



PIACERE General Presentation

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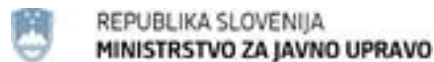


This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 101000162.

General Information

PIACERE - Programming trustworthy
Infrastructure As Code in a sECuRE framework

- December 2020-2023 (36 months)
- Overall budget: 4.424.250 euros
- Project coordinator: TECNALIA
- Technical coordinator: XLAB



Overall objective

- The main objective of the PIACERE project is to provide means (tools, methods and techniques) to enable most organizations to fully embrace the Infrastructure-as-Code approach, through the DevSecOps philosophy, providing an end-to-end solution from Dev to Ops
- Focus on quality, security, trustworthiness and evolvability of infrastructural code
- Ensure business continuity by providing self-healing mechanisms anticipating to failures and violations, and self-learning

Target users

Target users

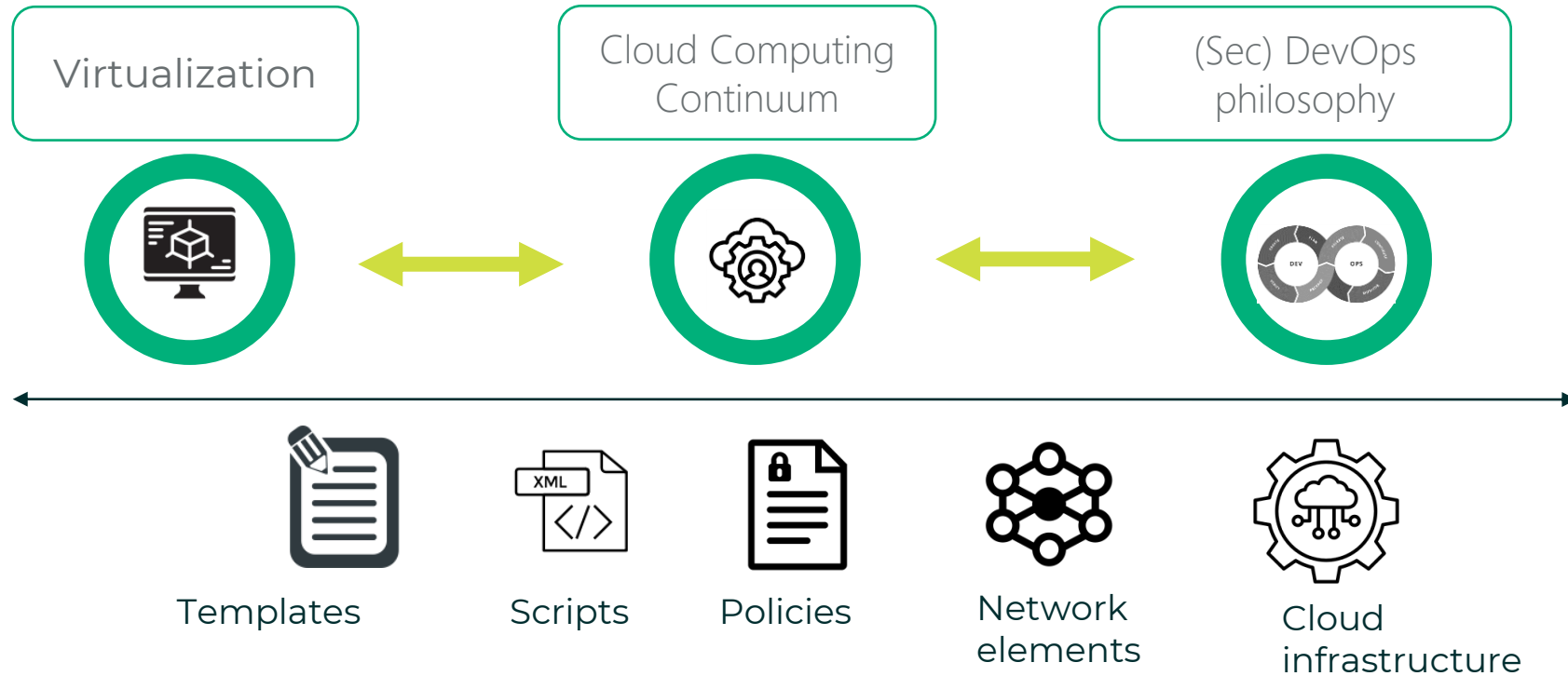
- Developers of IaC
- Operators of IaC



Infrastructural
Code



Context and motivation



Infrastructure as Code (IaC)

Enables the automation of several deployment, configuration and management tasks that otherwise would have to be performed manually by an operator

Context and motivation: general challenges

Large variety of competing tools with different programming languages for writing infrastructural code

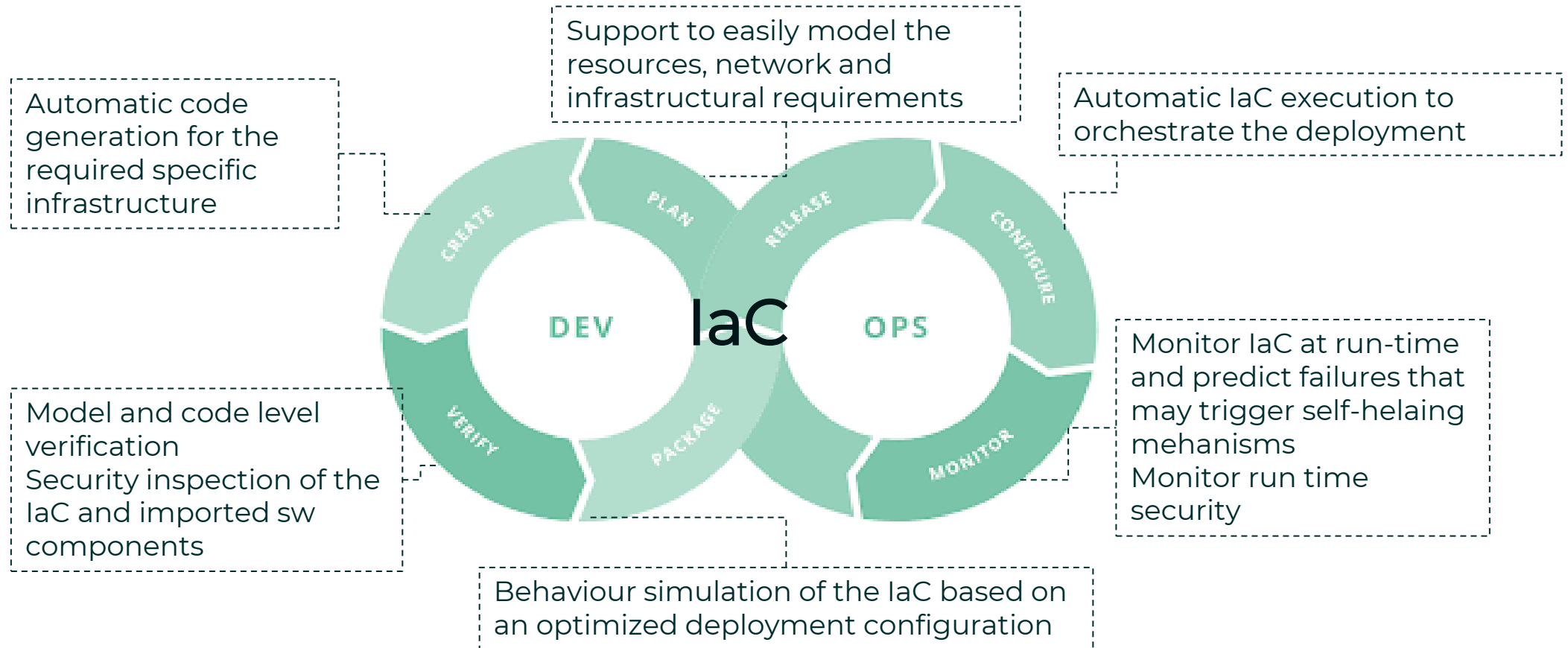
Focused on a single or a small set of automation steps and of types of resources (e.g., VMs)

Reactive solutions to anomalies, instead of seeking to predict them. IaC not self-healable

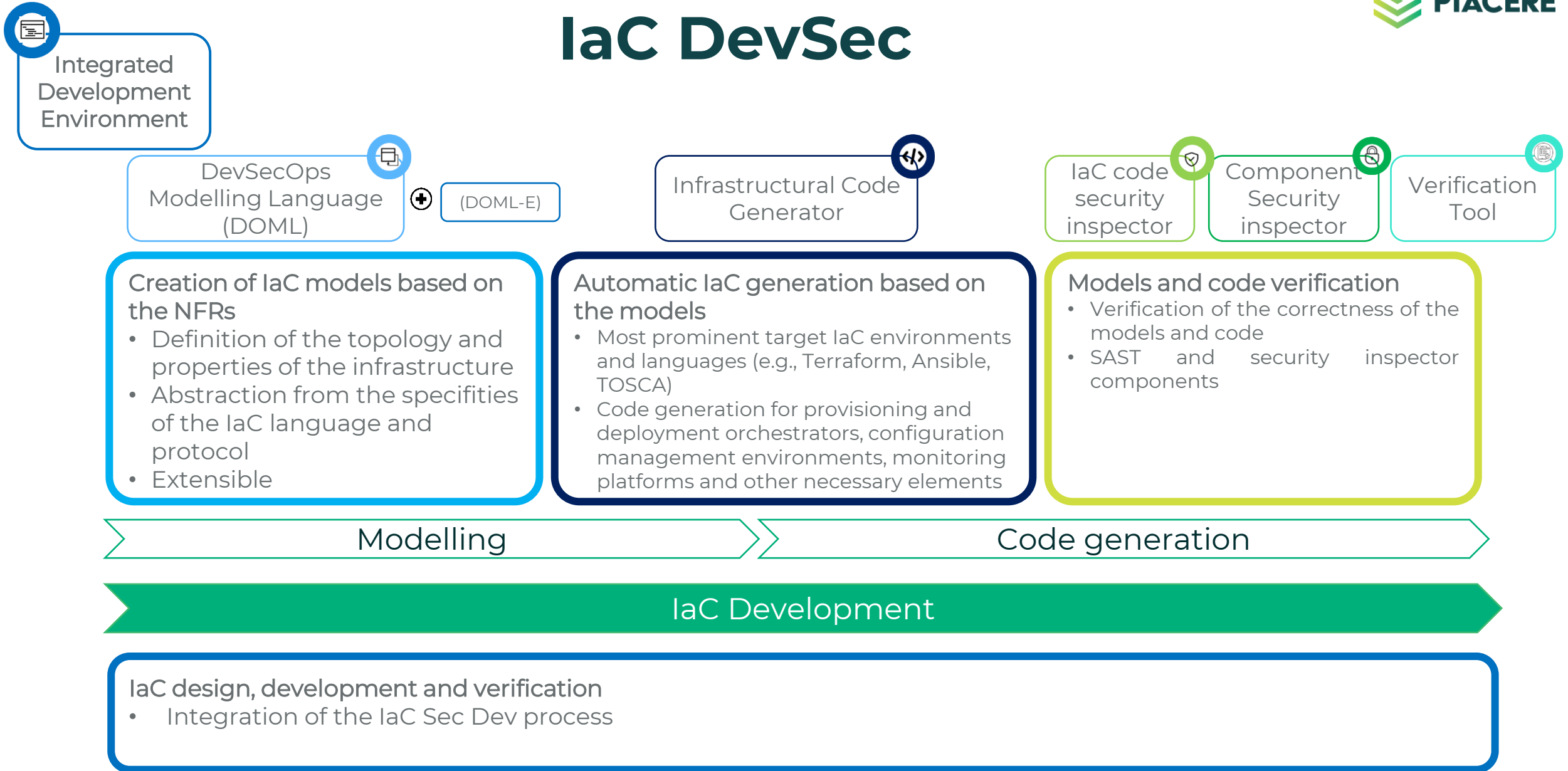
Not really an end-to-end solution covering Devs and the Ops

Trustworthiness and security aspects of the IaC are often left for the end of the cycle

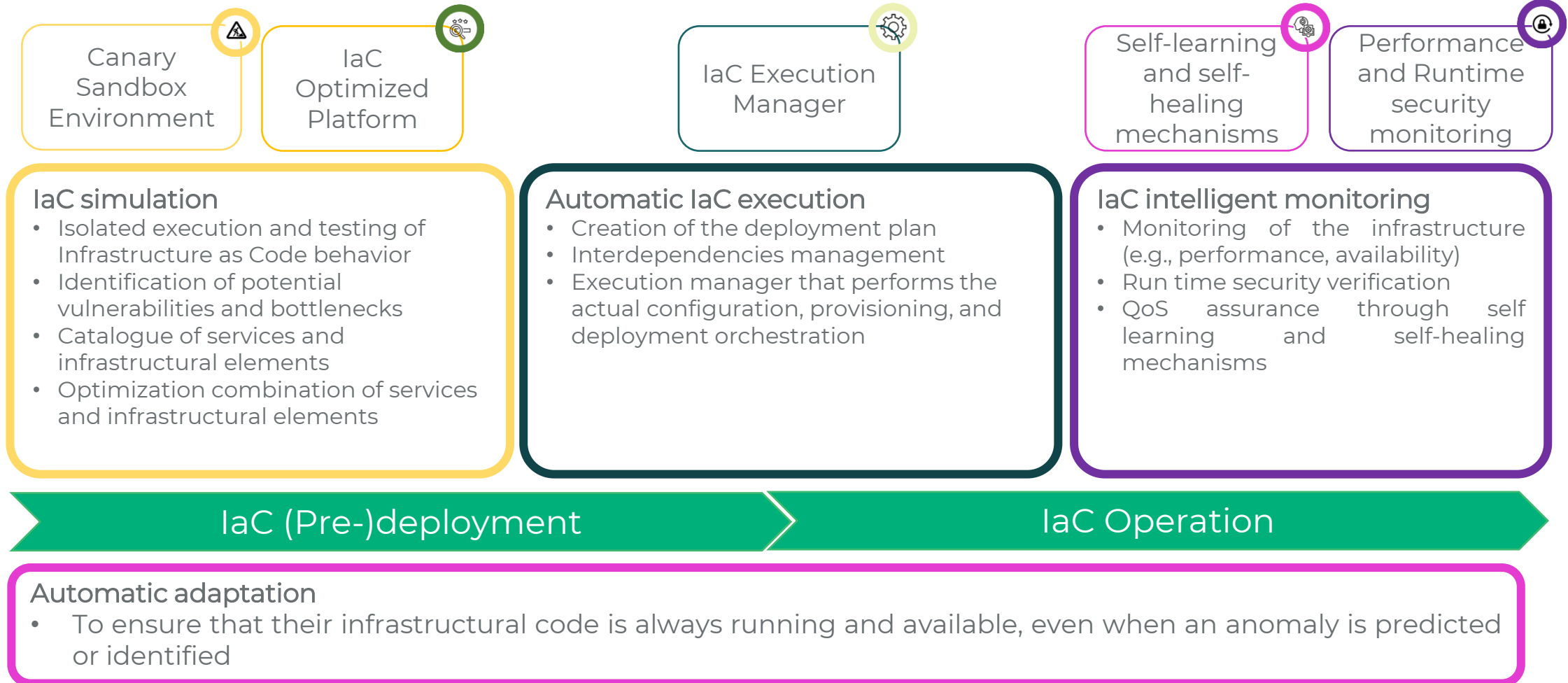
Approach and workflow



IaC DevSec



IaC SecOps



PIACERE Key Results



Validated in 3 application domains



Slovenian Ministry of Public Administration



Critical Maritime Infrastructures



Public Safety on IoT in 5G

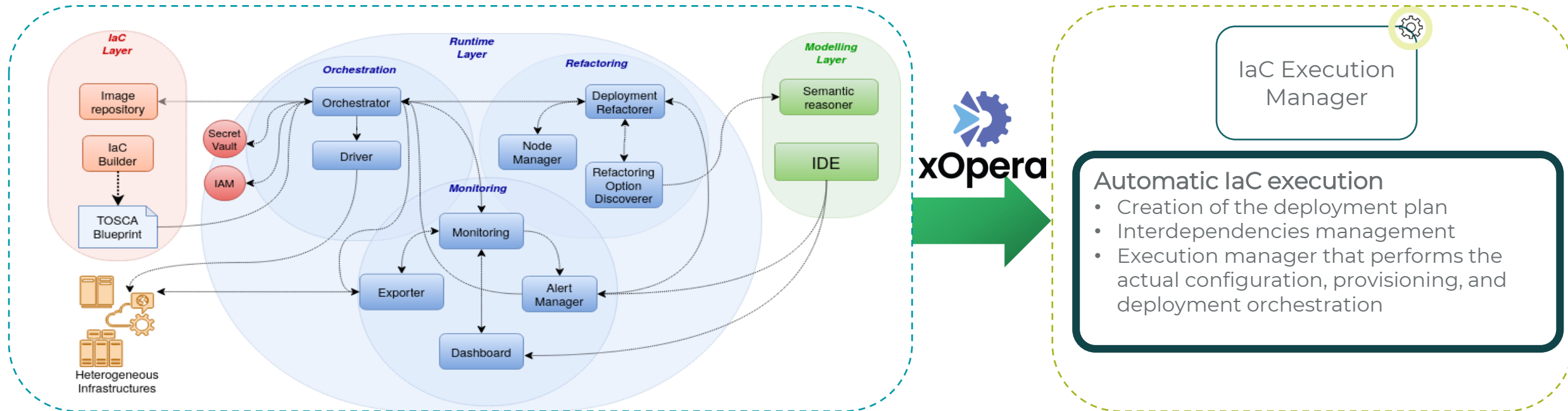
Relationship between SODALITE and PIACERE



Sodalite



PIACERE



Relationship between SODALITE and PIACERE



- Focus on
 - Resource Discovery
 - Deployment automation
- Deployment blueprints described in TOSCA
- (Application is considered and details known)

- Focus on **laC** Deployment automation
 - Configuration
 - Provisioning
 - Deployment orchestration

Directly In Terraform and Ansible in addition to TOSCA

- Verification of the **laC**, especially security (security inspector and component inspector)



Thank you!

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