Current status
- future implementation?

Pär Strand, Fair for Fusion Coordinator,
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Fair for Fusion Team
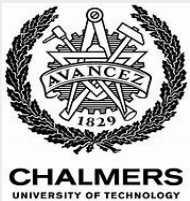
Introduction

Fair for Fusion – Open Access for fusion data in Europe

- Project duration: 24 months (Sept 2019-Aug 2021)

- Total budget: € 1 987 960

Consortium: 7 partners

Project website: https://fair4fusion.eu/

In Fair4Fusion we work on:
- Comprehensive assessments of **FAIR data requirements and open data issues** in fusion programme
- **Recommendations on the best technical approaches** for providing easy access to data
- Development of **support platforms and tools required to implement an open data policy** adapted to the needs of the fusion research programme.
- **Pooling the talent and knowledge** from big science programmes and organisations

With the objectives of:
- Further developing tools and platforms needed for an open data approach.
- Raising the profile and awareness of FAIR and open data within the fusion programme.
- Laying the foundations for implementing an **open data policy adapted to the needs of the present and especially the future fusion energy research programme**, particularly in the run up to the operation of ITER from the middle of the next decade.
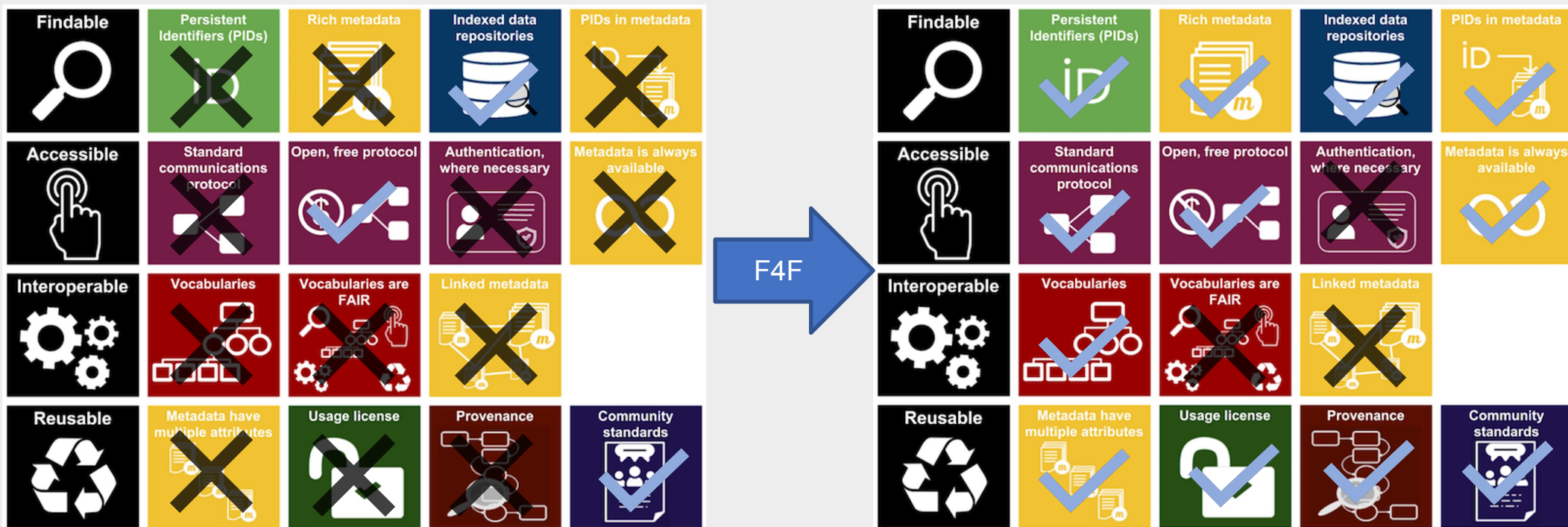
Fair4Fusion - open access for fusion data in Europe

This project has received funding from the Euratom research and training programme 2014-2018 under grant agreement No 847612

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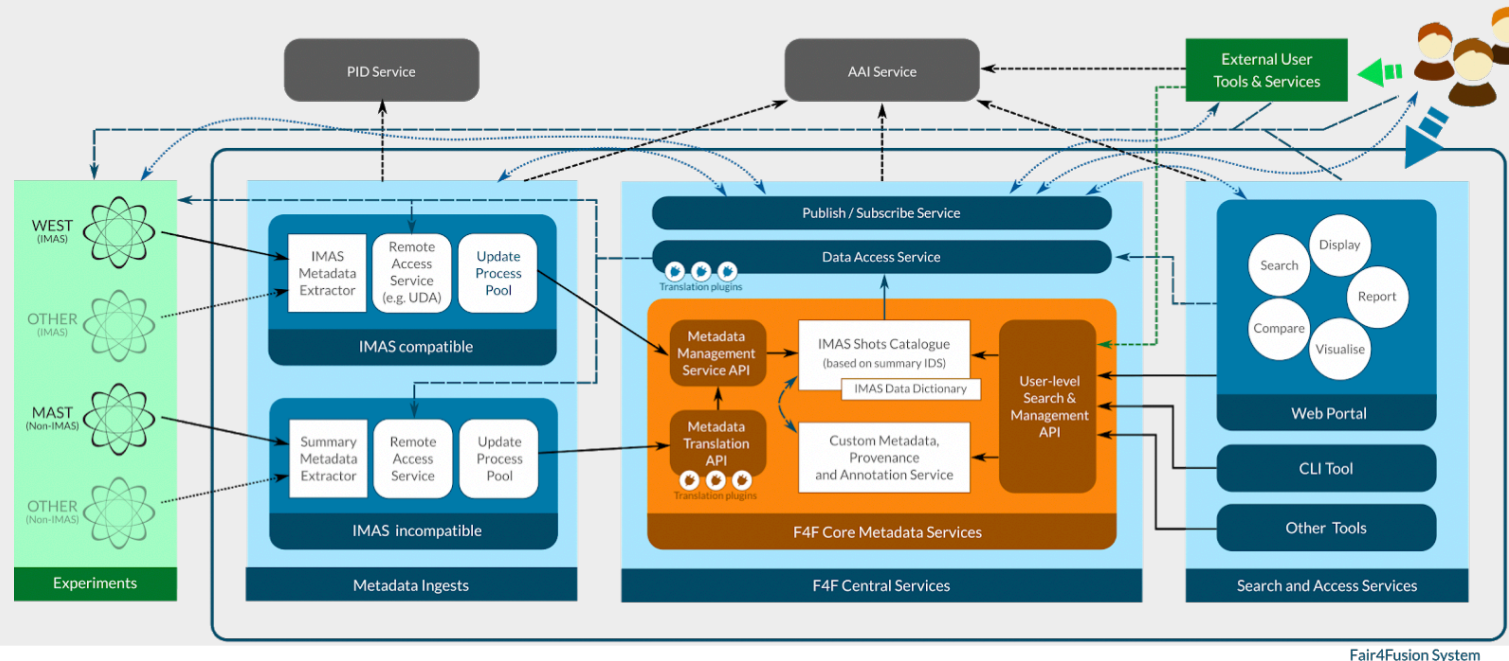
Goals

The Magnifying glass, Tap, Gears set, Recycle sign, Storage, Infinity, Discussion, Shield, and Man User icons made by Freepik from www.flaticon.com are licensed by CC 3.0 BY. All other icons made by ARDC. Entire FAIR resources graphic is licensed under a Creative Commons Attribution 4.0 International License

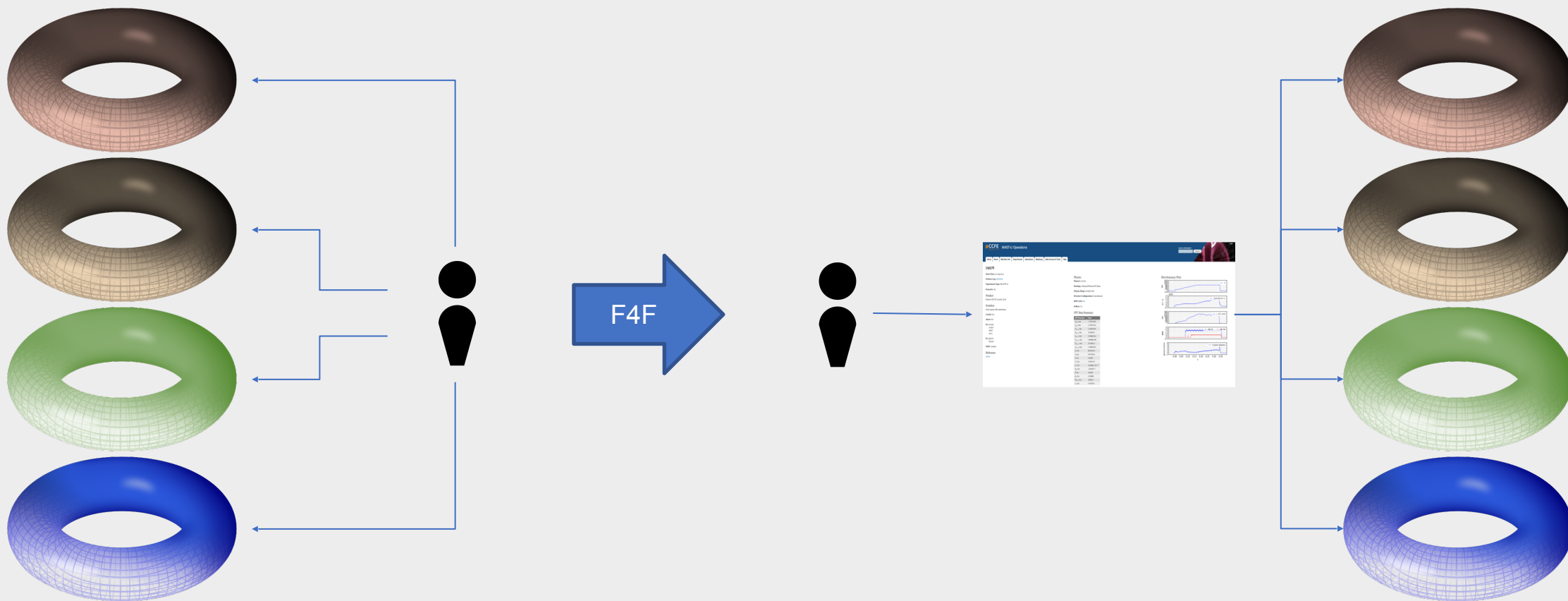**Fair4Fusion - open access for fusion data in Europe**

Developments from Fair 4 Fusion

- **A set of use cases** from the general public, non-fusion scientists, fusion scientists and data providers/managers drives the definition of the technical basis of the platform (tested in demonstrators encoded in blueprint draft document)

- **A defined and agreed metadata model**, building on the data ontology or dictionaries developed by ITER (IMAS).

- A **technology survey of existing technologies** and their designs to assess their suitability. Demonstrators to validate choices.

Preliminary Blueprint Architecture

Goals

Torus Image © Leonid_2. licensed under the Creative Commons Attribution-Share Alike 3.0 Unported license
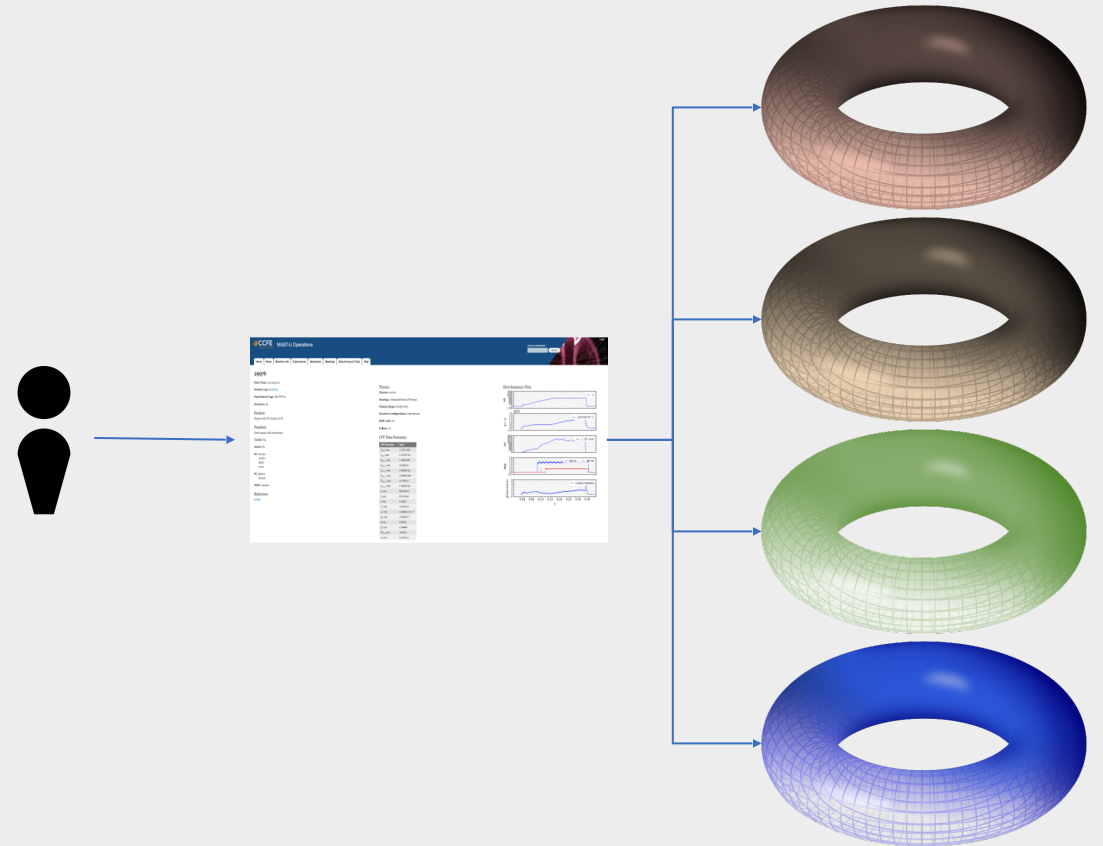Gender Neutral Human by Mithru Vigneshwara from the Noun Project

Access paradigm

- Central metadata "portal" for searches, summaries
- Remote data access (through portal) for verified and authorized users
- Data license (credit, peer review,…)
- Improved Provenance capture
- Data standard (IMAS)
- Embargo periods

Implementation – EUROFUSION II,
Several technology options - limit impact/cost on existing activities (experiments):
- Metadata (pushed from experiments to metadata server (as IMAS IDS summary)
- Remote data access (UDA client) serving subset of available data as IMAS based datasets
- Portal + fedrated AAI, central development

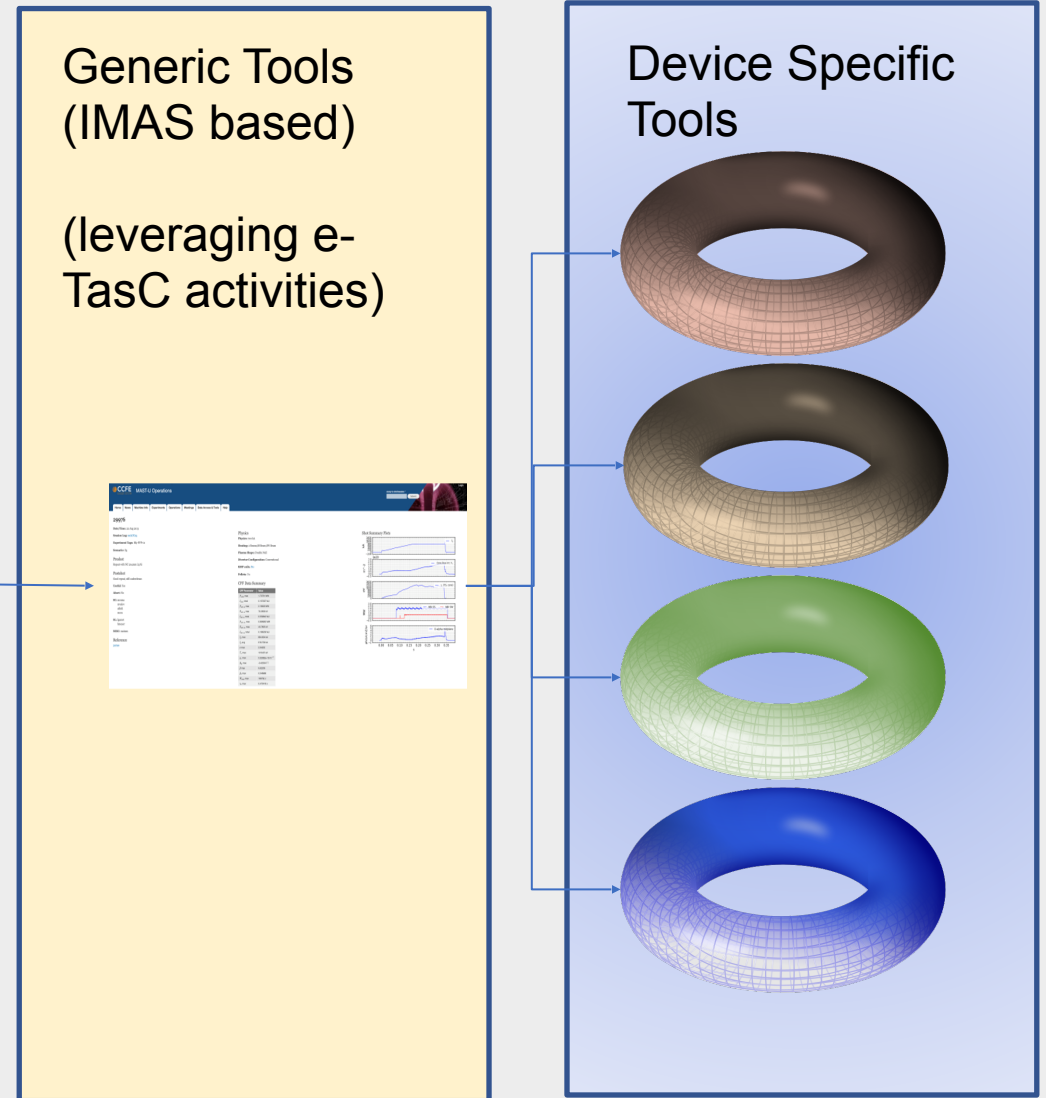**Fair4Fusion - open access for fusion data in Europe**

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Generic Tools
(IMAS based)

(leveraging e-TasC activities)

Device Specific Tools

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Summary - status

- Successful midterm review meeting for F4F – endorsement on all deliverables!
  - Core of a full blown implementation drafted.
  - Resource loaded plan and blueprint architecture final outcome.

- Demonstrators being deployed, will seek input from expts and users coming months to guide future developments – extending use cases.

- Providing Open data access <u>will</u> be a grant requirement at some level in FP9

- Open or FAIR Data is currently <u>not</u> described in any of the formal documents, data management plan or the WP for EUROfusion implementation in FP9
  - Fair for fusion to propose elements of the EUROfusion DMP by December GA.
  - Continued work (after end of F4F project) to be resourced through EUROfusion

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