



**DOME**

Cloud & Edge services you can trust

**Federated Marketplace of  
Cloud, Edge & AI services  
that you can trust**

August 2024

Jesus Ruiz

# The DOME project



Digital Europe Programme

DIGITAL-2021-CLOUD-AI-01

Budget: 40 M€

Funding 50%



Consortium: 38 Partners

+5 Affiliated Entities

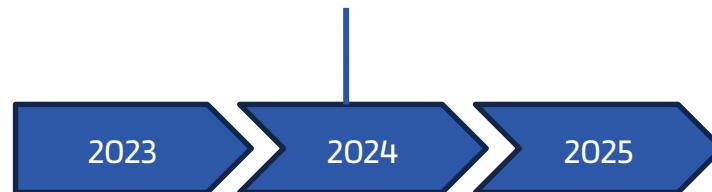


Duration: 36 Months

Jan 2023 – Dec 2025

Started production July 4<sup>th</sup>, 2024

- Only catalog, not procurement.
- Procurement will be added some months later.
- Will evolve according to feedback from users until the end of the project.





## 5.6. Deployment Priority: Federated Cloud Marketplace

<i>Short-term</i>	Design a Federated Cloud Marketplace as an openly accessible, certified catalogue of applications and infrastructure from all providers who abide by European regulation and who provide information-sharing and match-making capabilities. Assess and support candidate open source tools to serve as initial implementation of this tool.
<i>Mid-term</i>	Improve the Federated Cloud Marketplace, providing brokering features to facilitate transactions between providers and customers. Promote its use by end users and IaaS providers.
<i>Long-term</i>	Maintain the Federated Cloud Marketplace and provide long term support for it.



## 4.2. Technology Priority: Reliable, High-performance, Zero-trust Identity Management

### *Short-term*

Support European IAM vendors and technology providers (2 or 3 vendors / providers), to emerge at the level of worldwide leaders. The proposed support refers to funding through existing or new programs.

### *Mid-term*

Deliver regulations and certification schemes to require EU solutions for critical activities in Member States (homogeneously in all of them to open the whole EU market to these EU solutions).

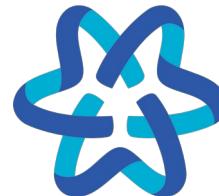
## 9.8. Technology Priority: Edge-to-Cloud Blockchain Services

<i>Short-term</i>	Structure an open ecosystem to ensure decentralised collaborations and test different blockchains in order to find best alternatives for the different sectors and applications. Support the implementation of a set of normative guidelines and frameworks of standardised procedures for the implementation and operation of blockchains across the European continuum. Foster standardisation, easy-to-use tools, and interfaces within a strong European network, enabling developers to initiate valuable use cases within an open European ecosystem.
<i>Mid-term</i>	Develop a European blockchain service following the model of EBSI, through a “core services layer” with specific services needed to accelerate key use cases across European industries and above. This layer will provide: (i) capabilities to instantiate blockchain nodes efficiently, (ii) standardised APIs to facilitate application developments and ensure compliance (through common guidelines shared by users) with blockchain adoption and services’ interoperability, (iii) a

# What is DOME marketplace?



Simplify acquisition of  
Cloud Services



Enforce and promote  
trust and compliance.



Access different services  
across the EU



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[dome-marketplace.eu](https://dome-marketplace.eu)





# DOME

One-stop Shop for your trusted Cloud, Edge & AI Journey



Verified Cloud, Edge & AI Services



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# Marketplace Advantages



## Sellers



Become a trusted player



Publish verified offering.



Compiled services to match demand



Increase visibility and outreach



Capability to go to the market



## Buyers



Single catalog of verified services



Seamless discovery and experience



Fast & efficient purchase pathway



Safe and trustful data services



# Roadmap

The DOME business aims to create a collaborative environment where we can grow together with the platform adopters.

July 4th 2024

## 1.0 Catalogue

### Publish your services

- Service Discovery
- Trusted services with Verified Credentials
- Offline contact provider / customer
- Services publication is free
- Free for both Sellers and Buyers

December 2024

## 1.1 Purchase

### Enjoy Full Experience

- Payments gateway (Services)
- Providers set up direct selling models and pay a minimum compliance check cost + a small % of DOME revenues - early bird discounts
- Group services in a single purchase

December 2025

## 1.2 New features

### New & Advanced Features

- New vertical functionalities delivered to support vertical market needs
- Total handover to the DOME operator

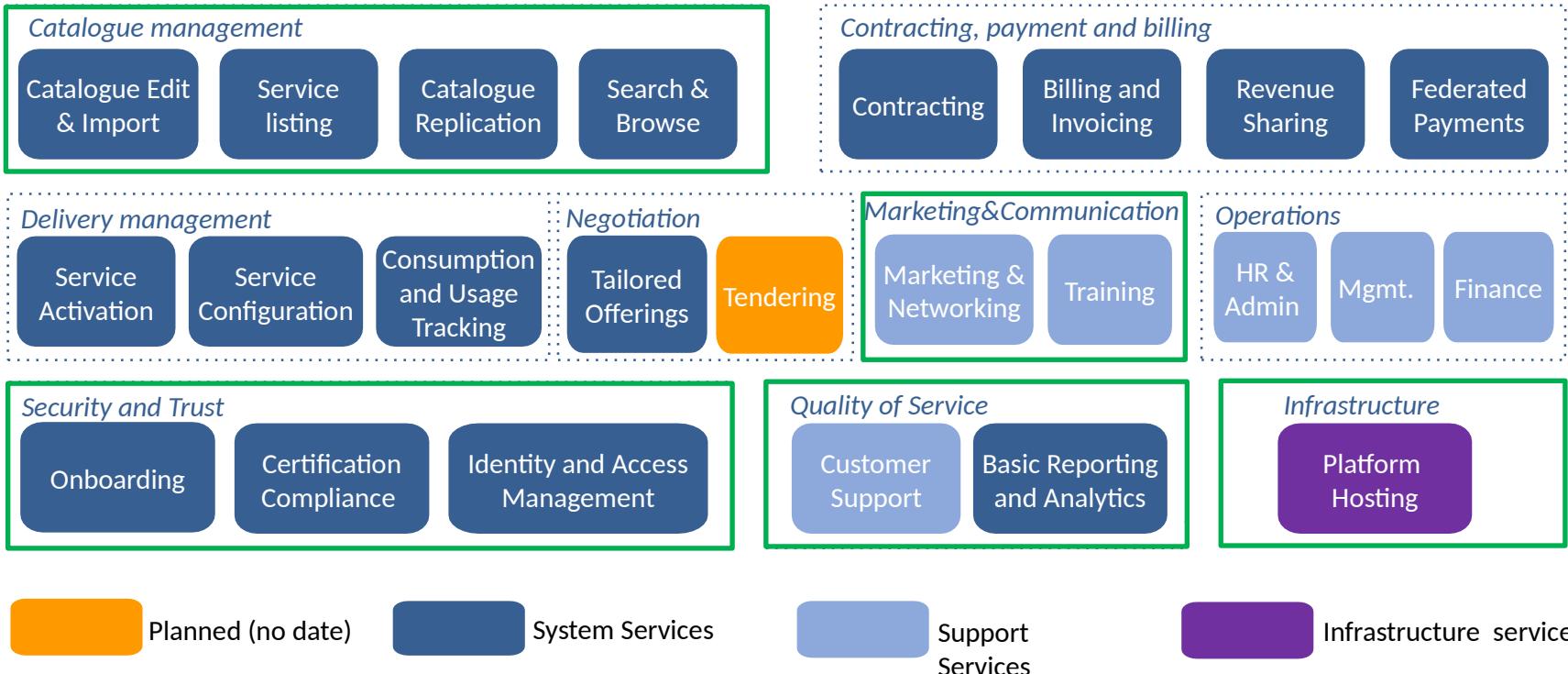


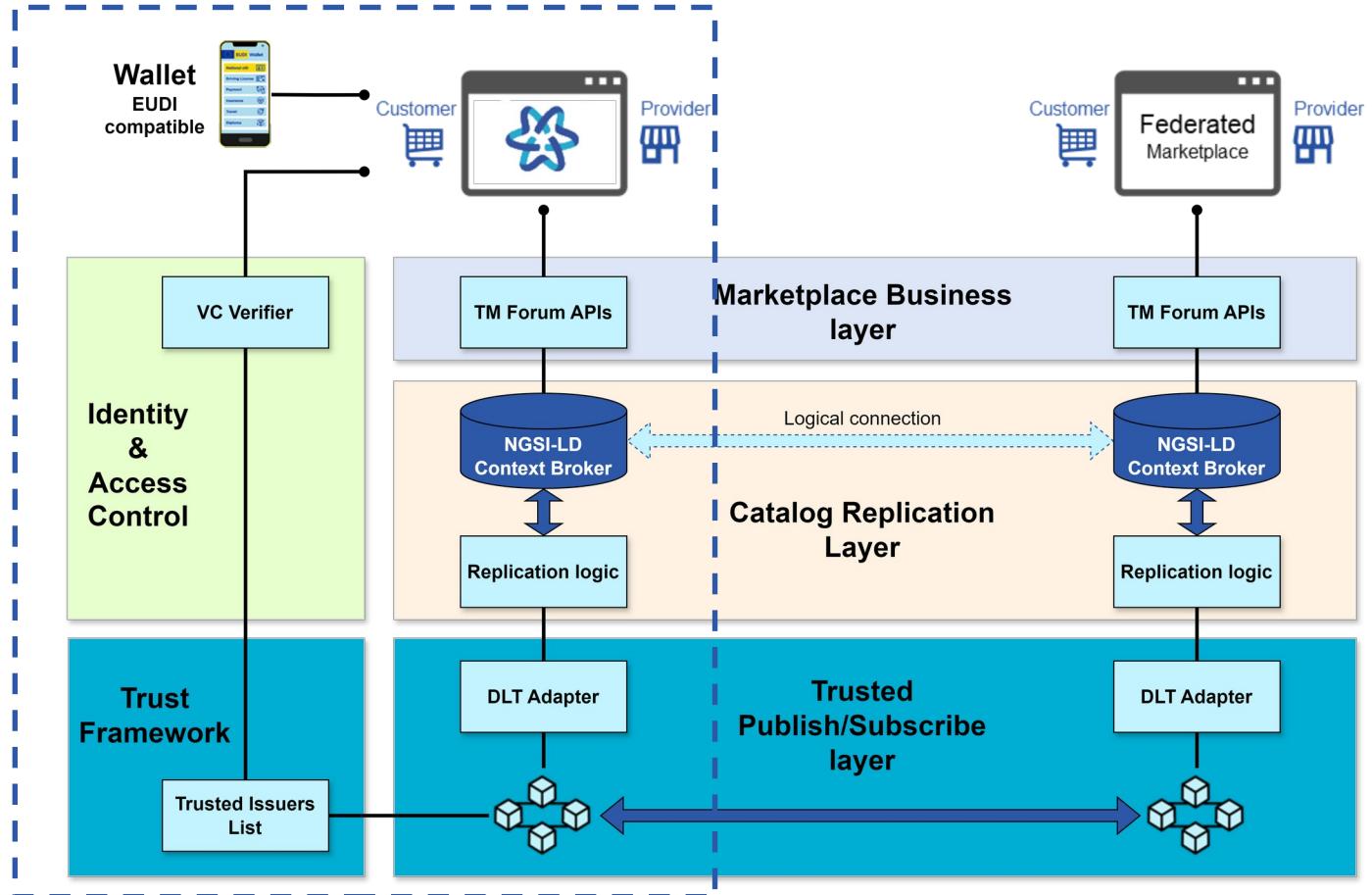
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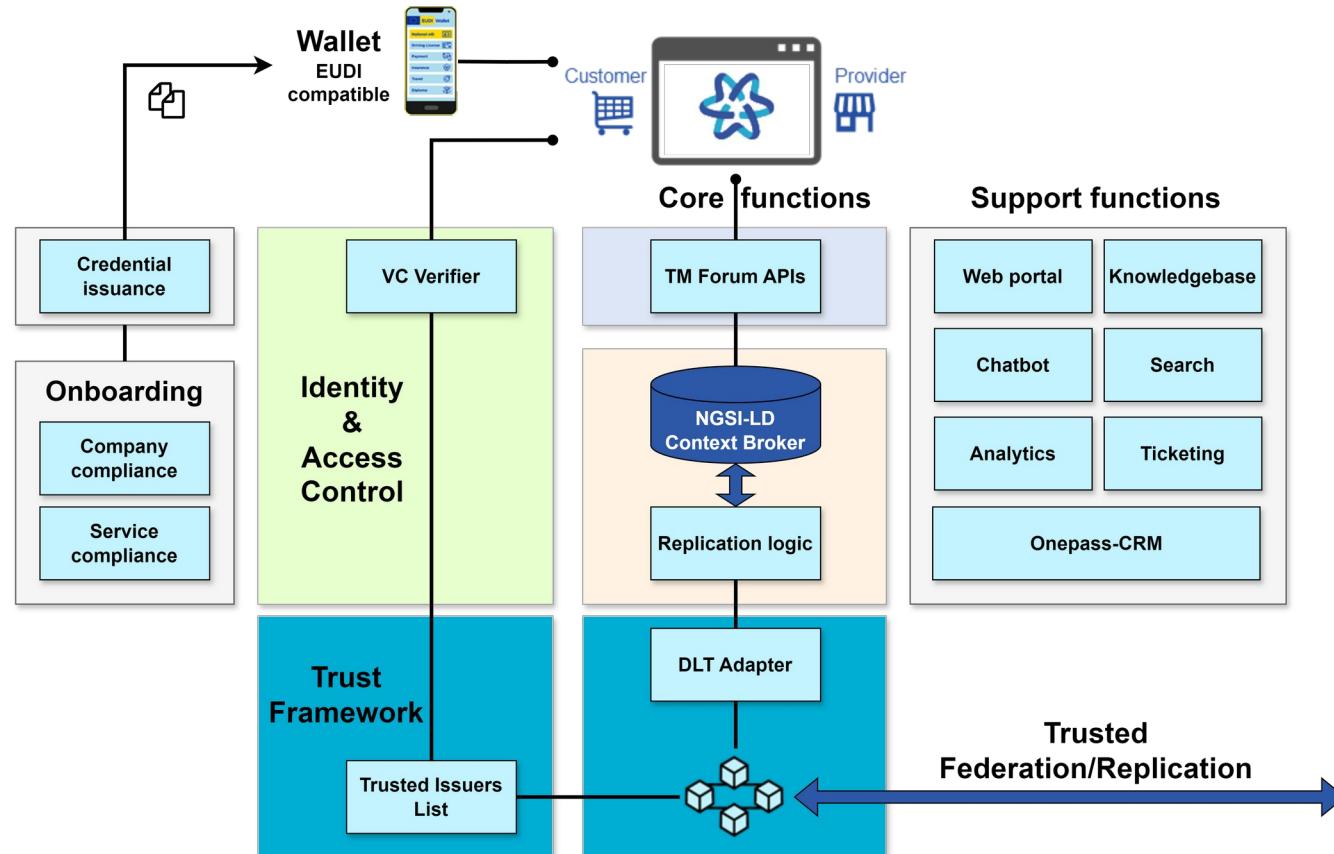
[dome-marketplace.eu](http://dome-marketplace.eu)



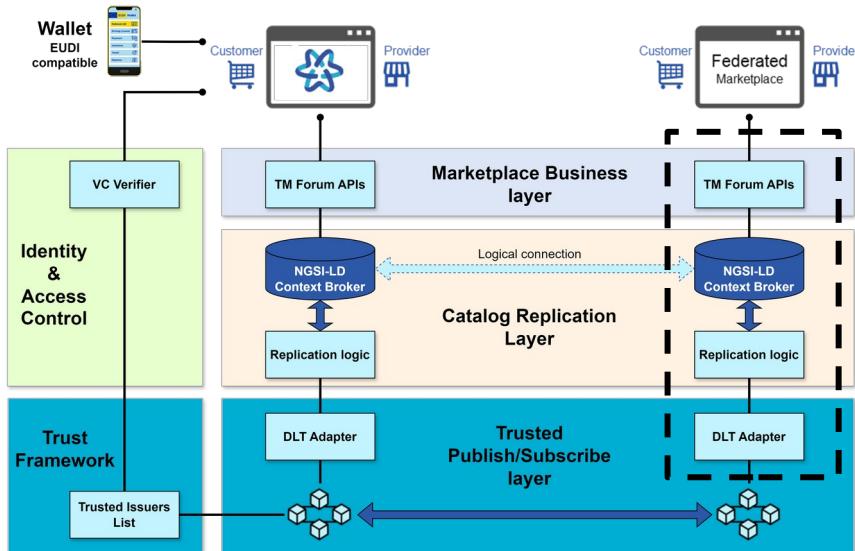
# Scope of functionalities in version 1.0 (Catalogue)







# Lower barrier of entry: Access Nodes as a service for federation participants



- Operated by DOME Operator as a service
- Operated by any entity as a service (maybe published in the catalogue)
- May include the whole marketplace SW, including the BAE

# Identity & Access control



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# eIDAS2 Regulation (11 April 2024) on the European Digital Identity Framework

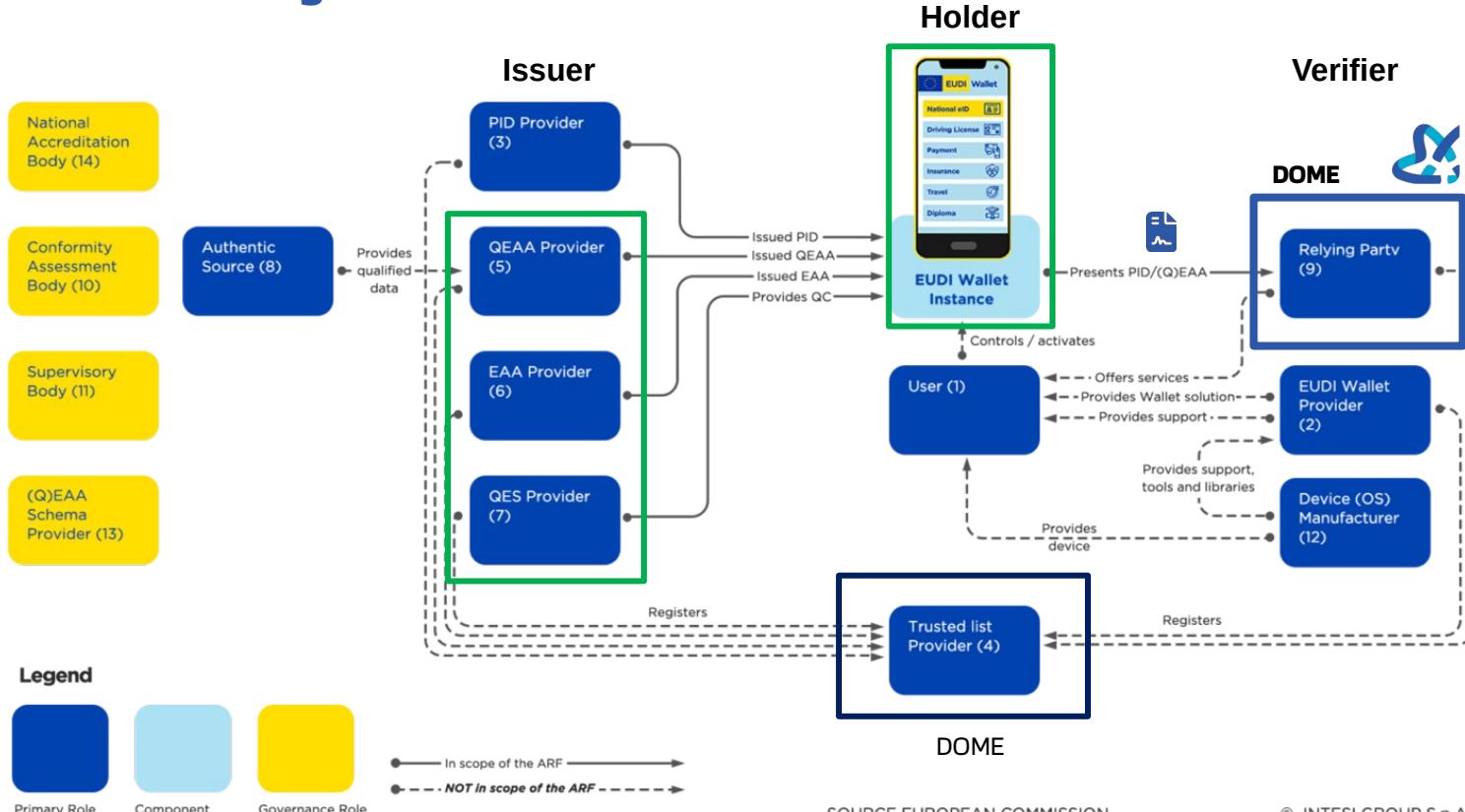
## *Section 1, Article 5f-2:*

*Where private relying parties that provide services are required by Union or national law to use strong user authentication for online identification or where strong user authentication for online identification is required by contractual obligation, including in the areas of **transport, energy, banking, financial services, social security, health, drinking water, postal services, digital infrastructure, education or telecommunications**, those private relying parties **shall, no later than 36 months from the date of entry into force of the implementing acts referred to in Article 5a(23) and Article 5c(6), accept European Digital Identity Wallets** that are provided in accordance with this Regulation.*

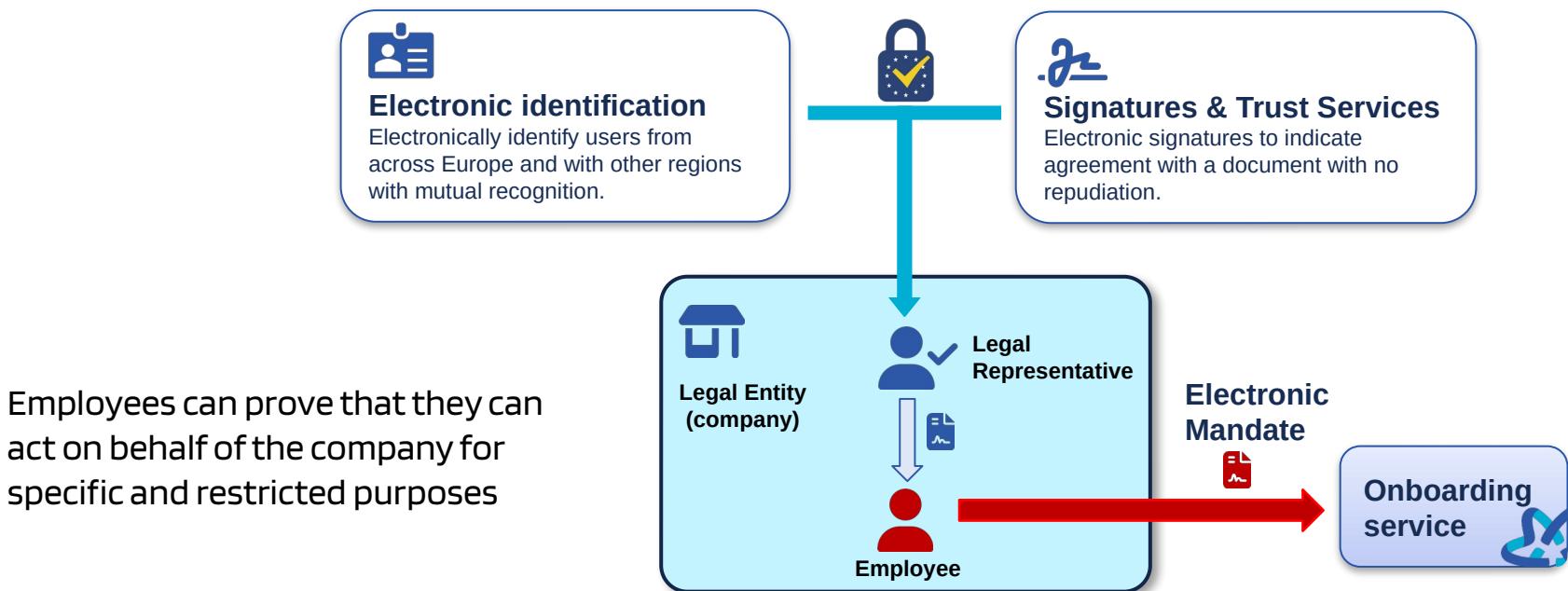
Source:

[Regulation \(EU\) 2024/1183 of the European Parliament and of the Council of 11 April 2024 amending Regulation \(EU\) No 910/2014 as regards establishing the European Digital Identity Framework](#)

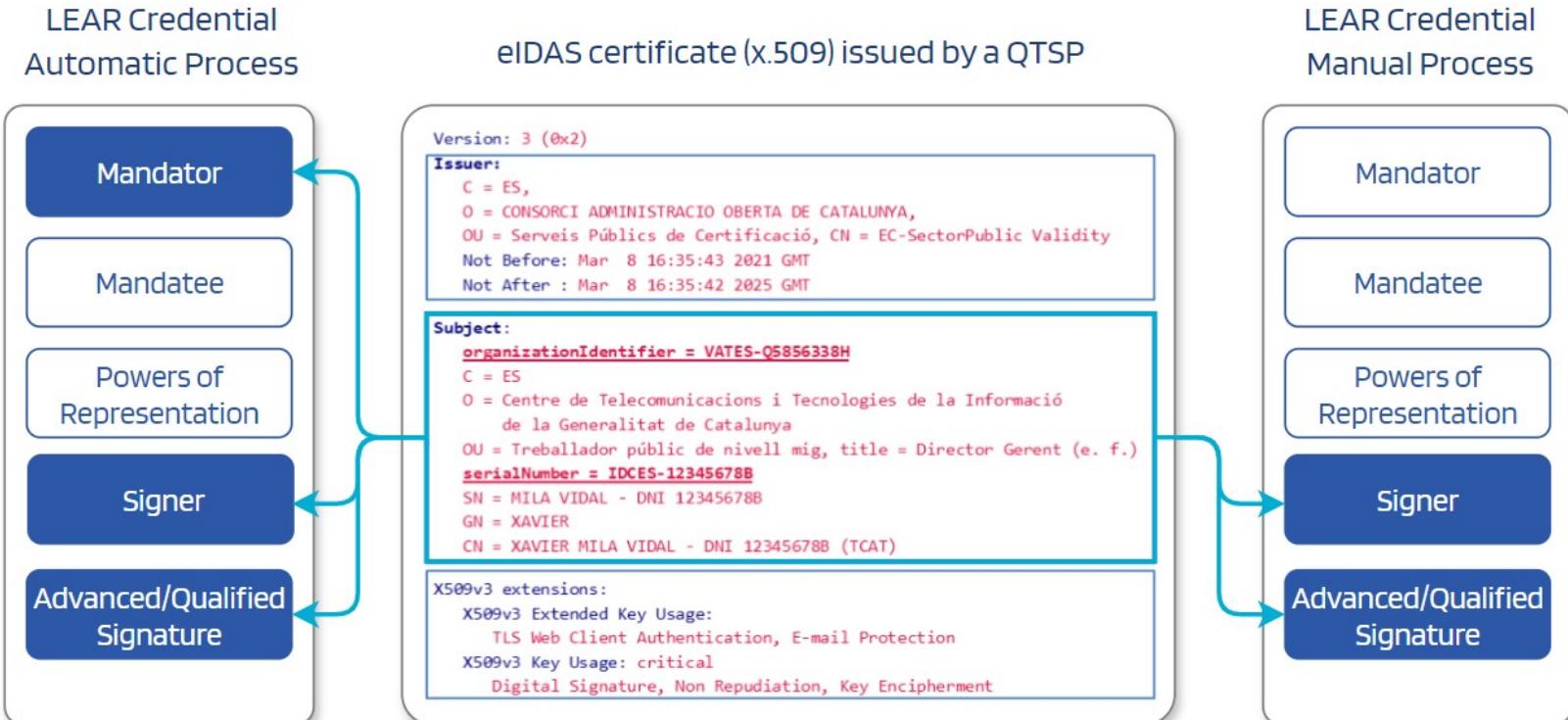
# Authentication aligned with EUDI Wallet



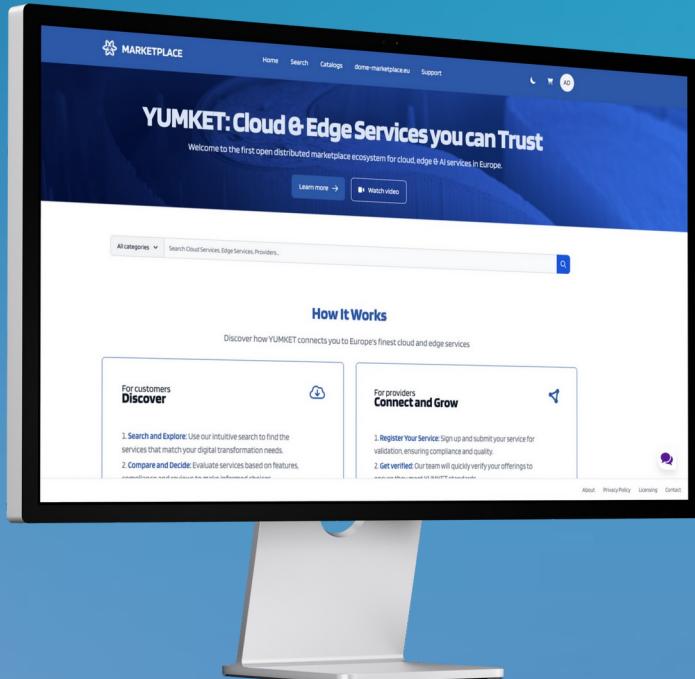
# Verifiable Credentials as electronic Powers of Representation



# LEAR Credential signature with Mandator eIDAS



# Open wallet ecosystem



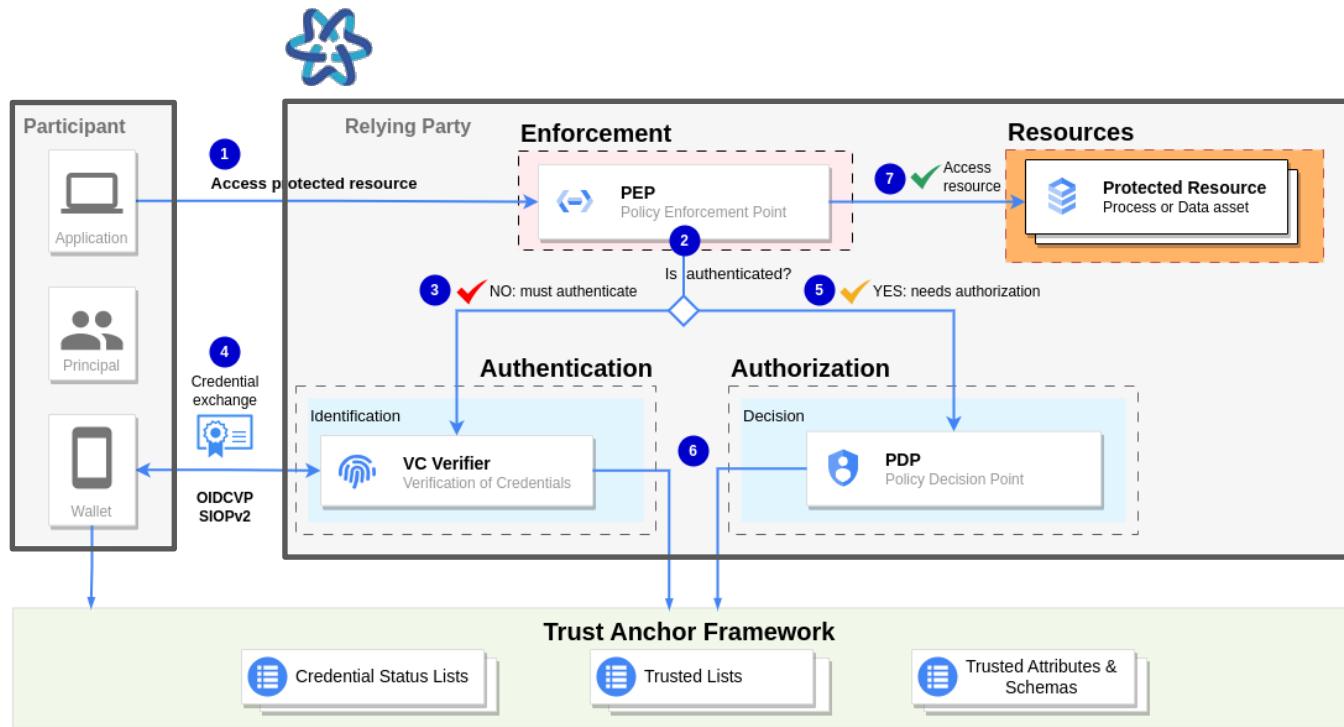
Wallet capabilities:

 EBSI conformant

✓ Request & present credentials

 Validated ID VIDwallet Individual wallets	 KeyTrust KeyTrust - Digital Identity Management Individual wallets	 Corposign DID Individual wallets
 izertis IDENTIF by Izertis Individual wallets	 DNI Wallet platform Individual wallets	 e-Origin Customs Proof Wallet Individual wallets
 INN Individual wallets	 novaWallet Individual wallets	 wwWallet Individual wallets
 Masca Individual wallets	 PwC-ID Individual wallets	 TRIVERIA Triveria wallet platform Individual wallets
 GLASS Wallet Individual wallets	 Gataca Individual wallets	 Talao wallet Individual wallets
 Altme wallet Individual wallets	 walt.id Individual wallets	 CERTH SSI Wallet Individual wallets
 Data Wallet by iGrant.io Individual wallets	 DS Wallet Individual wallets	 ekibisis wallet Individual wallets
 eDiplomas Wallet Individual wallets	 SSI Auth Wallet Individual wallets	 Teknei EBSI Wallet Individual wallets

# Authentication & Access Control based on Powers of Representation



# Onboarding

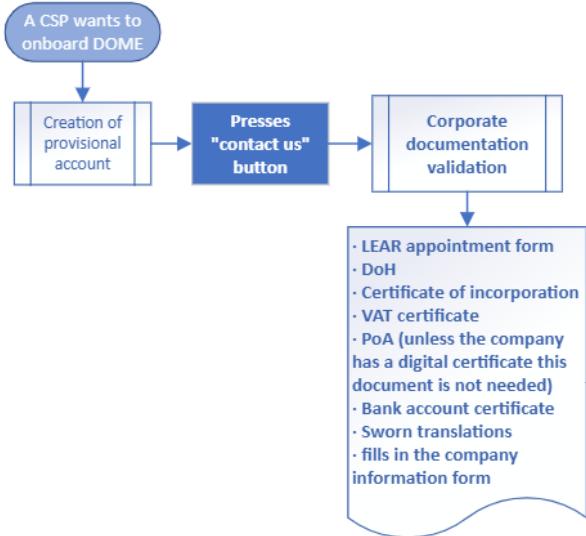


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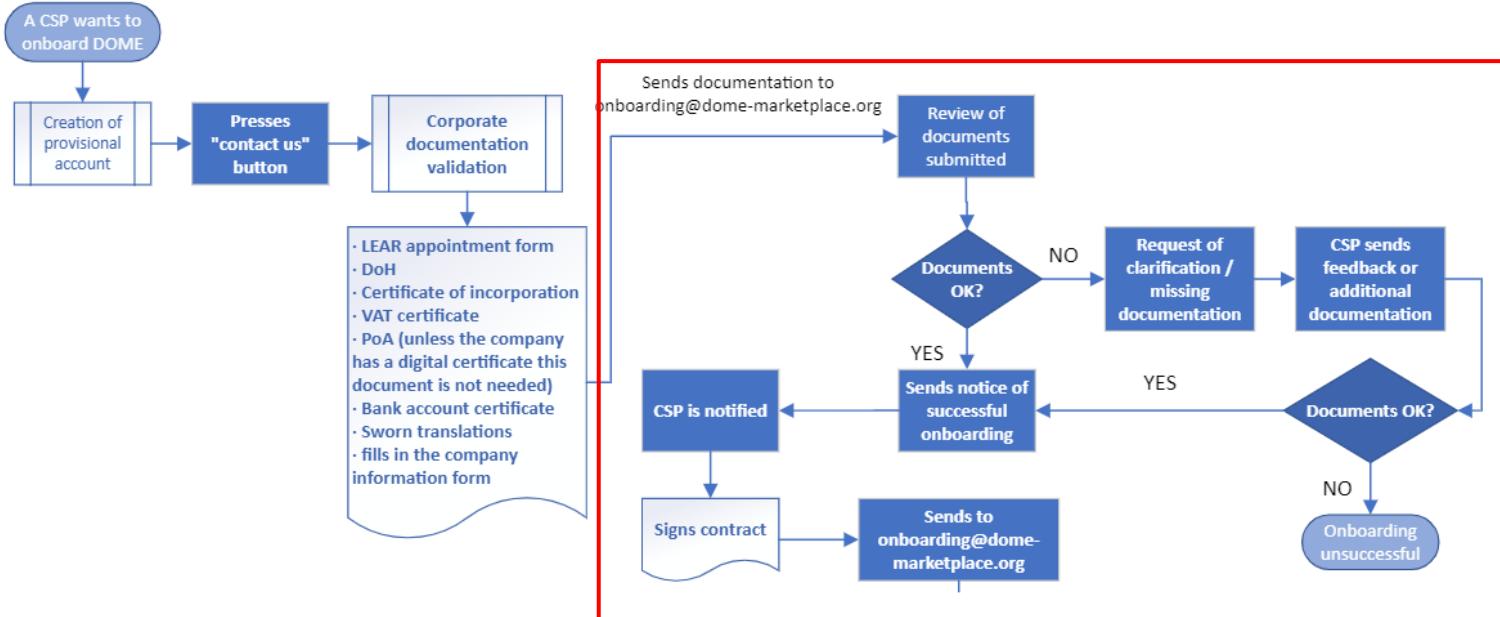
[dome-marketplace.eu](https://dome-marketplace.eu)



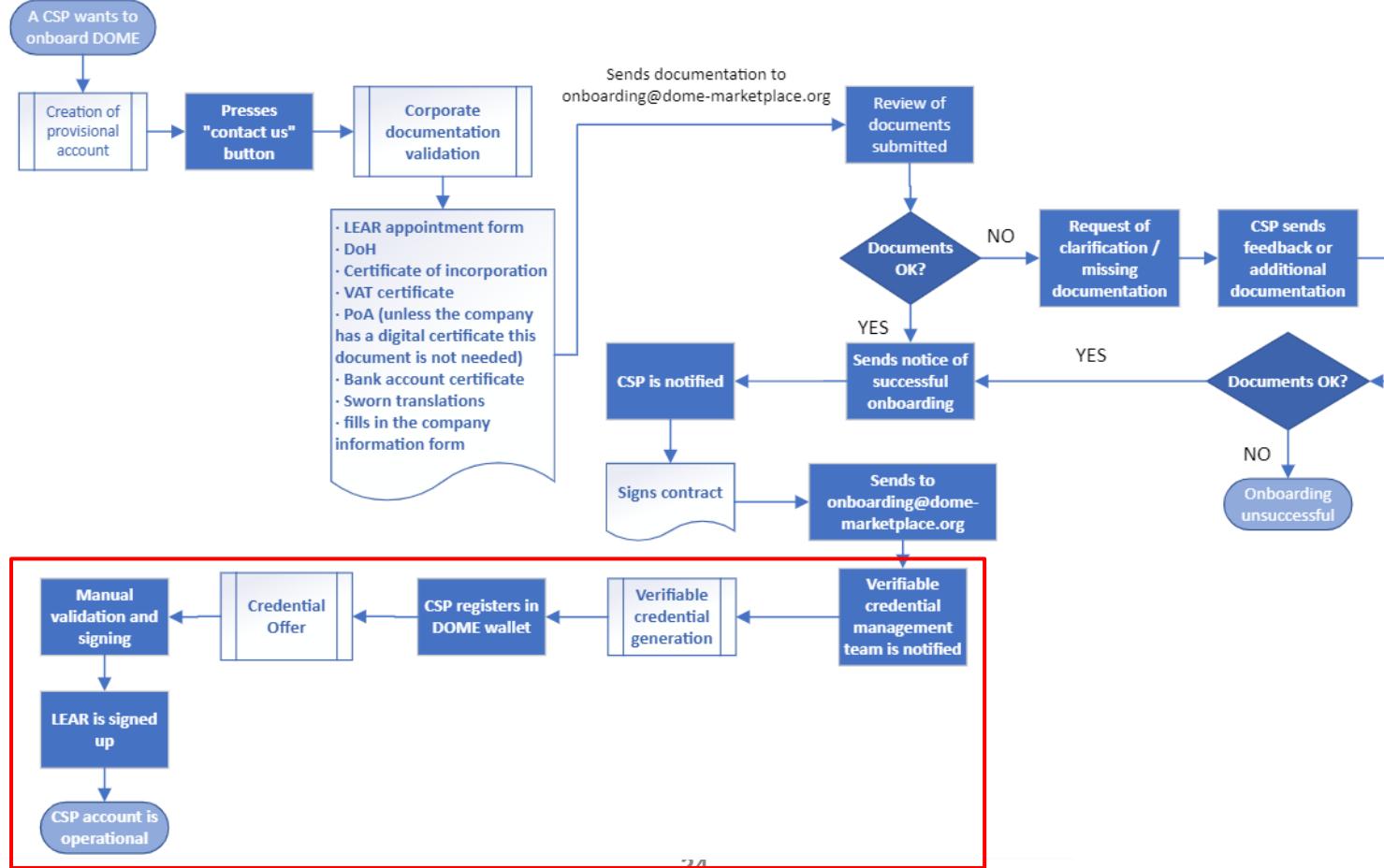
# Onboarding process: launch of process and document gathering



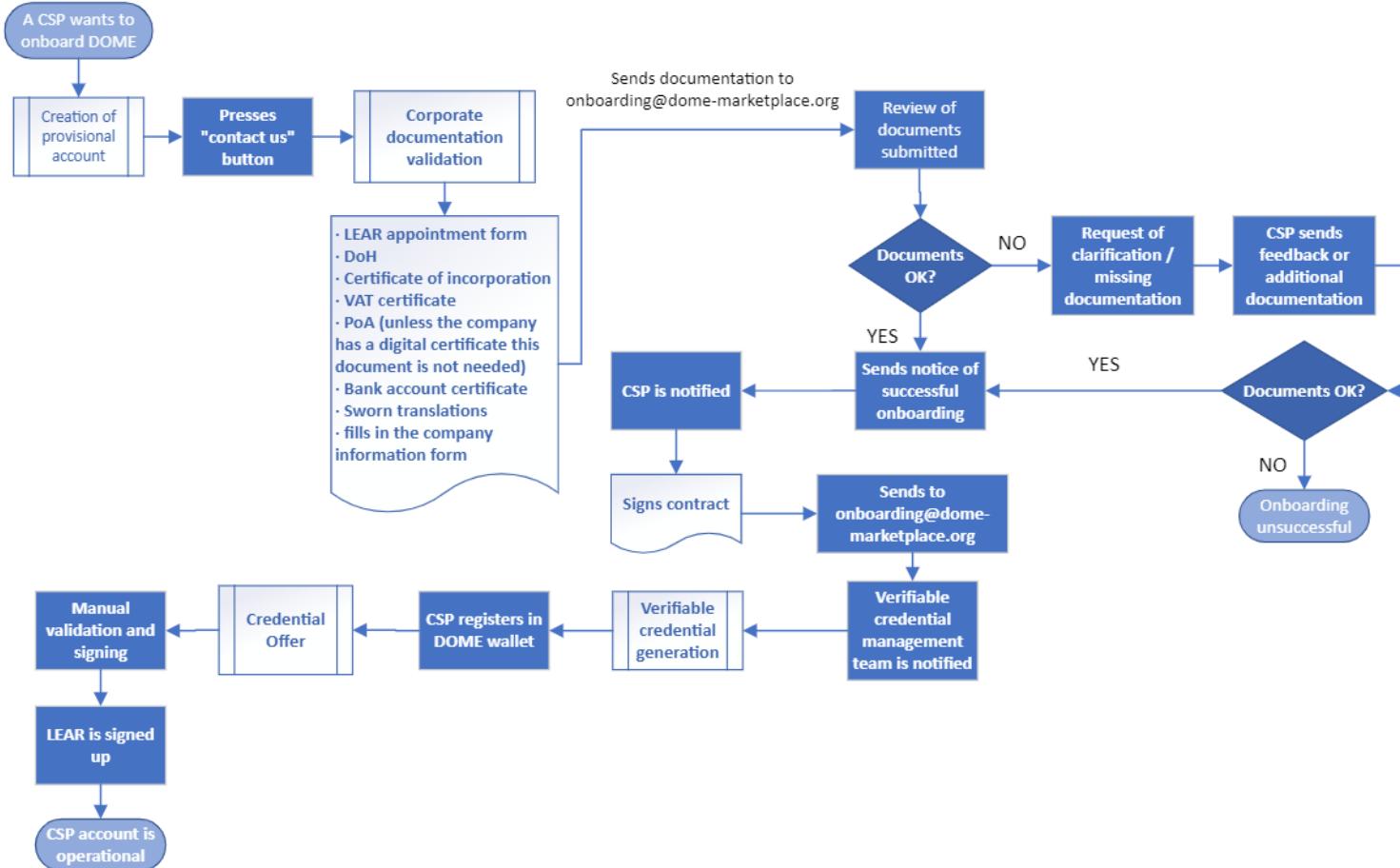
# Onboarding process: legal verification and contract signed



# Onboarding process: issuance of verifiable credential



# Onboarding process: general overview of the process



# Decentralised Replication

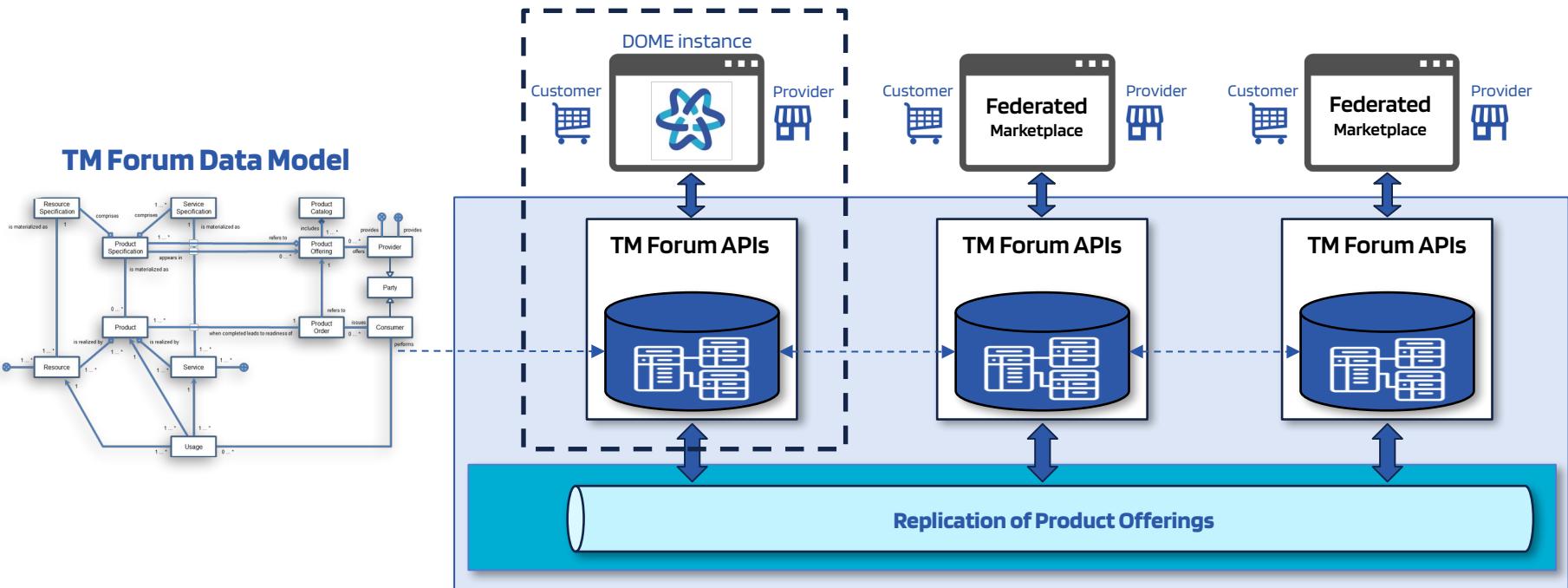


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# Replication requires common data model and APIs



# TM Forum datamodel and APIs for Marketplaces

tmforum Knowledge Labs Code + frameworks Training + accreditation Events Membership About Contact

**Marketing Sales APIs (1)**

Sales Management API  
TMF699 v4 v5 >

**Customer APIs (14)**

Appointment Management API  
TMF646 v3 v4 >

Customer Bill Management API  
TMF678 v4 v5 Async >

Customer Management API  
TMF629 v4 v5 Async >

Customer360 Management API  
TMF717 v4 v5 >

Payment Management API  
TMF676 v1 v4 >

Payment Method Management API  
TMF670 v4 v5 >

Prepay Balance Management API  
TMF654 v4 >

Product Ordering Management API  
TMF622 v4 v5 Async >

Product Configuration Management API  
TMF760 v5 >

Quote Management API  
TMF671 v4 v5 >

**Product APIs (8)**

IoT Service Management API  
TMF914 v4 >

Product Catalog Management API  
TMF620 v4 v5 Async >

Product Inventory Management API  
TMF637 v4 v5 Async >

Product Offering Qualification Management API  
TMF679 v4 v5 >

Product Ordering Management API  
TMF622 v4 v5 Async >

Promotion Management API  
TMF671 v4 v5 >

Usage Consumption Management API  
TMF656 v4 v5 >

**Service APIs (9)**

DCS 5GSlice Service Activation API  
TMF924 v4 >

Performance Management API  
TMF628 v5 >

Service Catalog Management API  
TMF633 v4 v5 >

Service Inventory Management API  
TMF638 v4 v5 Async >

Service Ordering Management API  
TMF641 v4 v5 >

Service Problem Management API  
TMF656 v4 v5 >

Service Qualification Management API  
TMF656 v4 v5 >

# Open API dashboard for May 2024



All time totals: **871,186** Open API downloads by **48,338** developers from **2,826** organizations | **85** Organizations have certified **1,124** Open APIs



## DOWNLOADS THIS MONTH

API downloads	<b>16,599</b>
Unique organizations	<b>473</b>
Unique individuals	<b>2,841</b>

## TOP DOWNLOADERS\*

Parent Account	Rank	Downloads
Vodafone Group	1	925
Tata Consultancy Services	2	772
Tech Mahindra Limited	3	571
AT&T Inc.	4	503
Orange	5	424
Amdocs Management Limited	6	398
Deutsche Telekom AG	7	397
Accenture	8	349
PlatformX Communications (PXC)	9	324
BT Group plc	10	312
Capgemini	11	291
LotusFlare	12	280
Infosys	13	261
Saudi Telecom Company	14	254
NEC Corporation	15	246
Ericsson Inc.	16	236
Millicom International Cellular S.A.	17	224
CelFocus	18	223
Jio Platforms Limited	19	217
TELEFONICA	20	198
ADVANCED INFO SERVICE PLC. (AIS)	21	179

\* Organizations with 5+ unique users in the month



## Useful links

[Open API table](#) | [Pre-production API table](#) |  
**188** Open API manifesto signatories (current TM Forum members)



## CERTIFICATIONS

### OPEN API CERTIFICATION LEADERBOARD



### TOP APIs CERTIFIED



### LATEST OPEN API CERTIFICATIONS



## WHAT'S NEW

### LATEST API UPDATES APPROVED

V4 TMF716 Resource Reservation - Production

### THIS MONTH'S MOST POPULAR APIs

API Full Name	Rank	Downloads
TMF622 Product Ordering	1	1,412
TMF620 Product Catalog Manage...	2	885
TMF666 Account Management	3	869
TMF632 Party Management	4	751
TMF629 Customer Management	5	722
TMF637 Product Inventory Mana...	6	562
TMF621 Trouble Ticket	7	559
TMF641 Service Ordering Mana...	8	546
TMF639 Resource Inventory Mana...	9	539
TMF638 Service Inventory Mana...	10	478
TMF678 Customer Bill Managem...	11	472
TMF640 Service Activation and C...	12	301
TMF679 Product Offering Qualific...	13	297
TMF669 Party Role Management	14	274
TMF915 AI Management	15	273

### NEW API RESEARCH & CASE STUDIES

[My API Story: Enhancing efficiency in product management and customer experience](#)

Kelvin Chaffer, CEO, Lifecycle Software



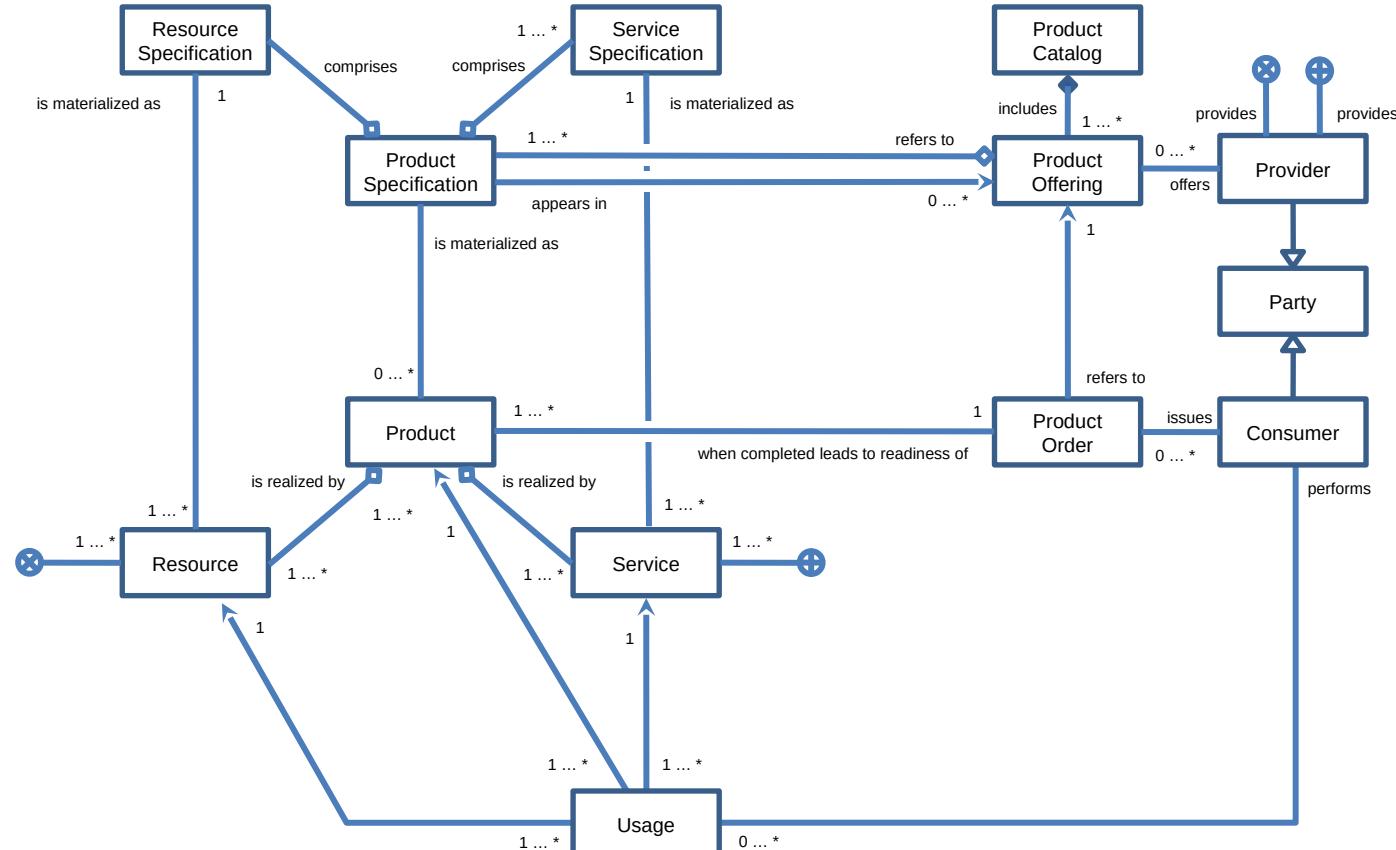
[DTW24-Ignite: ODA advances under the spotlight](#)

[Vodafone's journey to becoming a modular, agile telco](#)



DOME - Distributed Open Marketplace for Cloud and Edge Services in Europe

# TM Forum APIs for Marketplaces - Model (Simplification)



# Verifiable Certifications

Decentralised Trust on products and services

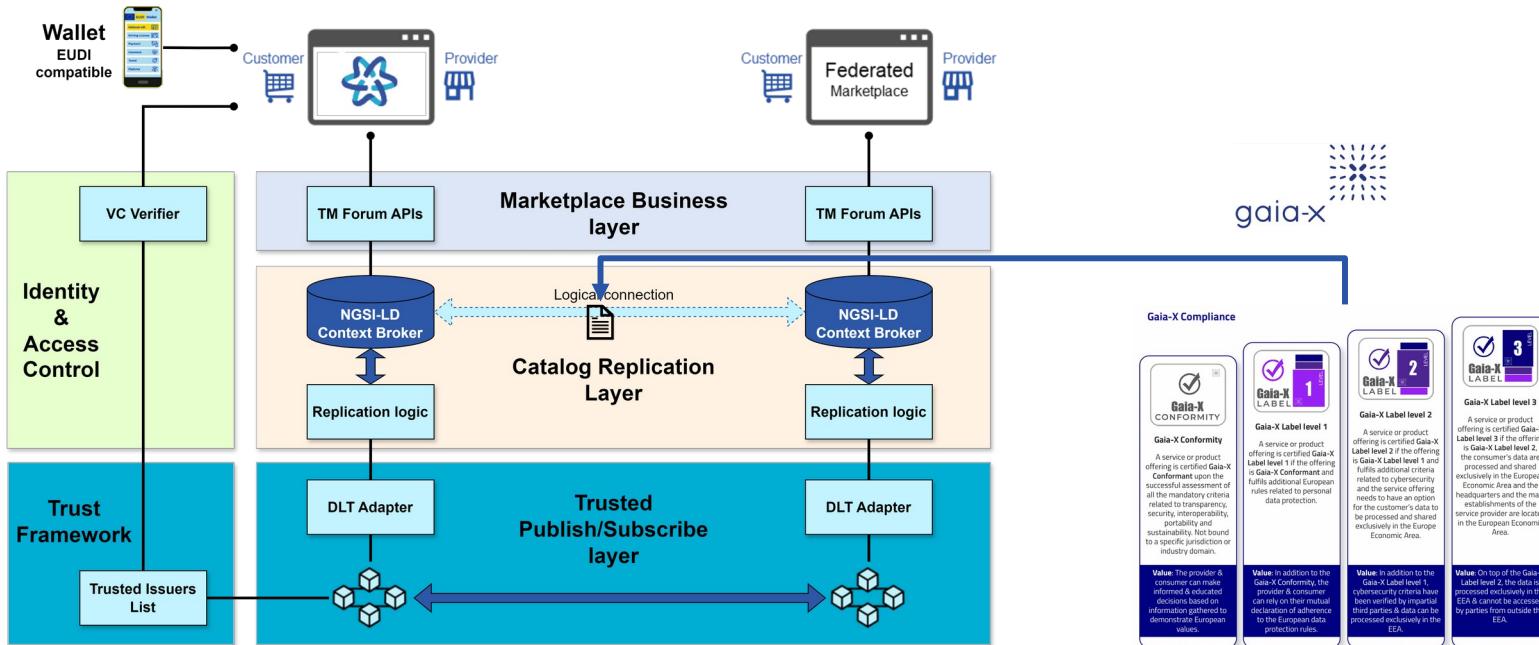


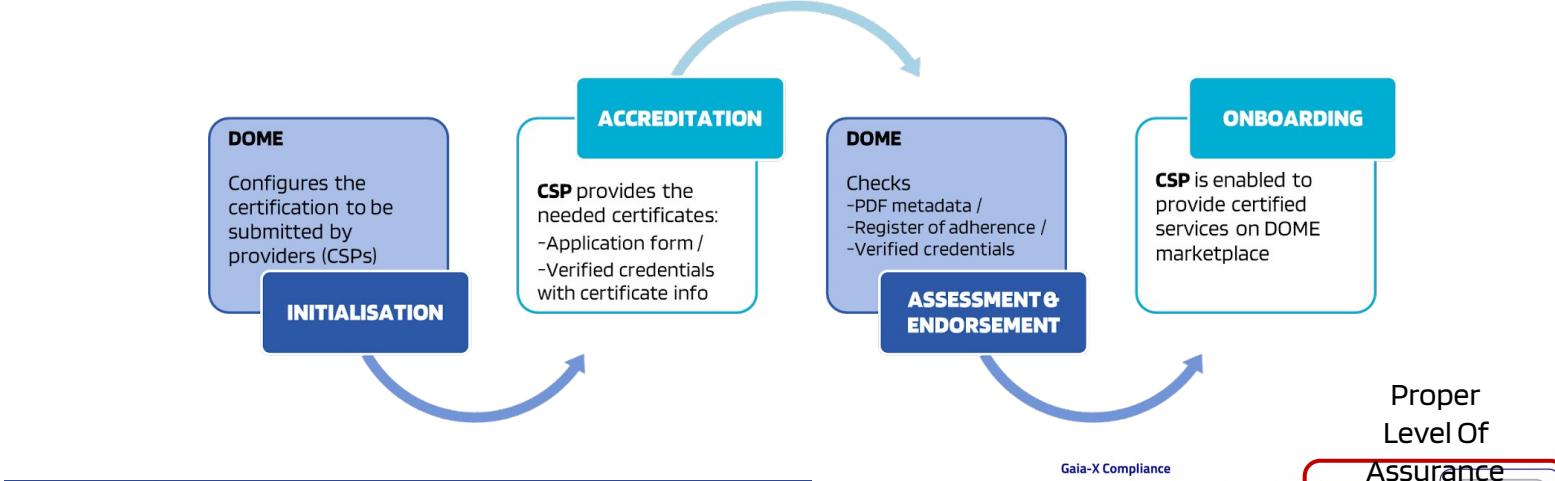
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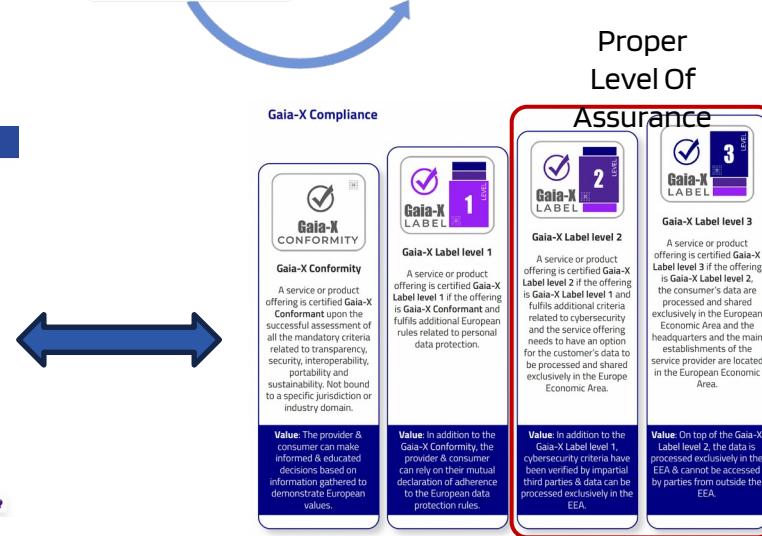
# Verifiable Certifications are required for trusted decentralised replication



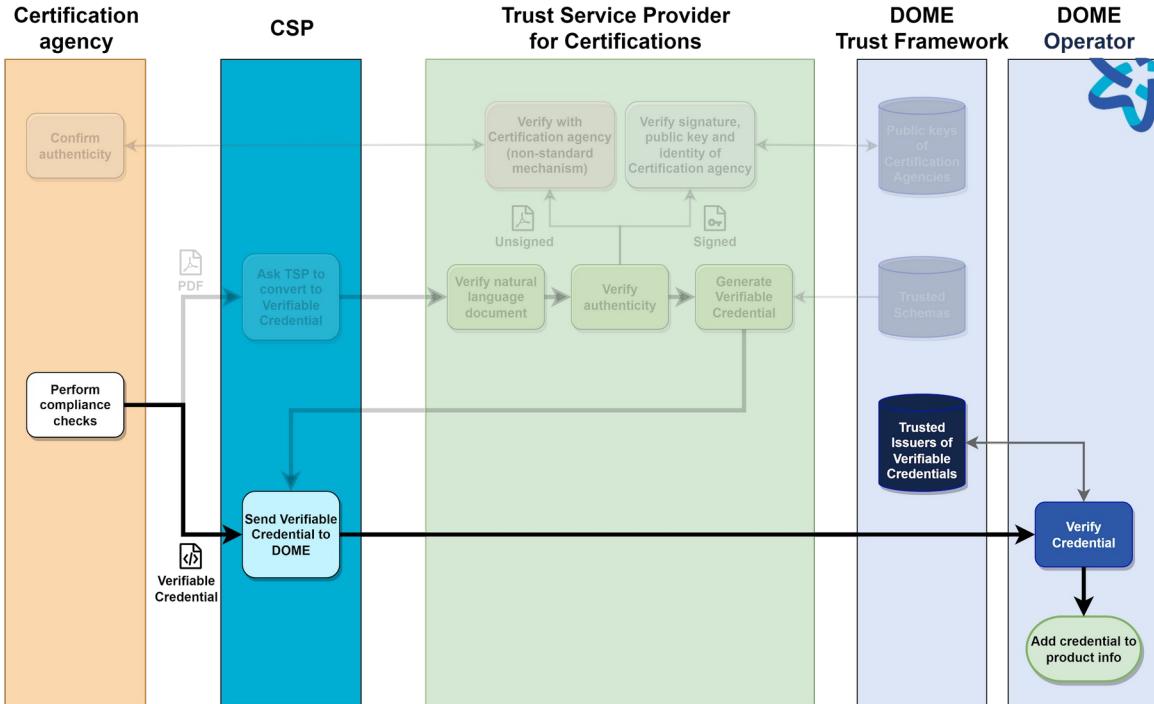


The screenshot shows a 'Compliance profile' section on the DOME Marketplace. It lists various certification standards with their status and options to set or declare them. The standards include:

- ISO 22301:2019 (Certification included)
- ISO/IEC 27000:2018 (Not achieved yet)
- ISO/IEC 27001:2022 (Not achieved yet)
- ISO/IEC 27002:2022 (Not achieved yet)
- ISO/IEC 27701:2019 (Not achieved yet)
- ISO/IEC 27701:2015 (Not achieved yet)
- Payment Card Industry Data Security Standard (PCI DSS) v4.0 (Not achieved yet)
- ISO/IEC 22323-1:2021 (Not achieved yet)
- ISO/IEC 20000-1:2018 (Not achieved yet)
- ISO/IEC 20000-2:2019 (Not achieved yet)
- ISO/IEC 19994-1:2020 (Not achieved yet)
- ISO/IEC 17826:2022 (Certification included)



# Future: the Certification agency issues a Verifiable Credential

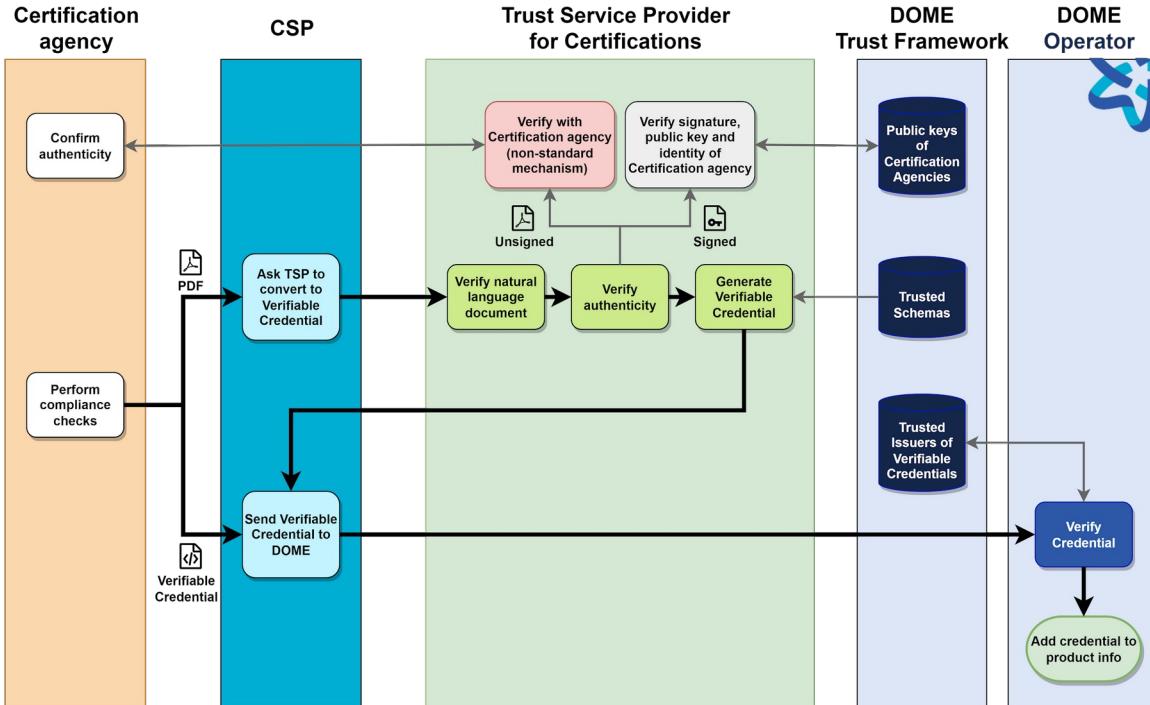


The flow is very simple:

- The CSP receives the certification in its enterprise wallet.
- The CSP sends the certification to DOME onboarding.
- DOME verifies automatically the authenticity of certification and that it is one of the required certifications.
- Identities of certifications agencies are in the Trust Framework



# Today: services to “convert” PDF to Verifiable Credential



There is an intermediate trusted service:

- Verifies the content of credential (typically natural language).
- If it is not digitally signed, checks with the certification agency (may be manual or automatic).
- If it is signed, checks signature, and that signer is authorised.
- Generates a VC and returns it to CSP.

The Trusted Service can be provided by DOME and by other market operators.

# Conclusion

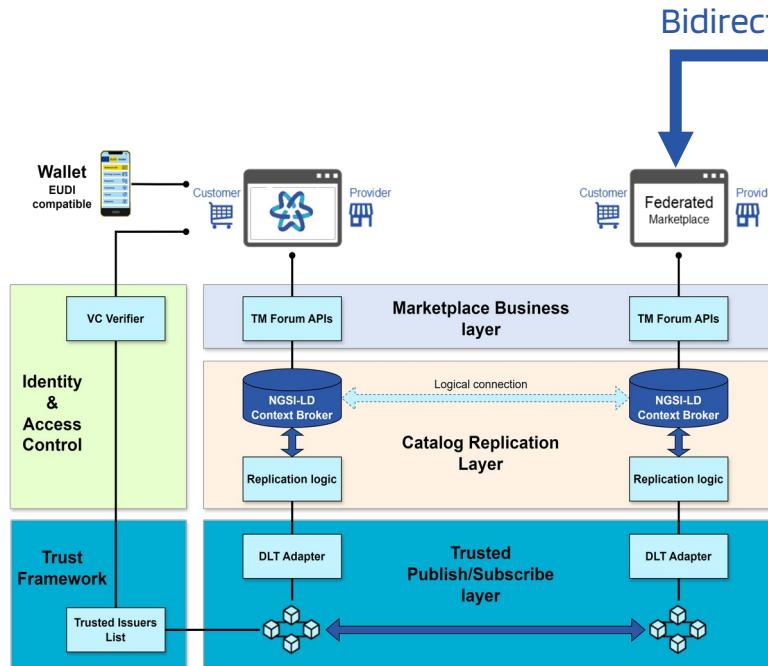


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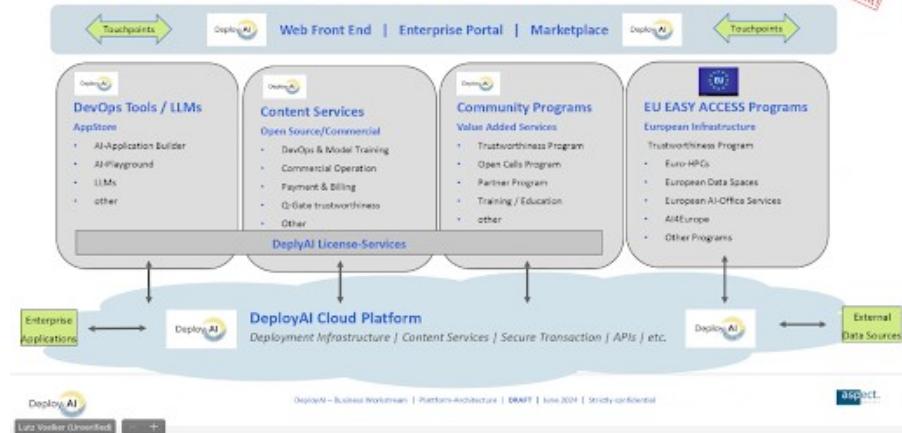


# Possible federation



Bidirectional replication of selected product offerings

DeployAI – high level solution architecture (draft – for internal discussions only)



# End



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