Platform Federation: Realisation of a Digital Ecosystem

PHARAON

Pilots for Healthy and Active Ageing

Information Catalyst for Enterprise – ICE

Dr. Usman Wajid| Technical Director

AgeingFit 2022

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Overview

1

Step 0: Natural Ecosystems

2

Step 1: Natural Ecosystems Approach

3

Step 2: Platform Ecosystems

4

Step 3: Federation Layer

5

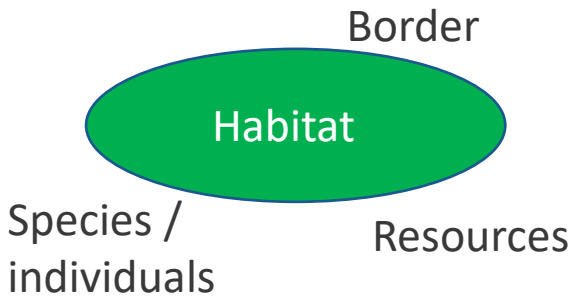
Step 4: Federated Services

6

Step 5: Federated Ecosystem

Natural Ecosystems

- In nature…
  - Habitat
  - Border
  - Species/individuals
  - Resources



Natural Ecosystems Approach

- In nature…
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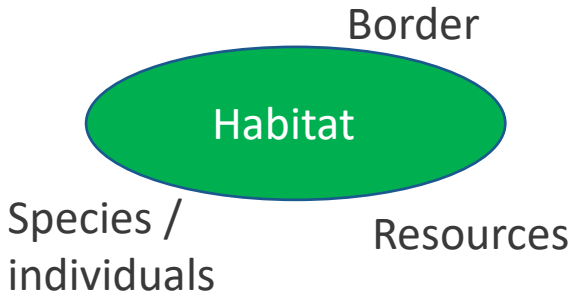
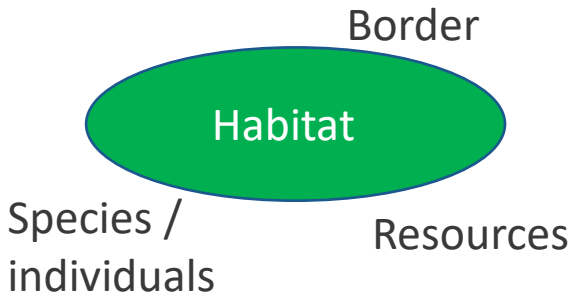
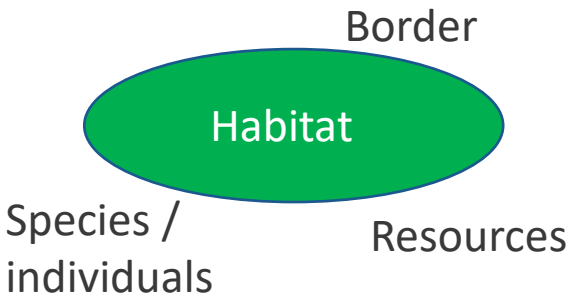
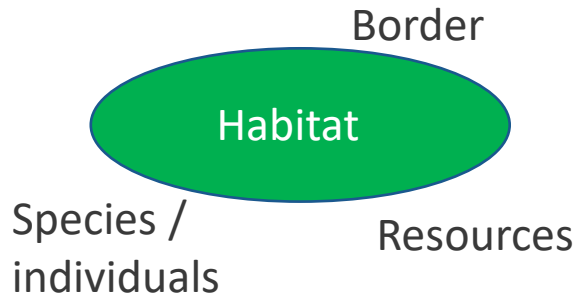


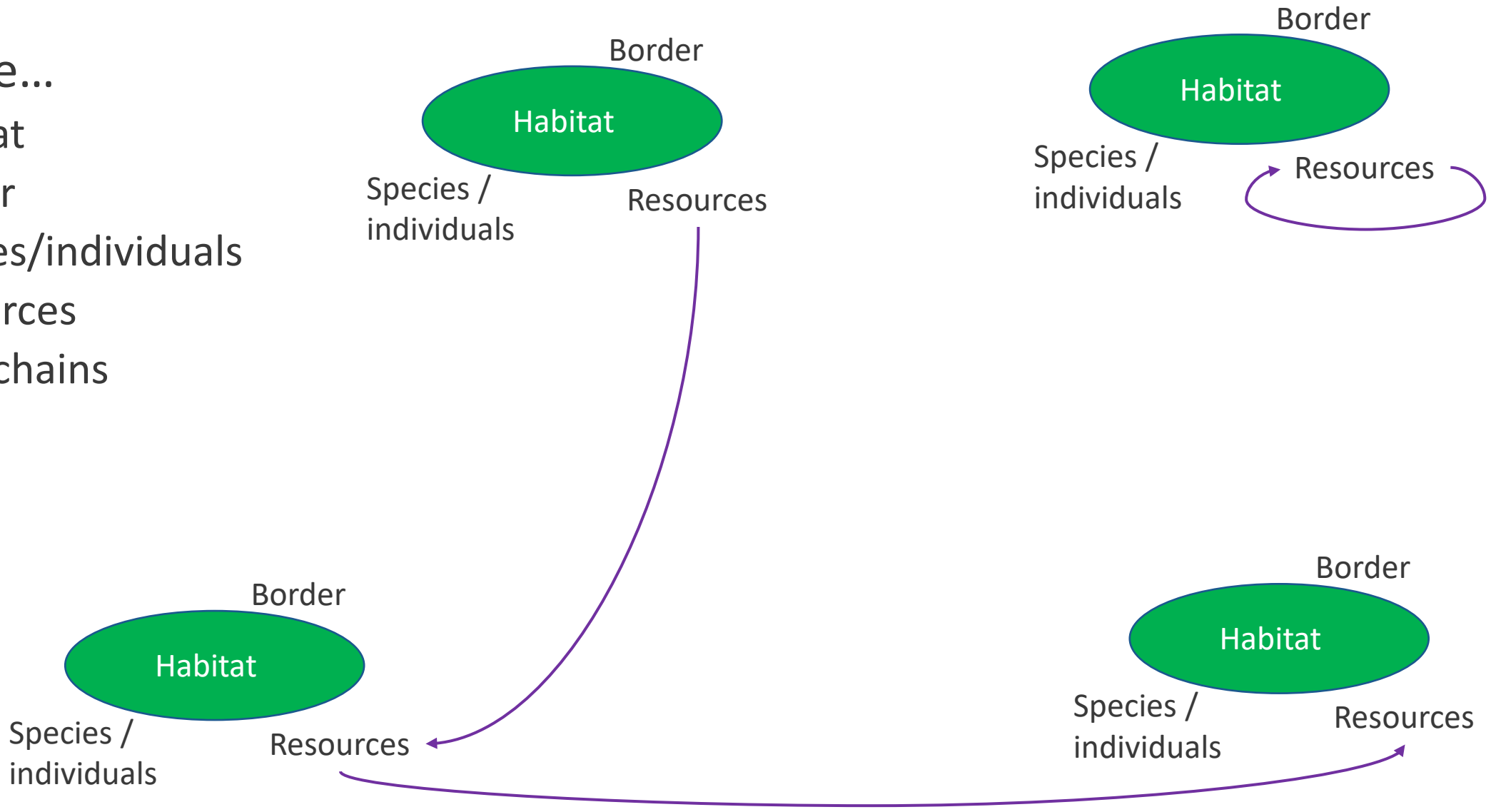






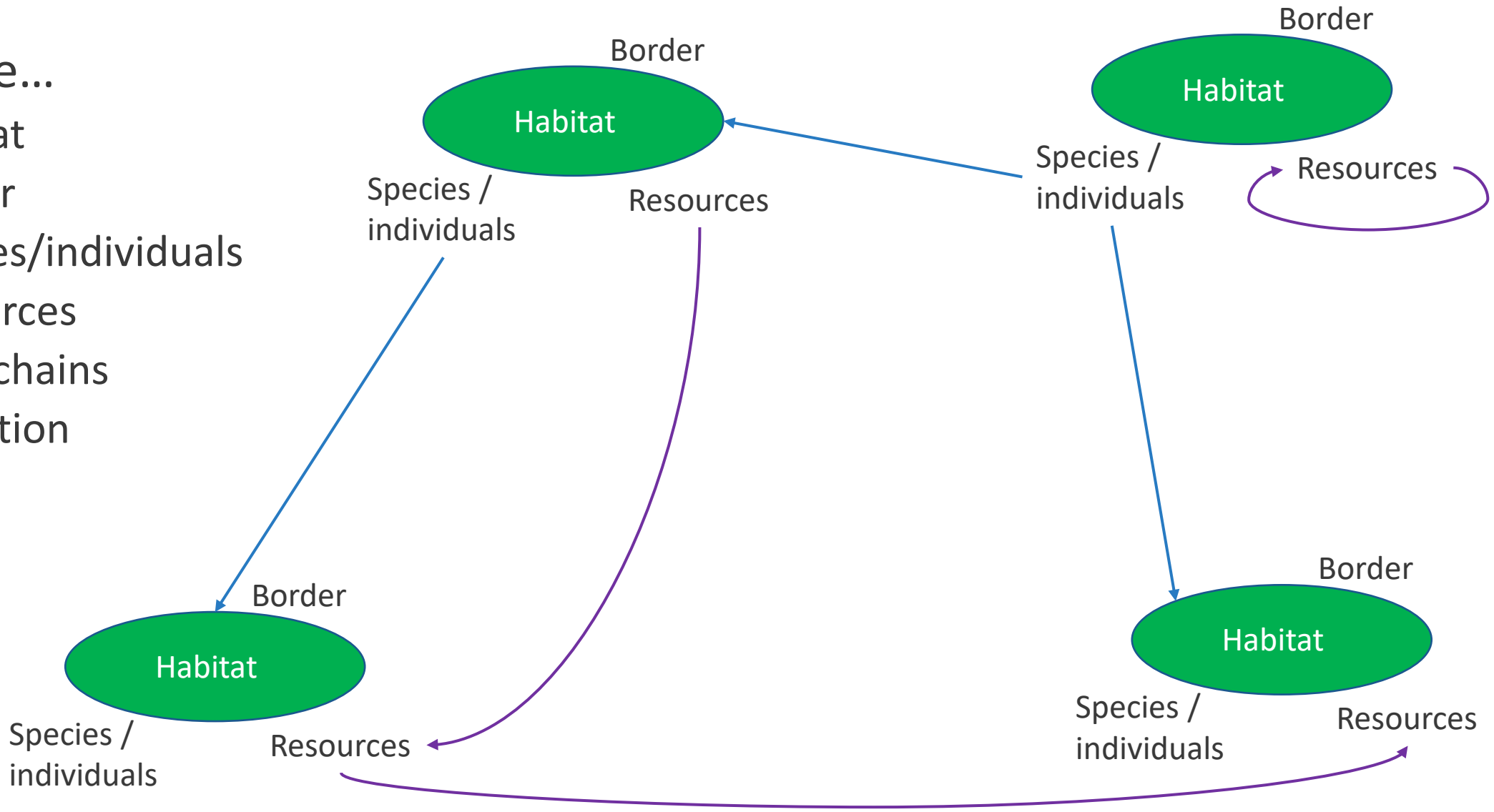
Natural Ecosystems Approach

- In nature…
  - Habitat
  - Border
  - Species/individuals
  - Resources
  - Food chains



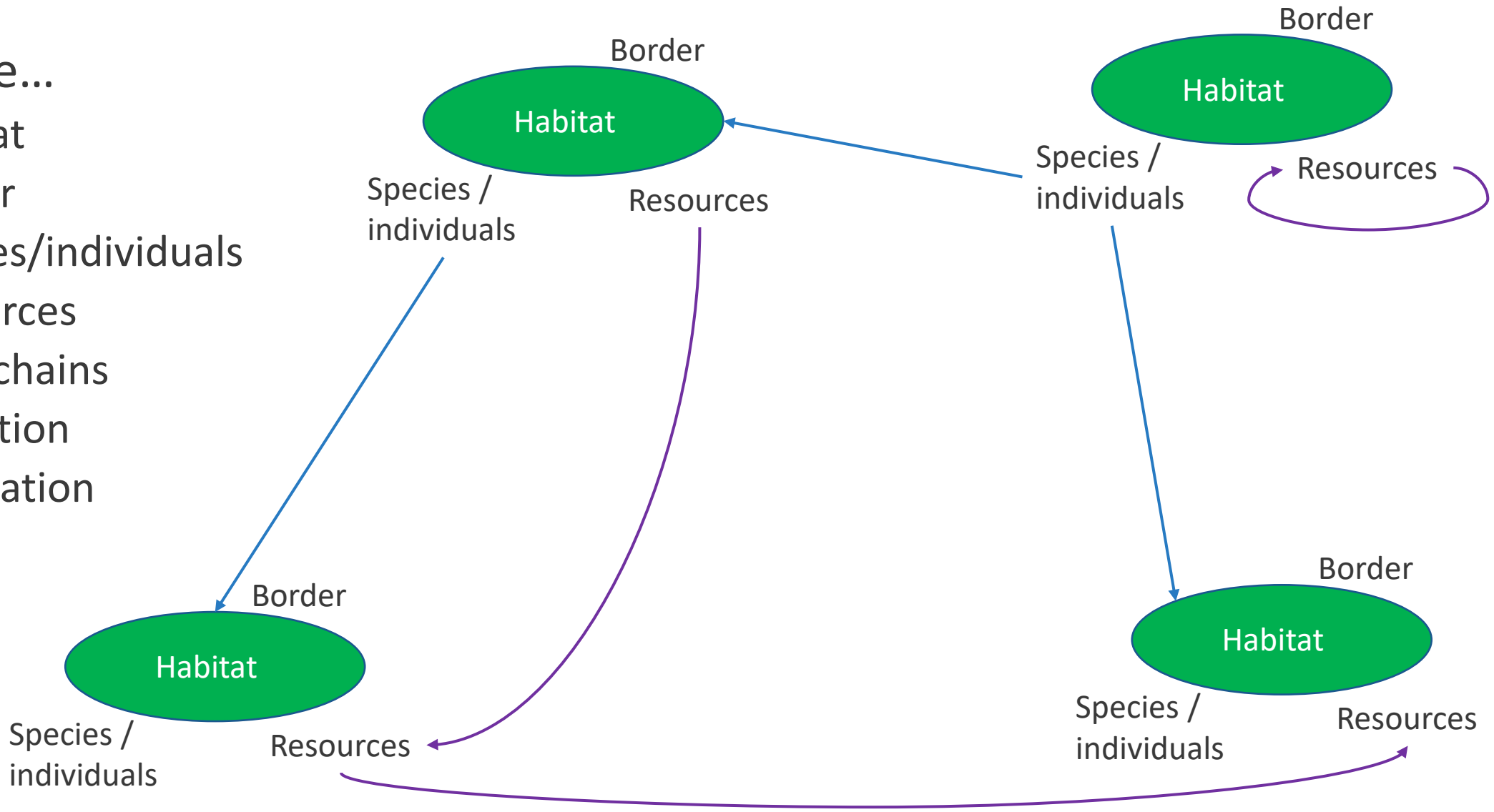
Natural Ecosystems Approach

- In nature…
  - Habitat
  - Border
  - Species/individuals
  - Resources
  - Food chains
  - Migration



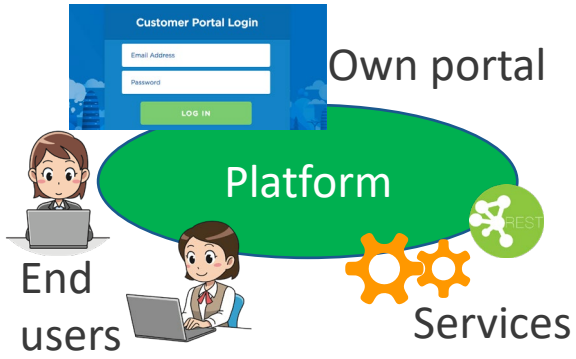
Natural Ecosystems Approach

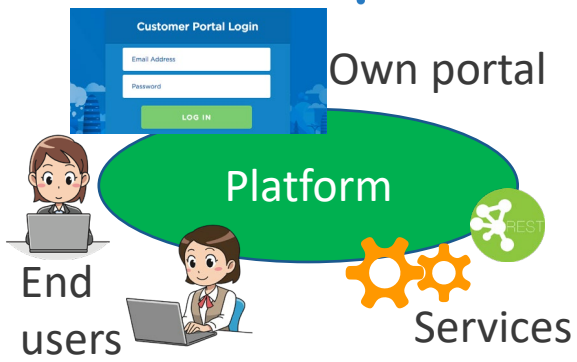
- In nature…
  - Habitat
  - Border
  - Species/individuals
  - Resources
  - Food chains
  - Migration
  - Adaptation

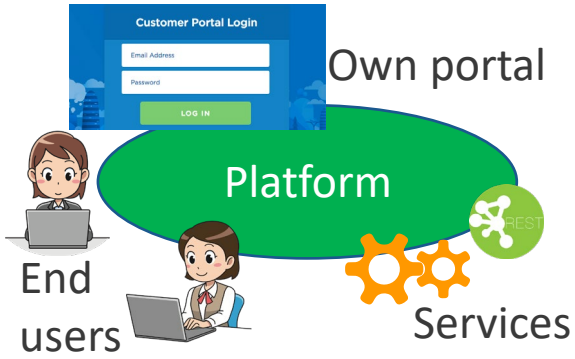


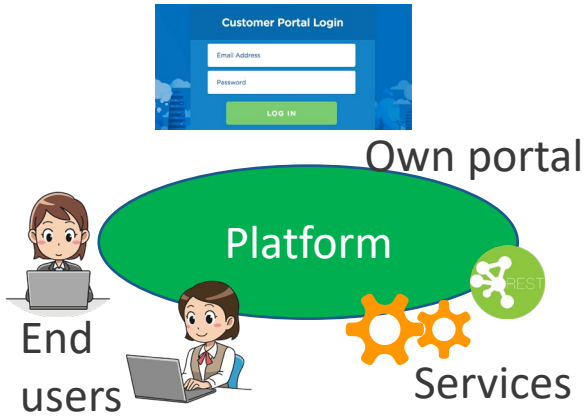
Platform Ecosystems

- Independent platforms
  - Habitat →
  - Border →
  - Species →
  - Resources →
  - Food chains →
  - Migration →
  - Adaptation →



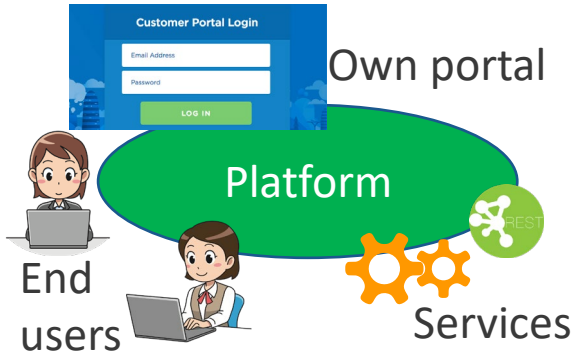


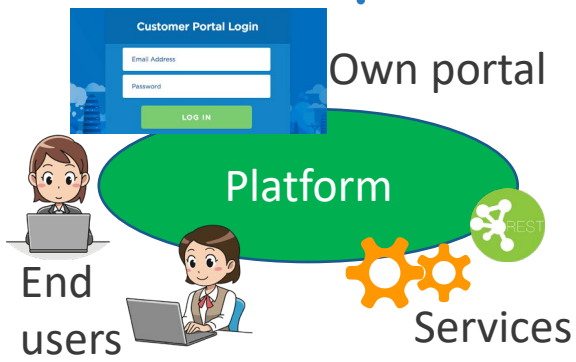


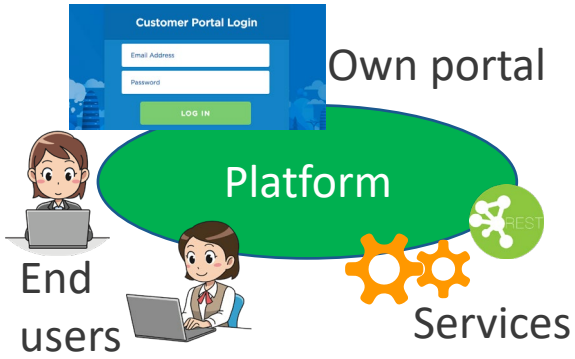


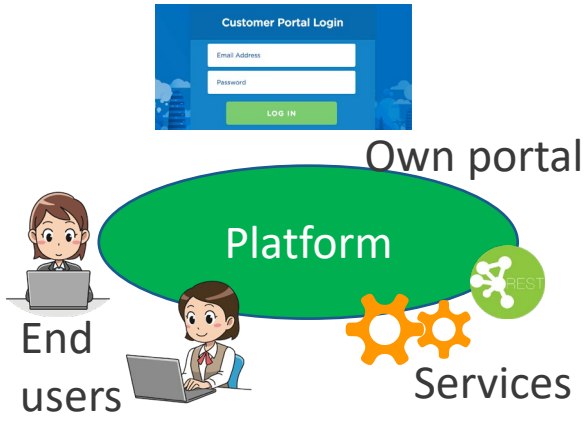
Platform Ecosystems

- Independent platforms
  - Habitat → Platform
  - Border → Own portal
  - Species → Users
  - Resources → Services
  - Food chains →
  - Migration →
  - Adaptation →



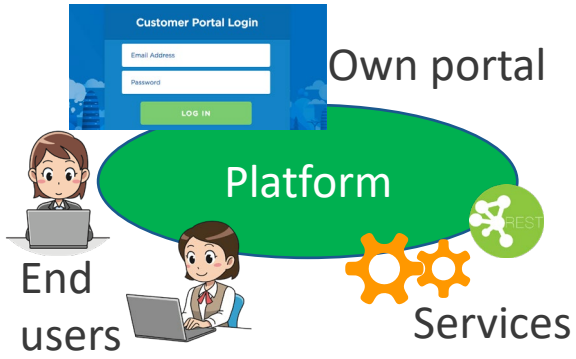


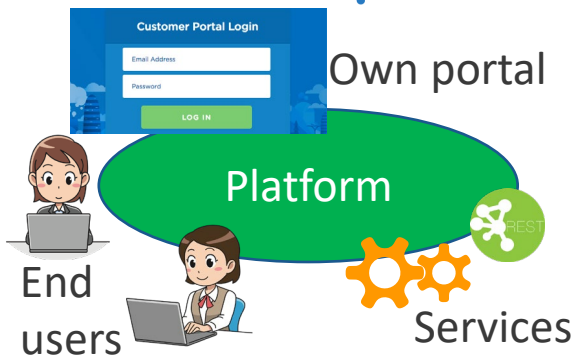


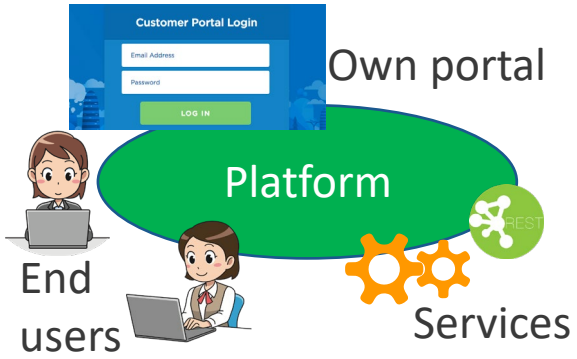


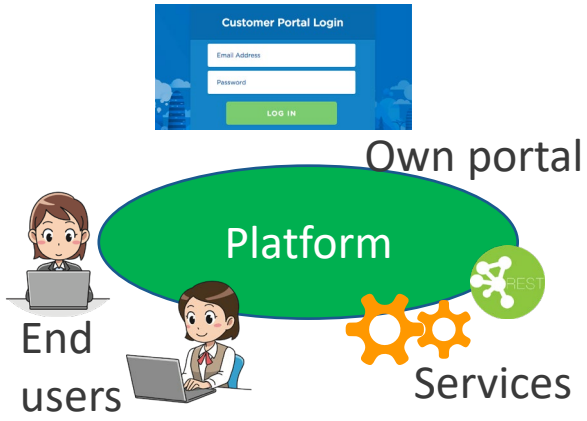
Platform Ecosystems

- Independent platforms
  - Habitat → Platform
  - Border → Own portal
  - Species → Users
  - Resources → Services
  - Food chains → Limited within each platform
  - Migration → Non existent
  - Adaptation → Limited, if any



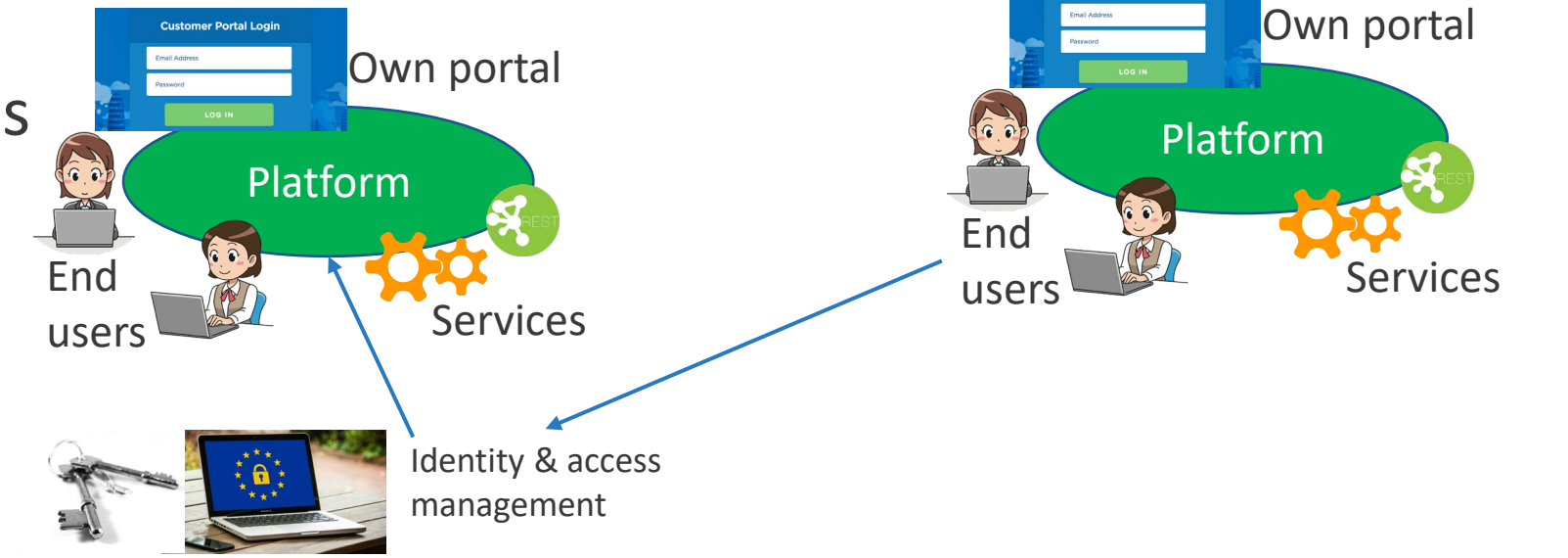


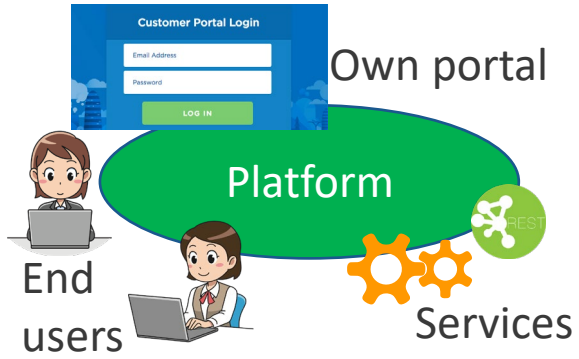


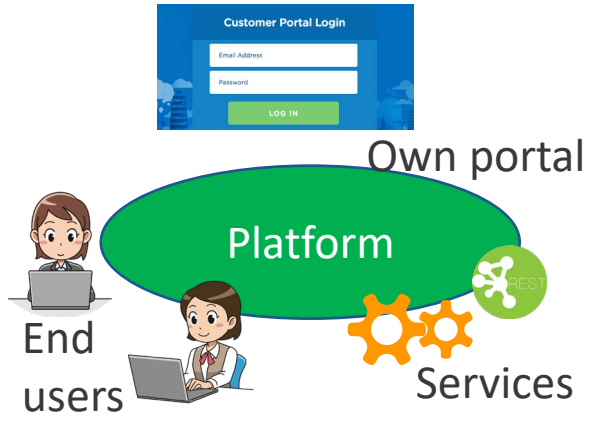


Federation Layer

- Central identity & access management
  - Let users “migrate” and visit other habitats

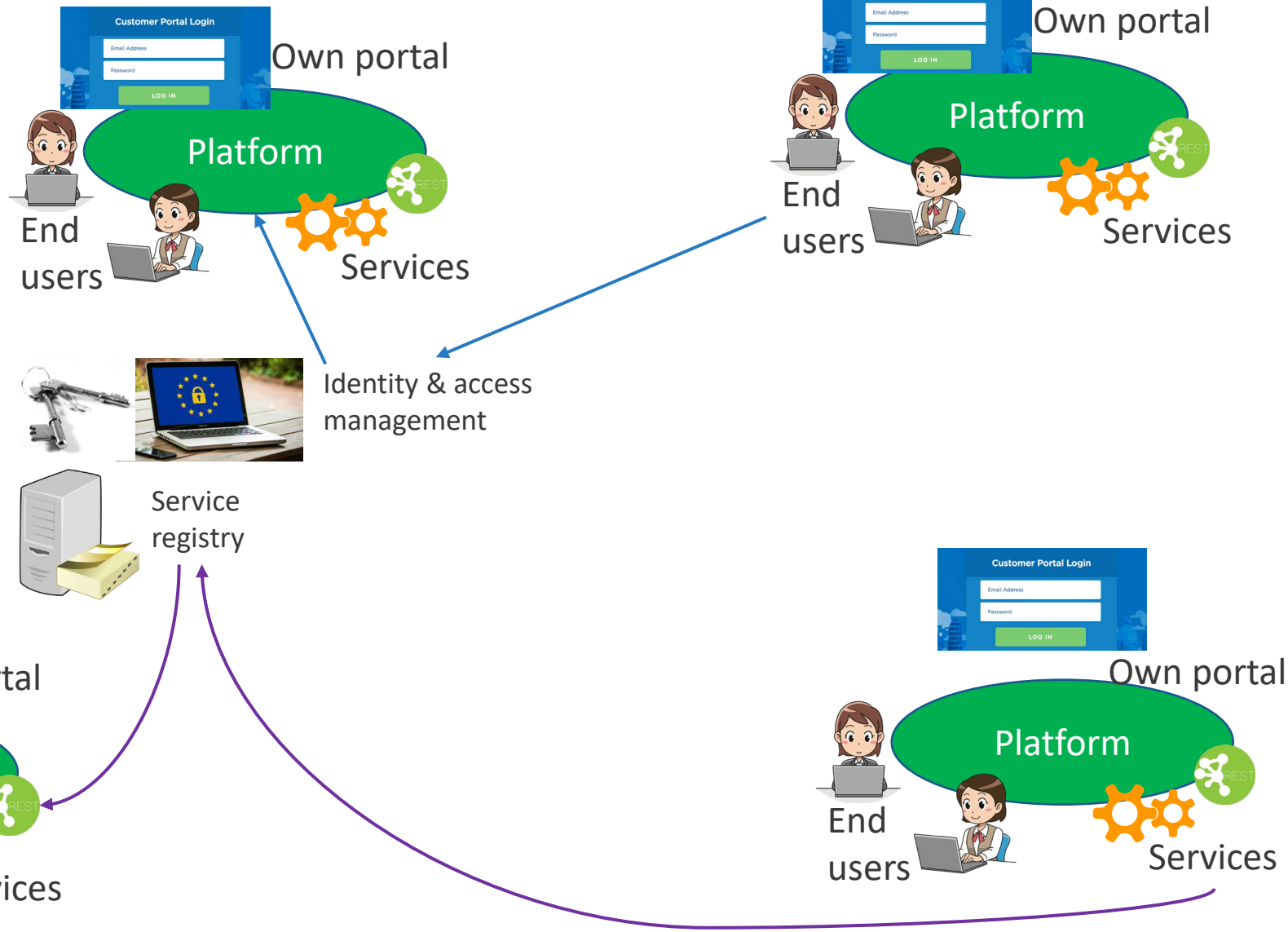






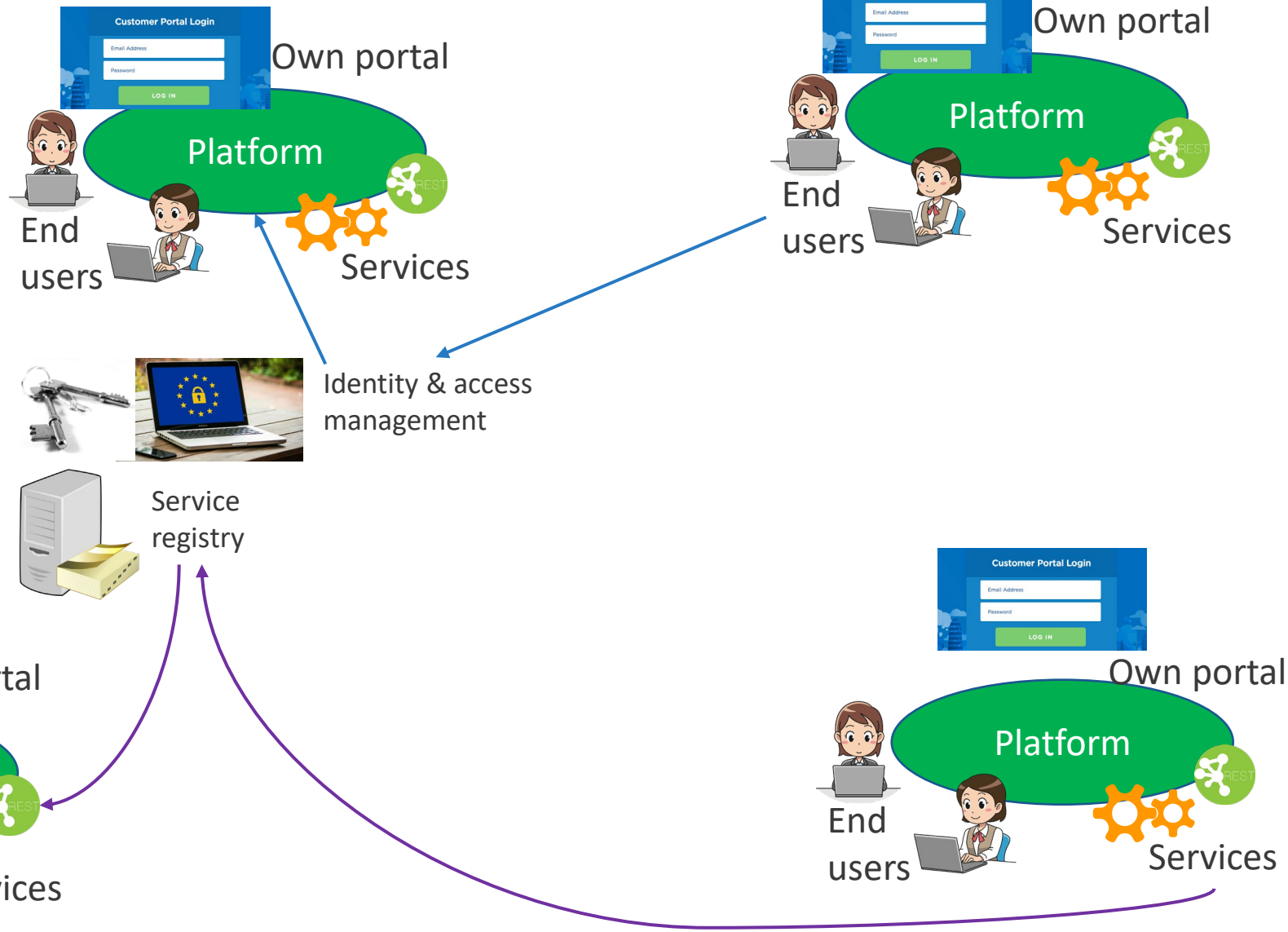
Federation Layer

- Central service registry
  - Let services connect across platforms and form “food chains”



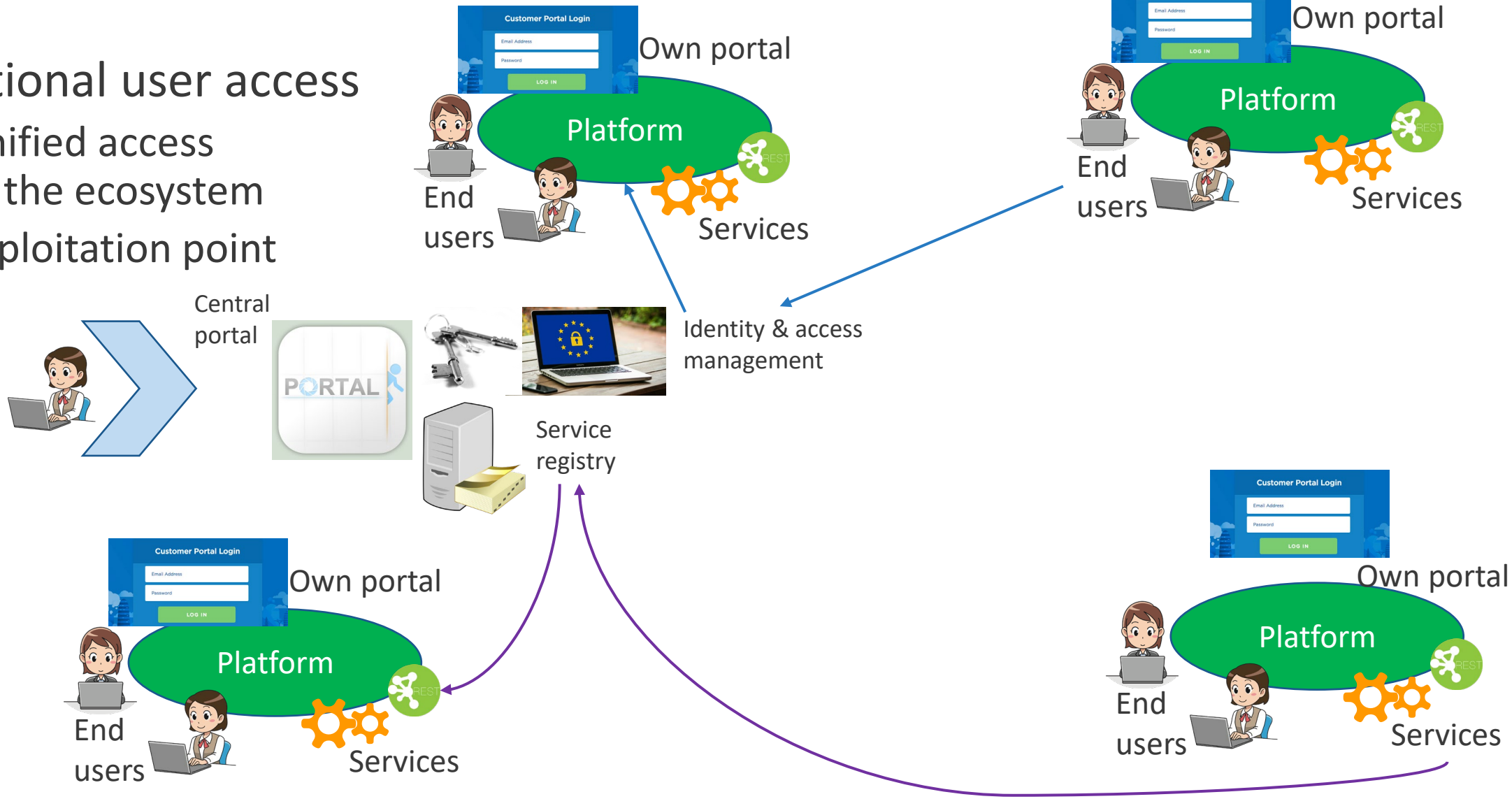
Federation Layer

- Central service registry
  - Let services connect across platforms and form “food chains”
  - Platform level interoperability is needed



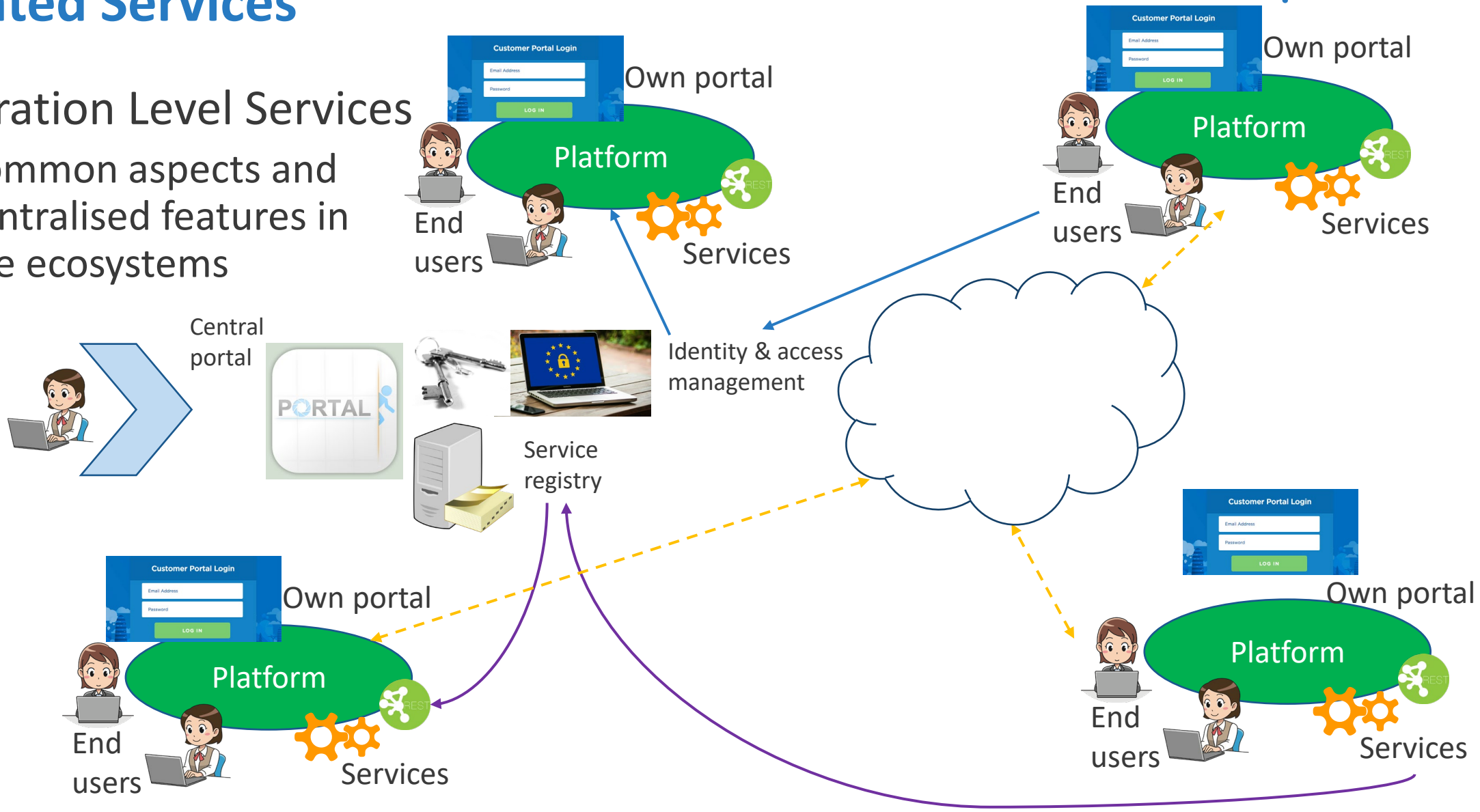
Federated Services

- Additional user access
  - Unified access to the ecosystem
  - Exploitation point



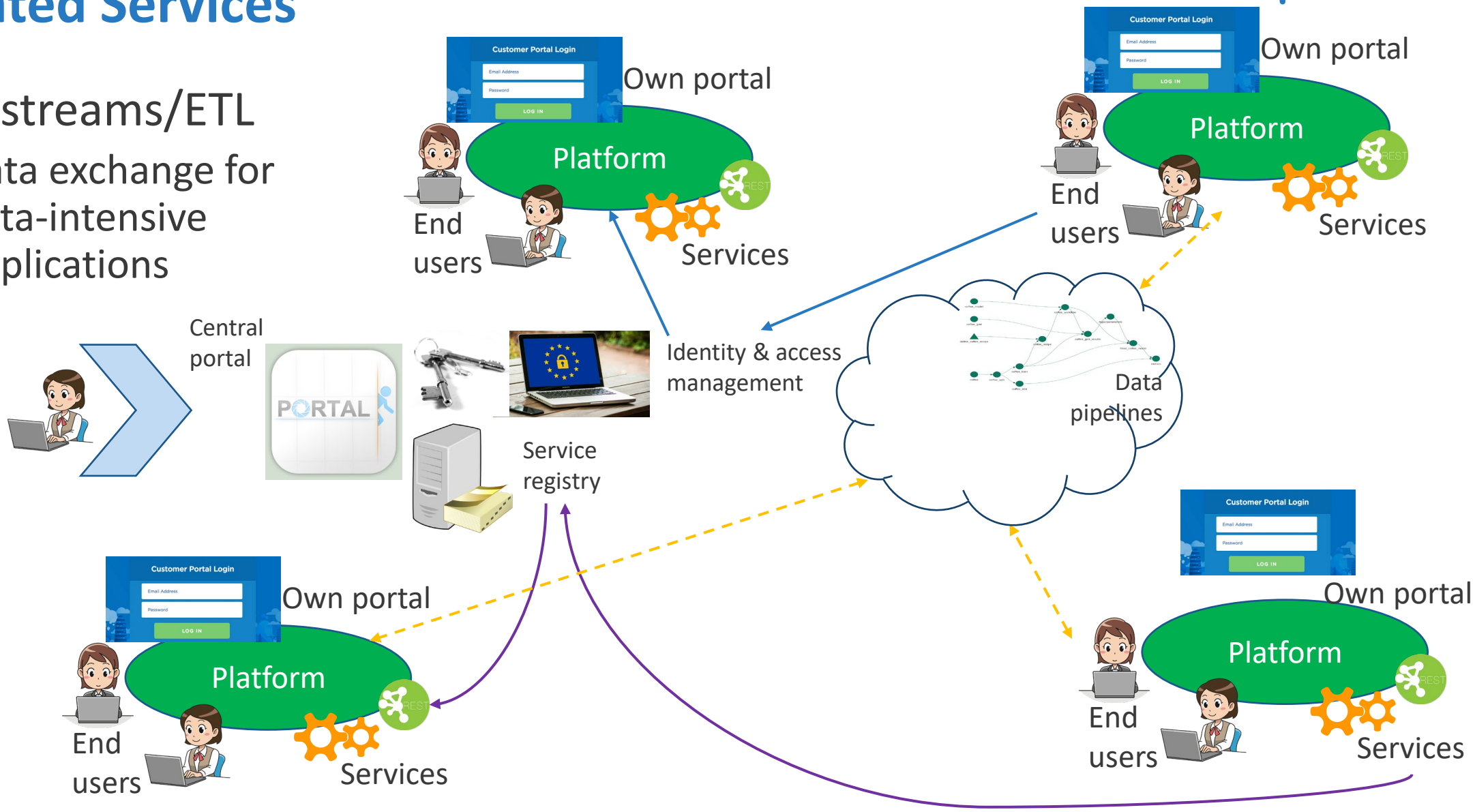
Federated Services

- Federation Level Services
  - Common aspects and centralised features in the ecosystems



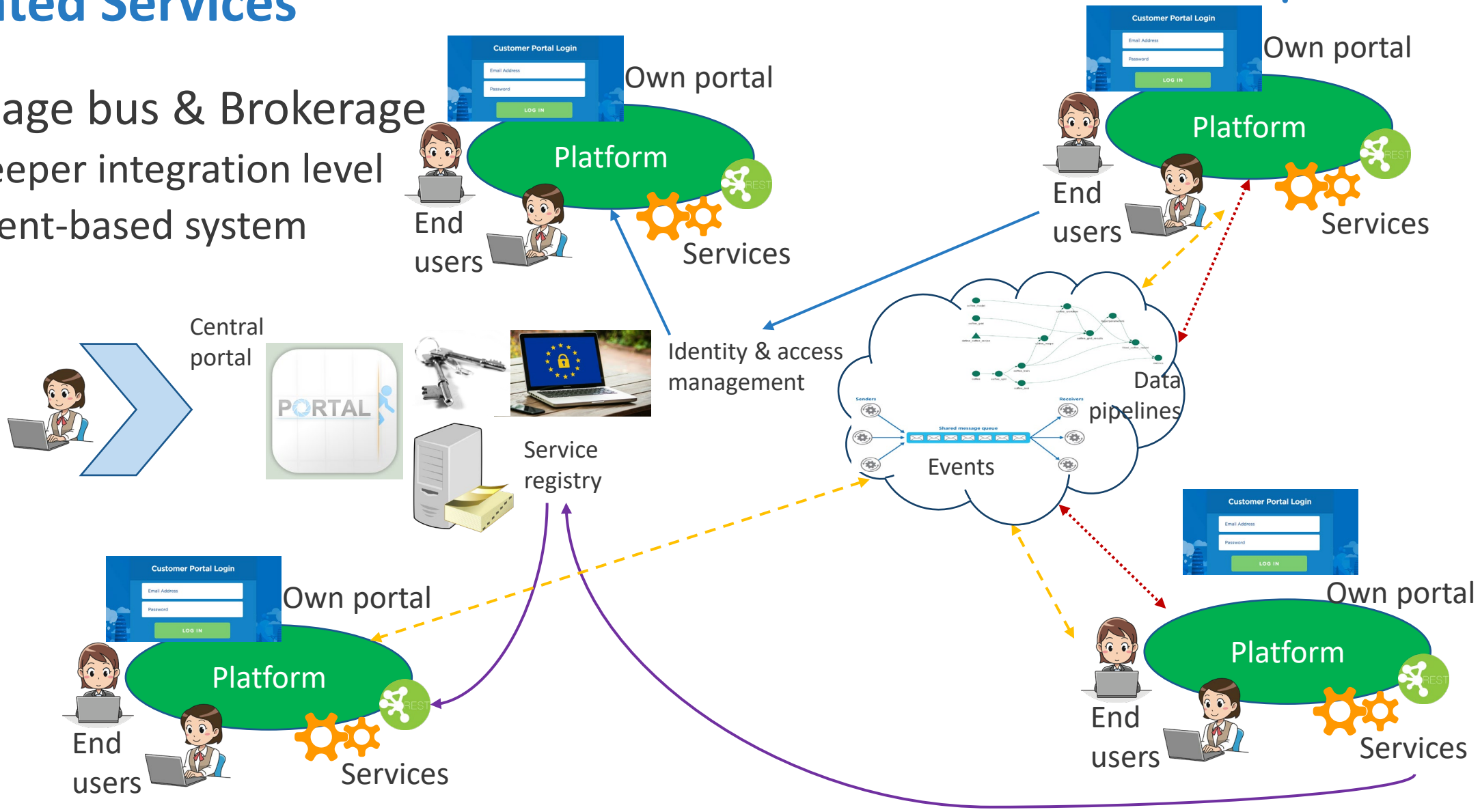
Federated Services

- Data streams/ETL
  - Data exchange for data-intensive applications

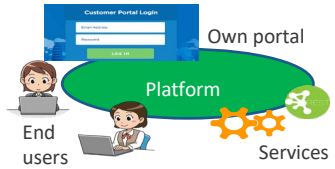


Federated Services

- Message bus & Brokerage
  - Deeper integration level
  - Event-based system



Federated Ecosystem



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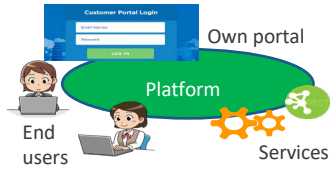

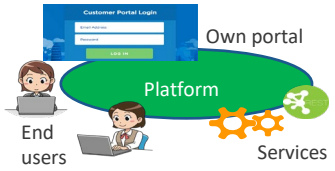

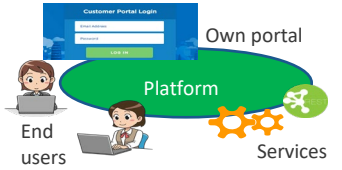

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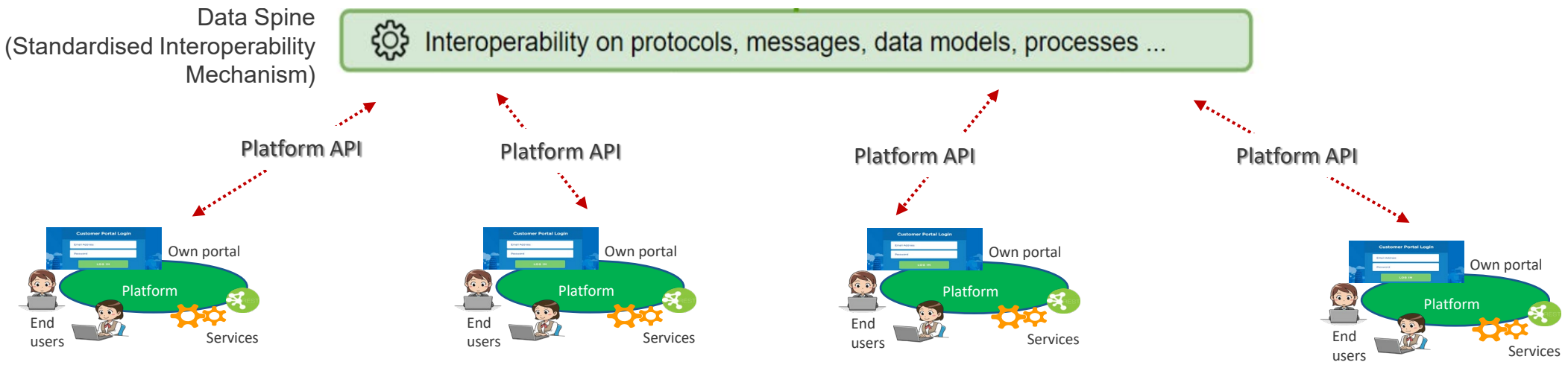

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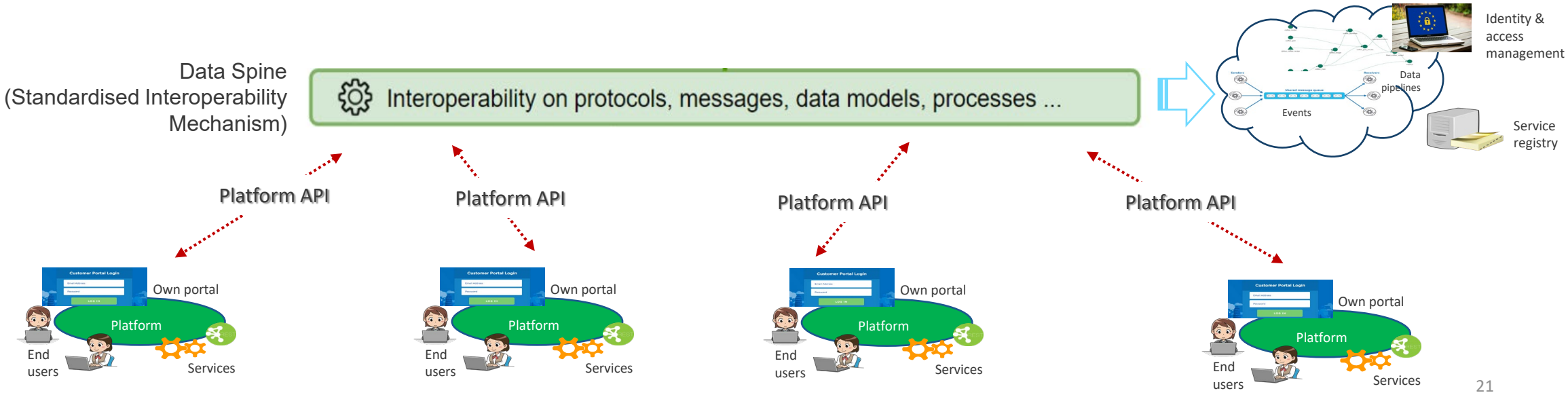

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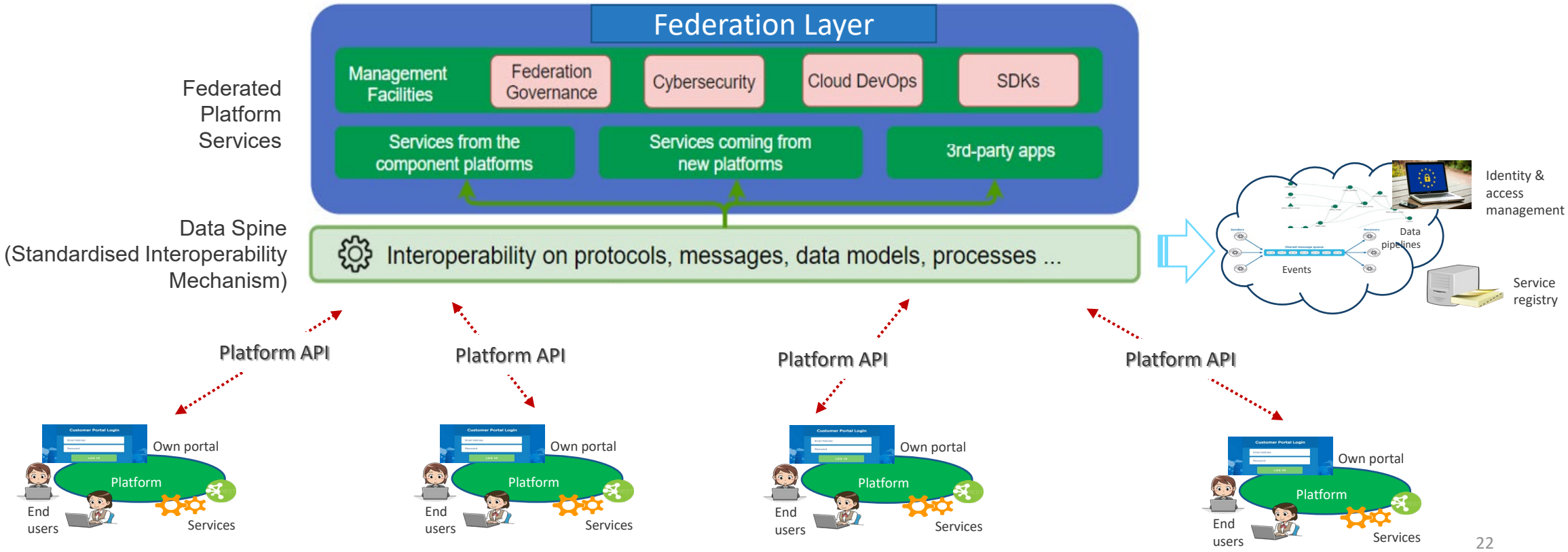
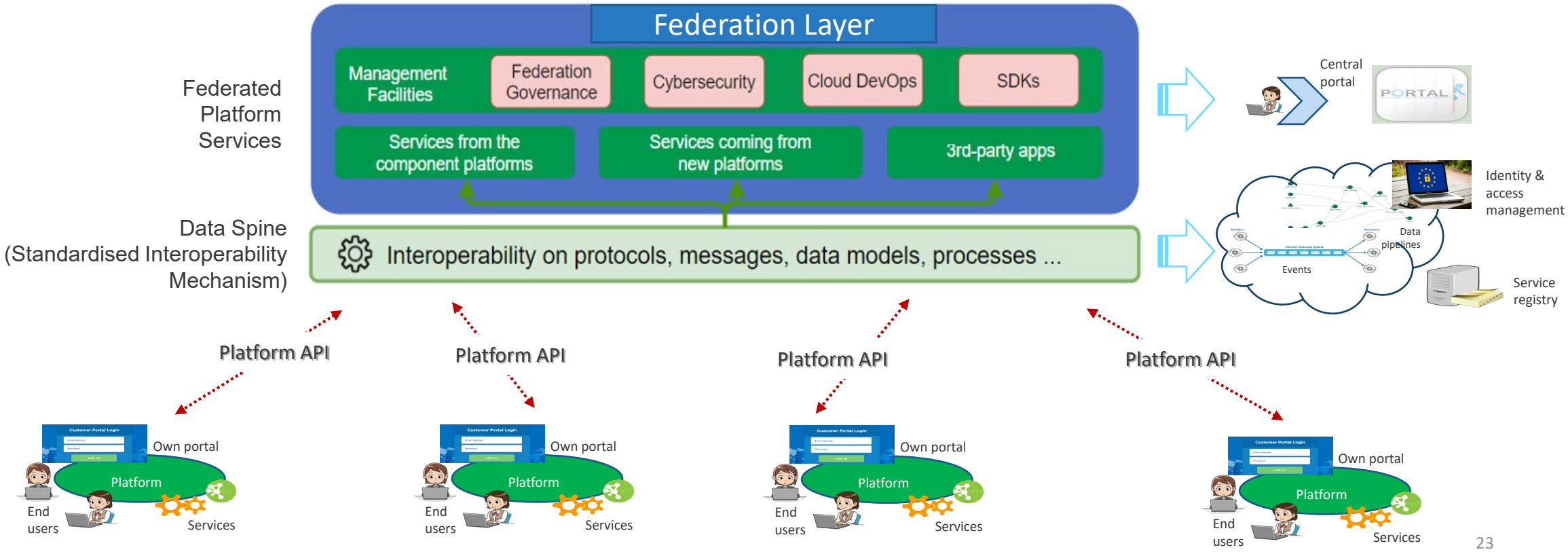


Federated Ecosystem



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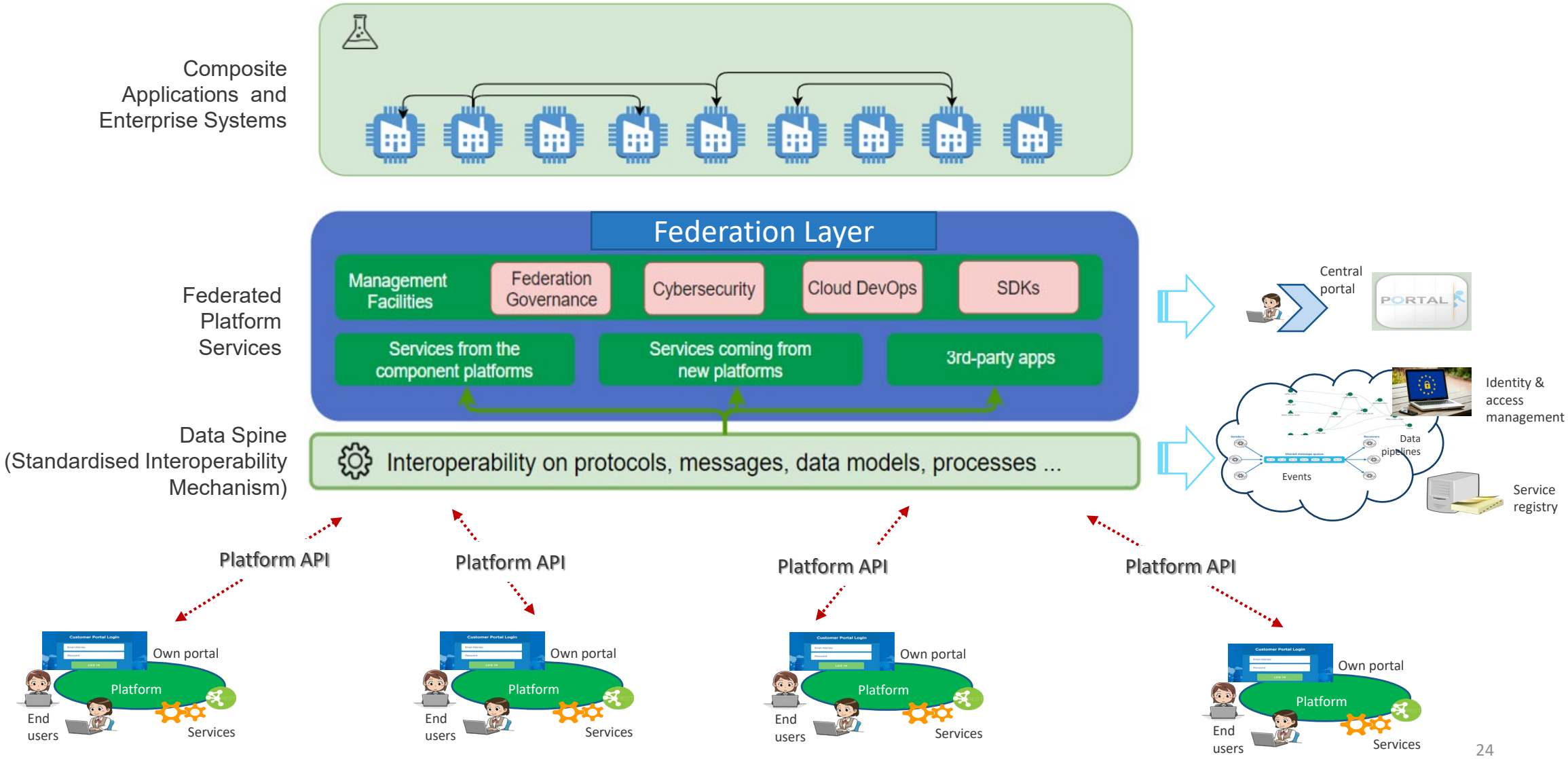
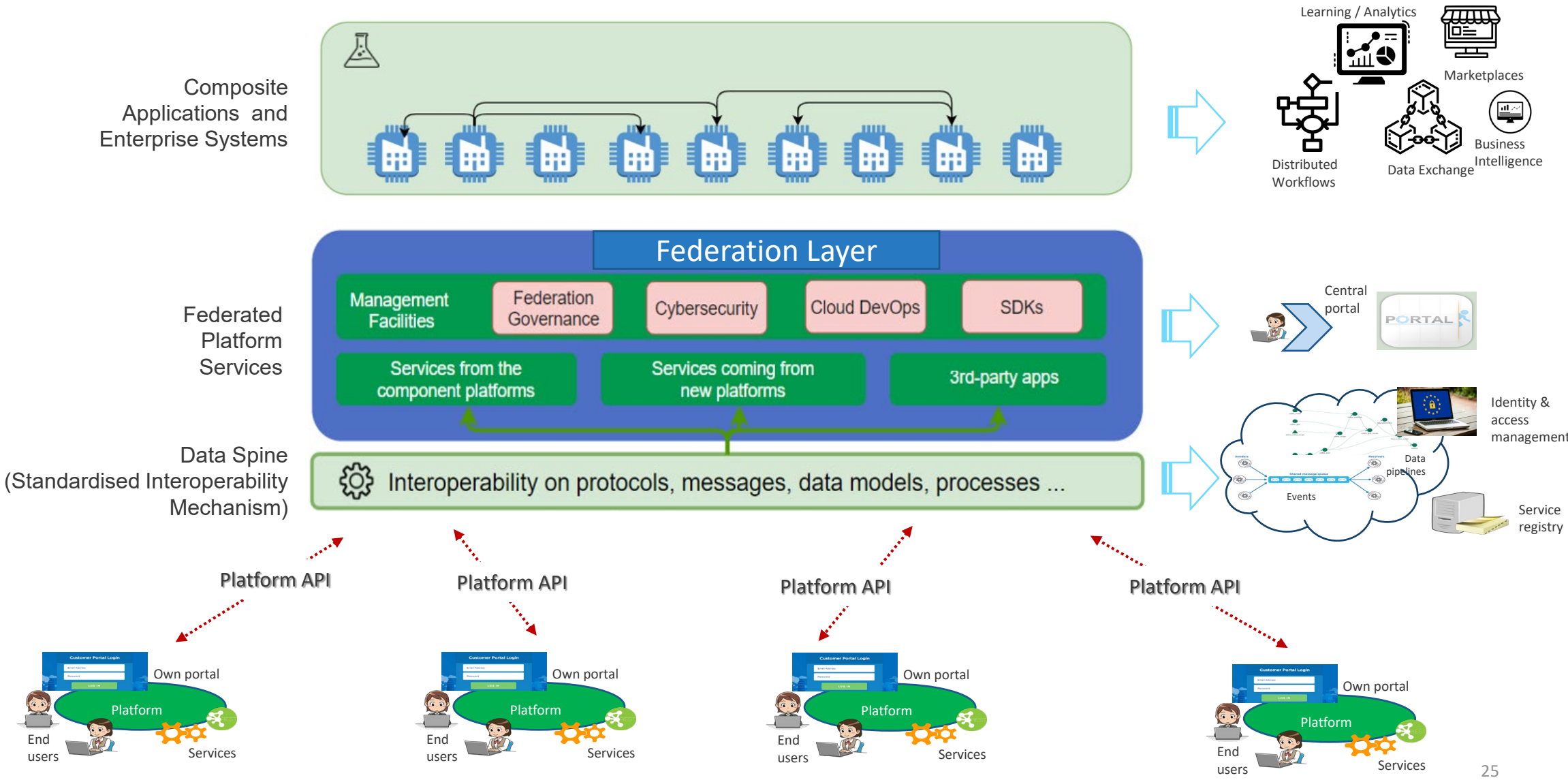
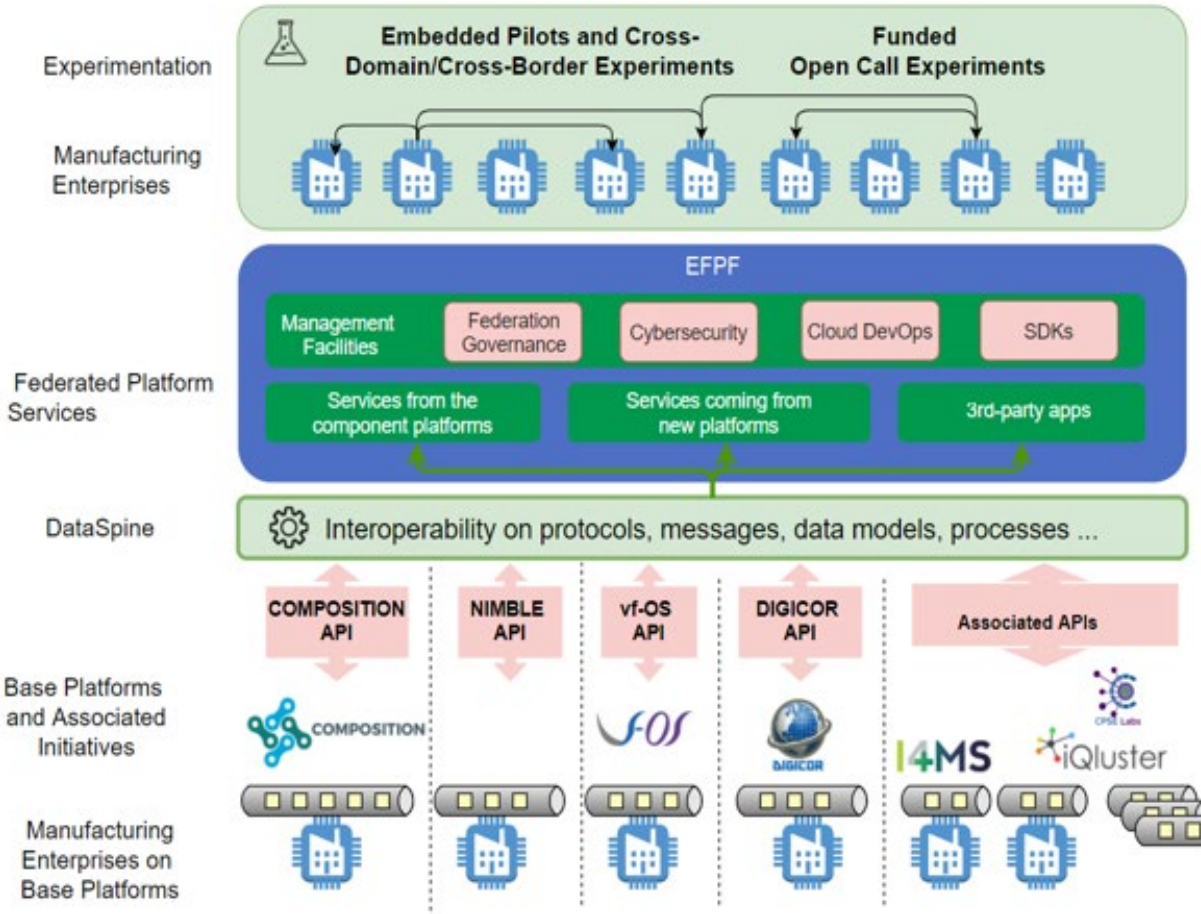


Federated Ecosystem



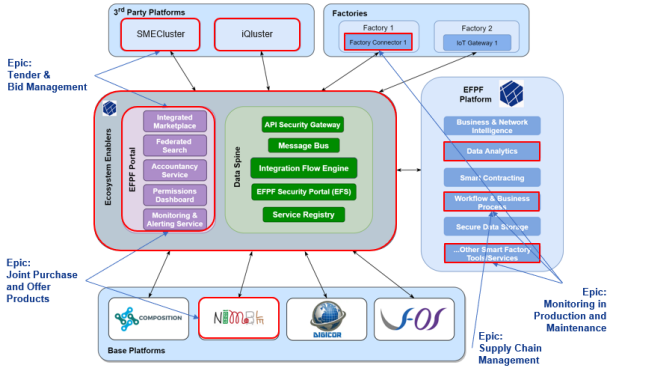
Federated Ecosystem

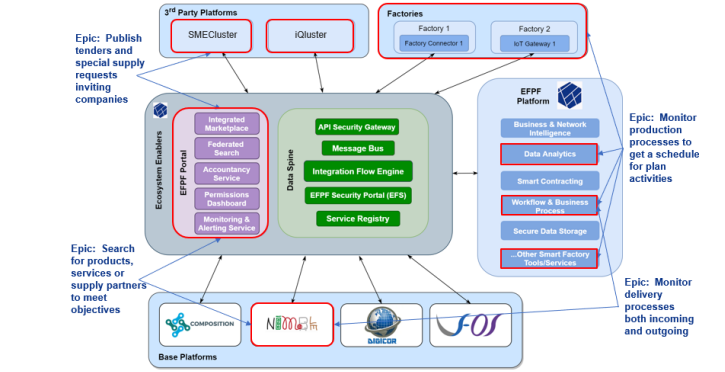
A federated smart factory ecosystem and a digital platform that interlinks different stakeholders of the digital manufacturing domain

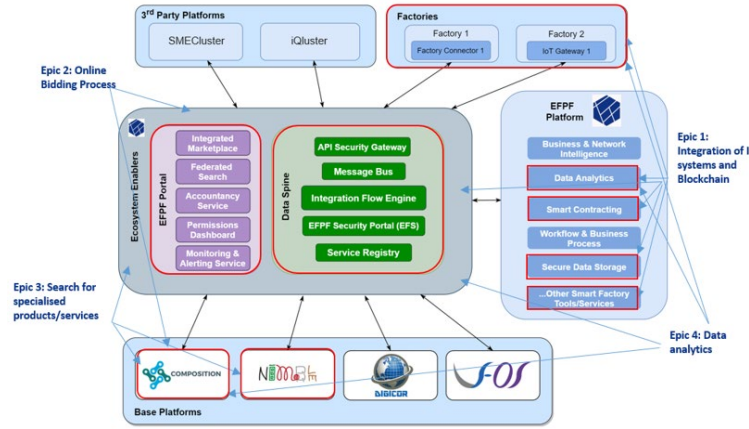


2019-2022
30 Core Partners

2021-2022
24 Open Call Partners







https://www.efpf.org/

Realisation of a Digital Ecosystem

Dr. Usman Wajid – Information Catalyst for Enterprise (ICE)

Dr. Usman Wajid
Technical Director
Information Catalyst (ICE)
GSM: +44 745 394 3997 Skype: usmanwajid
UK: +44 1270 254020 Web: www.informationcatalyst.com

LinkedIn: www.tinyurl.com/usmanwajid
NESSI: www.nessi-europe.eu
AIOTI: www.aioti.eu