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

The INFINITECH Project

Ernesto Troiano, Vittorio Monferrino, GFT Italy
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.

This project has received funding from the European Union’s horizon 2020 research and innovation programme under grant agreement no 856632.
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
Flagship initiative for Big Data in Finance and Insurance

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
**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

**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

Innovation

- Novel Technologies & Tools for digital Finance Innovation & Experimentation based on IoT/BigData
  - Novel BigData/IoT technologies
  - Sandboxes, Datasets etc.

Market

- Disruptive Financial Services Solutions
  - Innovative Industry Driven Use Cases
  - Emphasis on Models for Business Validation & Commercialization

Execution

- Provide IoT & BigData Platforms customized for Digital Finance
  - In terms of integration with banking & finance systems
  - In terms of data, semantics and processes
INFINITECH Consortium

Innovation

Universities and Research Centers

- NUI Galway, QE Gaillimh
- UNINOA
- University of Glasgow
- University of Nicosia
- University of Piraeus Research Center
- CTAG
- Otter S
d Stefan Institute
- gra n

FinTechs & High-Tech AI/IoT SMEs

- privè technologies
- jrc
- Finance Innovation
- COPENHAGEN FINTech
- agroapps
- dwf
- reportbrain
- UBITECH
- wenalyze
- innov-acts

Financial & Insurance Institutions

- ABI Lab
- Tecnologia utile
- aktif bank
- BANKA SLOVENIJE
- Poste Italiane
- National Bank of Greece
- Bank of Ireland
- Santander
- Bankia
- liber bank
- GENILLARD & CO
- Bank of Cyprus

Market

Digital Finance Vendors & Integrators

- GFT
- Atos
- Sia
- IBM
- Fujitsu
- Hewlett Packard Enterprise
- Singular Logic

Execution

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State of the Art

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

Innovation

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The INFINITECH Pilots (Finance)

**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)

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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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 edge to central HPC
- Business models development and validation in the scope of the pilots
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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
Roadmap

- **Reference Architecture** • June • 2020
- **Minimum Viable Platform** • Dec • 2020
- **Pilot 1st Wave** • Mar • 2021
- **ISA** • June • 2020
- **Marketplace** • Dec • 2020
- **VDIH** • Dec • 2021