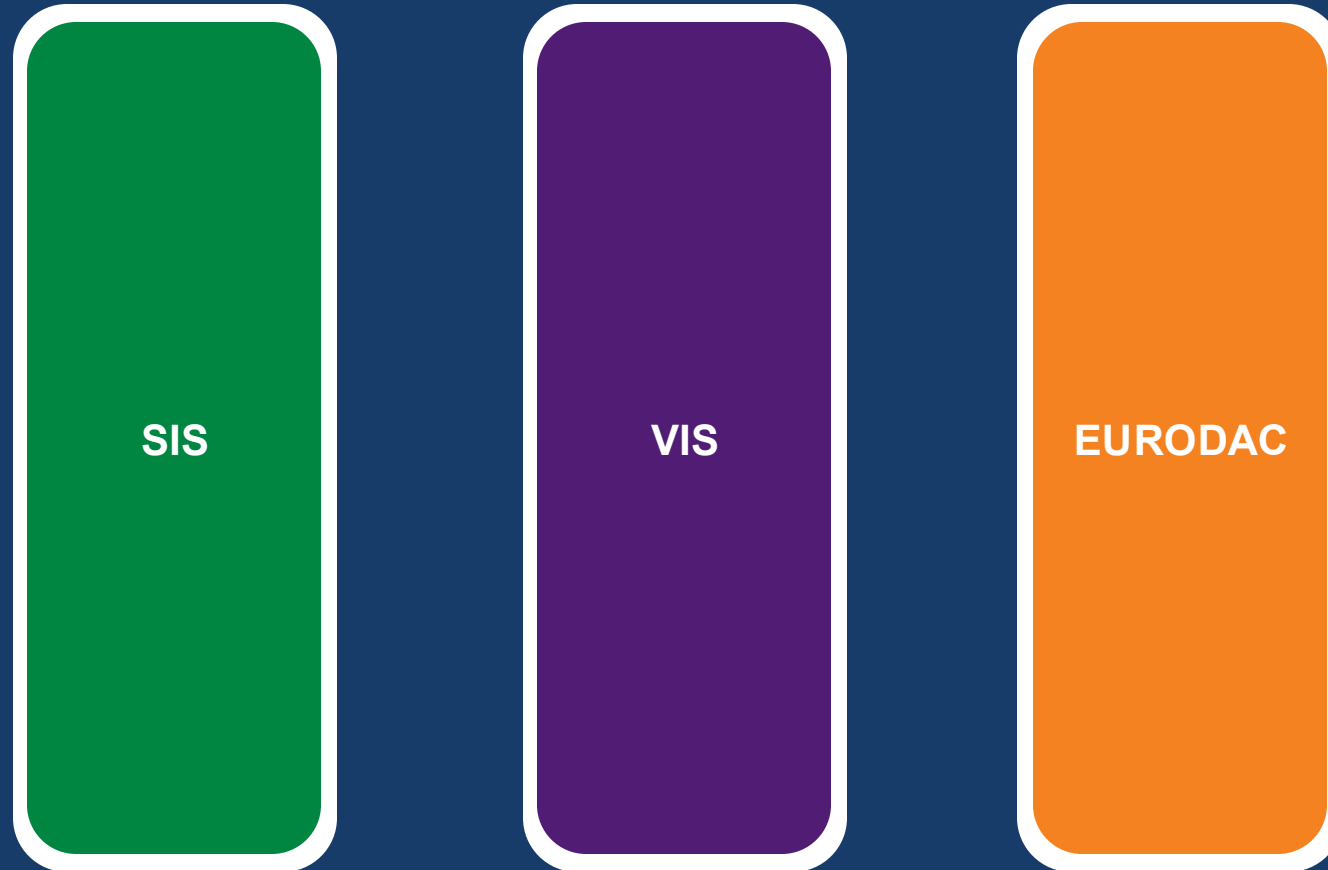# eu-LISA's journey towards a Software Factory

Jean-Pierre GRILLON
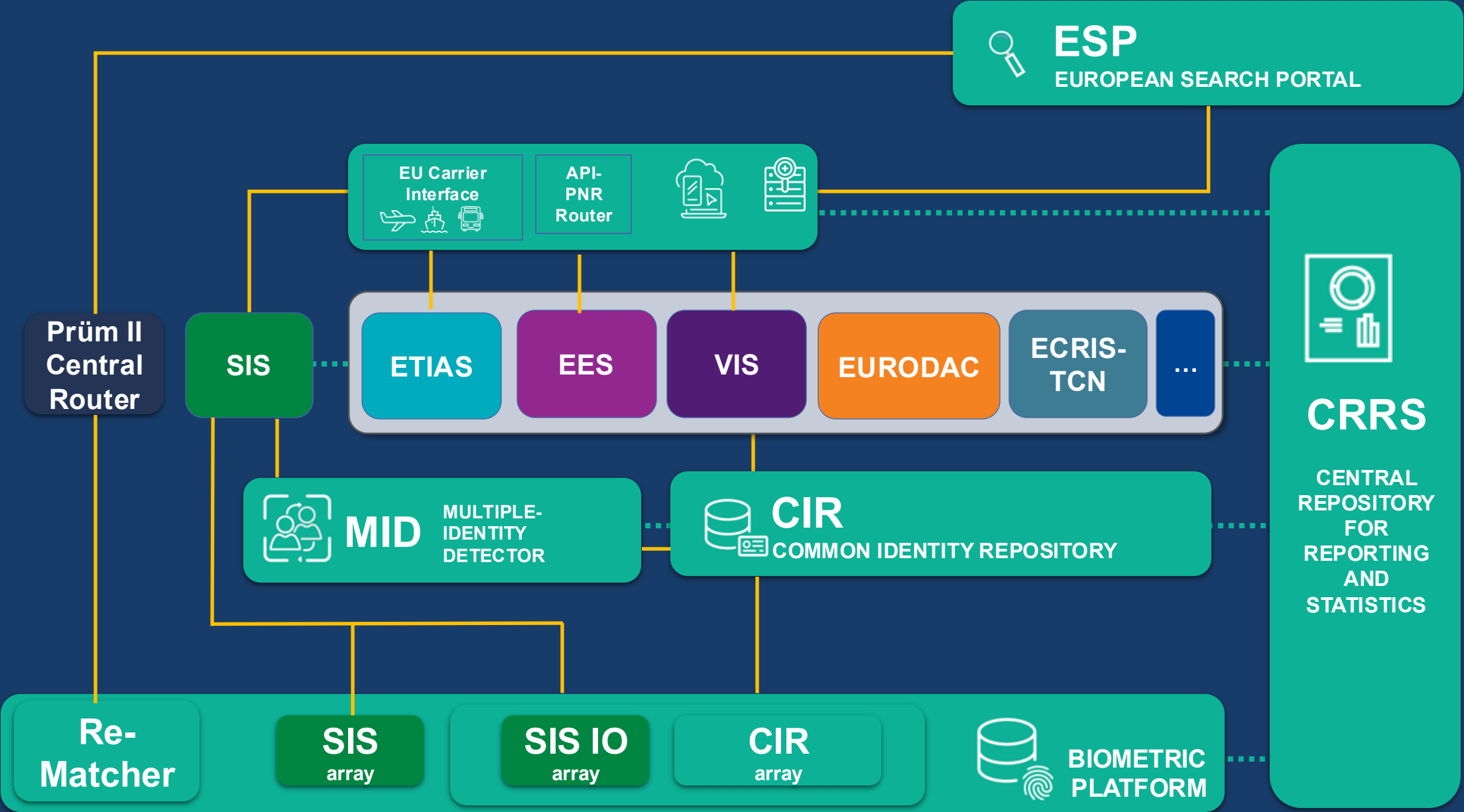
Head of the Technology and Software Unit

eU-LISA

Where does eu-LISA come from?
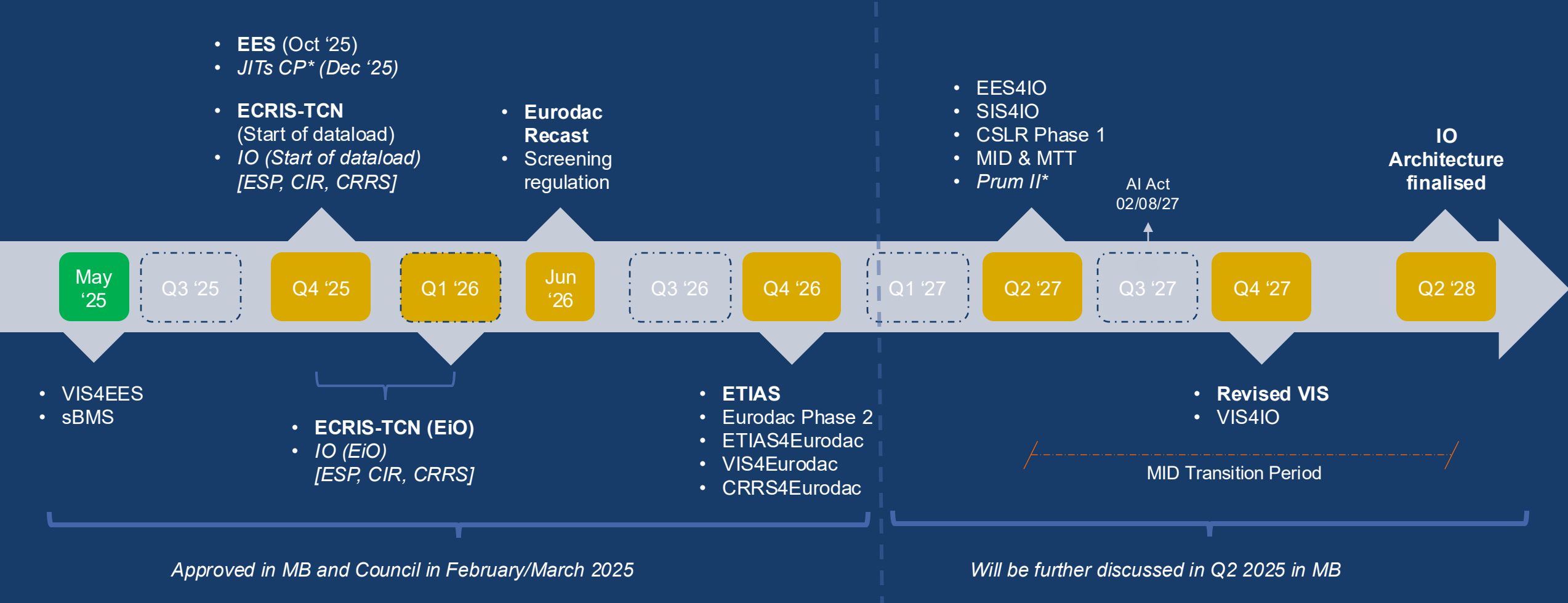
Core Business System's historical architecture: Silos

CBS Target Architecture: Interoperability

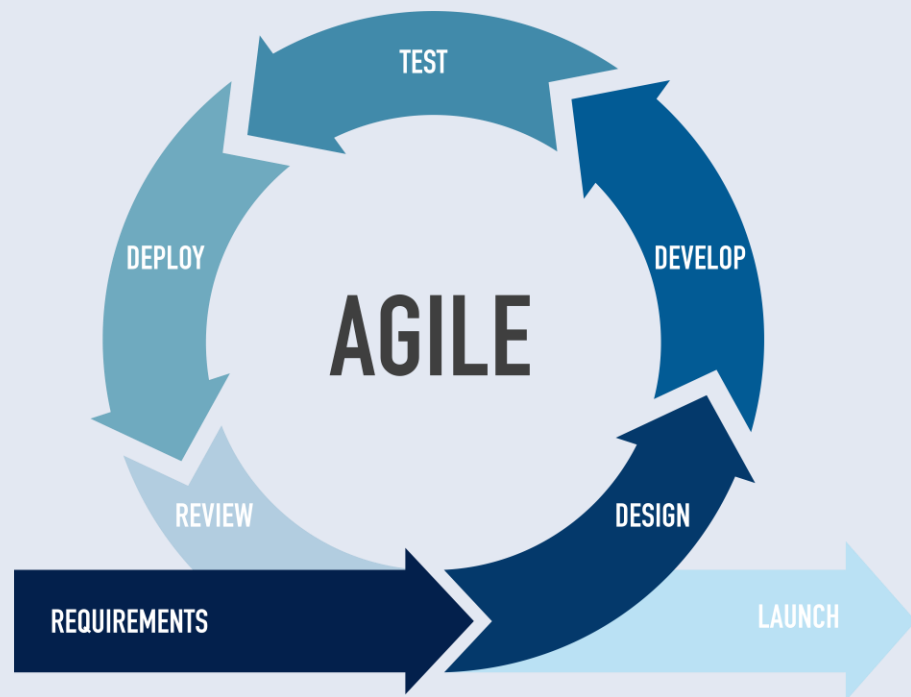Why do we need a deep transformation?

Interoperability Roadmap

- **EES** (Oct '25)
- *JITs CP* (Dec '25)*

- **ECRIS-TCN** (Start of dataload)
- *IO (Start of dataload) [ESP, CIR, CRRS]*

- **Eurodac Recast**
- Screening regulation

- EES4IO
- SIS4IO
- CSLR Phase 1
- MID & MTT
- *Prum II**

AI Act 02/08/27

IO Architecture finalised

| May '25 | Q3 '25 | Q4 '25 | Q1 '26 | Jun '26 | Q3 '26 | Q4 '26 | Q1 '27 | Q2 '27 | Q3 '27 | Q4 '27 | Q2 '28 |

- VIS4EES
- sBMS

- **ECRIS-TCN (EiO)**
- *IO (EiO) [ESP, CIR, CRRS]*

- **ETIAS**
- Eurodac Phase 2
- ETIAS4Eurodac
- VIS4Eurodac
- CRRS4Eurodac

- **Revised VIS**
- VIS4IO

MID Transition Period

Approved in MB and Council in February/March 2025

Will be further discussed in Q2 2025 in MB

* Not part of IO Roadmap

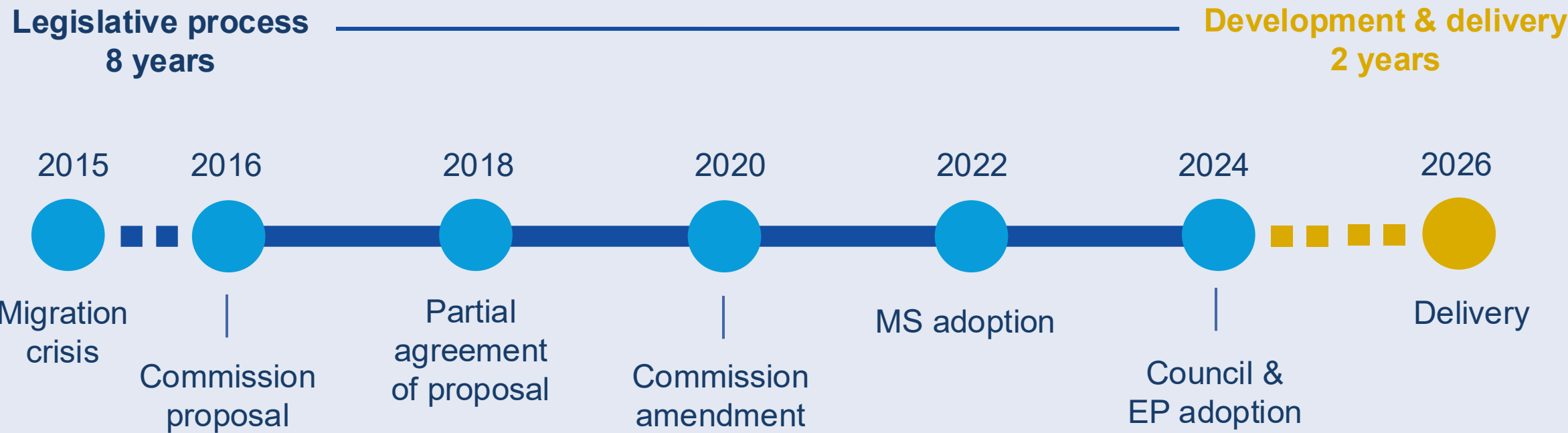eu-LISA

We are facing a number of challenges

- **Delays in some projects**

- **Complex operating environment with multiple stakeholders**

- **Strict and unflexible public procurement rules**

Political pressure to deliver fast with limited resources

- Continuous compliance with regulations (GDPR, AI Act, EU cybersecurity regulation…)

- Fast response to new system development and management requests

Example: EURODAC recast

Legislative process 8 years — **Development & delivery 2 years**

| 2015 | 2016 | 2018 | 2020 | 2022 | 2024 | 2026 |

Migration crisis

Commission proposal

Partial agreement of proposal

Commission amendment

MS adoption

Council & EP adoption

Delivery

Technological control, independency and sovereignty

A Software Factory combined with Agile methodologies and DevSecOps can provide:

- Ability to have **more control over the systems developed**

- **Reduce the reliance on external contractors**

- **Strengthen the technological self-sufficiency** of the Agency

What the reality of our complex environment says

- **High responsibility** of engaging tax payer money

- Projects have a very defined scope, budget and timeline coming from the **legal base**

- Vendor selection rigidity

What the reality of our complex environment says

- **Skill gaps and capacity building** among staff

- **Stakeholder alignment and governance** (multiple MS, EU oversight)

- **Measuring success and KPIs** (i.e., changing from traditional metrics to agile metrics)
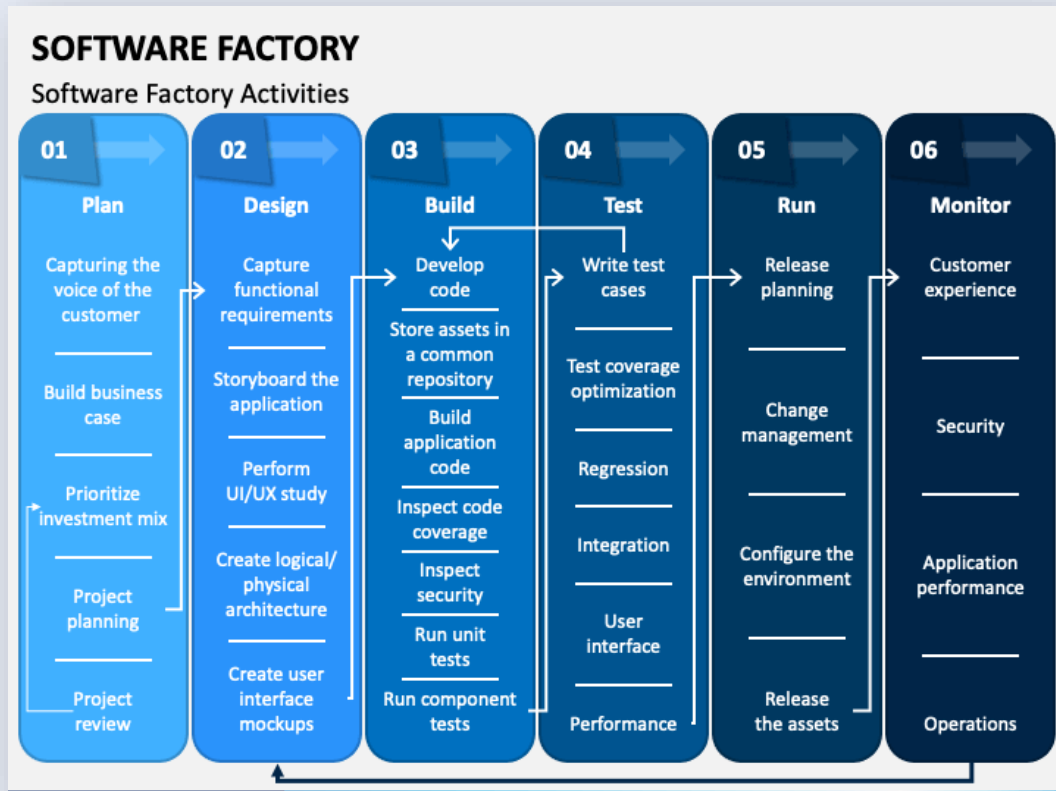
What the reality of our complex environment says

- **Highest security requirements**

- **Systems under operations** (e.g., data migration and consistency, monolithic architectures)

- **Infrastructure and tooling constraints**

What is our definition of SoFa?

What the theory says about SoFa

SOFTWARE FACTORY
Software Factory Activities

01 Plan	02 Design	03 Build	04 Test	05 Run	06 Monitor
Capturing the voice of the customer	Capture functional requirements	Develop code	Write test cases	Release planning	Customer experience
Build business case	Storyboard the application	Store assets in a common repository	Test coverage optimization	Change management	Security
Prioritize investment mix	Perform UI/UX study	Build application code	Regression	Configure the environment	Application performance
Project planning	Create logical/physical architecture	Inspect code coverage	Integration		
Project review	Create user interface mockups	Inspect security	User interface	Release the assets	Operations
		Run unit tests	Performance		
		Run component tests			

- The Software Factory is an **operating model for SDLC** (Software Development Lifecycle).

- It **sets the framework** for people, practices and tools, to deliver a software solution.

What the theory says a SoFa will deliver

- The target outcome is a **more predictable project delivery** through:

  - A revised **sourcing and procurement model**

  - An increased **internal technical ownership**

  - **Standardisation and automation**

  - Efficiency through the application of **agile methodologies at scale**

How are we redefining our model

(making theory and reality match)

eU-LISA

Sourcing & procurement

Move away from large fixed price contract

Engage with Software Vendors

# Human resources, capacity building and cultural shift

- Grow our internal, technical, hands-on workforce
  - Additional hiring
  - Training

- Involving managers and staff on the new way of working
  - Cultural shift
  - Take ownership internally instead of contracting it
  - Take risk, "fail fast"
  - Continuous learning
  - "Agility"

Applying new methodologies
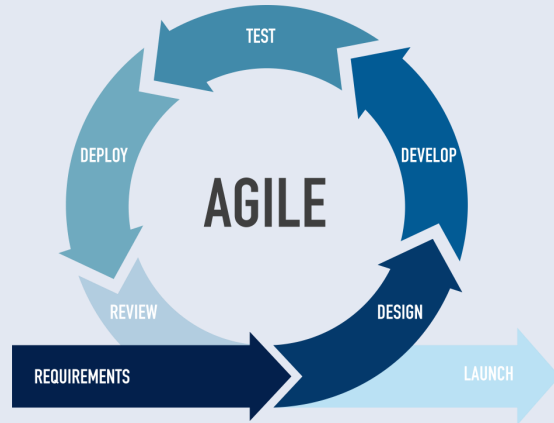
Scaled **A**gile **F**ramework (**SAFe**)
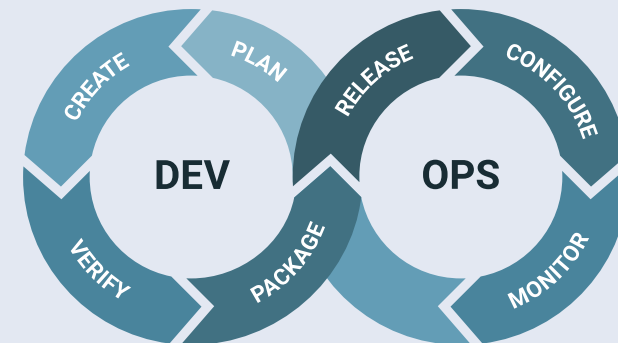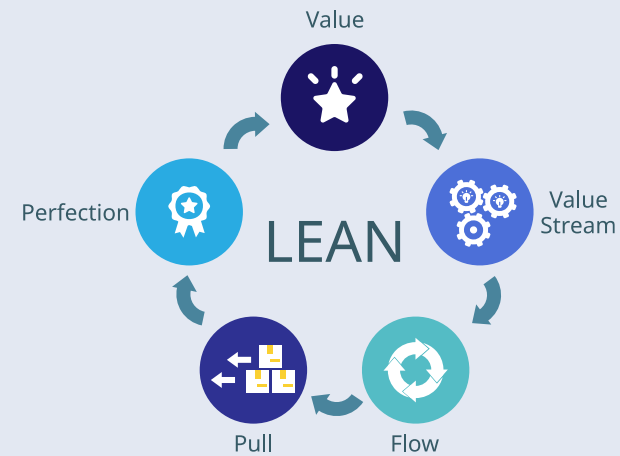
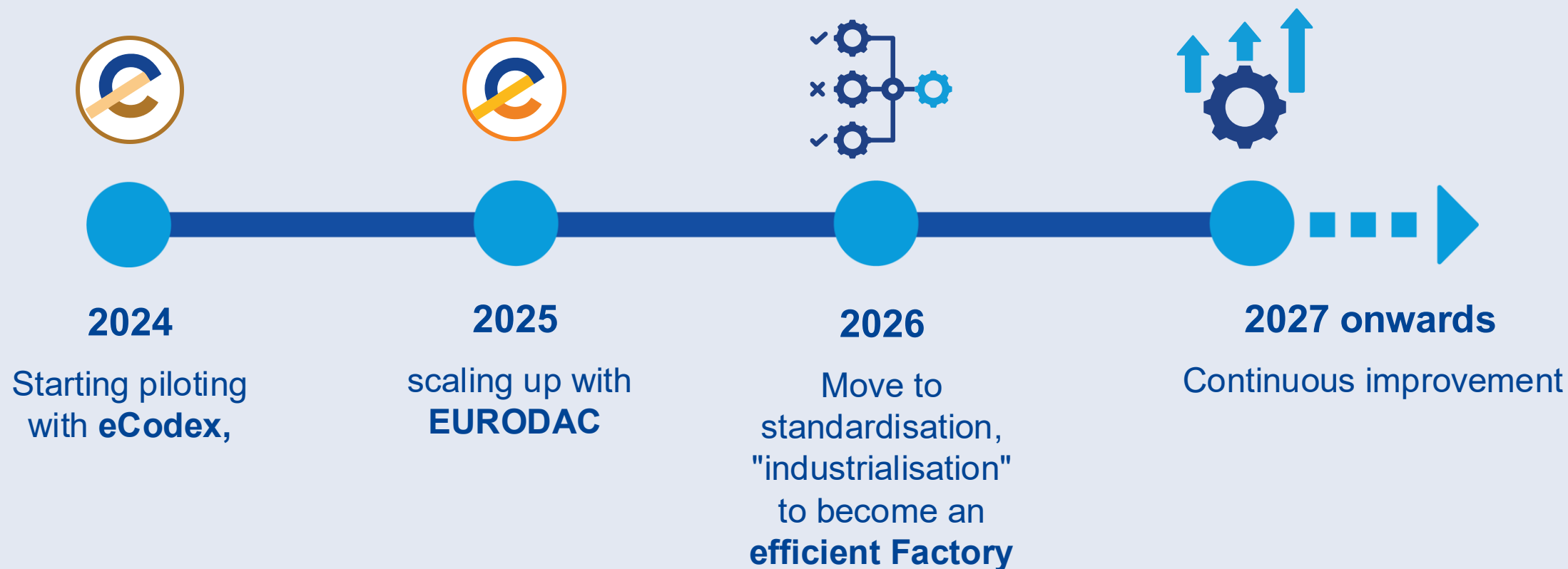# Application and integration of new technologies

AI and advanced analytics

Cloud: hybrid model with multiple providers, cloud-native architectures

DevSecOps and Zero trust security models

When we will reach our transformation?

Every transformation requires time and a plan

2024

Starting piloting with **eCodex,**

2025

scaling up with **EURODAC**

2026

Move to standardisation, "industrialisation" to become an **efficient Factory**

2027 onwards

Continuous improvement

Conclusion

Our current vision

- **We want** to keep delivering a high quality service to the Member States

- **We believe** that SoFa (through Agile and DevSecOps) is definitely the way to move forward

- **We know** there will be big challenges on the way

- **We are ready** to face them and find solutions for them

- **We are just starting our journey, and we want to learn from you**

Thank you !

eu-LISA
European Union Agency for the Operational
Management of Large-Scale IT Systems in
the Area of Freedom, Security and Justice

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