



# ATIEC 2021

2021/09/14

# EACP

## European Aviation Common PKI

Smart.  
Secure.  
Shareable.  
Aviation  
Information.

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EUROCONTROL  
EATM-CERT Manager





**SESAR**  
DEPLOYMENT MANAGER



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Co-financed by the Connecting Europe  
Facility of the European Union

# al “passports” for aviation

Enhance security of information exchanges  
Aviation Trust Framework  
Common service reducing costs

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Part of EC 2021/116 (Common Project1)





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# Why a European aviation PKI?



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Specific ...

But based on Commercial Off the Shelf solution

## Certificate Interoperability

Recognised by other European & Global trusted parties

## Aviation specific PKI configuration Aviation

PKI standards, safety

## Dedicated to Aviation Users only

Best practice to limit cross-domain cyber threats

## State of the Art Solution

TimeStamping, Signing, Validation, Automation, Authorisation

## Offload users of PKI deployment pain

Delegate design, implementation & day-to-day operations

## Financially Attractive

Common Service for all Aviation Stakeholders  
Public funding - tbc

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# European Aviation Common PKI (EACP)



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A Building Block for the European Aviation Digital Infrastructure



Local PKI



Local PKI



Smart.  
Secure.  
Share  
Avia  
Info



- Improve security throughout aviation value chain
- Trust Framework (governance, policies, procedures)
- Common service reducing costs & providing:
  - certificates
  - Interoperability between existing PKI

Targeting hundreds of users

Drone Operators  
Industry  
ANSPs  
Airports  
CAAs  
EUROCONTROL  
Aircraft Manufacturers  
AIRSPACE USER



*We are as strong as the weakest link*





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Governance Set up  
Possible Public Funding

Dev't

Operation

To be retendered periodically

Prepare Tech Framework & Procedures

Define Governance & Funding Principles

Prepare Call for Tenders

CFT

2020

2021

2022

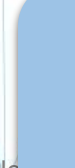
2023+

PCP  
Mandate

European PKI – CEF Project  
Preparation

European Aviation Common PKI  
2022-20..

30 partners  
21 ANSPs,  
3 Airspace Users  
3 Airports  
2 MIL  
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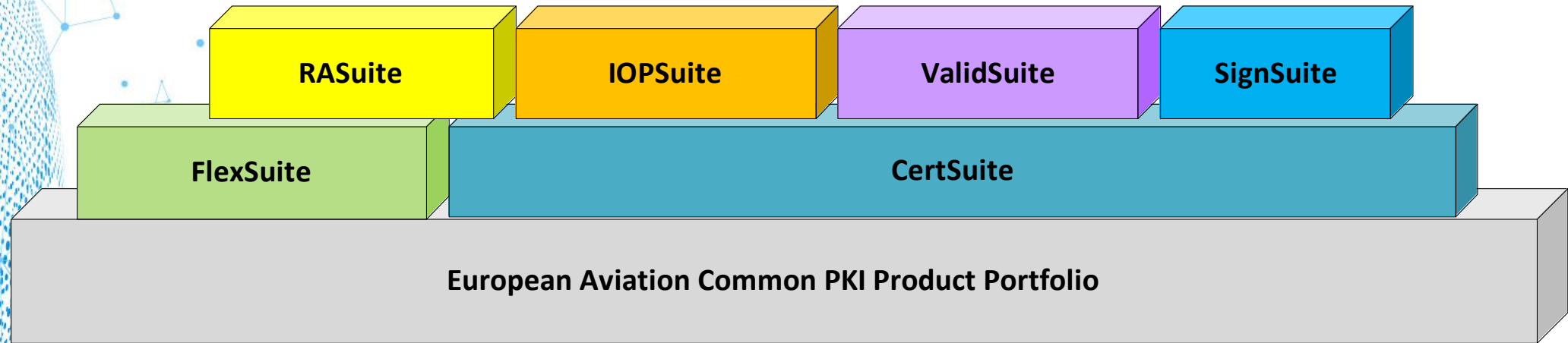




# EACCP

## Product portfolio

EA Trust Framework



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# EAC Trust Framework

Co-finance Trust Framework

EACP  
Governance

Membership Agreement  
Charging Policy

Operational Trust Framework

EACP Trust  
Framework

Fully aligned with  
ICAO Trust  
Framework

EACP Policies

EACP Technical  
Framework

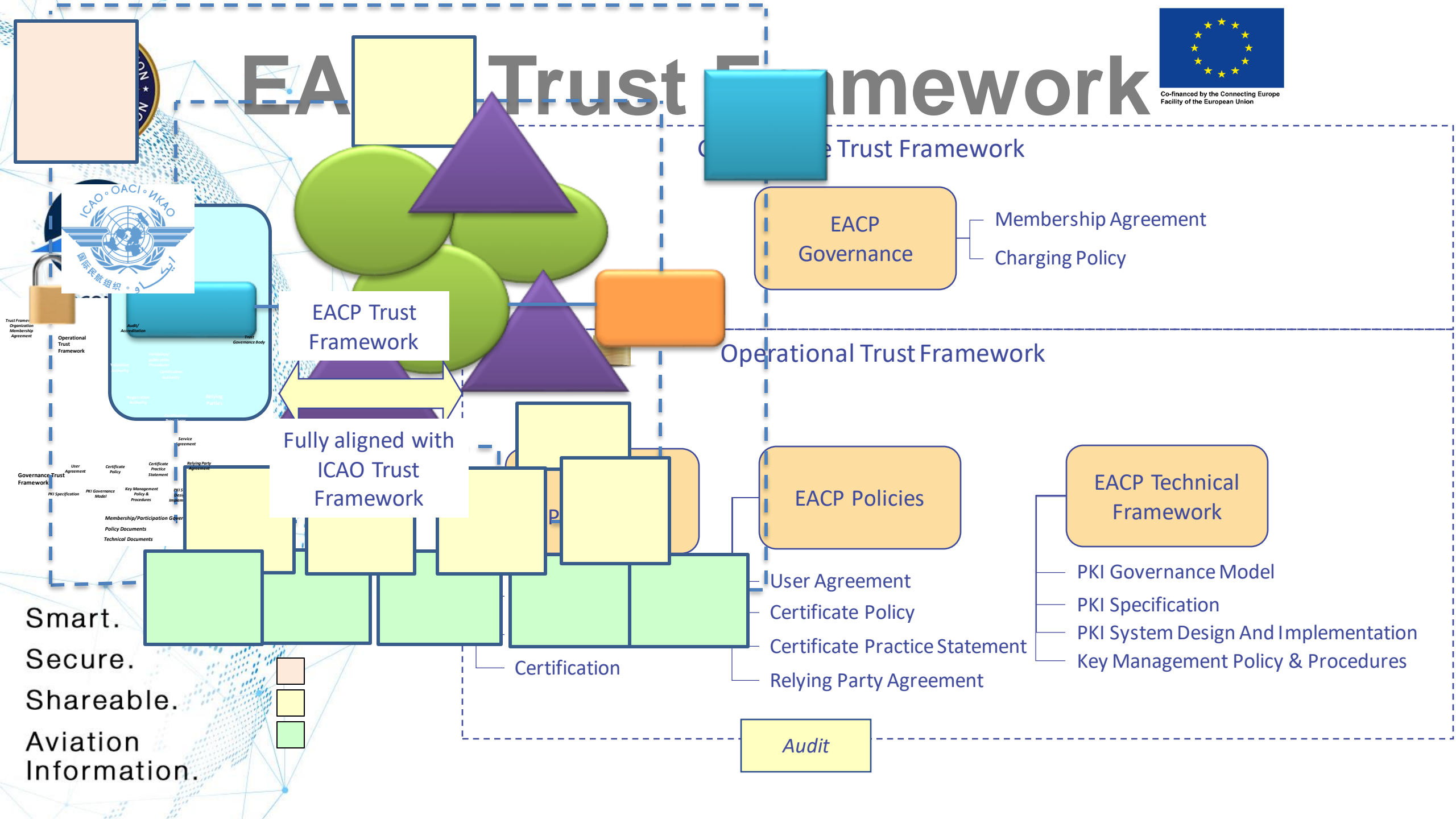
User Agreement  
Certificate Policy  
Certificate Practice Statement  
Relying Party Agreement

PKI Governance Model  
PKI Specification  
PKI System Design And Implementation  
Key Management Policy & Procedures

Certification

Audit

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# Draft governance



## EUROCONTROL WORKING ARRANGEMENTS

ND TECH

NM Technical Directors

IMT

Information Management  
managers & Experts

CYBERG

Cybersecurity Experts



## EACP Working Arrangements

PKI Executive Board (PEB)

EACP Members (Directors)

Policy Management Authority  
(PMA)

EACP Members  
(Policy Managers)

EACP  
Agreement

Technical Advisory  
Task Force (TATF)  
EACP Members  
(Experts)

PKI Management Unit

EACP Gov. Staff

Registration Authority Services

EACP Gov. Staff or outsourced

Day to Day Operation

European Aviation CA Operators

Day-to-Day operation

PKI User Group

EACP Users (Experts)

Outsourced  
Common procurement

EACP  
Contract  
(CFT)



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Facility of the European Union

Executive Level

Management &  
Policy Level

Operation Level





# Membership & charging



EACP Member

€ Pay Membership  
€ Fee commensurate to use

EACP User

Criteria to be trusted

Services

€ Fee commensurate to use

Governance

Establish the service  
Fund the common procurement & set-up  
Decide on Policy, Charging, Strategy



Services

Smart.  
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## Intra Europe

Well Known CA

## External PKI Domains

European Aviation  
Root CA

European  
Interoperability CA

X-certif CTL Root Sign

European Aviation  
Aeronautical  
Identity CA

European  
Aviation Safety  
Critical CA

European Aviation  
Aircraft  
Manufacturer CA

European  
Aviation  
Other CA

European  
Aviation Issuing  
CA

European Aviation  
Bridge CA

European Aviation  
Interoperability CA

CTL Root Sign

European Aviation  
Aeronautical  
Identity CA

European  
Aviation Safety  
Critical CA

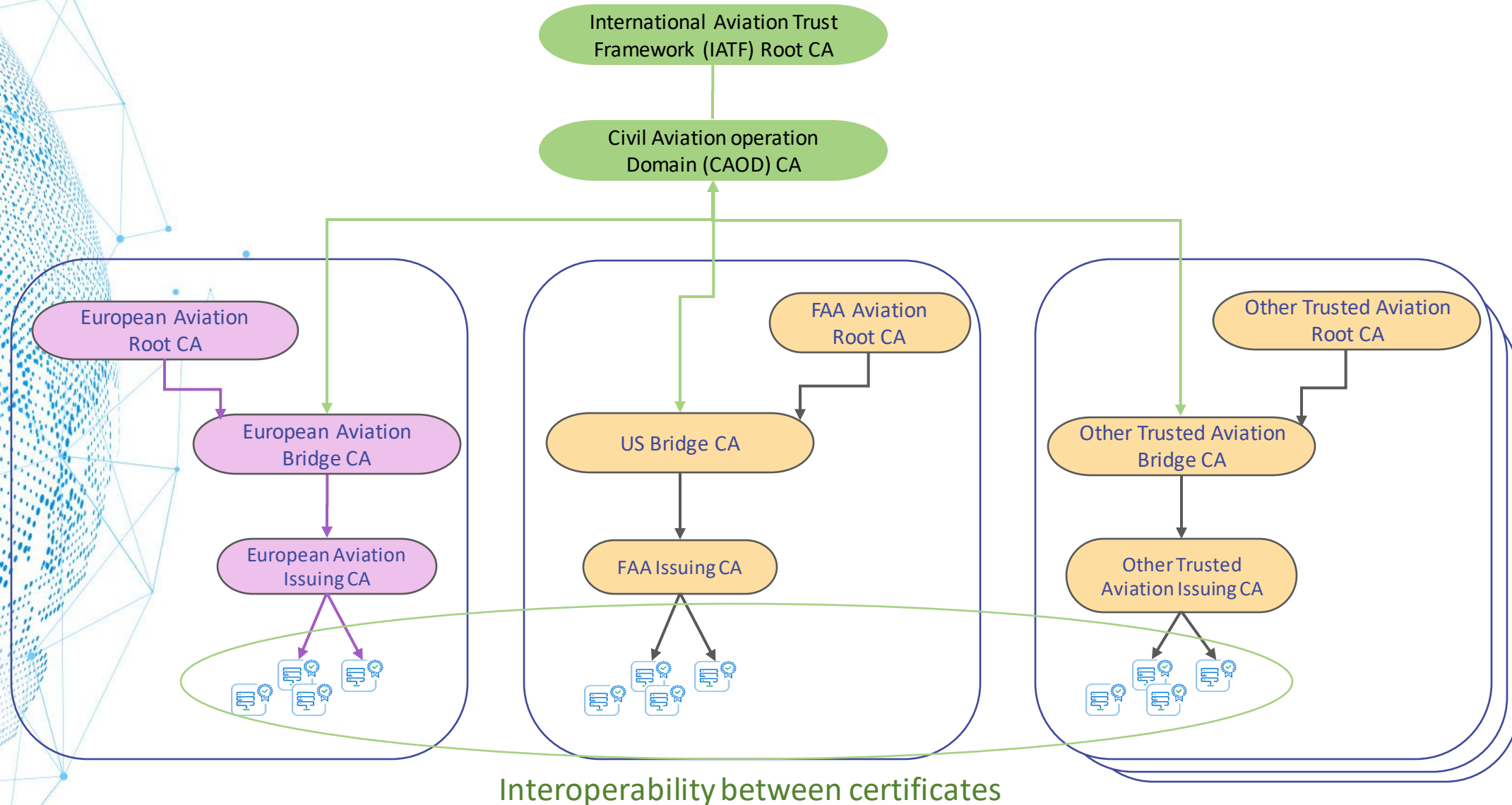
European Aviation  
Aircraft  
Manufacturer CA

European  
Aviation  
Other CA





# Global Interoperability



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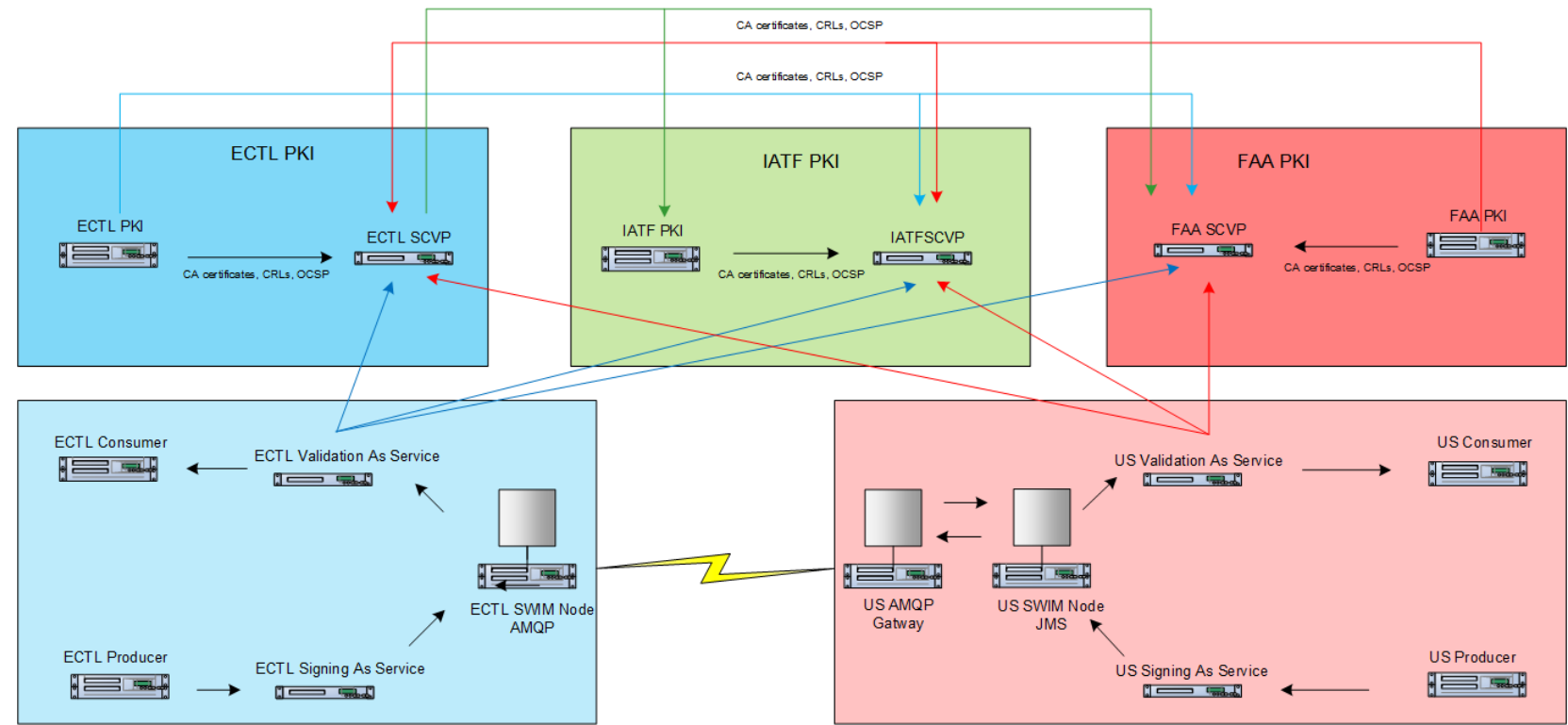




# Relationships EACP / IATF



- Technical:
  - Global interoperability of various solutions
  - Tests between FAA and EUROCONTROL



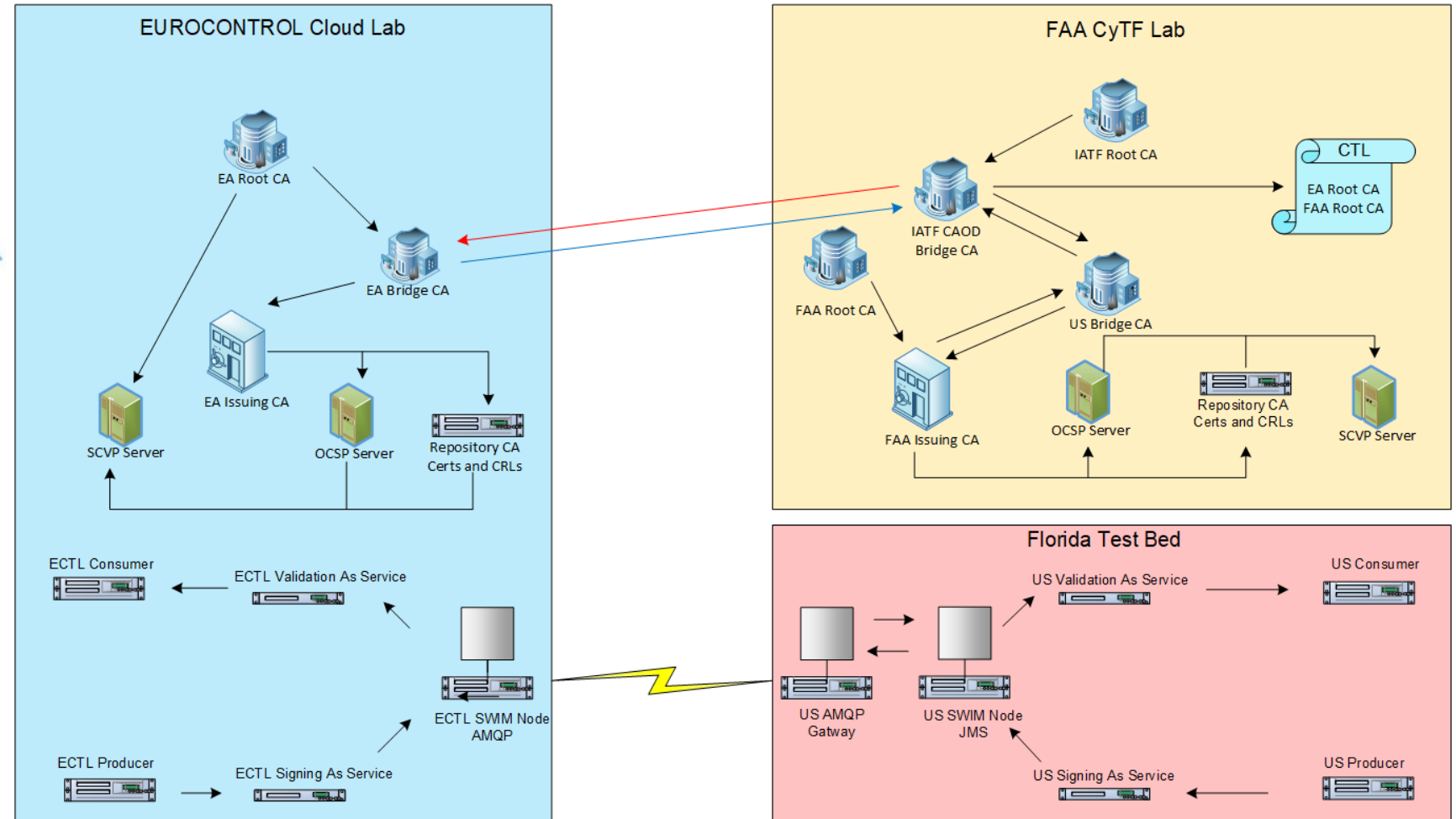
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# ESPHOC Overview



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# Use cases



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certificates

Client/Server

Proof of identity

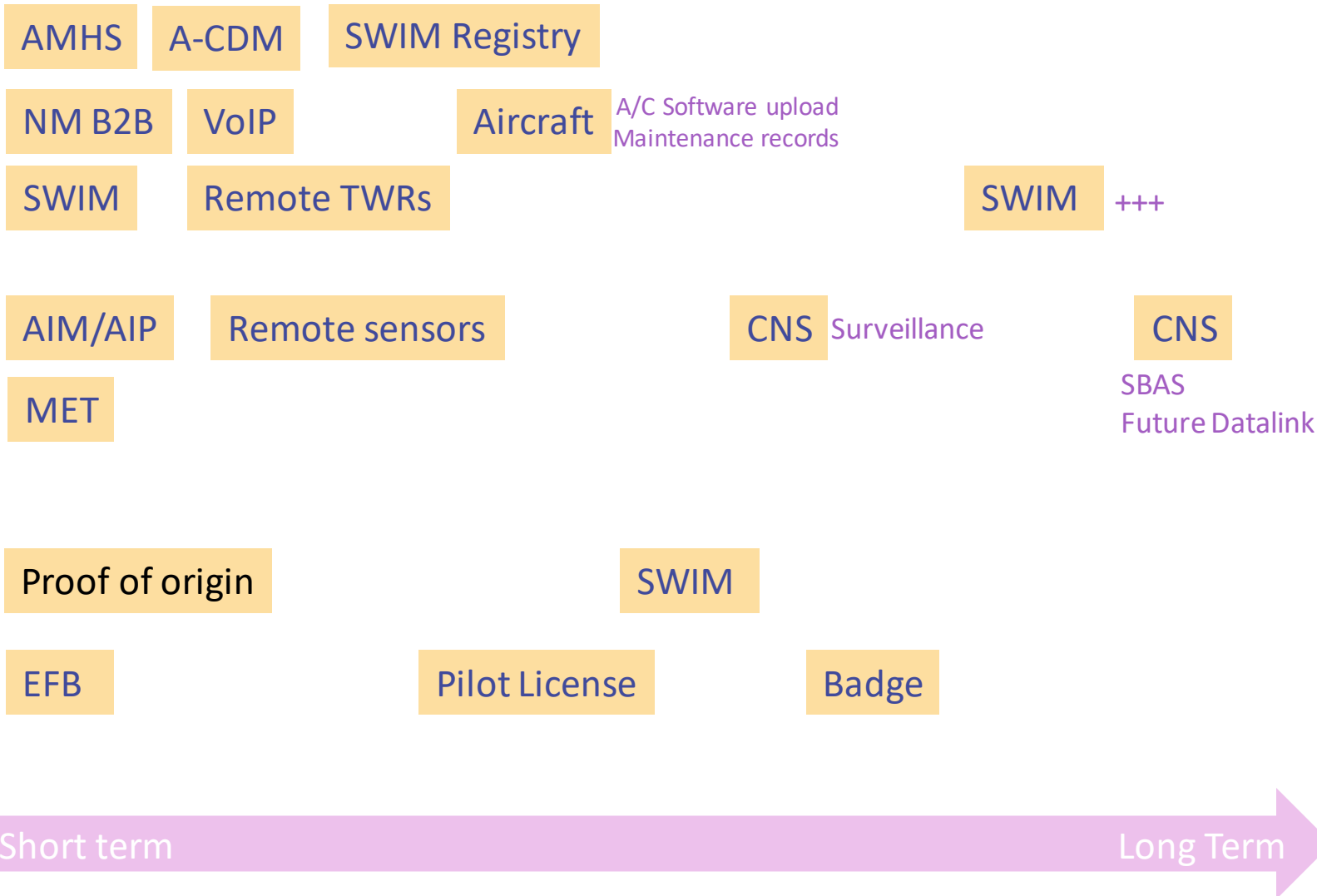
Object Signing

Personal Certificate

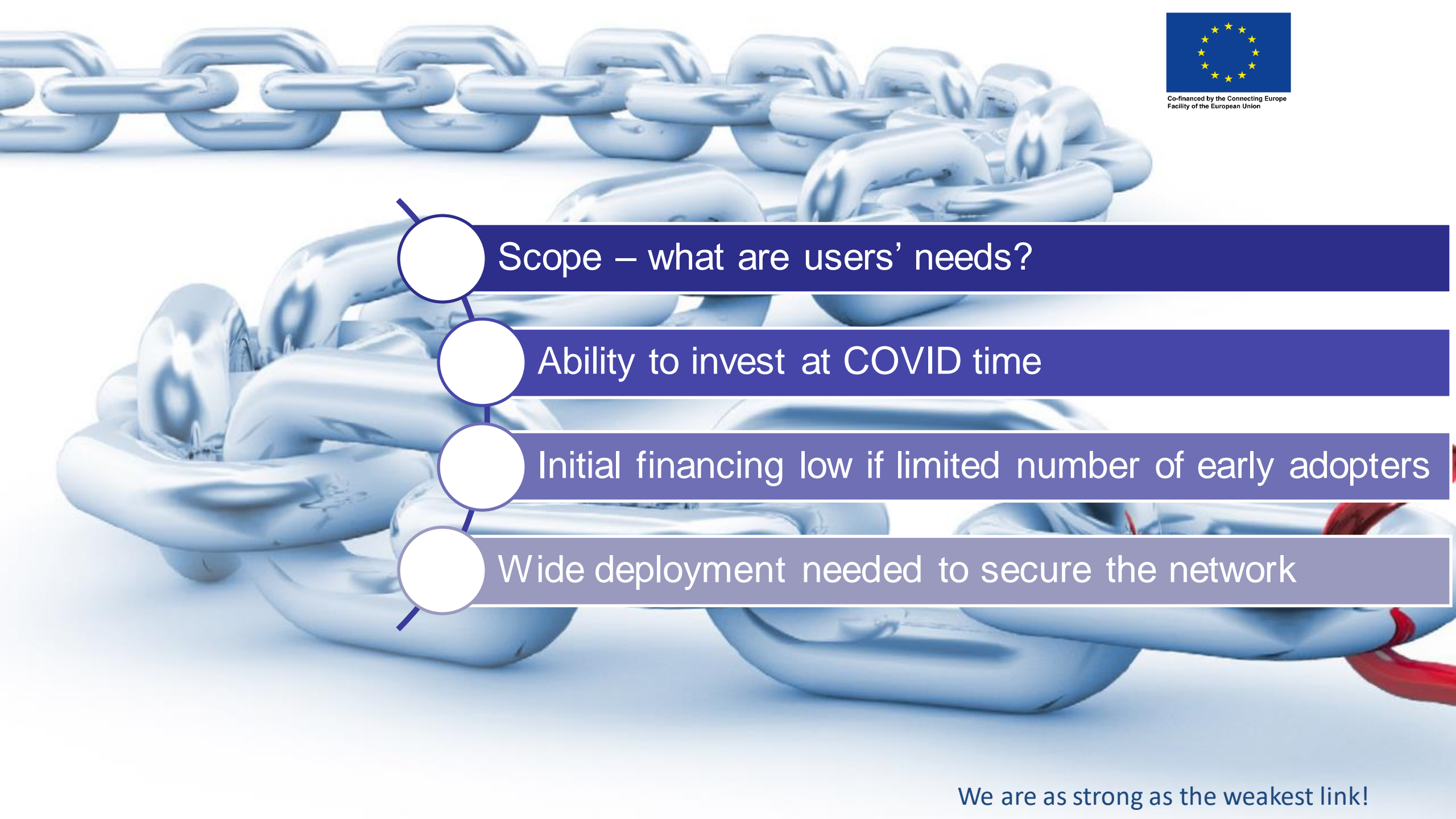


signing

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- 
- Scope – what are users' needs?
  - Ability to invest at COVID time
  - Initial financing low if limited number of early adopters
  - Wide deployment needed to secure the network

We are as strong as the weakest link!



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