Financial and Insurance Sectors case studies digitally transforming Europe's future with Big Data & AI driven innovation

The INFINITECH Project

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This project has received funding from the European Union's horizon 2020 research and innovation programme under grant agreement no 856632

Background and Motivation

- Historically, the financial and insurance services sectors are “conservative” (resistant to technology disruptions)
- Digital Technologies are rapidly transforming the financial and insurance services industry
- The vast majority of digital transformation applications for the finance and insurance sectors are data-intensive
- Endless quest for cost-effective applications exploiting Big Data also coming from IoT and Data Lakes

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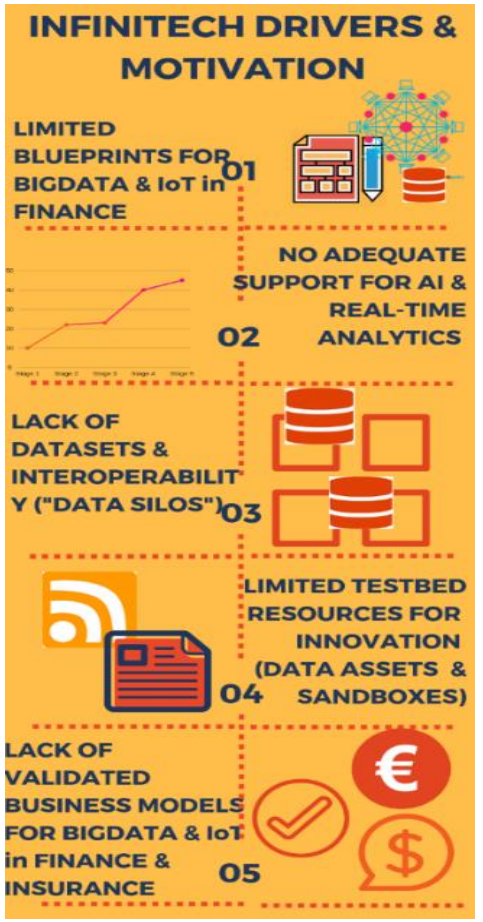
The Problem in the Financial and Insurance Sectors

- Data Fragmentation and Interoperability Barriers
- Limitations for Cost-Effective Real-Time Analytics
- Regulatory Barriers
- Data Availability Barriers
- Lack of Blueprint Architectures for BigData Applications
- Scarcity of Analytics and Standard Tools for the Sector
- No Validated Business Models



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Infinitech

- H2020 Program Grant
- Innovation Action
- Project Budget: 21.080.482 €
- EC Grant: 15.870.480 €
- Timeframe: 01/10/2019-31/12/2022
- 47 Participants (Industry, Academia, FinTechs)

Tailored IoT & BigData Sandboxes and Testbeds for Smart, Autonomous and Personalized Services in the European Finance and Insurance Services Ecosystem

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Project Excellence

Criterion 1 - Excellence

Score: **4.50** (Threshold: 3/5.00 , Weight: -)

Beyond the state of the art, and demonstrates innovation potential
ground-breaking objectives
- **novel concepts and approaches**
- **new products, services or business and organisational models**

Criterion 2 - Impact

Score: **5.00** (Threshold: 3/5.00 , Weight: -)

- **Enhance innovation capacity**
- **Create new market opportunities**
- **Strengthen competitiveness and growth of companies**

Criterion 3 - Quality and efficiency of the implementation

Score: **4.50** (Threshold: 3/5.00 , Weight: -)

- **Capacity and Capabilities in execution**
- **Complementarity of the participants and extent to which the consortium as a whole brings together the necessary expertise**

Innovation → Market → Execution

INFINITECH is a joint effort of global leaders in ICT and finance towards lowering the barriers for BigData/IoT/AI driven innovation, boosting regulatory compliance and stimulating additional investments

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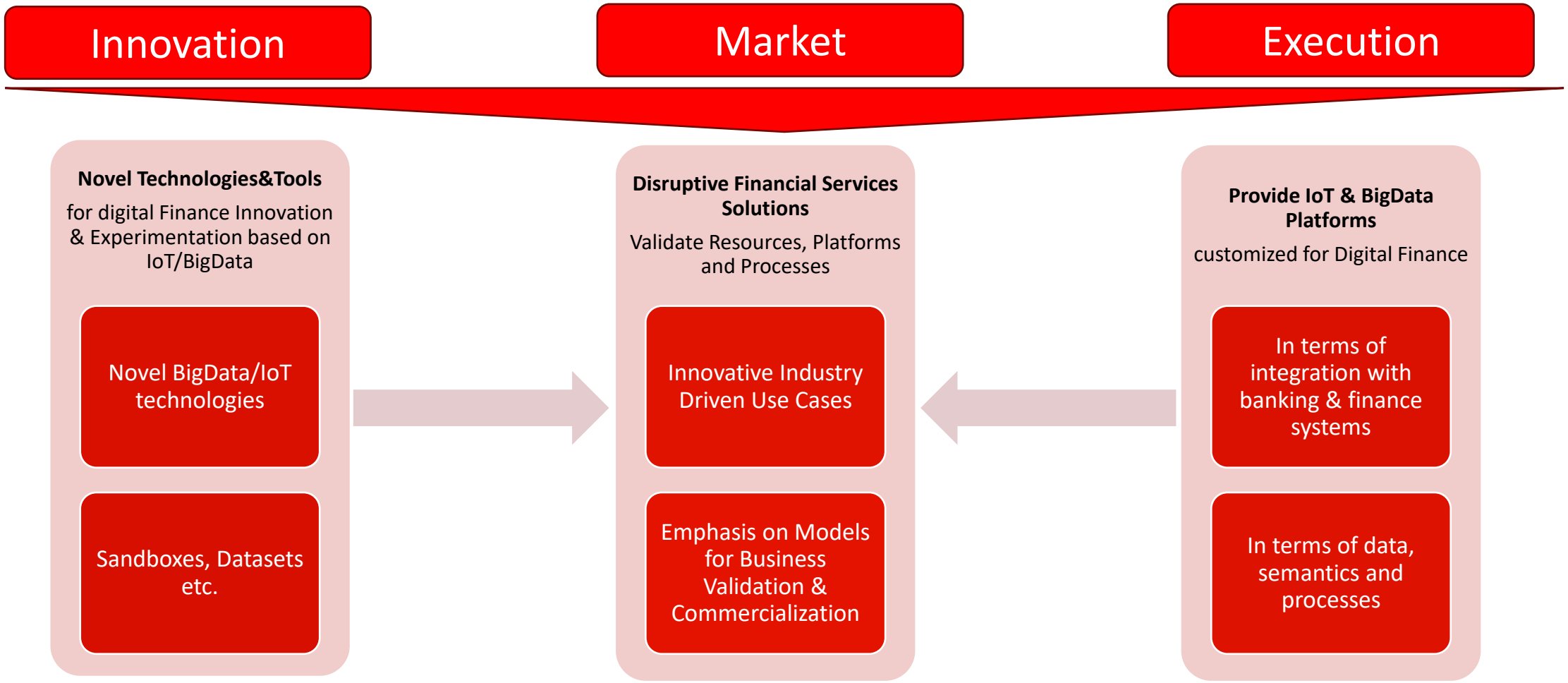
INFINITECH Vision



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INFINITECH Consortium

Innovation

Universities and Research Centers

NUI Galway OÉ Gaillimh
UNINOVA
Fondazione Bruno Kessler
University of Glasgow
University of Nicosia
University of Piraeus Research Center
ORT
CTAG Centro Tecnológico de Automoción de Galicia
Jožef Stefan Institute
Boğaziçi University
gradiant

Market

FinTechs & High-Tech AI/IoT SMEs

Crowd Policy
privé technologies
jrc
Finance Innovation
Copenhagen Fintech
Unparallel
agroapps
dwf
Innovation Sprint
reportbrain
Roessingh
UBITECH
Lean Cale
Innov-acts
wenalyze

Financial & Insurance Institutions

ABI Lab Tecnologia utile
aktif bank
Banka Slovenije Evrosistem
National Bank of Greece
Posteitaliane
Bank of Ireland
Banking & Payments Federation Ireland
Santander
Dynamis
Bankia
Liberbank
Genillard & Co
Bank of Cyprus

Execution

Digital Finance Vendors & Integrators

GFT
Atos
SIA
IBM
Fujitsu
ENGINEERING
Hewlett Packard Enterprise
Singular Logic

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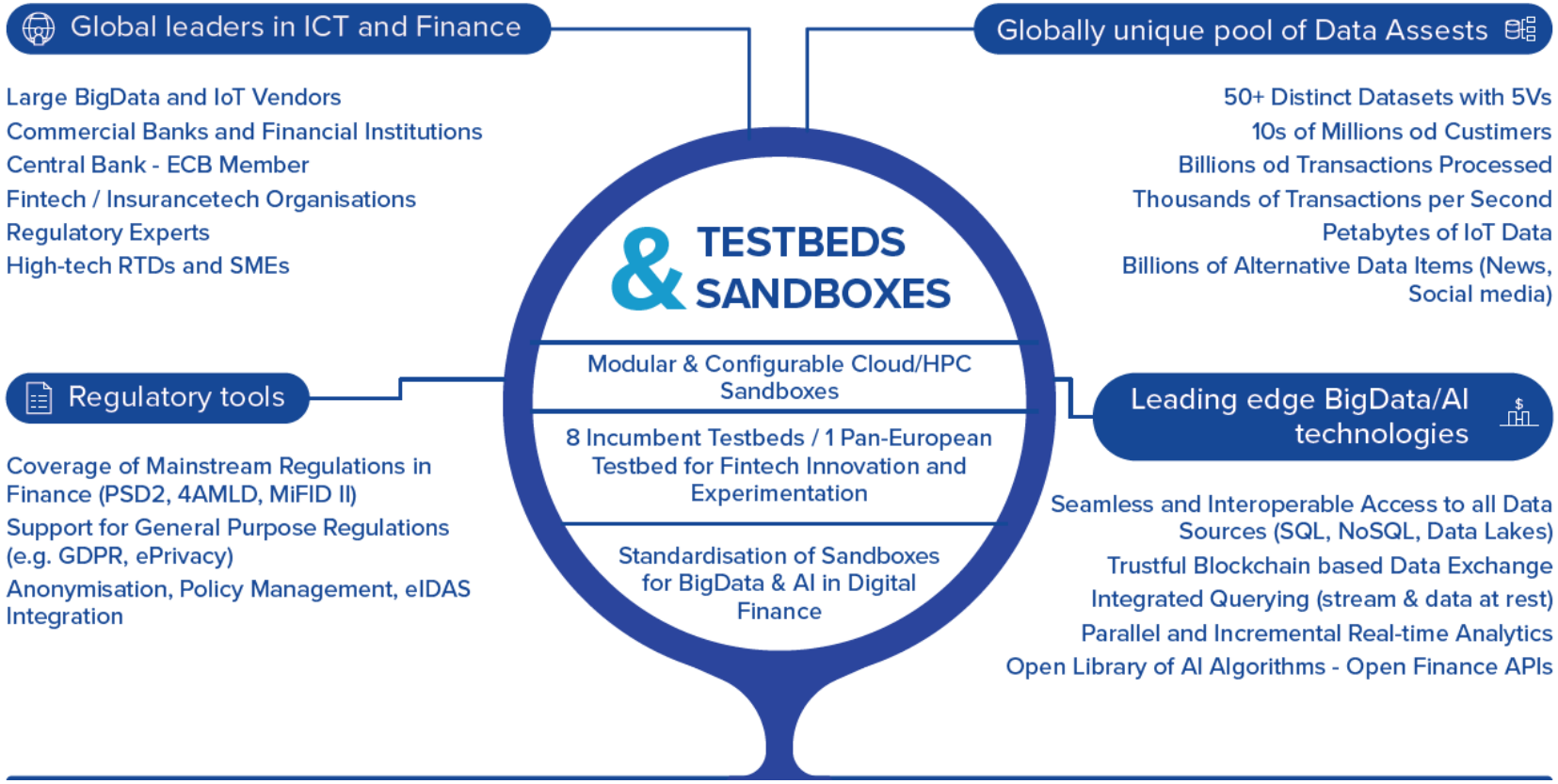
State of the Art

Innovation



- **15 High Impact Pilots – Broad coverage of sector applications & Processes**
- **Infinitech marketplace and digital innovation hub for EU-28**

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The INFINITECH Pilots (Finance)

Market

Personalized Retail and Investment Banking Services

- KYC & Customer-centric Data Analytics
- Personalized Portfolio Management & "Democratization" of Investment Banking
- Smart & Personalized Pocket Assistant for PFM
- BFM tools delivering a Smart Business Advise
- Personalized Closed-Loop Investment Portfolio Management for Retail Customers

Smart, Reliable and Accurate Risk Assessment

- Invoices Processing Platform for a more Sustainable Banking Industry
- Real-time Risk Assessment in Investment Banking

Predictive Financial Crime and Fraud Detection

- Operation Whitetail – Avoiding Financial Crime
- Platform for Anti Money Laundering Supervision
- Analyzing Blockchain Transaction Graphs for Fraudulent Activities
- Real-time cybersecurity analytics on Financial Transactions' BigData

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The INFINITECH Pilots (Insurance)

Market

Personalized Usage-Based Insurance Pilots

- Personalized insurance products based on IoT connected vehicles
- Real World Data for Novel Health-Insurance products

Configurable and Personalized Insurance Products for SMEs and Agro-Insurance

- Alternative/automated insurance risk selection - product recommendation for SME
- Big Data and IoT for the Agricultural Insurance Industry

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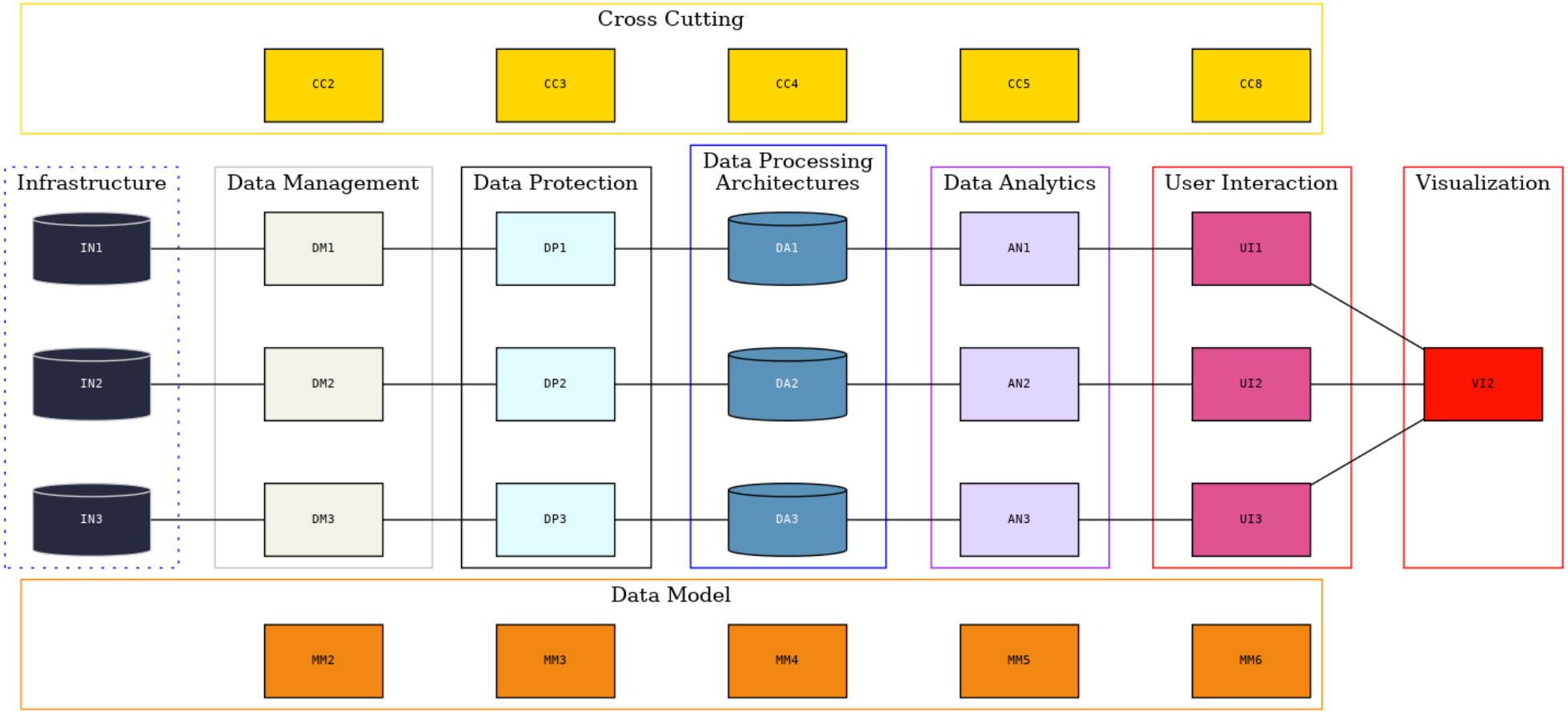
INFINITECH Reference Architecture



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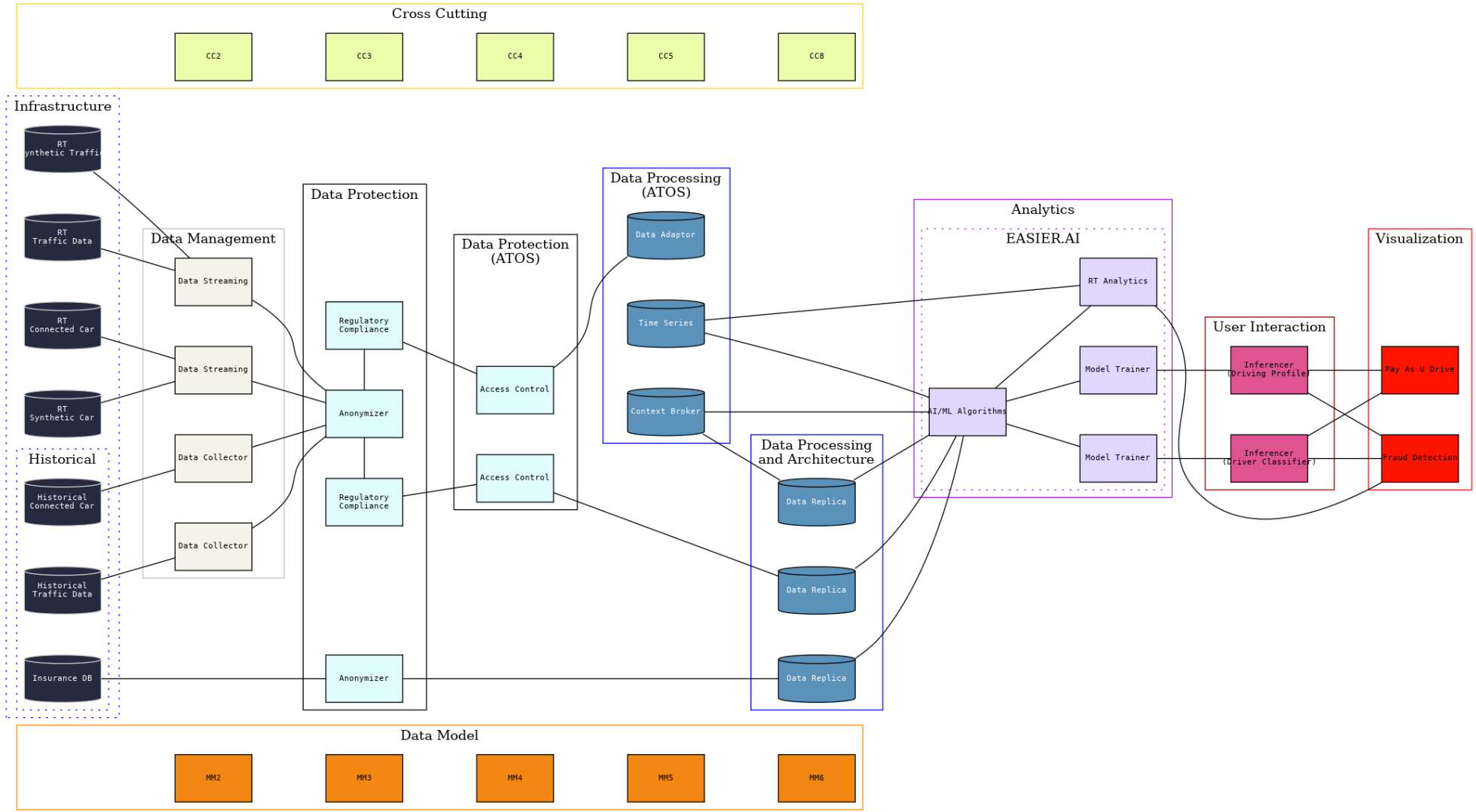
Infinitech

A Workflow Example



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Challenges

- Map Use Cases into Workflows and data pipelines
- Provide Innovative and specialized Technological Building Blocks for BigData, IoT and AI
- Provide infrastructures, components and toolkits for seamless data management for cost-effective real-time analytics, advanced algorithms and data manipulation
- Exploit DLT (blockchain) technologies at the edge or within the pipeline
- Tailor Experimentation Infrastructures (i.e. Testbeds and Sandboxes) for different use cases
- Scale to 15 Large-Scale Pilots
- Distribute computing from egde to central HPC
- Business models development and validation in the scope of the pilots

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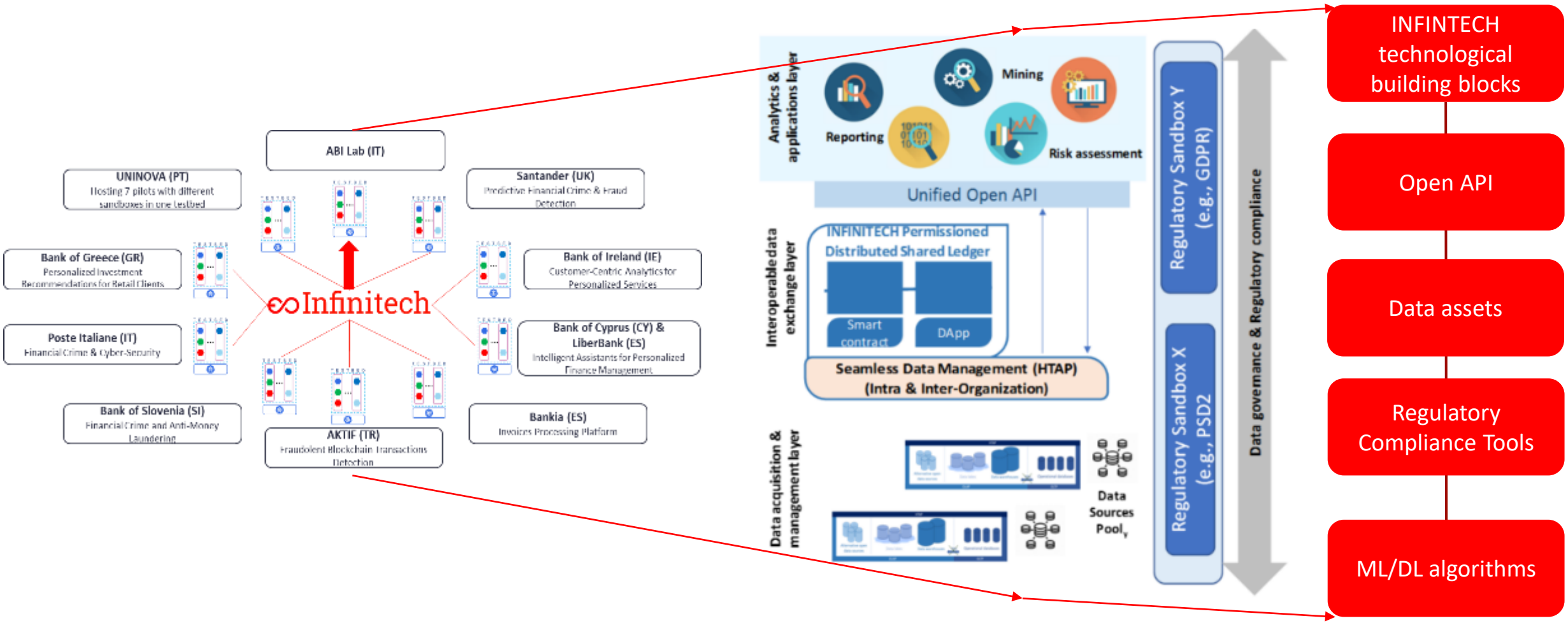
Infinitech

INFINITECH Testbeds & Sandboxes

Execution



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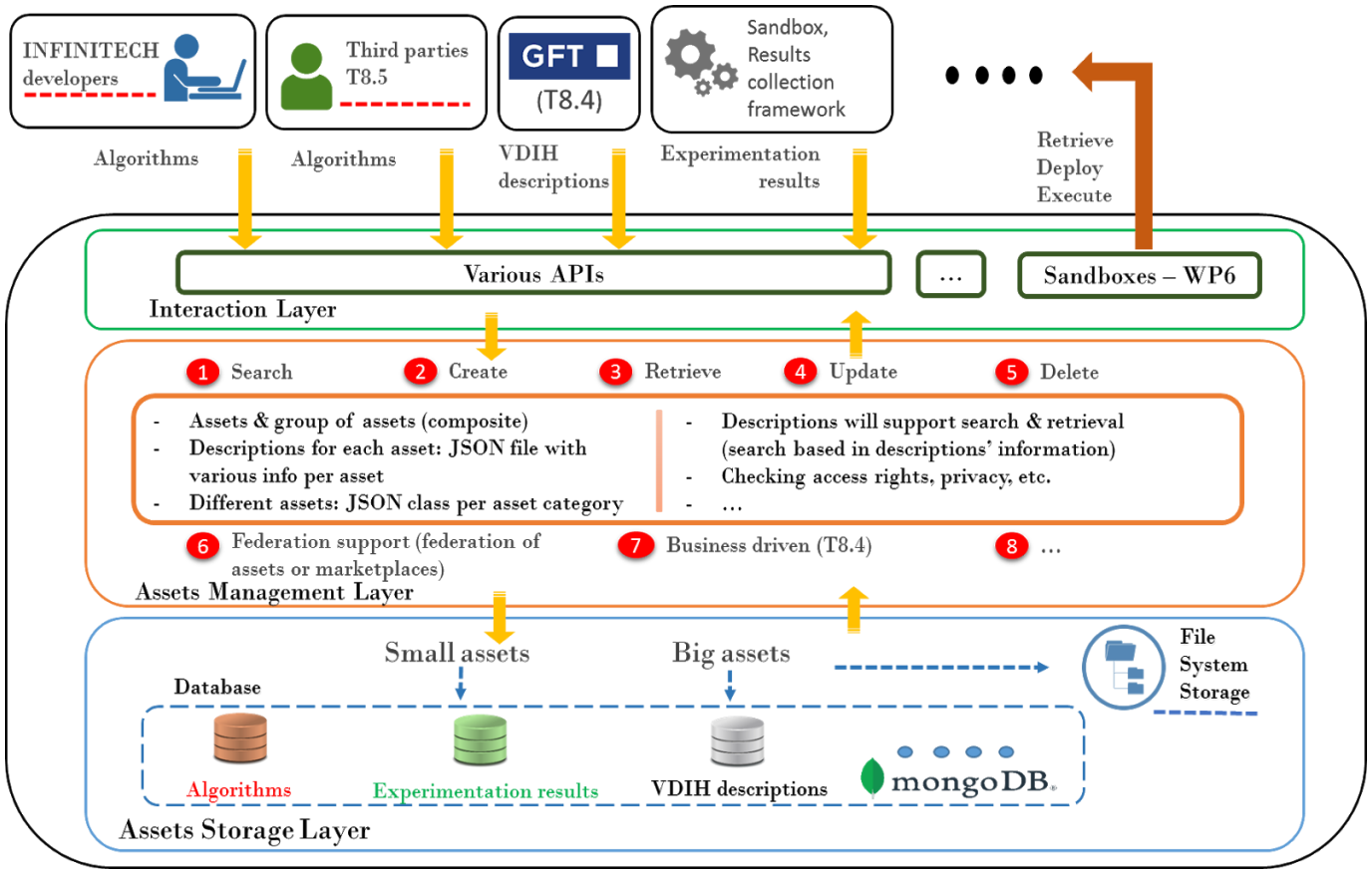
Marketplace, VDIH and ISA

Market



ISA INFINITECH STAKEHOLDERS ALLIANCE

ISA is the main vehicle for **engaging relevant stakeholders**

- Stakeholder **ecosystem**
- Structured **communication**
- Privileged access to **information**
- Collaboration with **R&I**
- **Newsletter** with focused information

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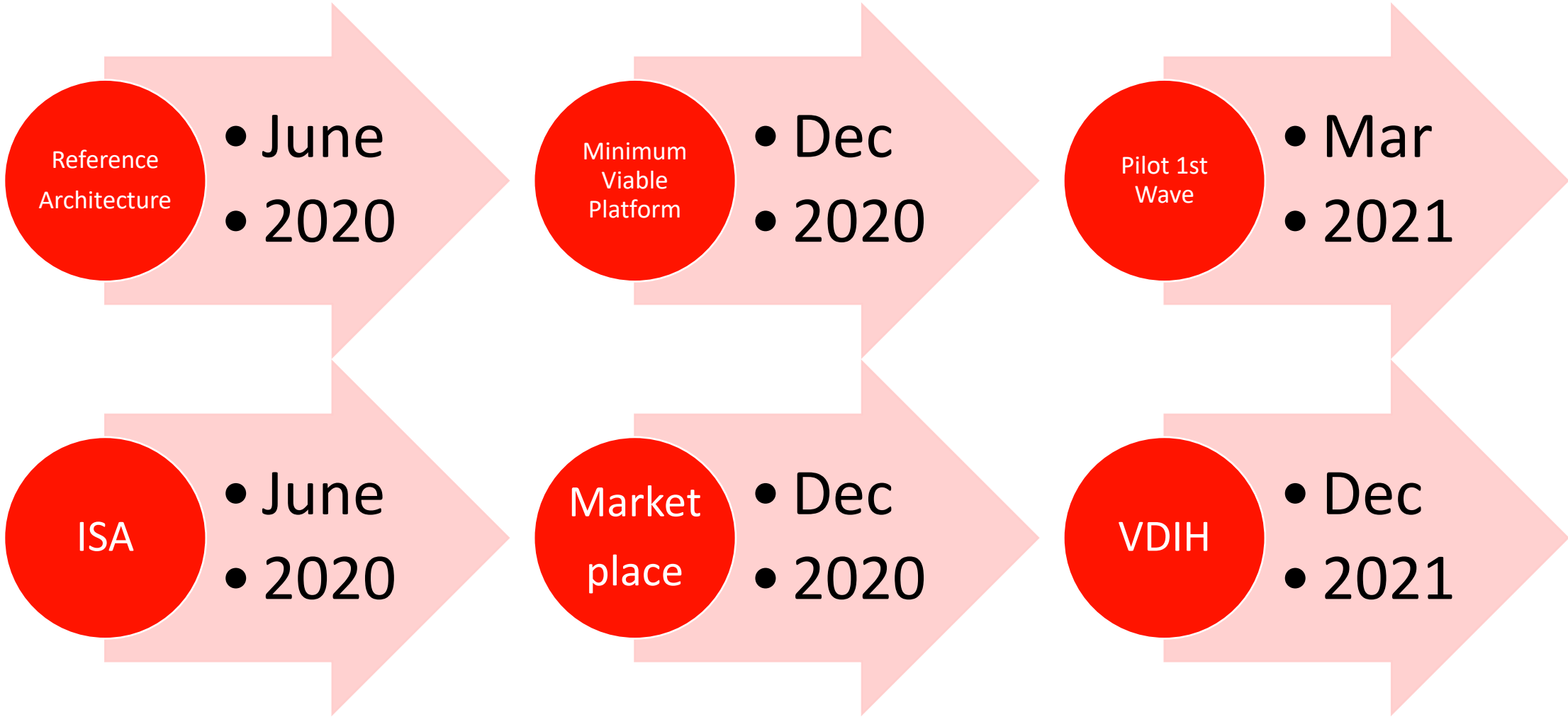
Roadmap



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