



SemantyFish – Advancing Visibility, Interoperability, and Exploitability of FishBase

<https://semantyfish.github.io/>

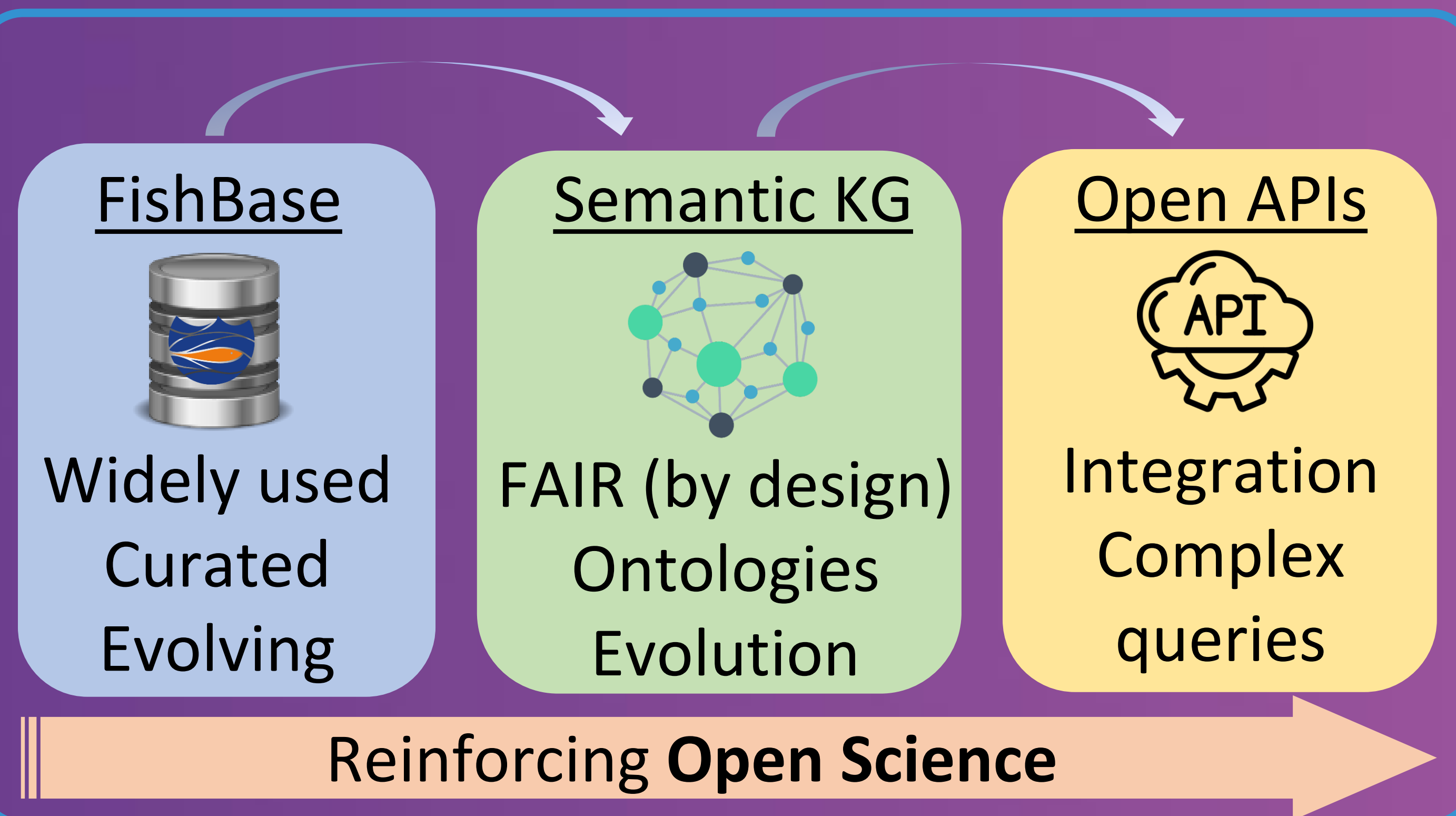


Summary



SemantyFish is an **Open Science** project that transforms FishBase into a Knowledge Graph

- FAIR-by-design biodiversity data
- Semantic interoperability at scale
- Enables reuse and long-term sustainability



Challenge

Although globally used, FishBase:

- Uses traditional data structures
- Is difficult to integrate with external sources
- Offers limited interoperability
- Cannot easily support cross-domain queries

Open data alone ≠ Open Science

Solution

- From FishBase → Semantic Knowledge Graph
- Shared conceptual models using ontologies
- Use open APIs for interoperability and reuse
- Support complex query answering
- Deeper research through reasoning/inference
- Apply evolution workflow to stay updated

Results

 **Knowledge Graph** with FishBase contents

 **Open APIs** for discovery and access

 **Evolution workflow** for data update

 Support for **complex biodiversity queries**

 **FAIR-by-design** infrastructure

Exploitation of results



- Supporting the environmental pillar of the **Verifish** Indicator Framework
- Enhancing species of the **UN-FAO Global Record of Stocks and Fisheries**, and vice versa

Sustainability

- Evolution Workflow → Alignment with evolving data
- Preserves existing update policies and practices
- Open, standards-based infrastructure → long-term reuse
- Continuous availability through APIs

