



AI on-demand platform for regional interoperable DIHs Network

Interoperability with AI-On-Demand Platform

<https://www.dih4ai.eu/>

Benoit TABUTIAUX (IMT)

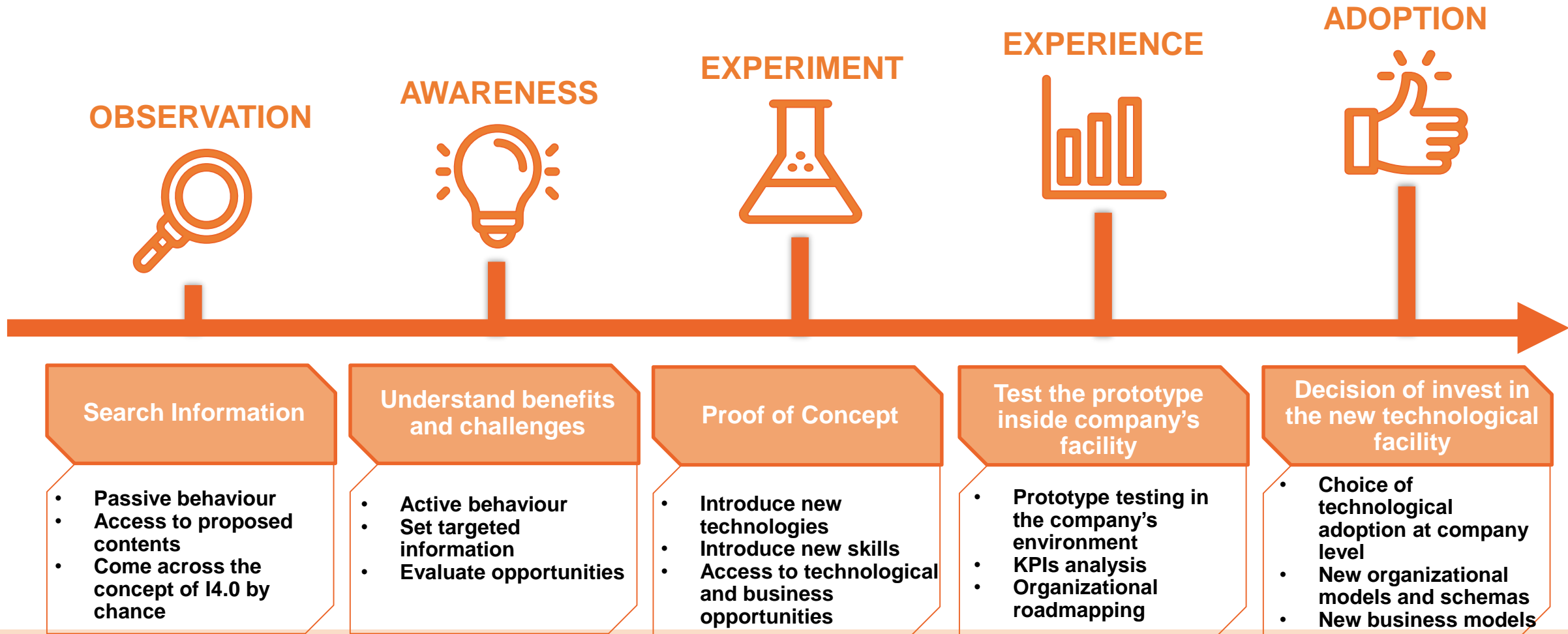
AI4EU TGB meeting

04/03/2022

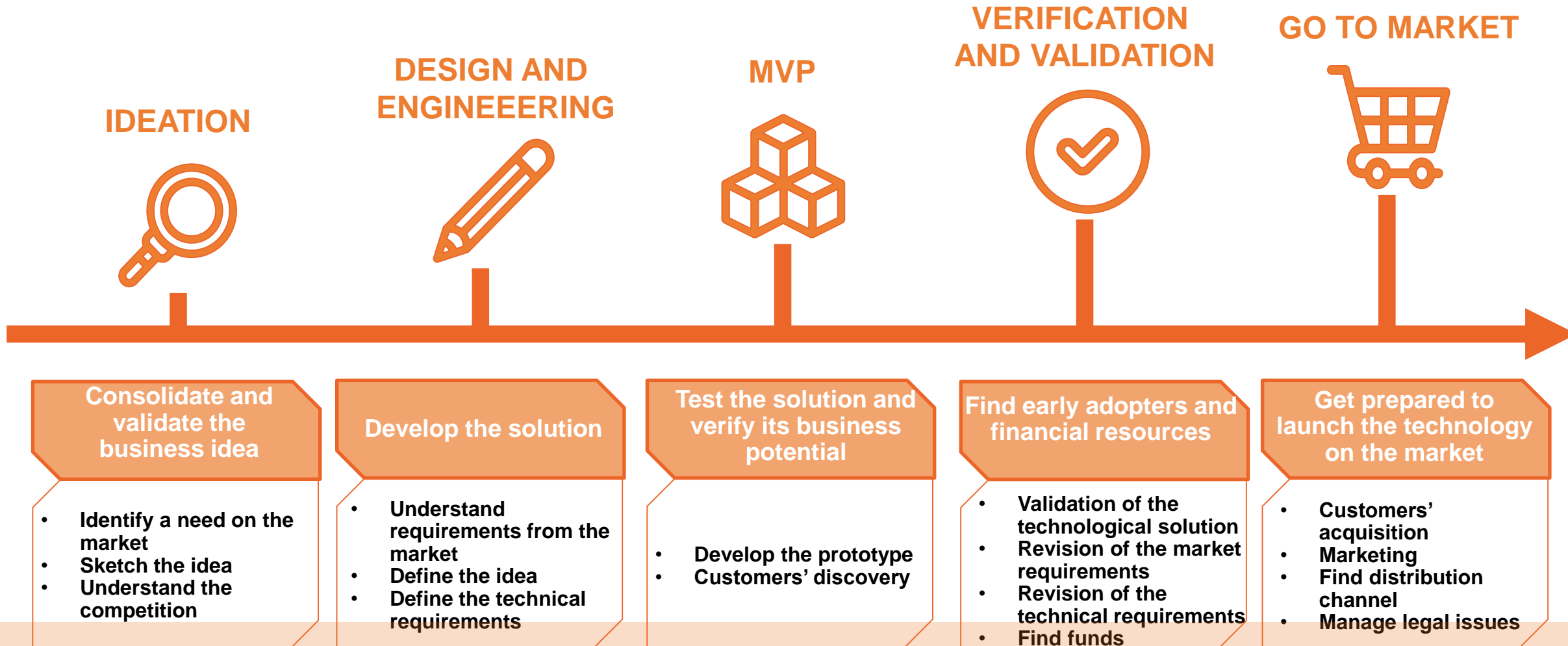


Interoperability with AI Experiment - Components

CUSTOMER JOURNEY – TECHNOLOGY USER



CUSTOMER JOURNEY – TECHNOLOGY PROVIDER



Concept



The AloD Platform and DIH-Europe Interoperability

Regional DIH platforms (DIHIWARE) as IDS Network nodes with AloD Catalog / Marketplace / Experiments Platform (portal data cloud).

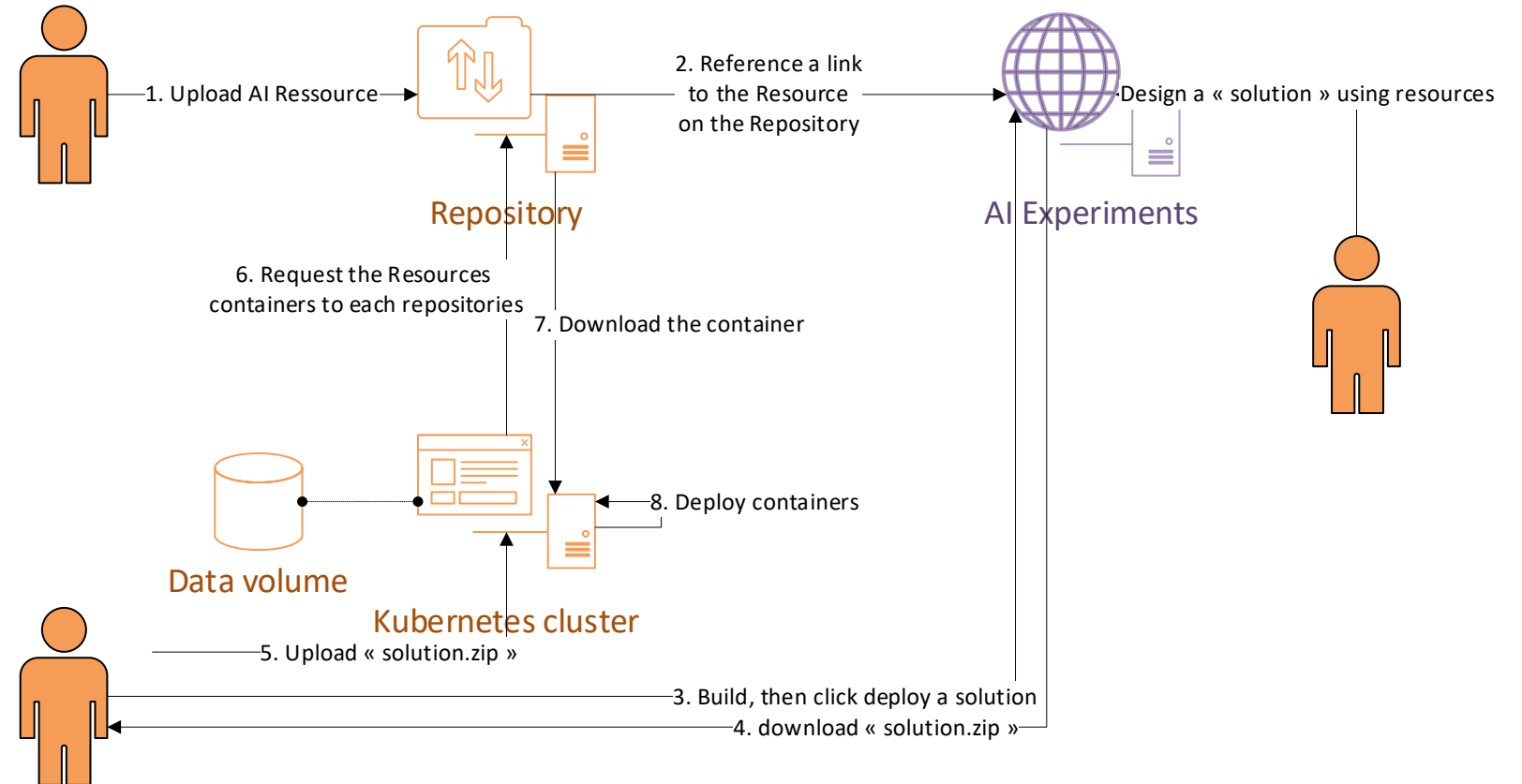
- Deploy all needed components to go from AI assets creation to deployment, all though AI4EU AI Experiments
- Allow DIHs to hold a role and provide services at each steps of the journey

DIHs Services around AI Experiments

1. **Create, edit, enhance, store source** in Public or Private GIT source repository.
2. **Create, edit, enhance, host and distribute** a **packaged container** in Public or Private Container Repository.
3. **Onboard, publish and serve** an **AI resource** in AI4EU Experiment.
4. **Create, modify and publish Solutions** in AI4EU Experiment.
5. **Deploy, test, evaluate** a **Solution** from AI4EU Experiment in the Kubernetes Cluster
6. Propose an **access** to the **Solution** to the final users.

Scenarios

- Onboarding AI4EU-compliant models
- Enabling AI4EU-compliant experimentation facility for DIHs.

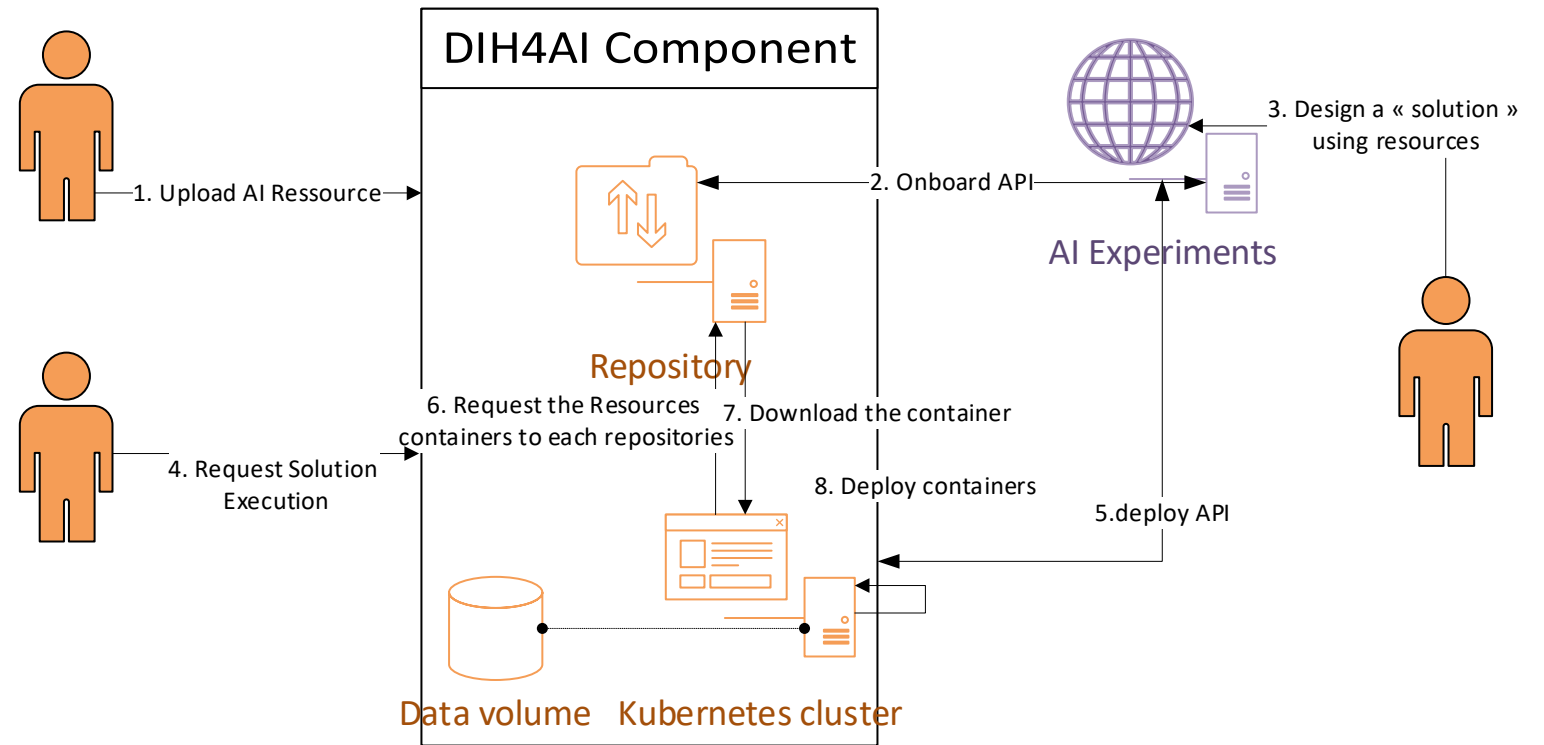


Delivered in December 2021

Interoperability with AI Experiment - Integration

Scenarios

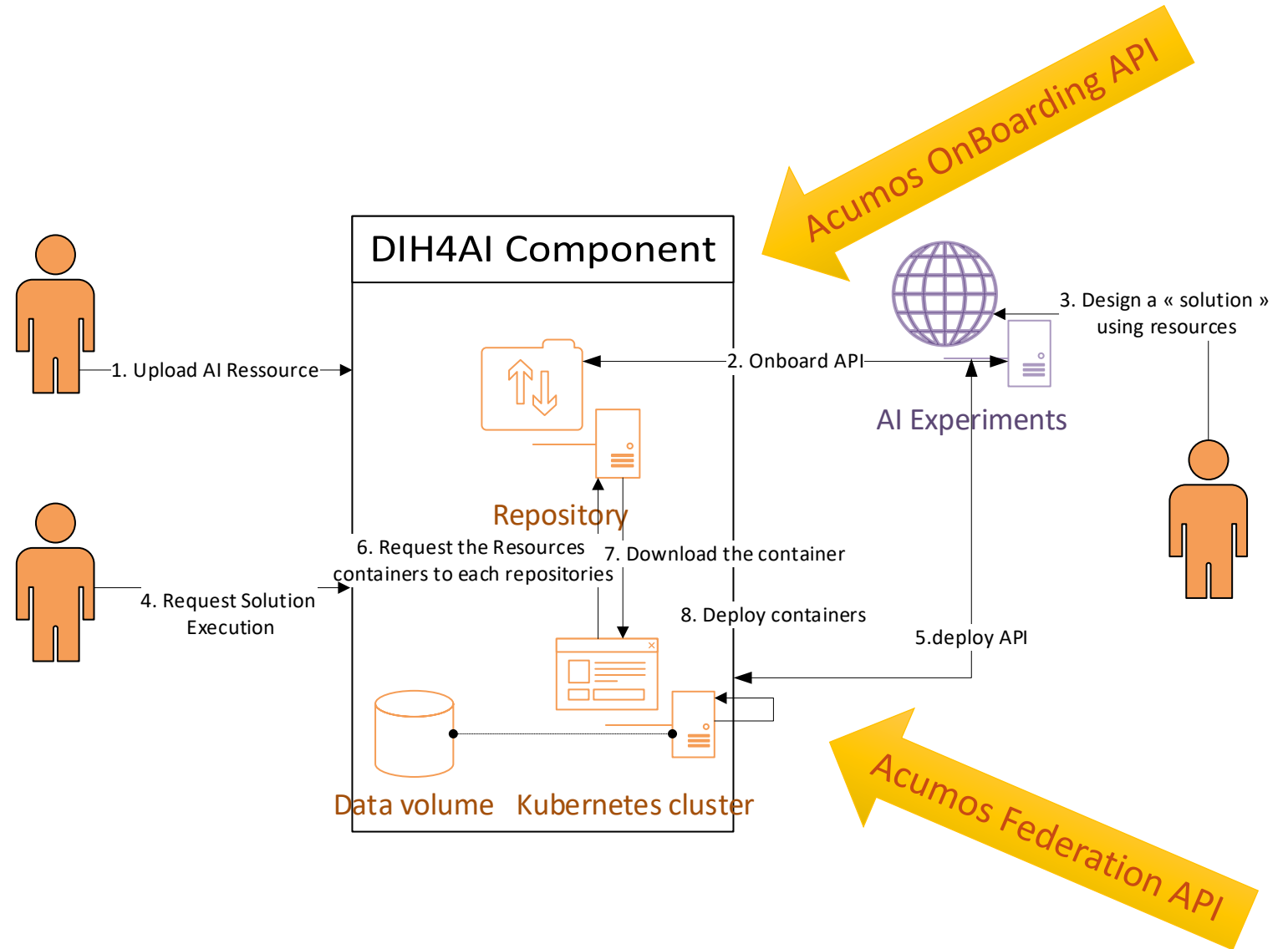
- Onboarding AI4EU-compliant models
- Enabling AI4EU-compliant experimentation facility for DIHs.



Delivery planned: end of March 2022

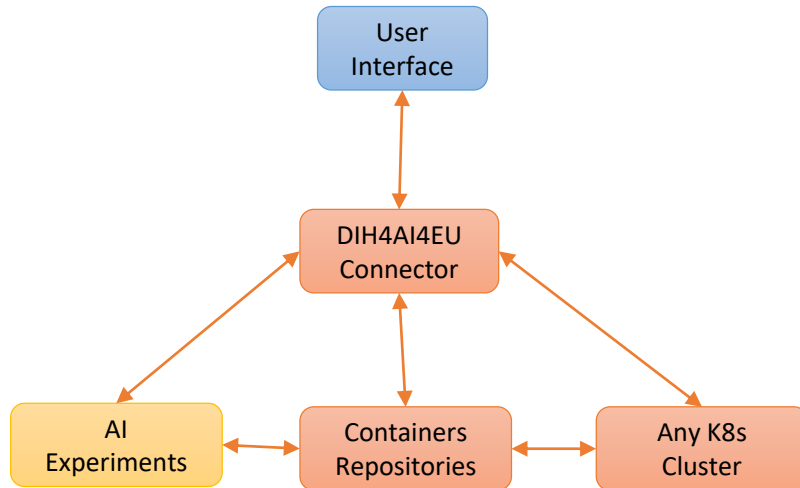
Scenarios

- Onboarding AI4EU-compliant models
- Enabling AI4EU-compliant experimentation facility for DIHs.



Delivery planned: end of March 2022

Status



Step #1 Onboard an AI resource on AI4EU Experiments – IN DIH4AI-Gitlab

1. **Gather or write the source of the module.**
2. **Package modules and gRPC server in Docker containers.**
3. **Push the image to the container registry.**
4. **Onboard the resource in AI4EU Experiments**
5. **Publish the resource**

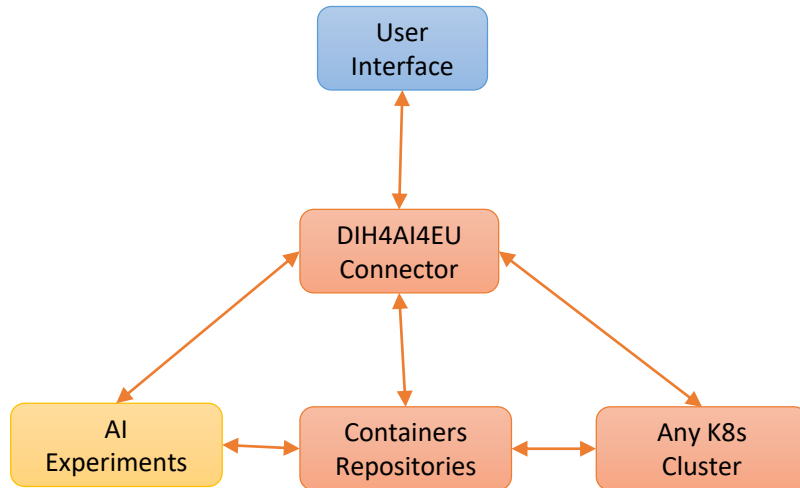
Step #2 Compose a solution – IN AI4EU – AI4EU EXPERIMENTS

6. **AI4EU Experiments Design Studio**
7. **Compose a solution**

Step #3 Deploy a solution – IN DIH4AI KUBERNETES CLUSTER

8. **Package and deploy the solution from AI4EU Experiments**
9. **Unzip and install the requirements of the solution**
10. **Deploy in the namespace**
11. **Run the Orchestrator**
12. **Access to the demo GUI**
13. **Access the demo, test before invest**

Status



Step #1 Onboard an AI resource on AI4EU Experiments – IN DIH4AI-Gitlab

1. Gather or write the source of the module.
2. Package modules and gRPC server in Docker containers.
3. Push the image to the container registry.
4. Onboard the resource in AI4EU Experiments
5. Publish the resource

Ongoing

Step #2 Compose a solution – IN AI4EU – AI4EU EXPERIMENTS

6. AI4EU Experiments Design Studio
7. Compose a solution

Step #3 Deploy a solution – IN DIH4AI KUBERNETES CLUSTER

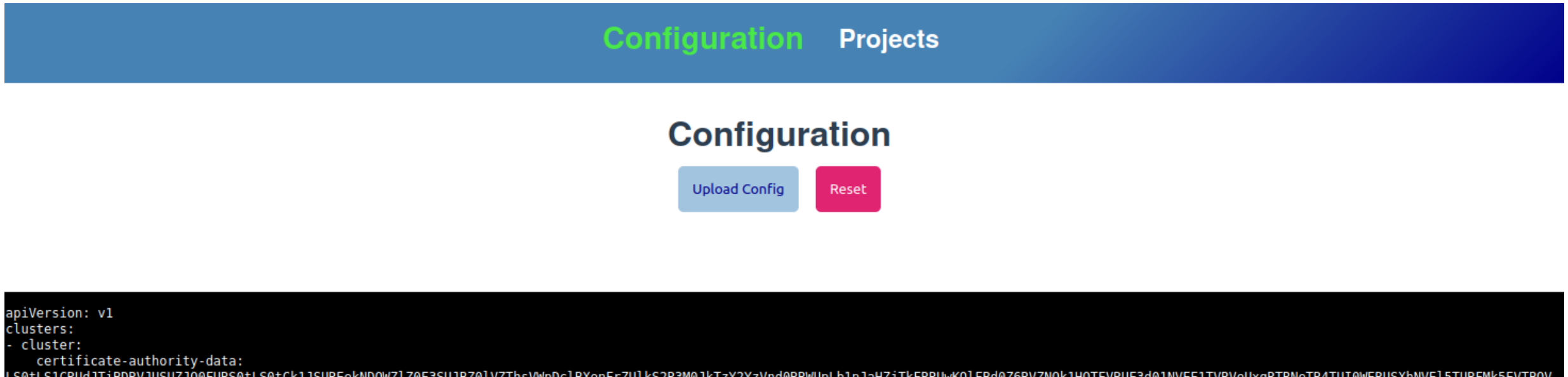
8. Package and deploy the solution from AI4EU Experiments
9. Unzip and install the requirements of the solution
10. Deploy in the namespace
11. Run the Orchestrator
12. Access to the demo GUI
13. Access the demo, test before invest

Integrated

Demo

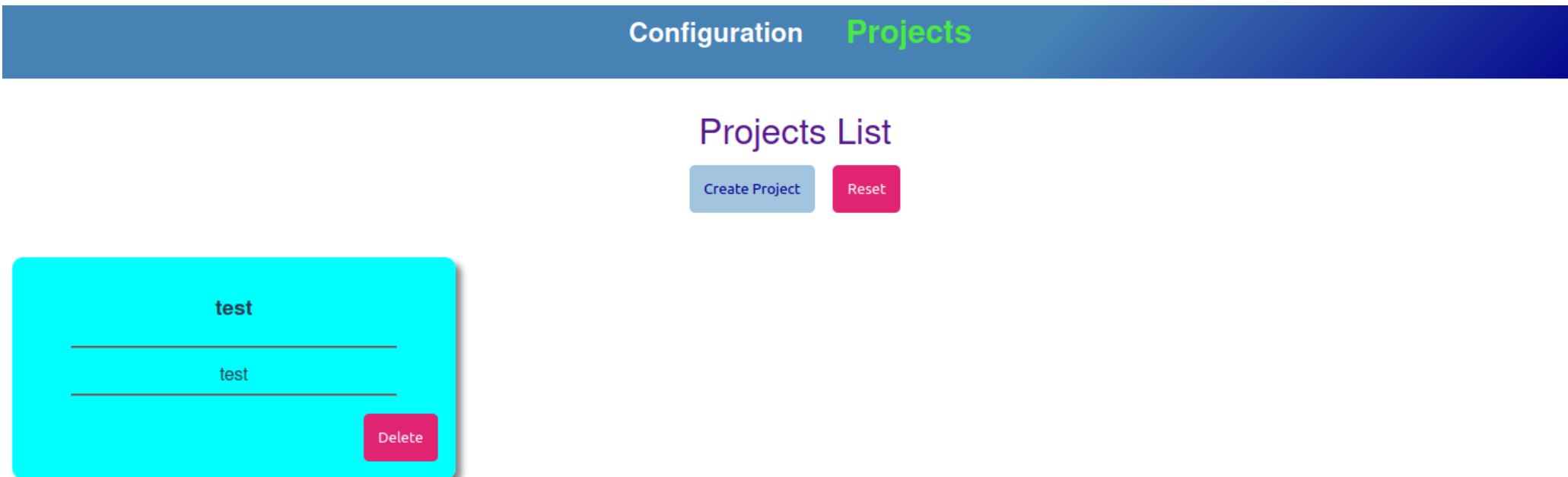
Setup

- Kube Config setup



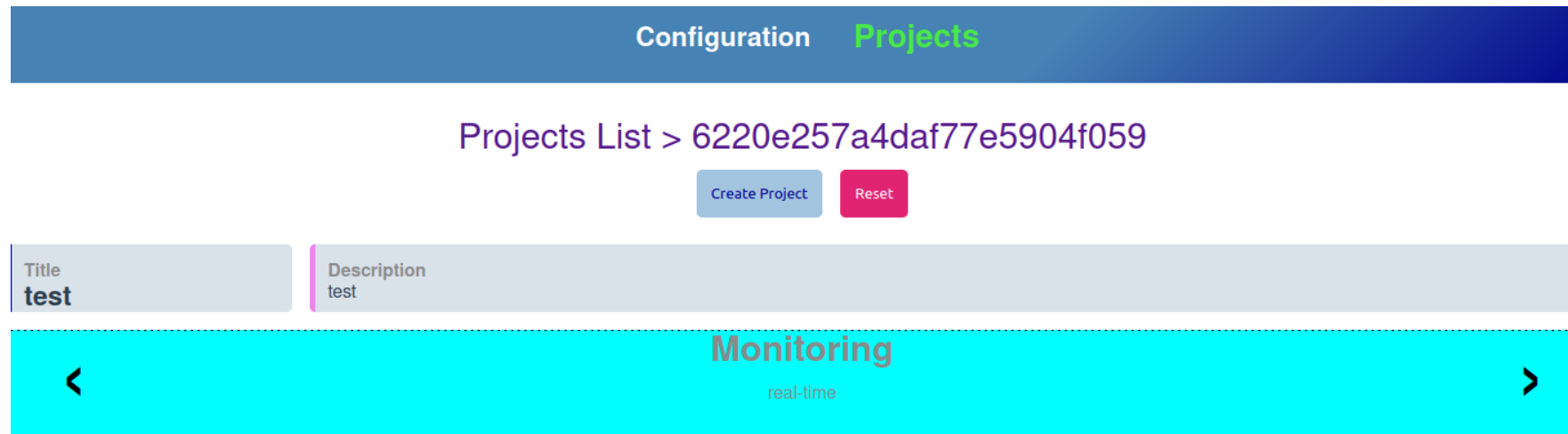
List Solutions

- Upload a « solution.zip »
- Choose in the list of published « public » solutions from AI Experiments (Federation API)



Control container deployment

- Realtime feedback on container deployment



Launch orchestration

- Launch the orchestration and get feedback

Configuration

Projects

Projects List > 6220e257a4daf77e5904f059

Create Project

Reset

Title
test

Description
test

<

Orchestration

>

☐ Recursive

Launch Orchestration

Next Step

For this iteration (March 2022)

- Full API integration
- Security and orchestrator fix (external clusters)
- UX Design integration

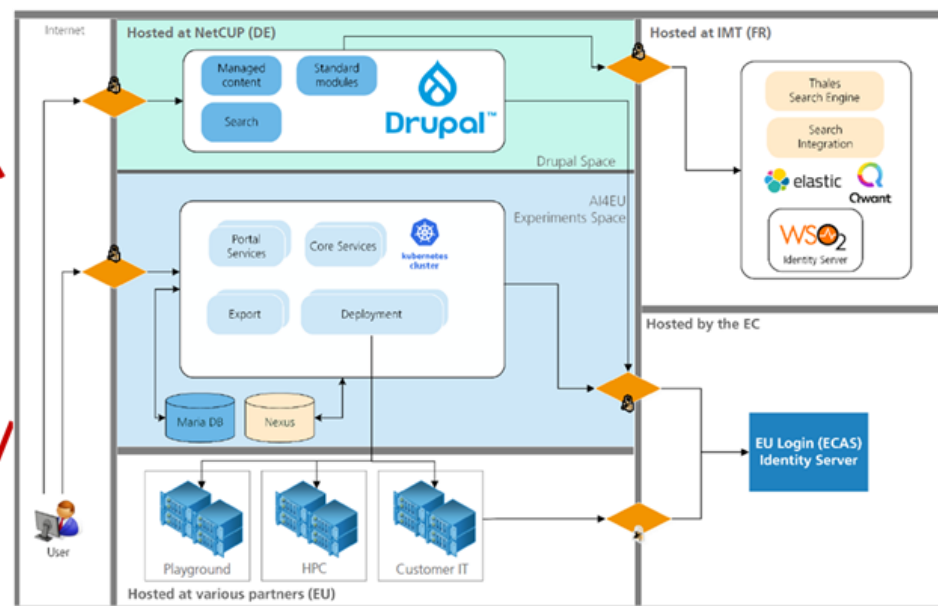
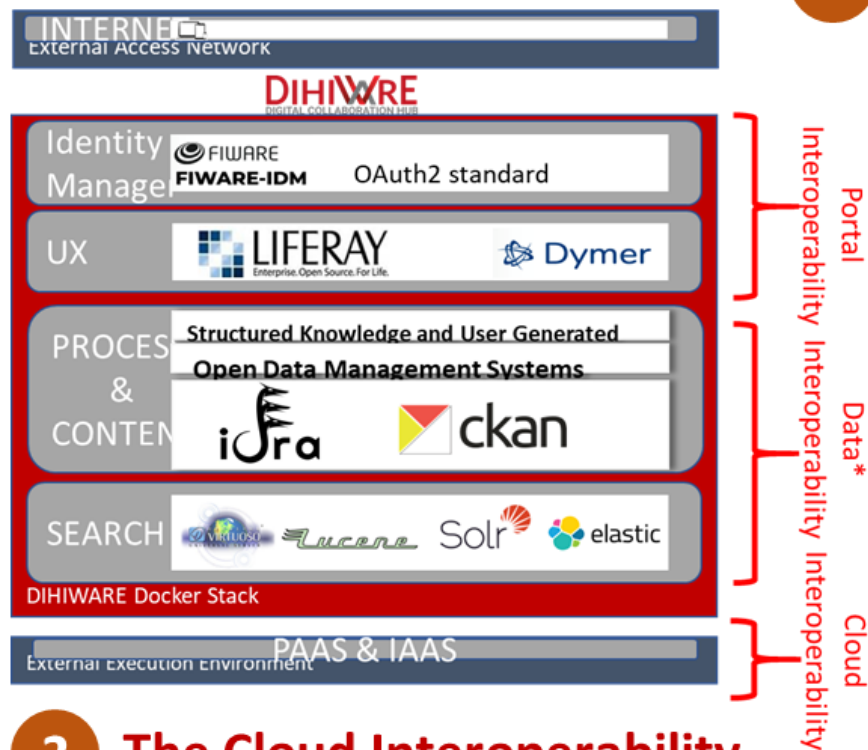
For the next iteration

- Integration with DihiWare (GIT // Docker Repository // AI Experiments // Execution) to fill the gap with portal interoperability
- IDS connector in AI Experiments to fill the gap with data interoperability

DIH4AI Portal, Data & Cloud Interoperability with AloD

1 The Portal Interoperability

To integrate **Users** and **search content** of both the Regional and the European platforms.



2 The Cloud Interoperability

To integrate **Services** and **AI Infrastructures** of both the Regional and the European platforms.

3 The Data Interoperability

To integrate **Data Repositories** of both the Regional and the European platforms

Next steps and questions

Questions to AI-on-Demand community

Two User journey to consider:

- Persona1 coming from the DIH4AI ecosystem and willing to continue their exploration from the DIH4AI Portal to the AI-on-Demand Platform
- Persona2 coming from the AI4EU ecosystem and able to seamless receive information from the AI-on-Demand Platform of the DIH4AI ecosystem

Questions to AI-on-Demand community

Two User journey to consider:

- Persona1 coming from the DIH4AI ecosystem and willing to continue their exploration from the DIH4AI Portal to the AI-on-Demand Platform
- Persona2 coming from the AI4EU ecosystem and able to seamless receive information from the AI-on-Demand Platform of the DIH4AI ecosystem

Identities

Search

CMS

Questions to AI-on-Demand community

Two User journey to consider:

- Persona1 coming from the DIH4AI ecosystem and willing to continue their exploration from the DIH4AI Portal to the AI-on-Demand Platform
- Persona2 coming from the AI4EU ecosystem and able to seamless receive information from the AI-on-Demand Platform of the DIH4AI ecosystem

Identities

Search

CMS

We would like to know more about APIs and Components related to these topics:

Which Project? Status of the API? Access to the API (certificate, app token)?

How to exchange over requirements?

Questions to AI-on-Demand community

SSO and Identities: Application/system level trust, Organization identification/authentication, and user-level (additional fields?)

Search: Any plan to integrate an API holistic layer to get a full view of Experiments & CMS

CMS: Any news regarding CMS API (scope, technology, status, organizations/projects in charge) ?