

DPP Architecture

A CIRPASS Suggestion

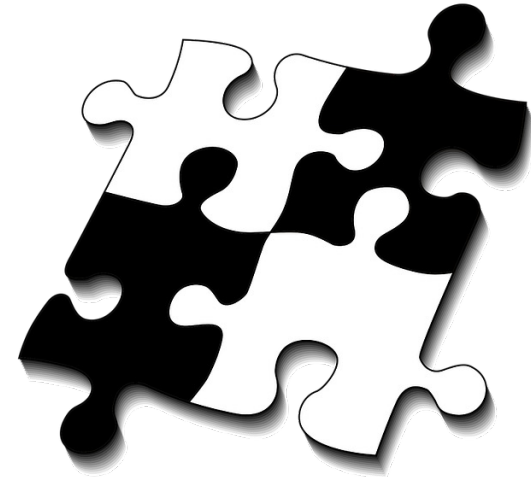
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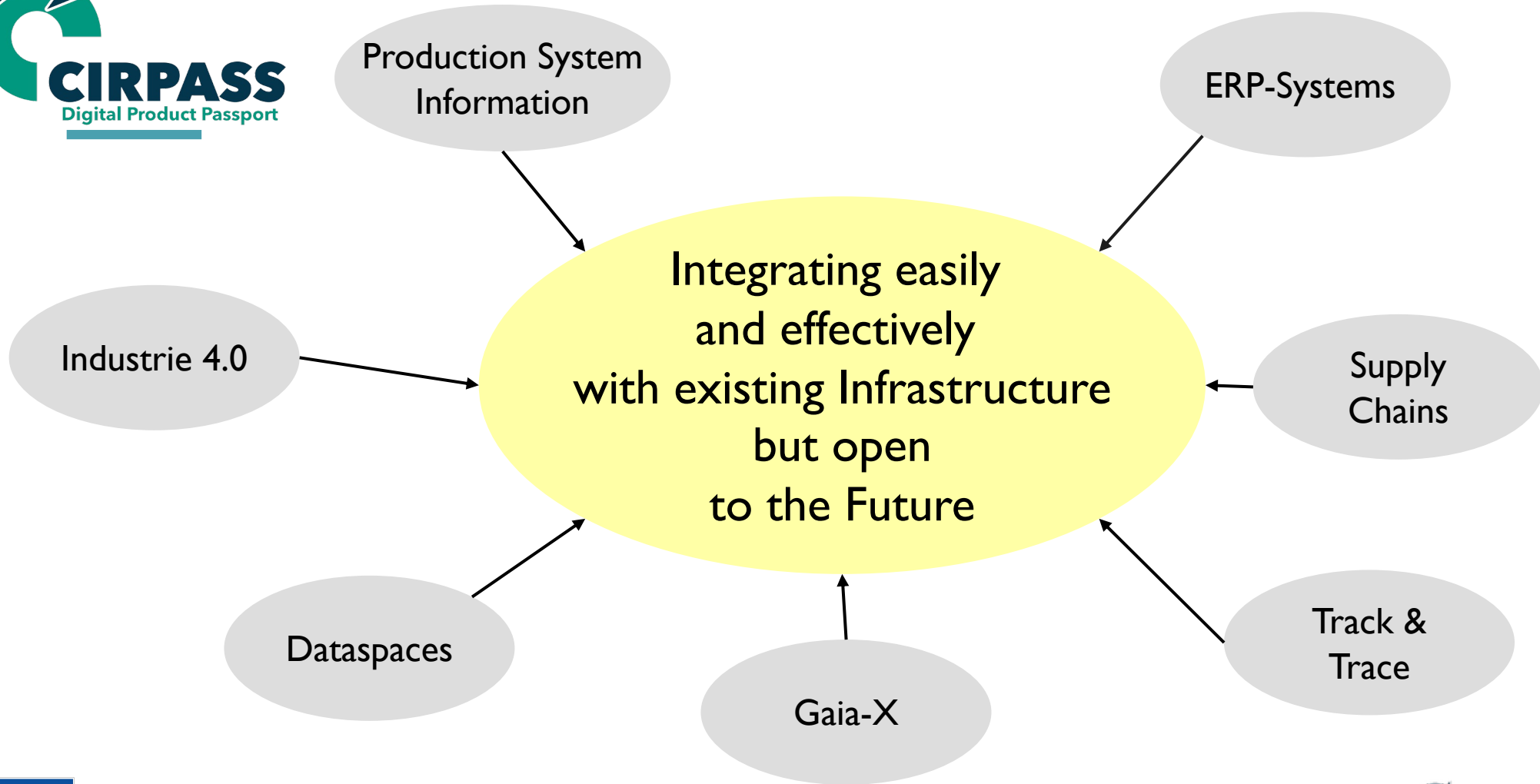
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<https://www.ercim.eu/>

Design goals

- Interoperability
 - Flexibility
 - Combinability
 - Extensibility
 - Standardised level playing field
- Product-centric
 - Decentralized in all kinds of ways





Easy to create

- Produce DPP from existing information workflows
- Combine information from a variety of sources
- Easy registration/ automated red tape API
 - API for information exchange with authorities
 - Validation tools from authorities
- **Control**
 - Access control, usage control, compliance automation



Basic Features intended

- Public DPP information for consumers
 - Easy & reliable discoverability
 - Easy to display on any device (web)
- Flexibility
 - Deliver information based on needs (role based access for “recyclers” & “repairers”)
 - Usability for authorities as data-centric system (from data to Product & not from Product to Data)

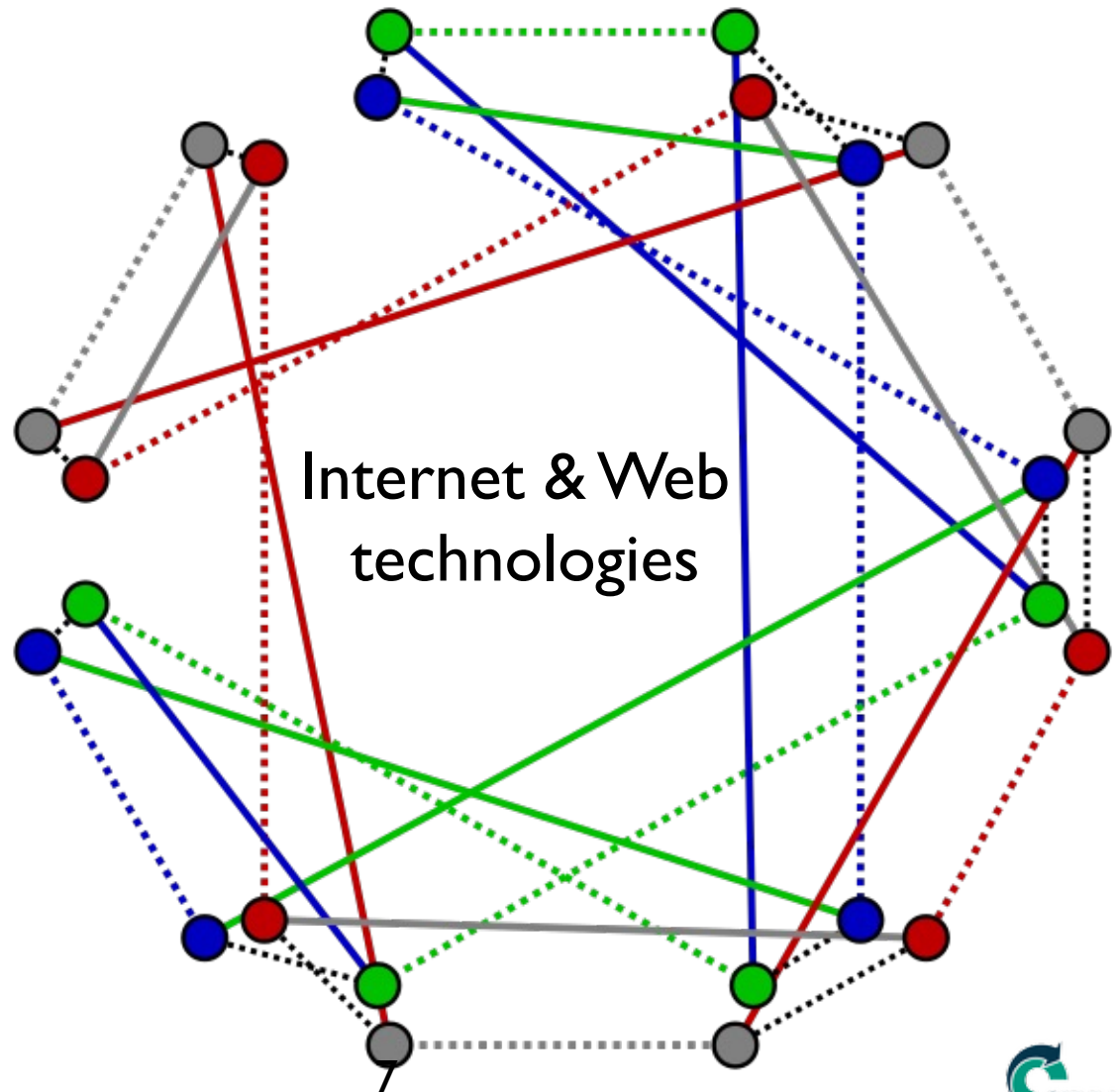


Extensibility

- Integrates well into:
 - Dataspace concept
 - Gaia-X and data sovereignty
- Extend DPP data
 - To add non mandatory data easily
 - Ability to carry Industrie 4.0 data



Decentralized & interoperable Basis for thousand flowers to bloom





How?

One system, two ways to access

Product UID	https://example.org/UID	did:method:UID
Finding the resolver	DNS or ISO 15459	DID method (e.g. EBSI, web method)
Finding the data	Resolver	DID Document
Accessing the data	Decentralized Data Repository (or dataspace or maybe with Linked data API)	



Parallel interoperable designs

- HTTP Architecture
 - Short term vision
 - Availability of tools high
 - Decentralized
 - 5 roles
- DID Infrastructure
 - Longer term
 - Includes advanced features
 - 5 roles

Different path to the same information: The DPP is the same

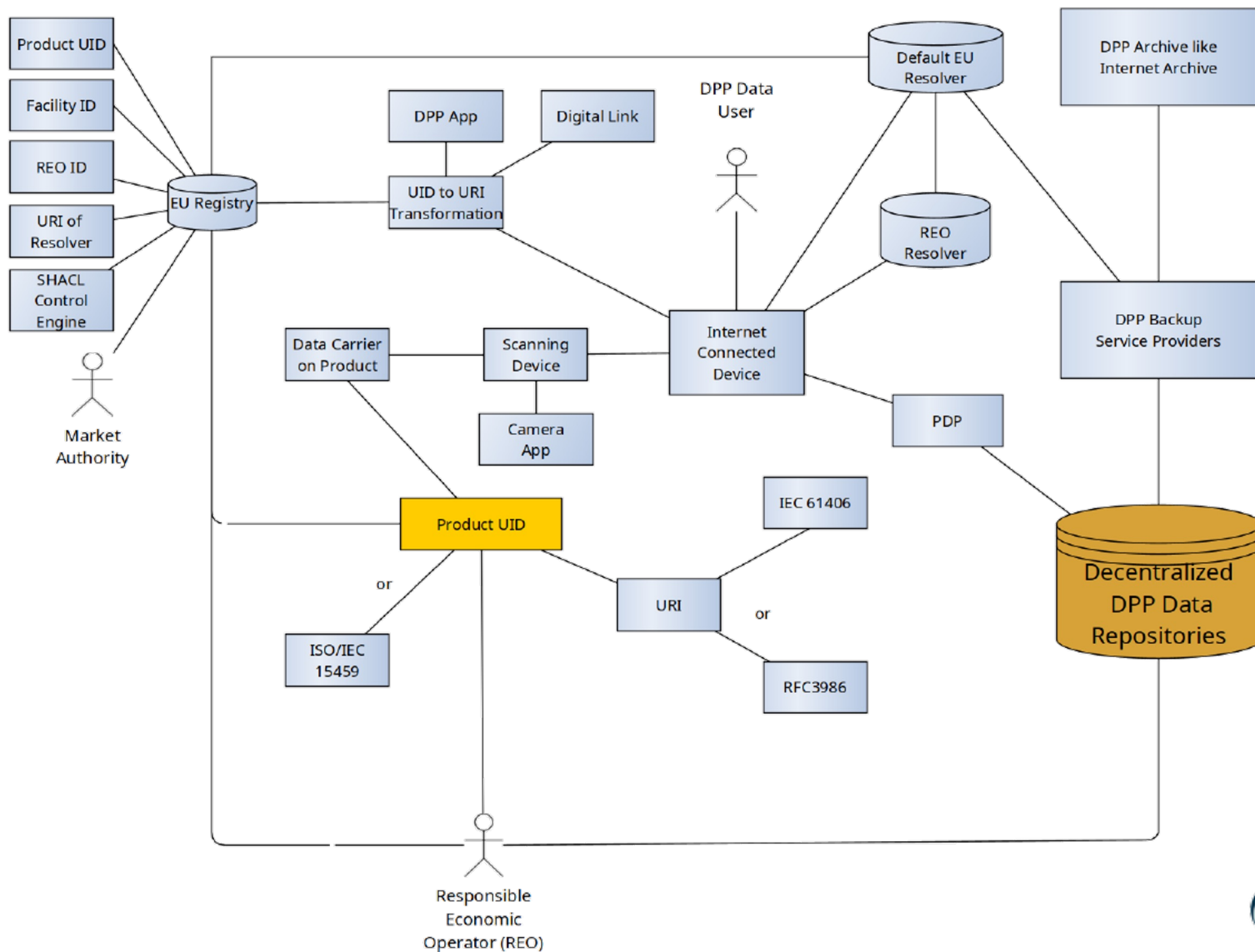


Common to both approaches

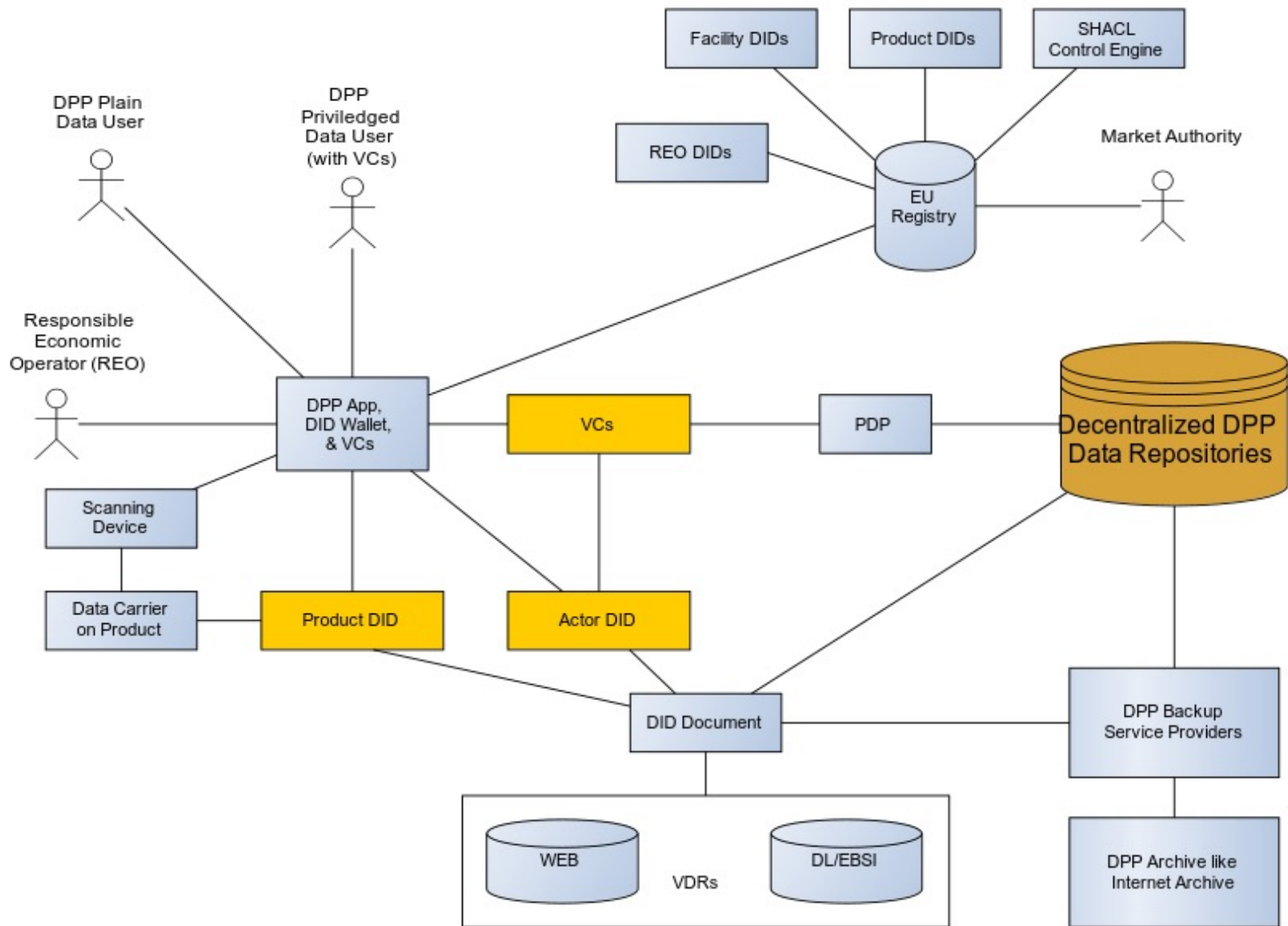
- Decentralized
 - DID is even more decentralized
- Product centric
 - Product UID scopes DPP
- Linked data as interoperability layer
 - Transforms to and from Linked data
- Decentralized Data Repository
 - One or more Repos
 - APIs standardised
 - 1000 ways to implement
- Tailored access role types:
 - “Consumer”, “Recycler”, “Repairer”, “Remanufacturer”, “Market Authority”



HTTP Structure



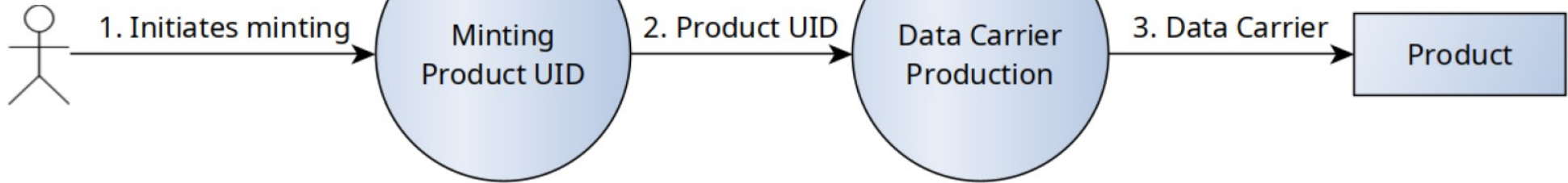
DID-Structure



DPP Creation

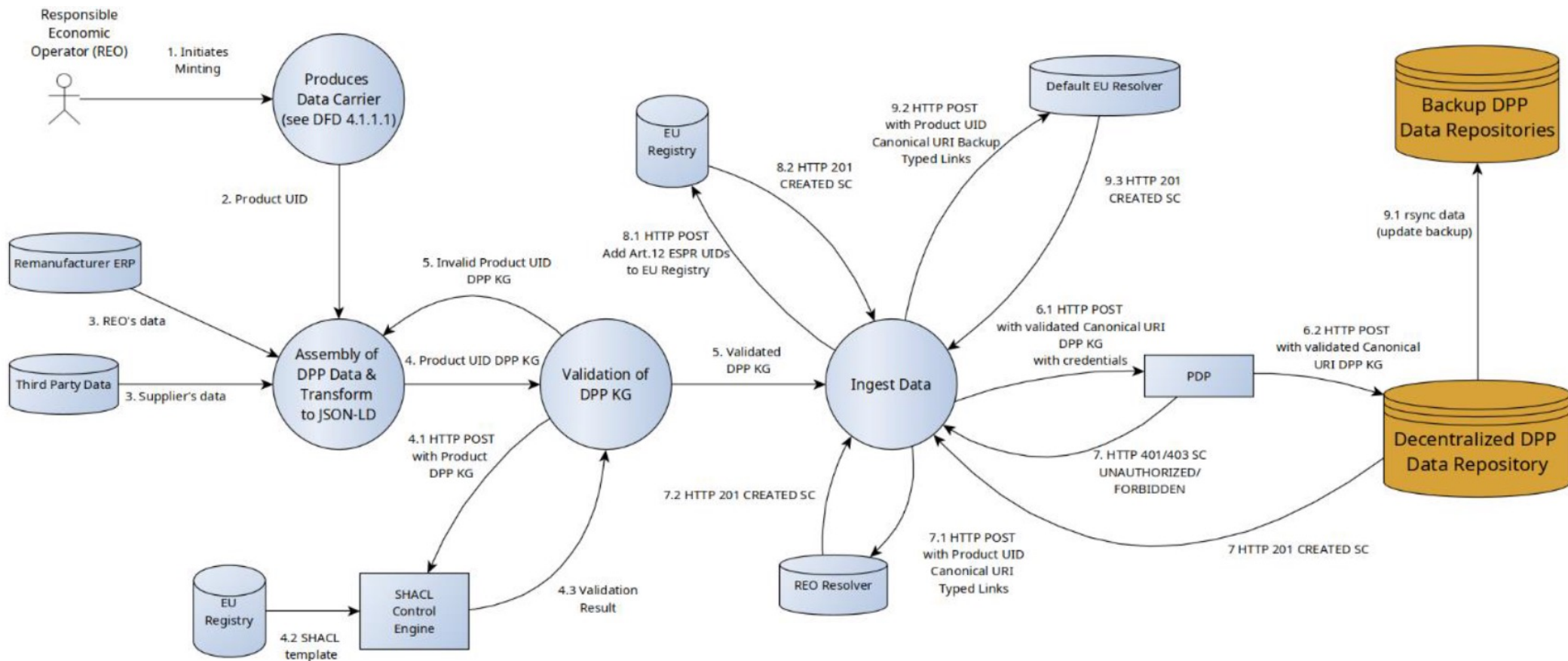
Making a UID/URI & a Data Carrier

Responsible
Economic
Operator (REO)



Funded by
the European Union

Steps for DPP issuing (maximum data re-use)

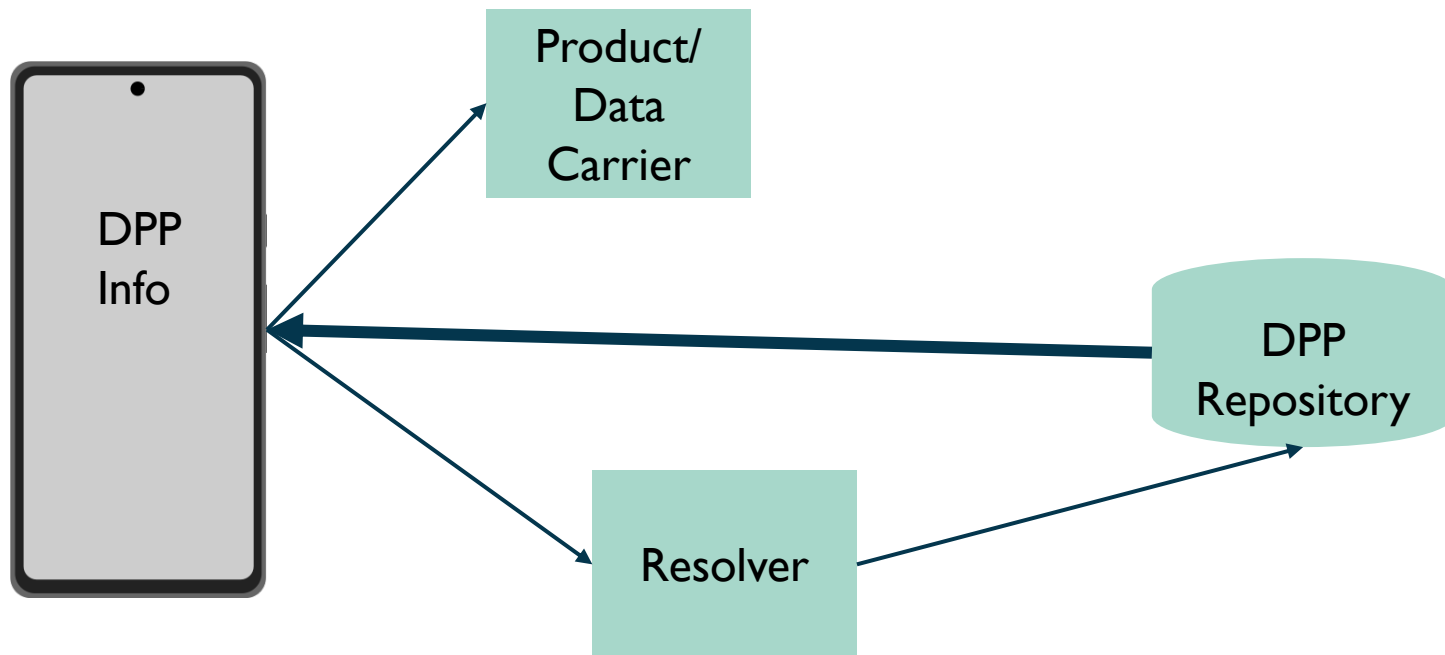


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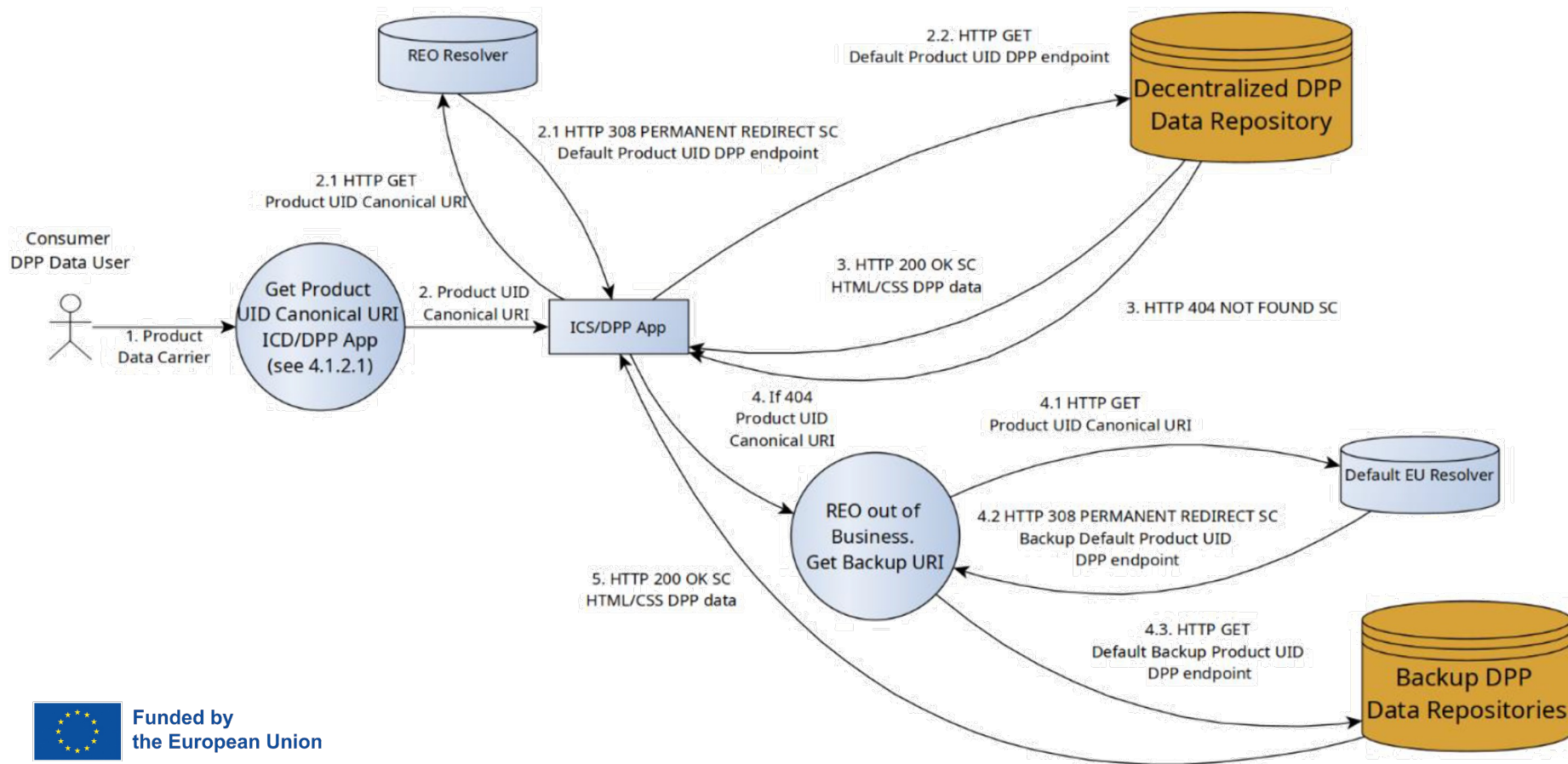


Using the DPP

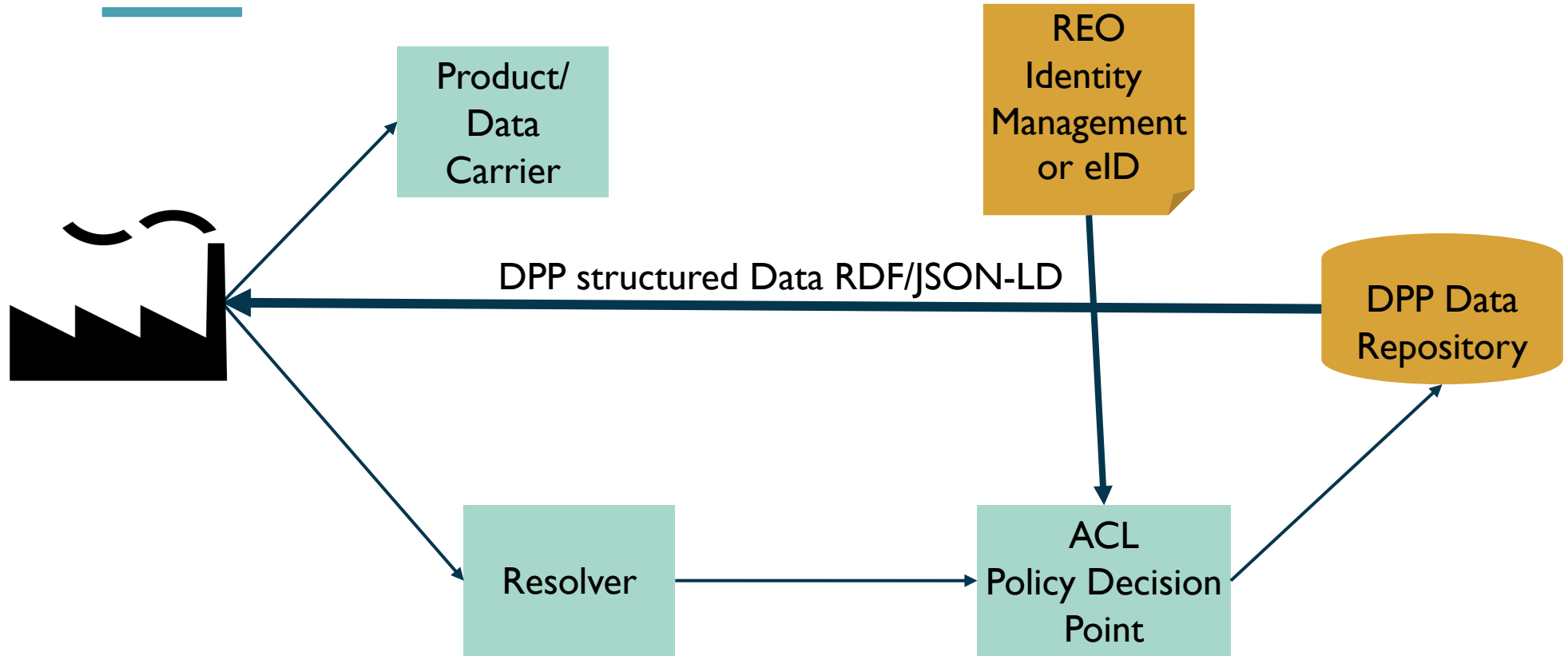
Simplified: Consumer Info (HTML)



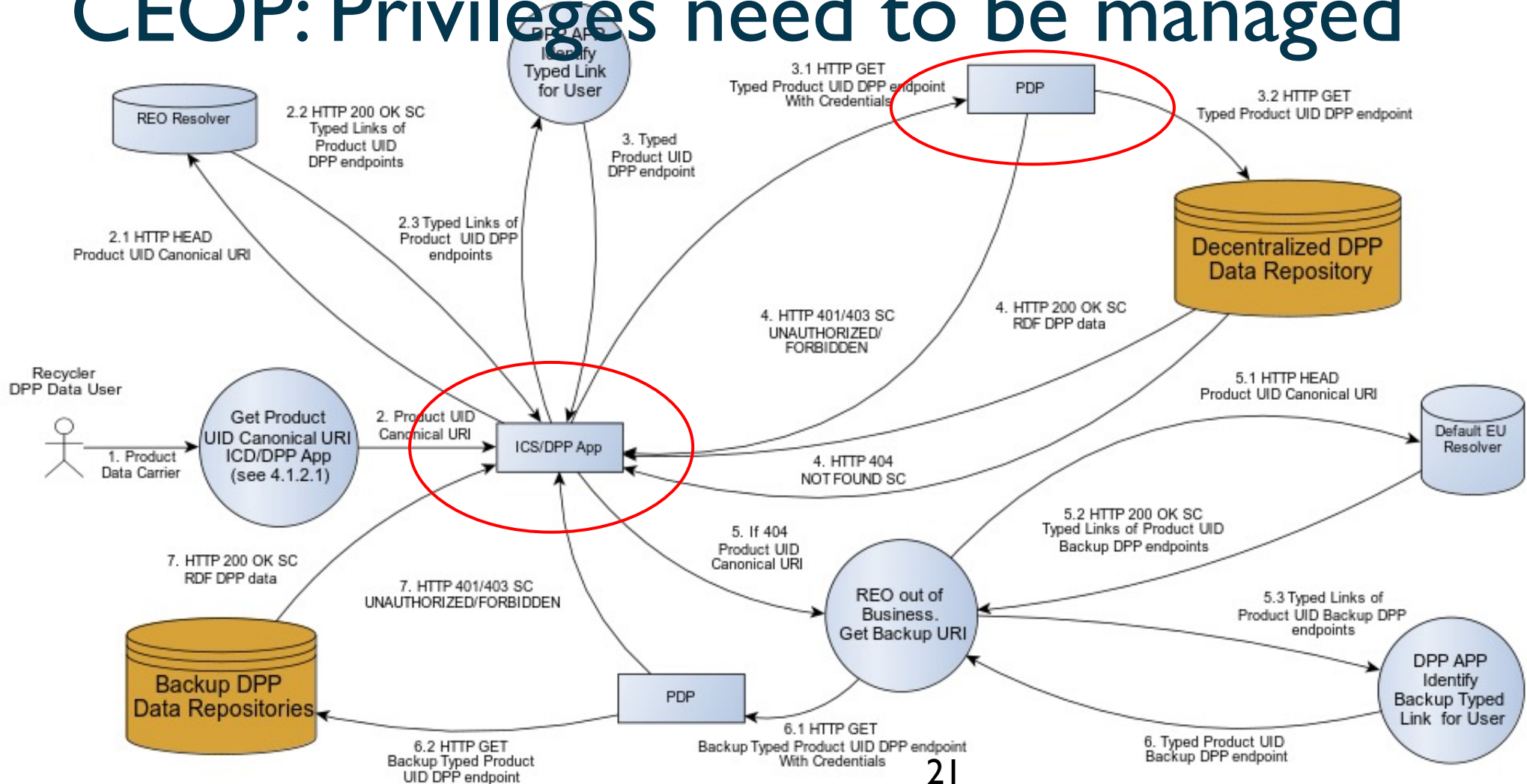
Default: Public Consumer Info (HTML)



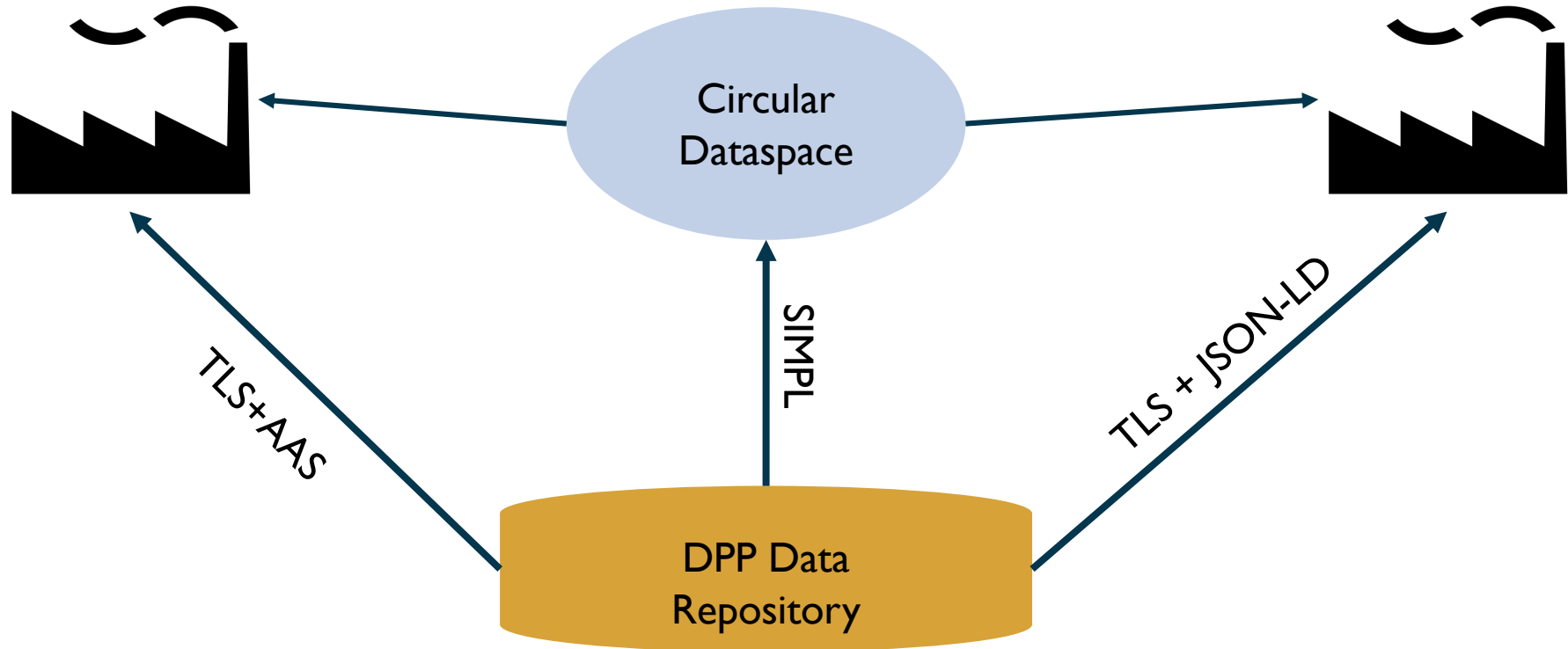
CEOPs may need privileged data



CEOP: Privileges need to be managed



DPP Data Repo is a concept



Conclusion

- Internet/Web based system
 - Standards-based level playing field
- Flexible & highly interoperable
 - Can digest a large variety of solutions
- Combinable:
 - All nodes can be services
 - Data from a variety of sources can be merged
- Extensible (can integrate into the EU data strategy)

<https://cirpassproject.eu/>

