



symbloTe

Co-create virtual interoperable IoT smart city applications and services

symbloTe Team

17 October 2018, Barcelona



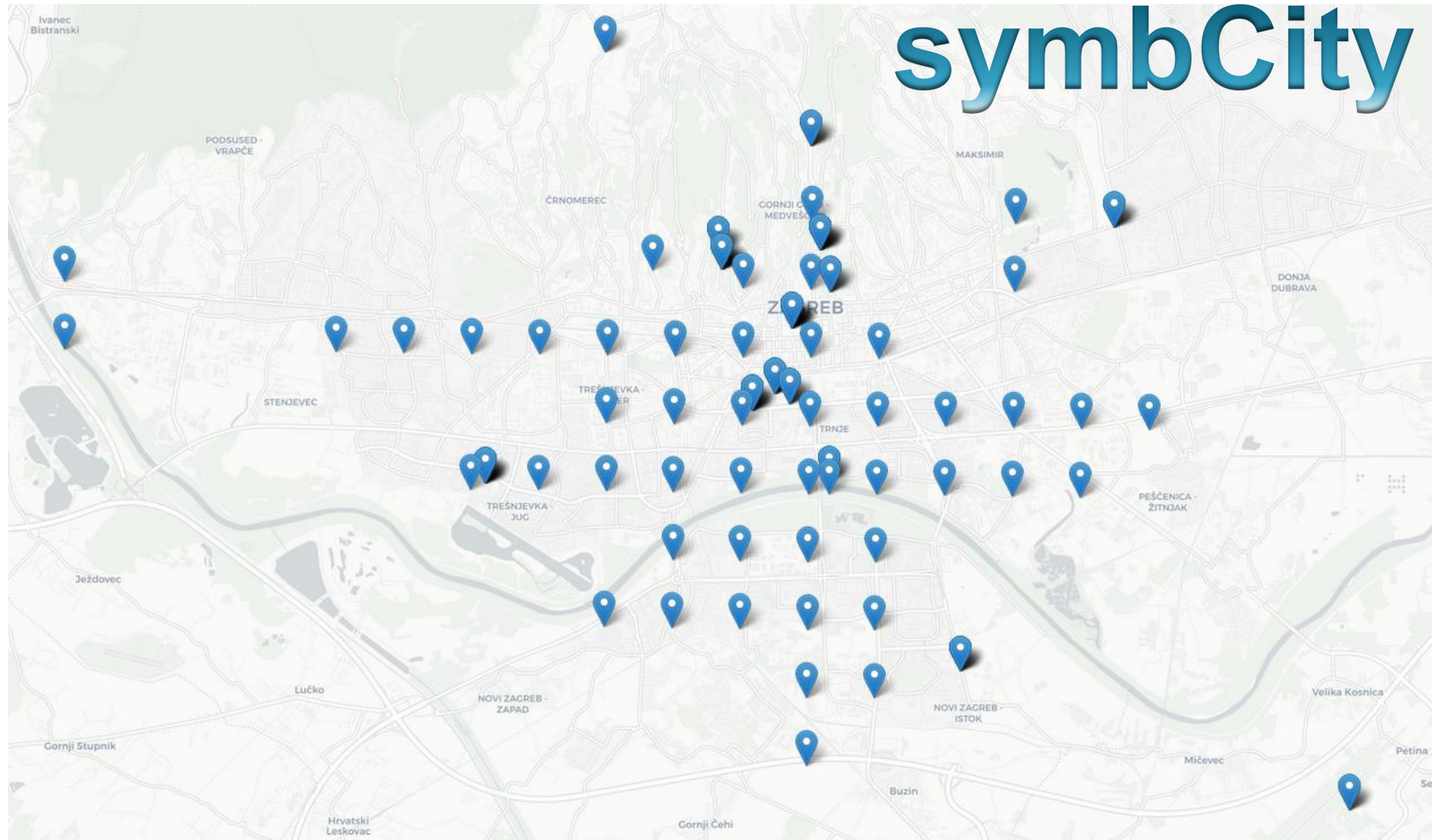


Hackaton overview

- Main challenge
 - co-create innovative **applications** or **services** for a virtual interoperable smart city – **the *sympCity*** – using symbloTe-enabled IoT resources (sensors, actuators and services)
 - different categories of IoT resources: Smart Home/Residence, Smart Mobility, Smart Yachting
 - IoT resources are searchable on the **[symbloTe's IoT Portal](#)**
 - Full software documentation available on **<https://middleware.symbiote-h2020.eu/>**



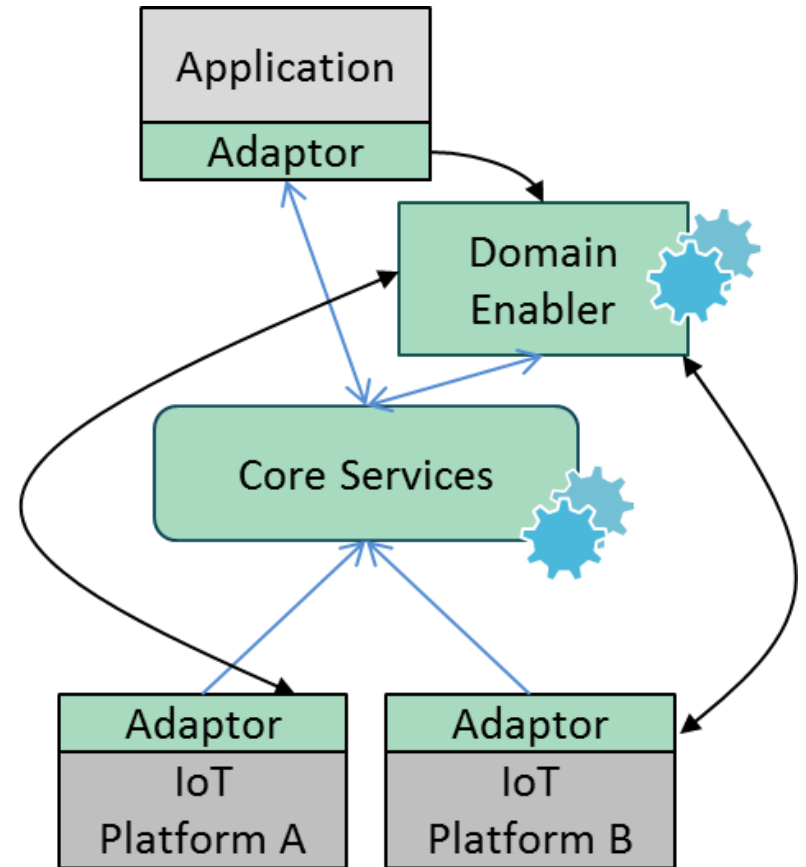
Available resources





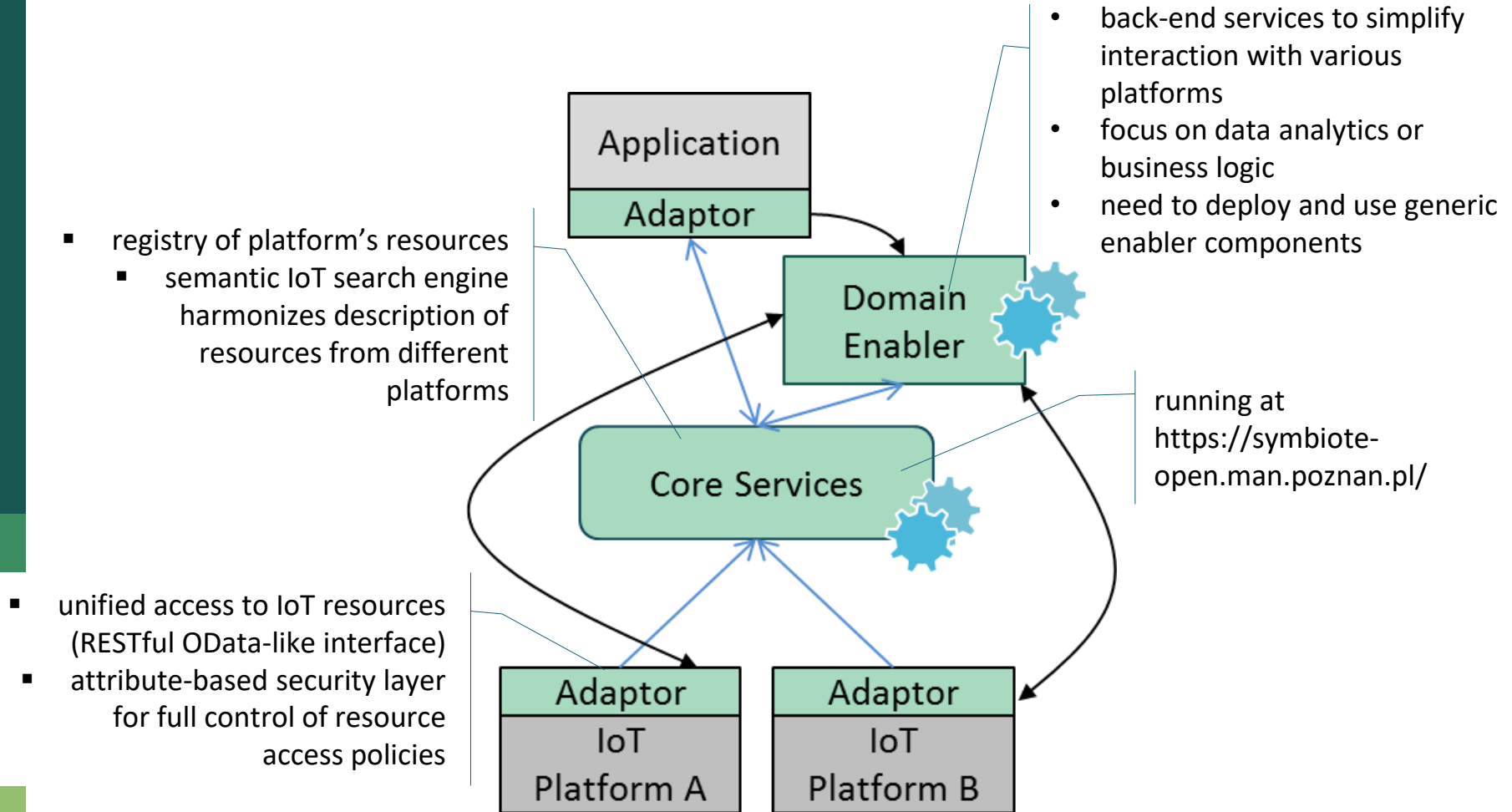
What is symbloTe?

- Middleware for IoT interoperability
- **Main objective:** simplify the development of next-generation IoT applications and services (cross-domain and cross-platform)





symbloTe offerings





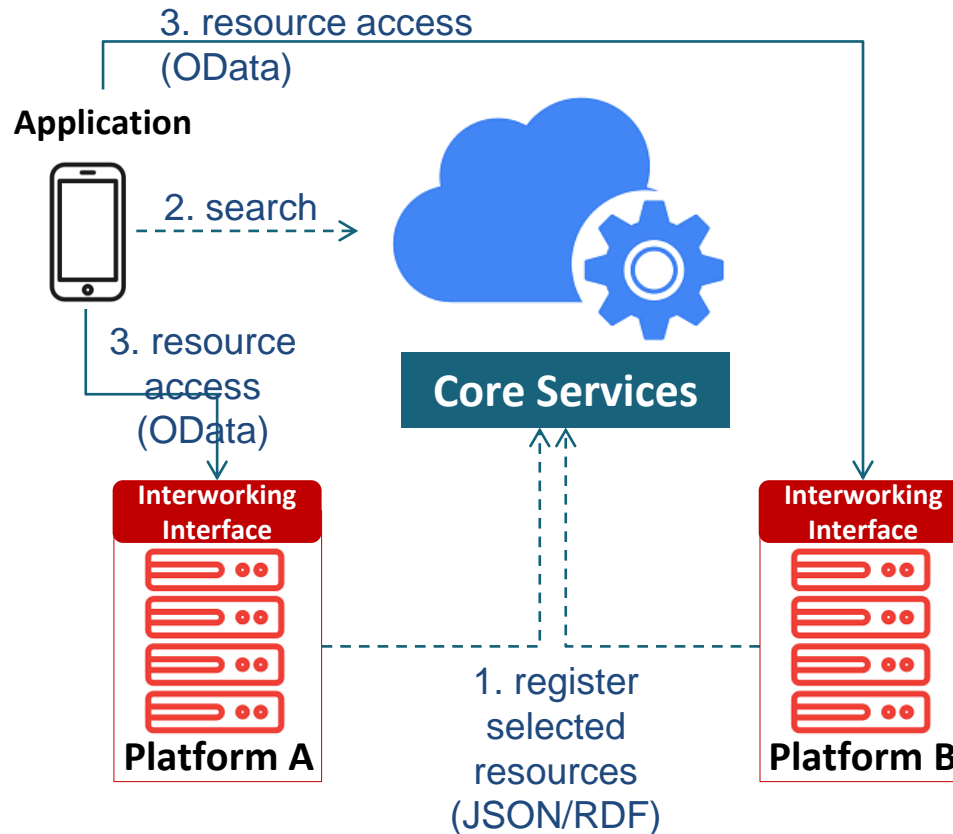
1. symbloTe-Apps Challenge



- design and build mobile or web apps which use symbloTe-enabled resources (sensors, actuators and services) searchable using the [symbloTe's IoT Portal](#)
- we are looking for a working application and code, not wireframes
- end product: mobile application (either developed natively for Android or iOS or using cross-platform frameworks or a web app) that combines IoT resources offered by the symbloTe ecosystem and can demonstrate cross-domain features or usage of IoT resources from different IoT platforms



Building symbloTe Apps



1. done by platform providers

2. *search* requires authentication.

- use guest tokens and build security headers

3. resource access

- Read the current /historical values from a resource
- Write a value into a resource (actuation)



- GIT Hub



- symbloTe Libraries

- <https://jitpack.io/#symbiote-h2020/SymbloTeLibraries/>

- Android Client

- <https://github.com/symbiote-h2020/SymbloTeAndroidClient>

- IOS Client

- <https://github.com/symbiote-h2020/SymbloTeSecurity4iOS/wiki>

- JAVA Client

- <https://github.com/symbiote-h2020/ExampleClient>

- Building symbloTe-enabled apps

- <https://github.com/symbiote-h2020/SymbioteCloud/wiki/9.-Developing-symbloTe-enabled-apps>



2. symbloTe-Enablers Challenge



design and build a symbloTe Enabler to provide your specific smart city service on top of symbloTe-enabled resources (sensors, actuators and services)

Fore example:

- Combine existing information from sensors/actuators and adds additional information from other sources (e.g. public data, other services on the Internet)
- Uses data analytics and provides analysed data
- Uses machine learning on existing data



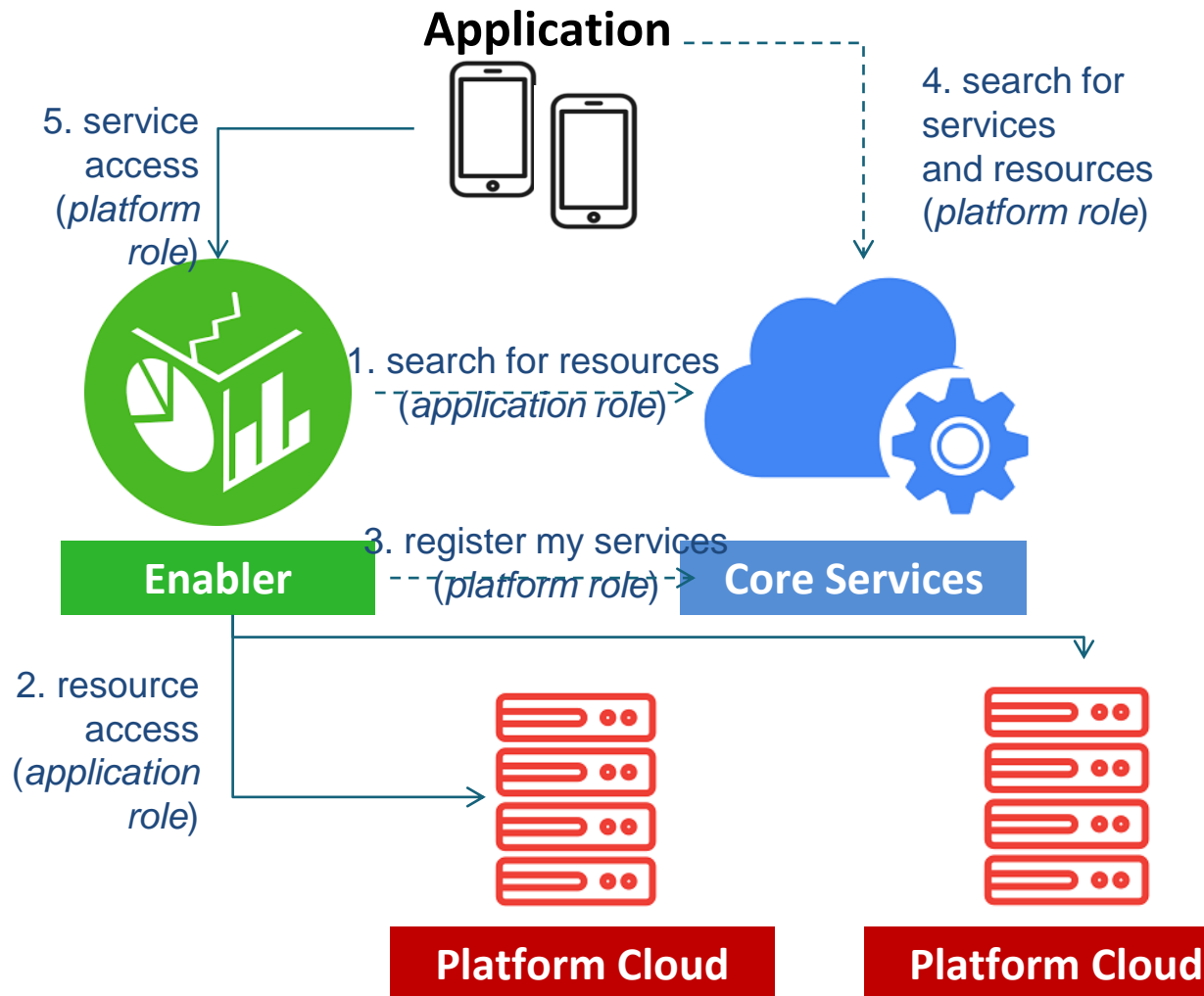
Enabler roles



- Enablers act as both platforms and apps
- Role 1 – as virtual platforms, enablers:
 - Provide domain specific functionalities to apps
 - Transform/combine resources from actual platforms
 - Expose services to apps
 - Register to symbloTe Core as platform and register services that provides
 - Implements domain specific interface and RAP access
- Role 2 – as application:
 - Use symbloTe Core and Cloud infrastructure as input to domain specific functionalities
 - Authenticate itself as application
 - Access data from Cloud (platforms)

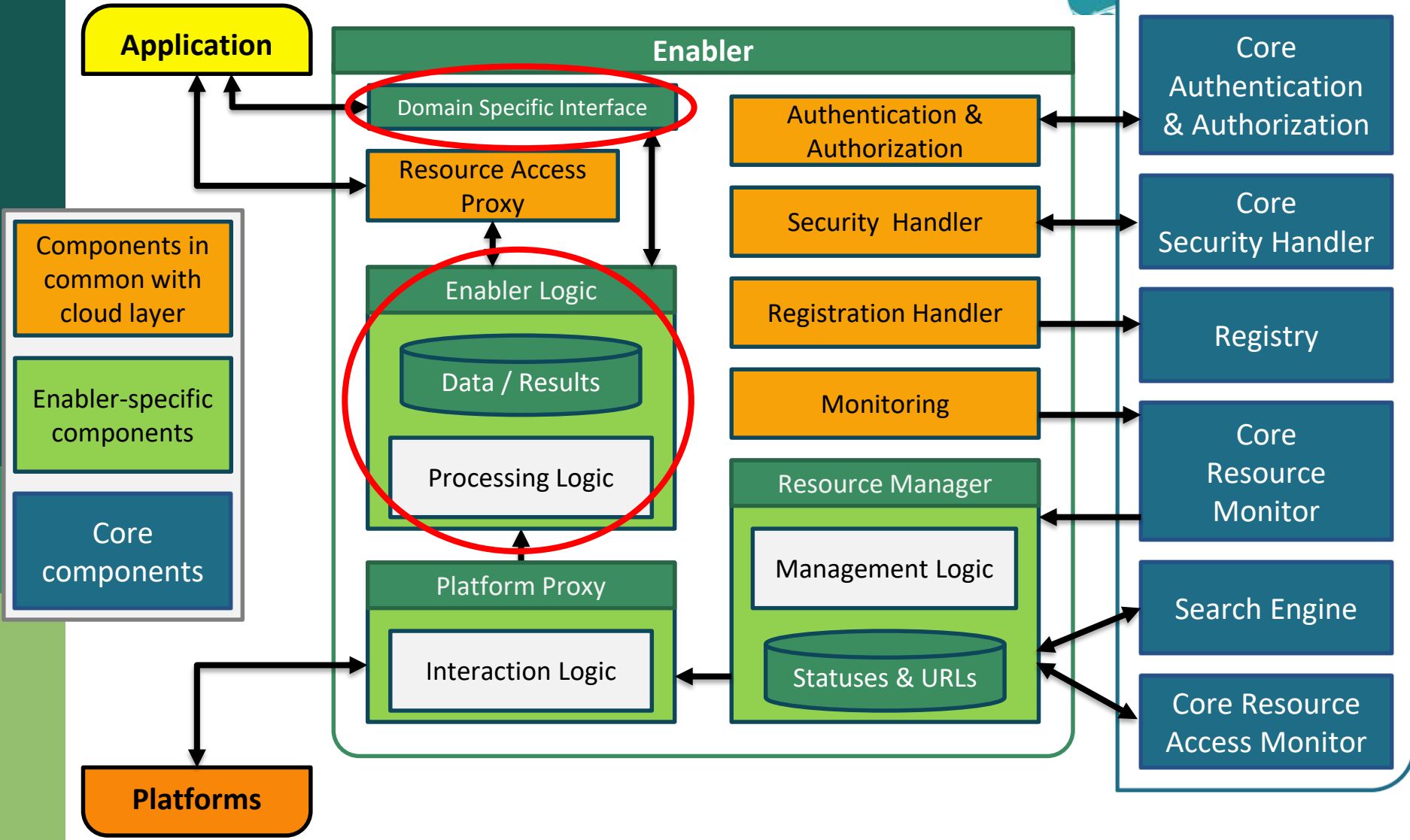


Building symbloTe Enablers





Generic architecture





- About Enablers

- Reports:

- [D2.3 - Report on symbloTe Domain-Specific Enablers and Tools](#)
 - [D2.6 - symbloTe Domain-Specific Enablers and Tools](#)

- GIT Hub

- Installing enabler

- <https://github.com/symbiote-h2020/SymbioteEnabler/wiki>

- Enabler Logic Instructions

- <https://github.com/symbiote-h2020/EnablerLogic>

- Enabler Logic Example

- <https://github.com/symbiote-h2020/EnablerLogicExample>



Support Team



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Thank you!

Questions?