FAME

FAME is a joint effort of world-class experts in data management, data technologies, the data economy, and digital finance

ABOUT FAME

The FAME marketplace will alleviate the proclaimed limitations of centralized cloud marketplaces towards demonstrating the full potential of the data economy.

FAME's developments will be integrated in a single federated data marketplace platform, which will become (openly and publicly) accessible based on OpenAPIs. The platform will be operational in a federated cloud environment with multiple providers of different types of data assets, including datasets, AI/ML models, analytical insights and more.

FAME Objectives & Ambition

Federated Marketplace

Unified Data & Security Policy Management for Federated Services

Federated Data Catalogues based on Semantic Interoperability of EmFi Data Assets

Decentralized Programmble Data Assets Trading & Monetization (incl. Value Accrual in NFT)

Trusted, Privacy Friendly and Energy Efficient Analytics

FAME Training Programs & Learning Center

Novel Embedded Finance Use Cases

Funded by the European Union

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FAME Work Packages

WP1. Management and Coordination Activities

This work package coordinates the project to ensure that all work packages are fully integrated and effectively executed, including legal and regulatory compliance management.

WP2. FAME Platform: Specifications, Architecture and Integration

Since the goal of WP2 is to support all the activities for the specification, the architecture as well as the integration of the overall FAME platform and its technical components, as an initial phase WP2 has mainly focused on the specification of the FAME Pilots' Business and Technical Requirements.

To this context, there have been organized co-creation workshops considering the FAME Pilots, in order to primarily identify the Pilots' Business Requirements. These requirements deal with establishing the expected goals and results of the solution to be implemented. They can be best described as an overview of the changes required by stakeholders and why they are important to optimize the current business processes.

As soon as the Business Requirements elicitation phase was finalized, next steps included translating these Business Requirement into Technical Requirements, again following a plethora of co-creation workshops. The Technical Requirements can be identified as a detailed representation of the changes and the expected results of a solution. They describe the solution's capabilities and qualities, providing a sufficient level of detail to start with its design and development.

Having in hand these Technical Requirements, an initial version of the FAME reference architecture model was designed, following the GAIA-X and the International Data Spaces (IDS) principles, along with the guidelines offered by the C4 architectural model (Context, Container, Component, Code). The C4 architectural model is an easy to learn, developer friendly approach to software architecture diagramming that can assist with communication inside/outside of software development/product teams, efficient onboarding of new staff, architecture reviews/evaluations, risk identification (e.g., risk-storming), or threat modelling, among others. To this extent, the Context-view and the Container-view diagrams have been provided for the overall FAME platform, whereas for each different FAME-related component the Components-view architecture diagrams have been delivered as well, towards a unified and commonly understandable architectural approach that will trigger the initiation of the implementation phase.

WP3. Secure, Interoperable, Federated Data Management

WP3 is responsible for implementing the project's AAI infrastructure for federated access to data providers and for designing and implementing a unified approach to manage and enforce data policies in a federated environment.

The WP will design and deliver a federated catalog of data assets as part of the marketplace, as well as design and implement a set of tools for regulatory compliance for integrated financial applications based on data about the FAME marketplace.

WP4. Decentralized Programmable Data Trading and Pricing

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The title of WP4 hardly provides the full picture of its mission. Under this generic label, we are committed to the delivery of several elements of FAME's common infrastructure. First and foremost, a Blockchain network for the purpose of improving trust in data provenance, decentralizing the trading of asset and tracking user transactions; then, the enablers of dynamic pricing, asset discovery and trade monetization; lastly, a set of tools to support the governance of FAME's federated marketplace.

During this initial phase of our activities, we have been laying the groundwork: n open-source Blockchain platform implementation has been selected as our baseline system - our final choice being Hyperledger Besu; on top of this, a *permissioned* network has been created for the use of FAME partners.

We are now in the process of making several profound decisions that will give shape to our future work, and create the basis for the integration of WP4 results with other relevant parts of the FAME architecture, like the authentication/authorization and catalogue federation subsystems. To this goal, a technical workshop involving all the technical stakeholders has been planned at EUBA's premises in Bratislava for the end of June 2023.

WP5. Trusted and Energy Efficient Analytics

This work package provides a catalog of AI/ML models and techniques for EmFi, which will be used as the basis for data analysis in FAME. It will also specify and implement new XAI techniques, incremental analysis techniques to reduce the CO2 footprint of analysis operations, and an FML infrastructure in support of EE and privacy-friendly analytics.

The objective of WP5 is to create a toolbox to combine the following key principles to optimize the efficiency and sustainability of EmFi use cases:

- the potential of decentralized AI approaches, such as Federated Learning,
- analytics to monitor and reduce the carbon footprint,
- state-of-the-art XAI techniques to increase the explainability of AI models

To achieve these ambitious objectives, Atos, IBM, LeanXcale, UPRC, ENG, Jozef Stefan Institute, Unparallel Innovation, Lda and MOH are combining their diverse expertise in AI, XAI, cloud and edge computing and databases, among others, to provide FAME users with a complete suite of explainable AI/ML models to be deployed in decentralized environments making the most efficient usage of the available resources.

At this moment, all the partners are working together towards setting the pillars of this toolbox by analyzing the requirements coming from the use cases to tailor the offered solution to their needs.

WP6. Integration, Validation and Evaluation of EmFi Use Cases

Specification of the project pilots and the preparation of the various sites/partners for implementation and validation. It will implement the FAME market-based use cases, leveraging FAME data assets and tools through open APIs and evaluating UC from a techno-economic and socio-economic perspective, as well as based on stakeholder feedback analysis.

WP7. Dissemination, Exploitation and Stakeholders' Training

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This work package coordinates and oversees the dissemination, communication and exploitation activities within the project and creates a community around the FAME data marketplace platform.

WP8. Ethics requirements

This work package sets out the ethics requirements that the project must comply with.

The kick-off meeting of FAME took place on 15-16 March in Rome

Read more >

Blockchain and Decentralized Programmable Data Trading and Pricing: Why They Matter and How FAME Can Help

Read more >

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