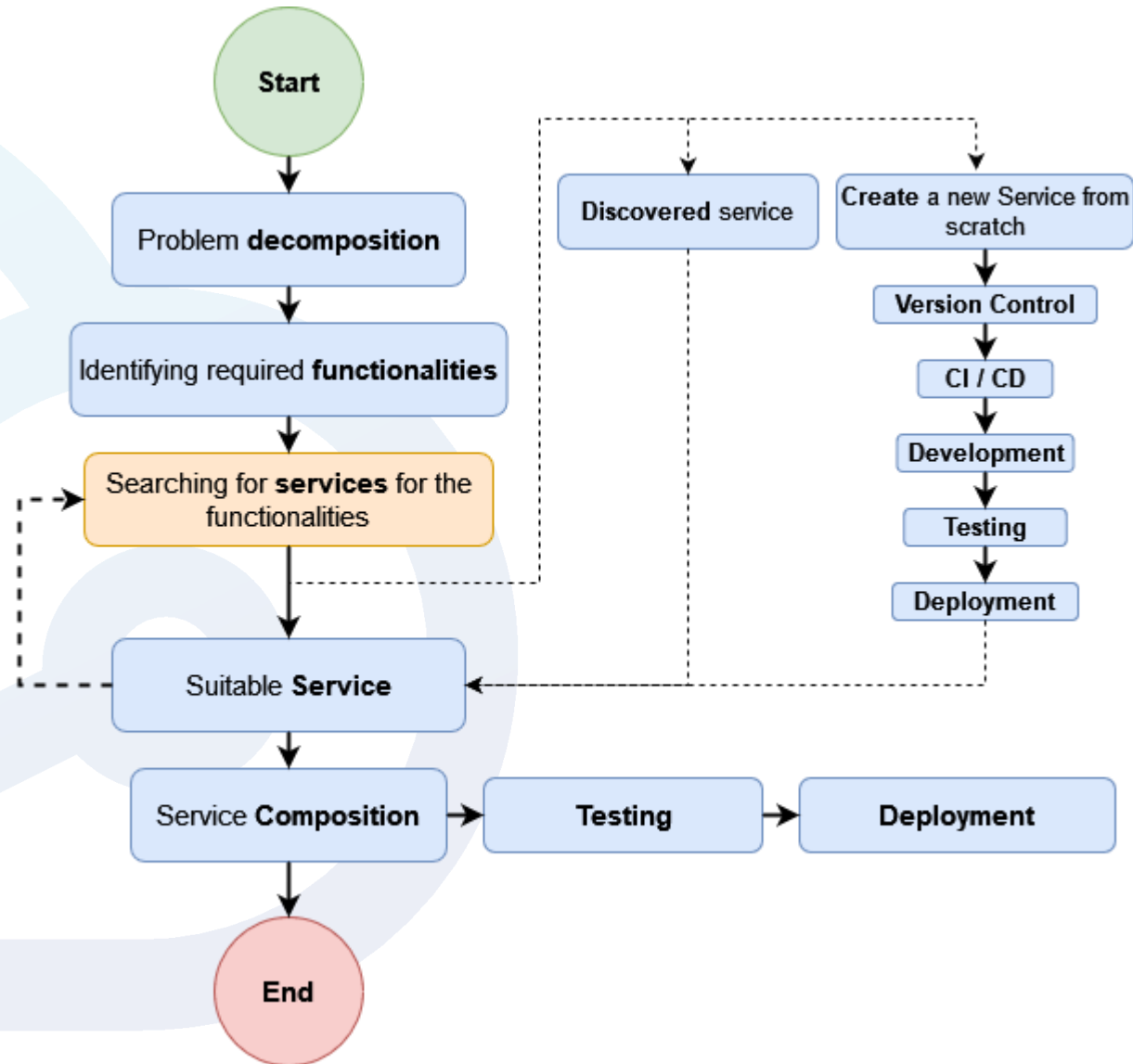
SmartCLIDE Service Composition

Design by drag-n-drop

- Tasks
- Script Task
- Service Tasks
- Manual Tasks
- Events
- Gateways
- Sub-Processes



Development Flow



SmartCLIDE Service Creation

Crucial part of the whole process

- Necessary
- Time consuming

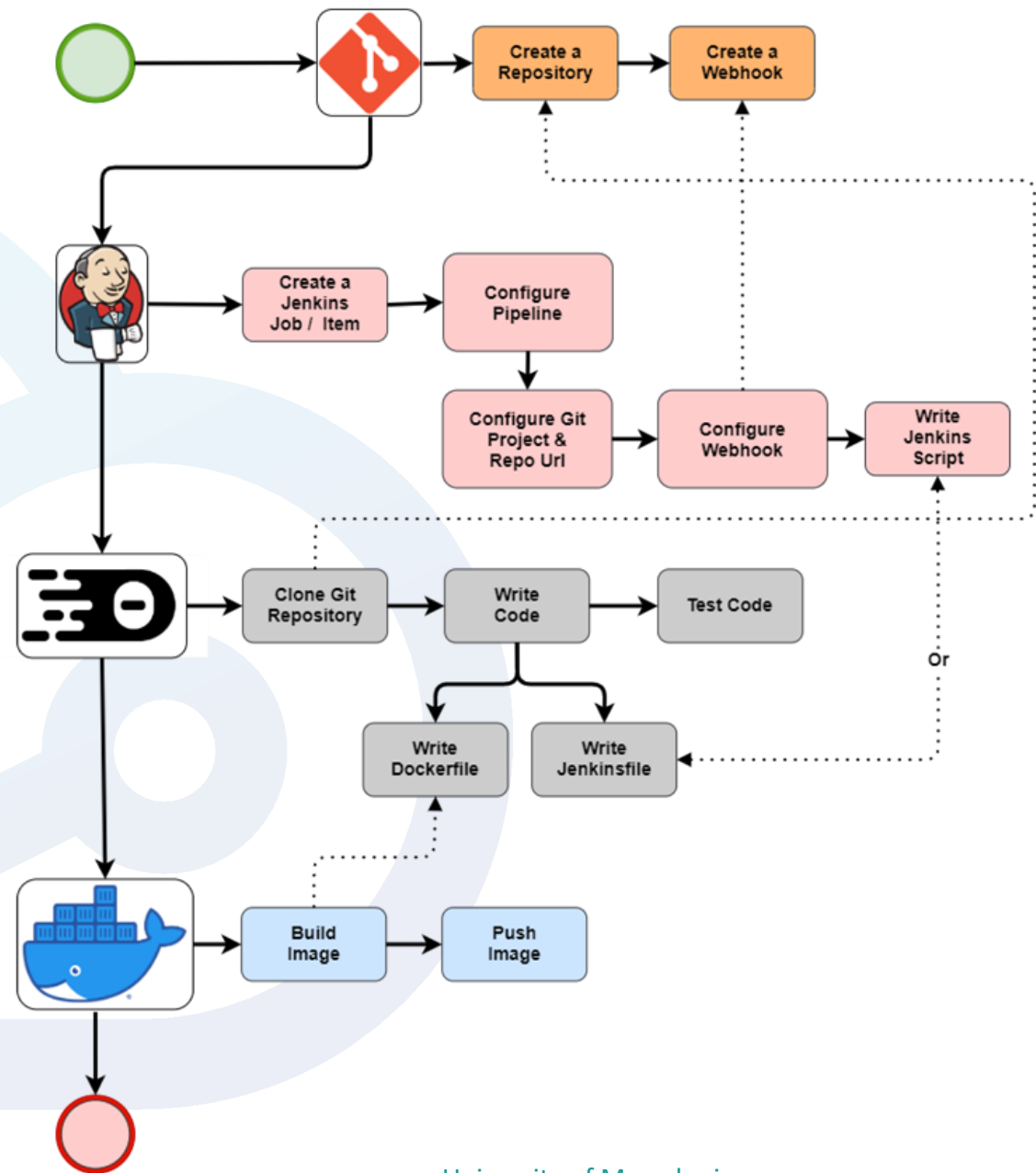
There are many necessary steps before the development can start:

- Collaborative development
- Version Control
- Continuous Integration and Delivery (CI/CD)

During the development process

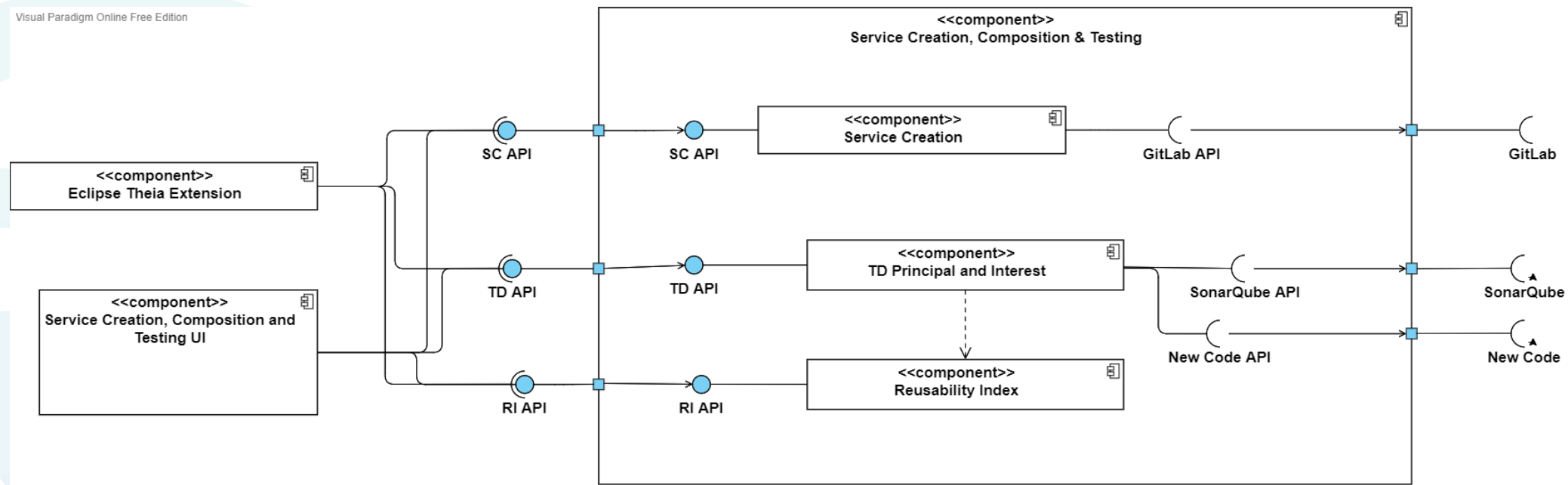
- Progress monitoring
 - Technical debt (Principal and Interest)
- Metrics calculation

Before



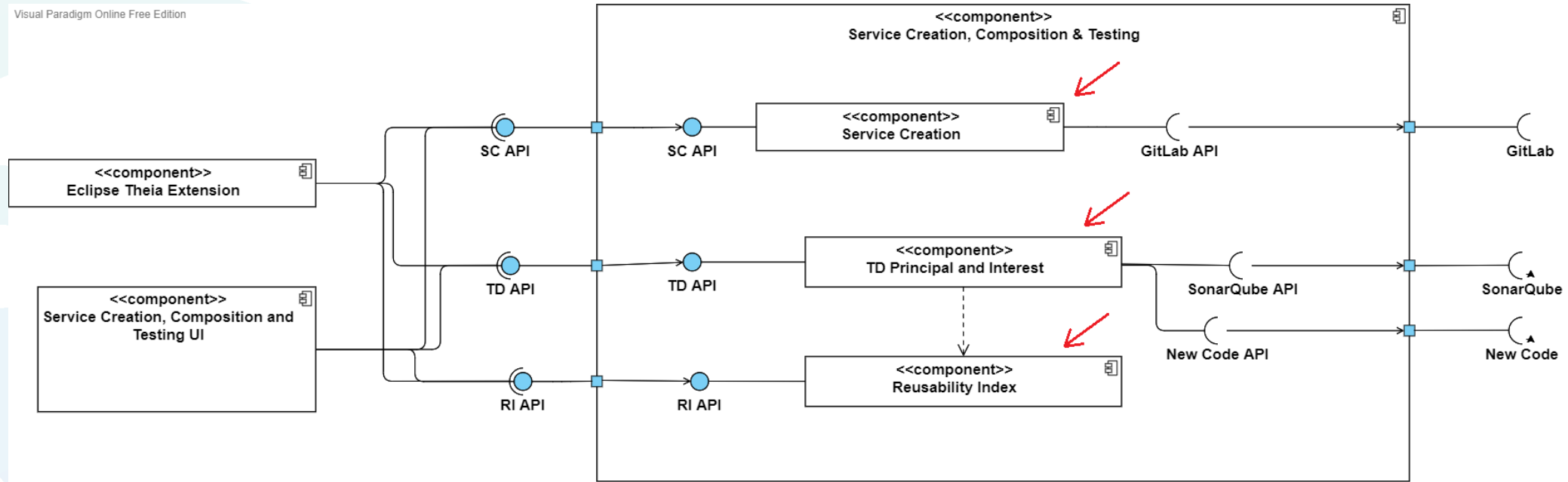
SmartCLIDE Service Creation

Visual Paradigm Online Free Edition

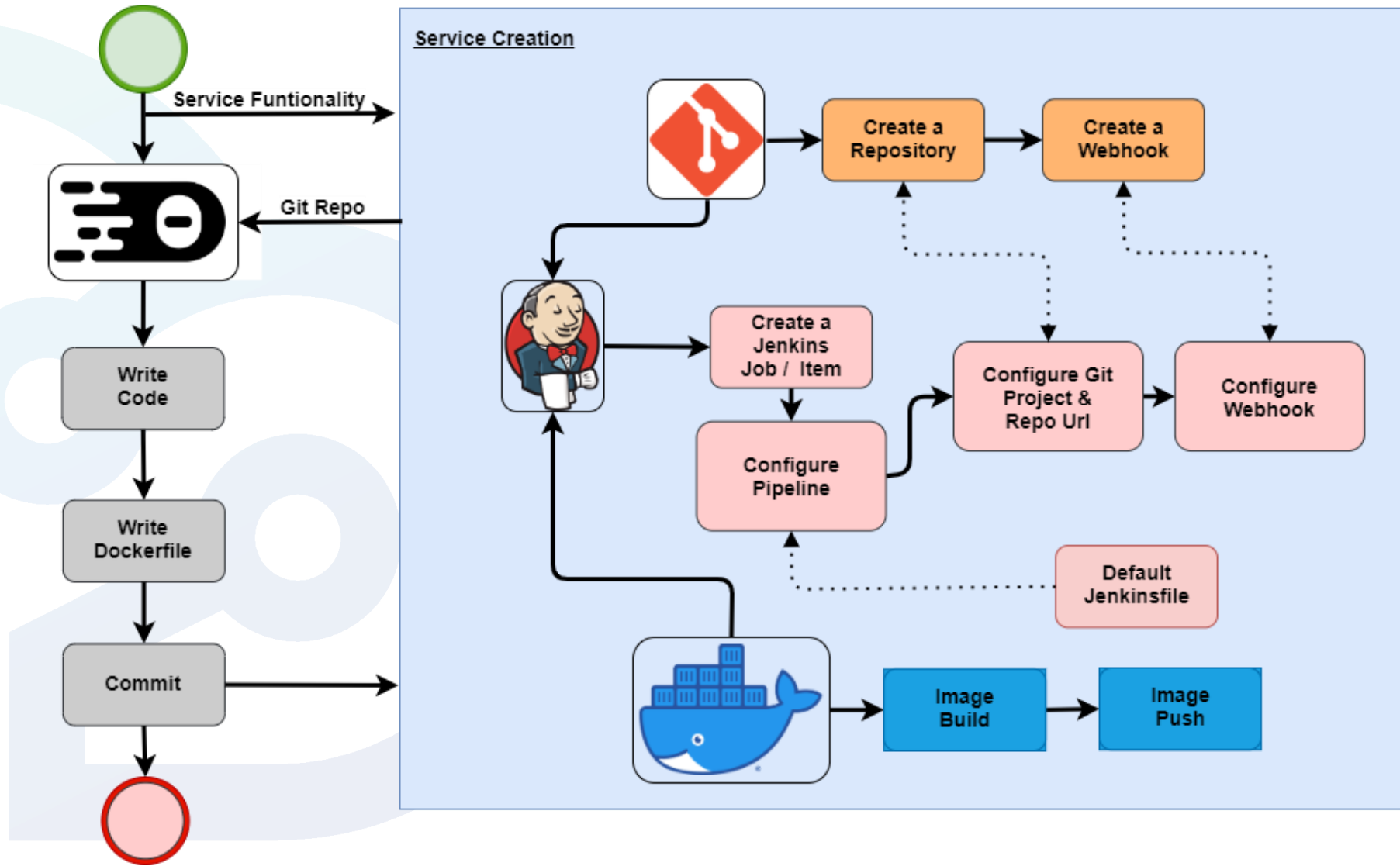


SmartCLIDE Service Creation

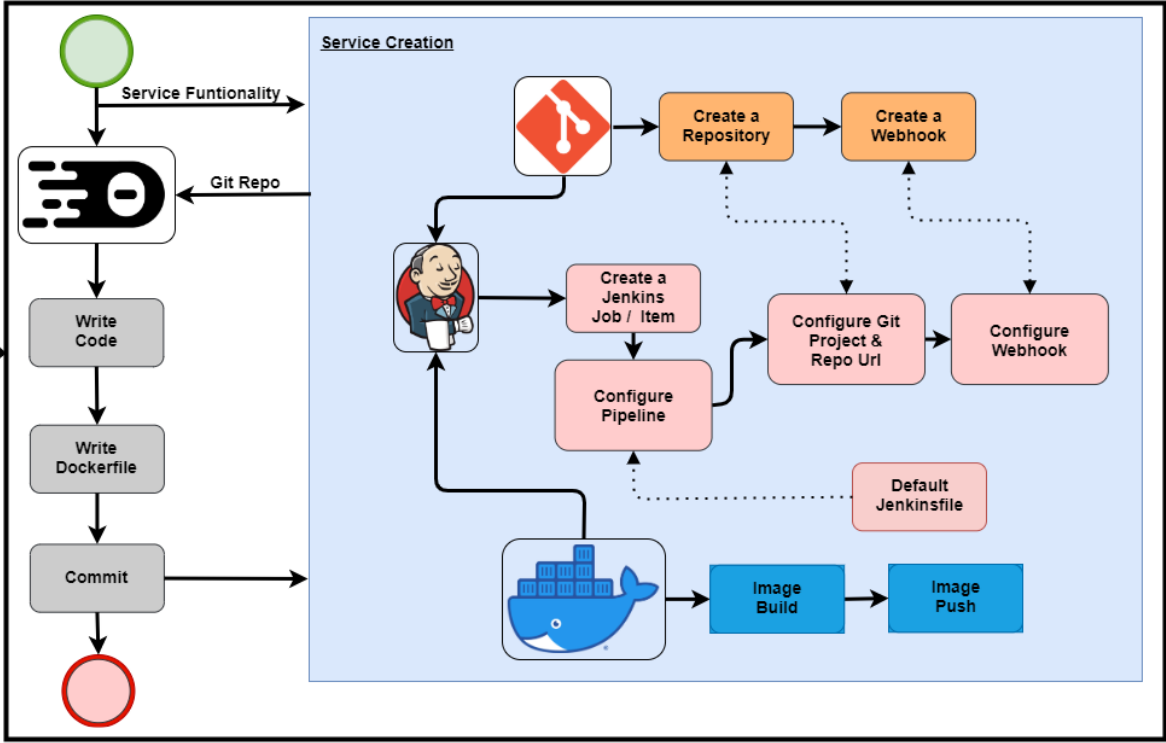
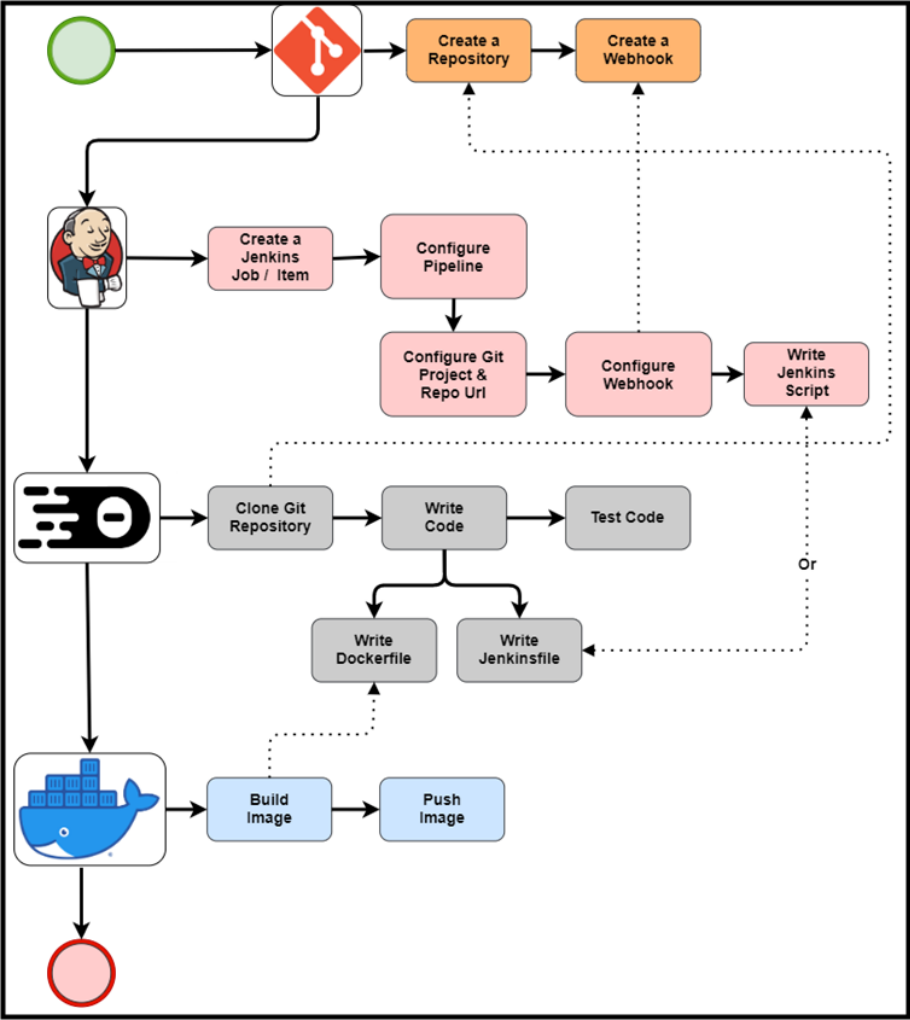
Visual Paradigm Online Free Edition



- **Necessary structure creation (Service Creation)**
- **Calculation of Technical Debt (TD Principal and Interest)**
 - Principal
 - Interest
- **Calculation of software reusability (Reusability Index)**



Comparison



SmartCLIDE Future Expansions

Testing:

Automatic test case creation, for code testing.

Deployment:

Automation for services as well.



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the Stairway to Cloud

Thank you !

