ArcaScience

2026 Product/IT Roadmap

January 26

01/21/2026

2025 Product/IT Retrospective

The year 2025 was the year of **profound restructuring** of our entire technical base to be able to attack our 2026 projects on a **solid basis**.

The 12 Labors of Hercules: Key IT Roadmap Initiatives

- ✓ Migration from Azure to a **scalable 100% Kubernetes AWS** infrastructure (staring our partner at Deloitte).
- ✓ Complete rethink and rewrite of the "**Data Forge**" pipelines for **high performance** daily data processing.
- ✓ Increase our skills in **MLOps industrialization by** development and release of the new **COA model, PICOS,...**
- ✓ Improvement of **Product Design** methodology to deliver **Clinical Landscape** Analysis and prototype the **BRA platform** - with externalised Design and Web dev

2025 Product/IT Retrospective

The formation of a **fully multidisciplinary team**,
now prepared to address upcoming technical challenges,
was completed in **2025**

IT Core team:

- Product Team : **Charbel, Clarisse**
- AI/ML Team : **Natalia, Praise, Dimitri**
- Lead Data Engineer : **Anne-Cécile**
- Lead Full Stack Web : **Fayez**
- Lead DevOps : **Ons**

External help:

- Product Design : **Michael**
- Dataviz Design : **Silvia**
- DevoPS : **Deloitte**
- Web Development : **The Software House**
- Medical annotators :

Software architecture (current and future)

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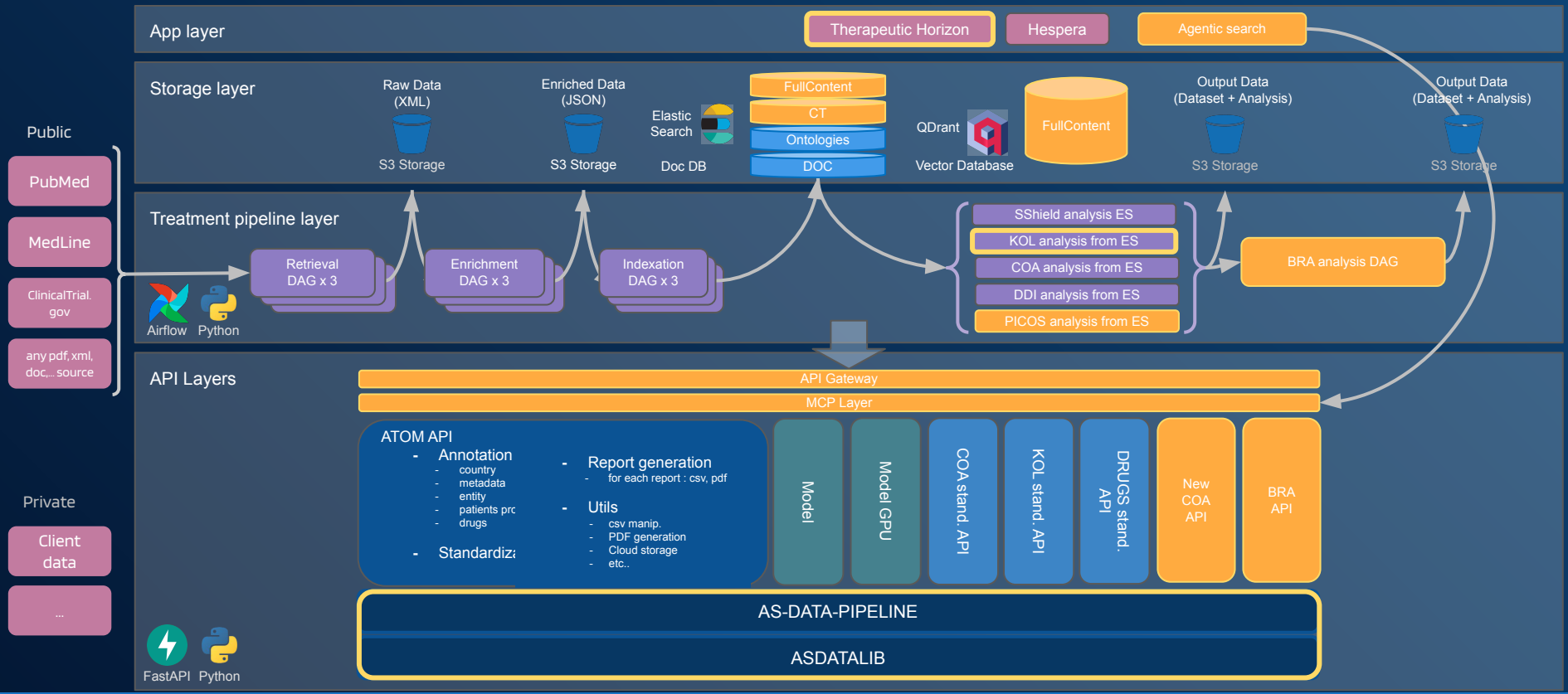
Data Sources	Data Ingestion, Cleaning and Enrichment Pipeline	Enriched Data Storage	Level 1 Analysis	Extended Analysis



New element

Refactored element

2026 Product/IT Goal & Challenges

Our primary objective for 2026

is the successful **delivery of the web-based BRA platform**

this while maintaining significant **R&D capacity** for the future initiatives

The main challenges we are facing

- **Fast Time to Market (FTTM):** Deliver a basic but functional initial version of the platform in **Q1**.
- **Continuous delivery** to propose a full product before the end of the year

Solutions & Risks

Strategy to Tackle the Challenge

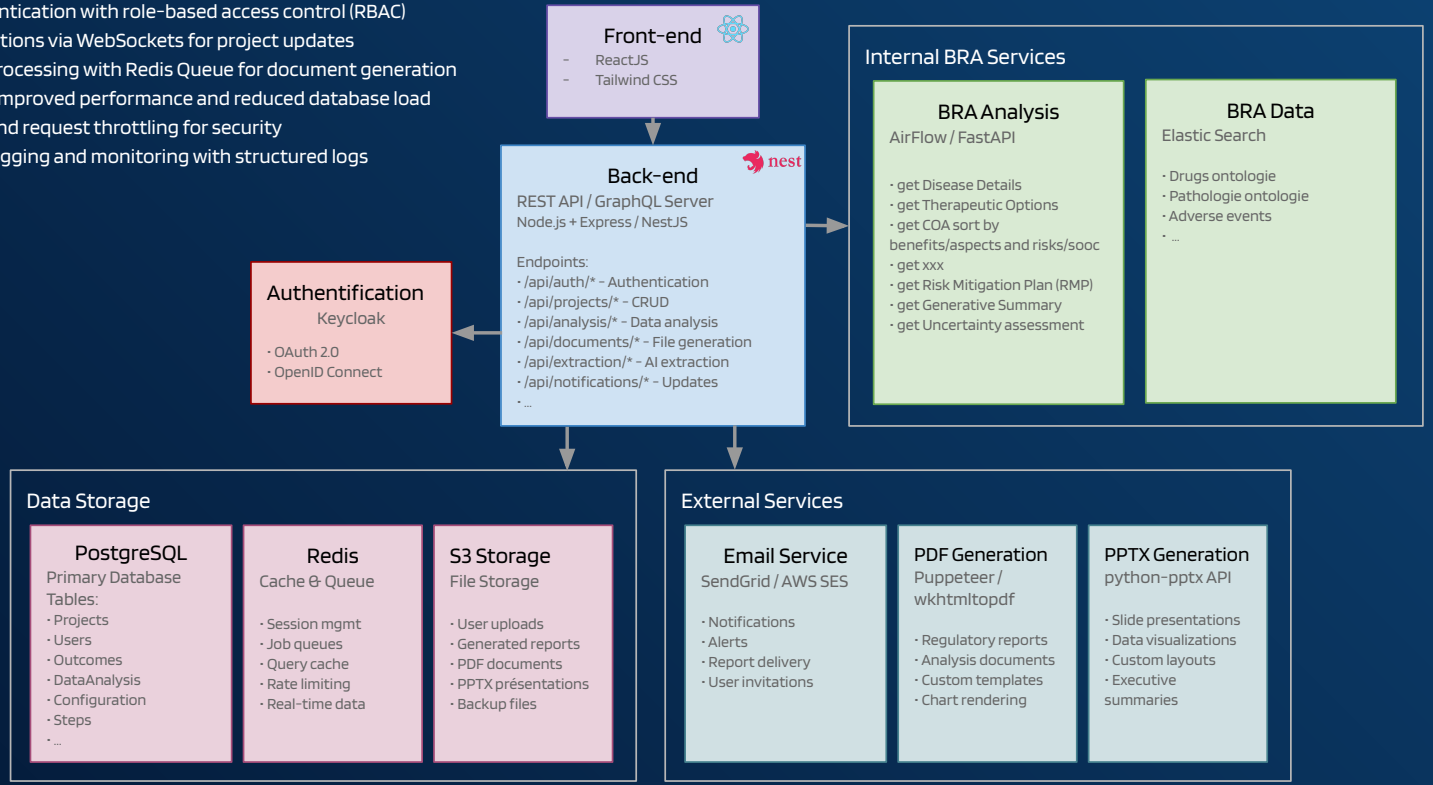
- **Increase resources**
  - Integrate **external resources** to assist with the development phase.
  - Ensure **coordinated** effort across all simultaneous development teams.
- **Adopt a versatile and evolutive architecture**
  - Design a platform capable of **seamless, incremental upgrades** to core elements.
  - Implement a **phased** approach for treatment (fake > semi-automated > fully automated).
- **Reduce workload**
  - **Leverage** the prototype interface components developed by Lovable.app.
  - Utilize **AI-generated code** for non-strategic components.

Identify Risks

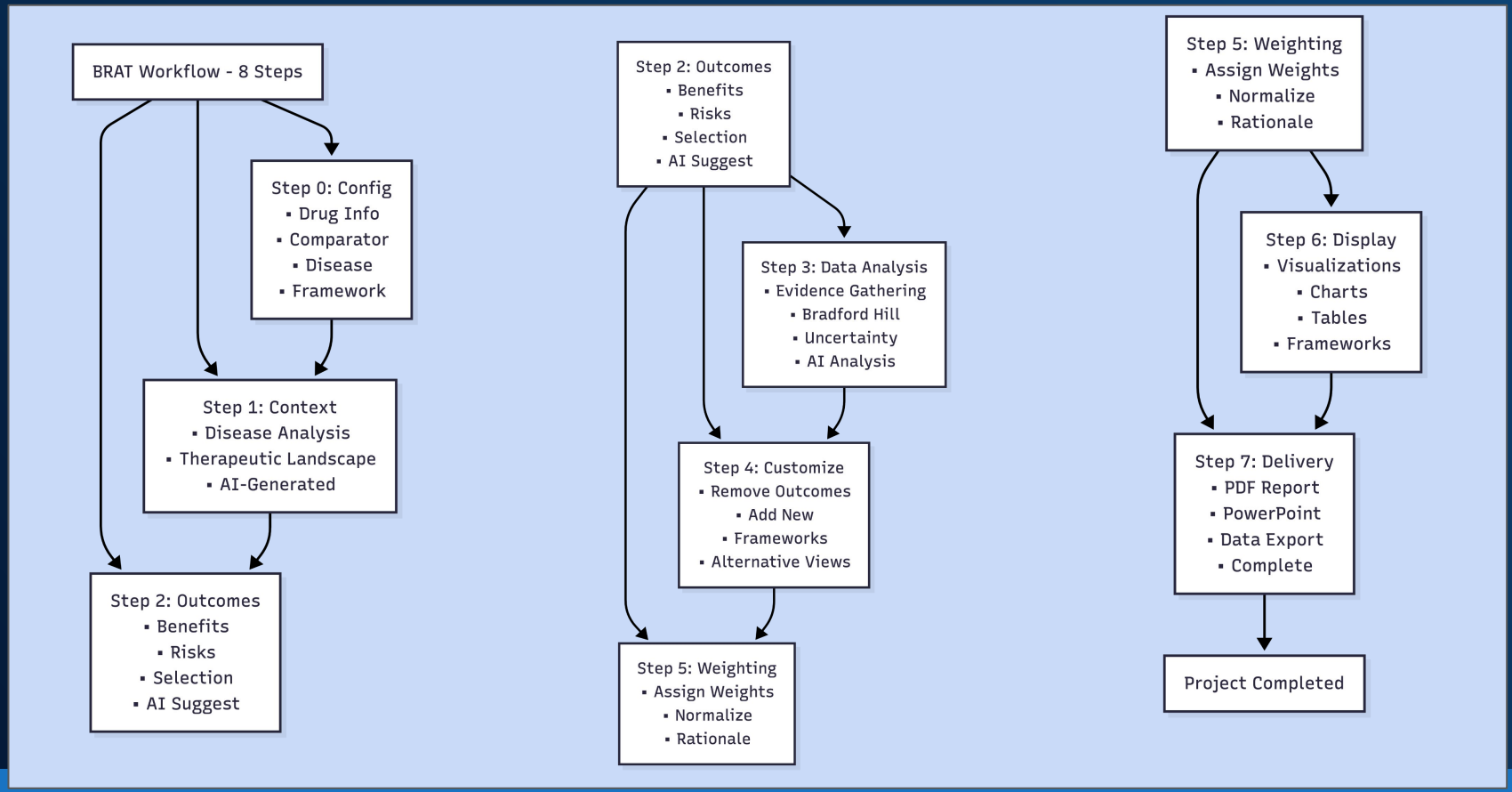
- **Team coordination:** Coordinate the work of all the teams that will be involved simultaneously
- **AI/ML new treatment** ready in time with right level of quality

BRA Platform Global Architecture

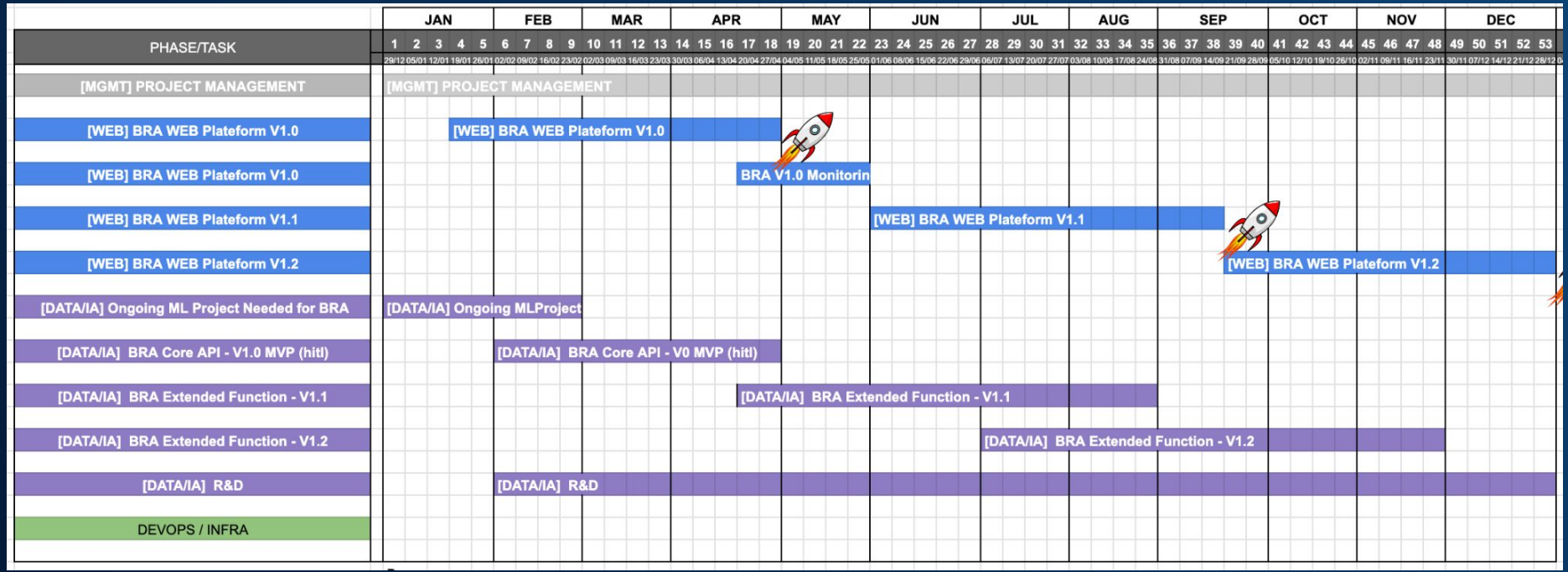
- RESTful API architecture with versioning support
- JWT-based authentication with role-based access control (RBAC)
- Real-time notifications via WebSockets for project updates
- Background job processing with Redis Queue for document generation
- Caching layer for improved performance and reduced database load
- API rate limiting and request throttling for security
- Comprehensive logging and monitoring with structured logs



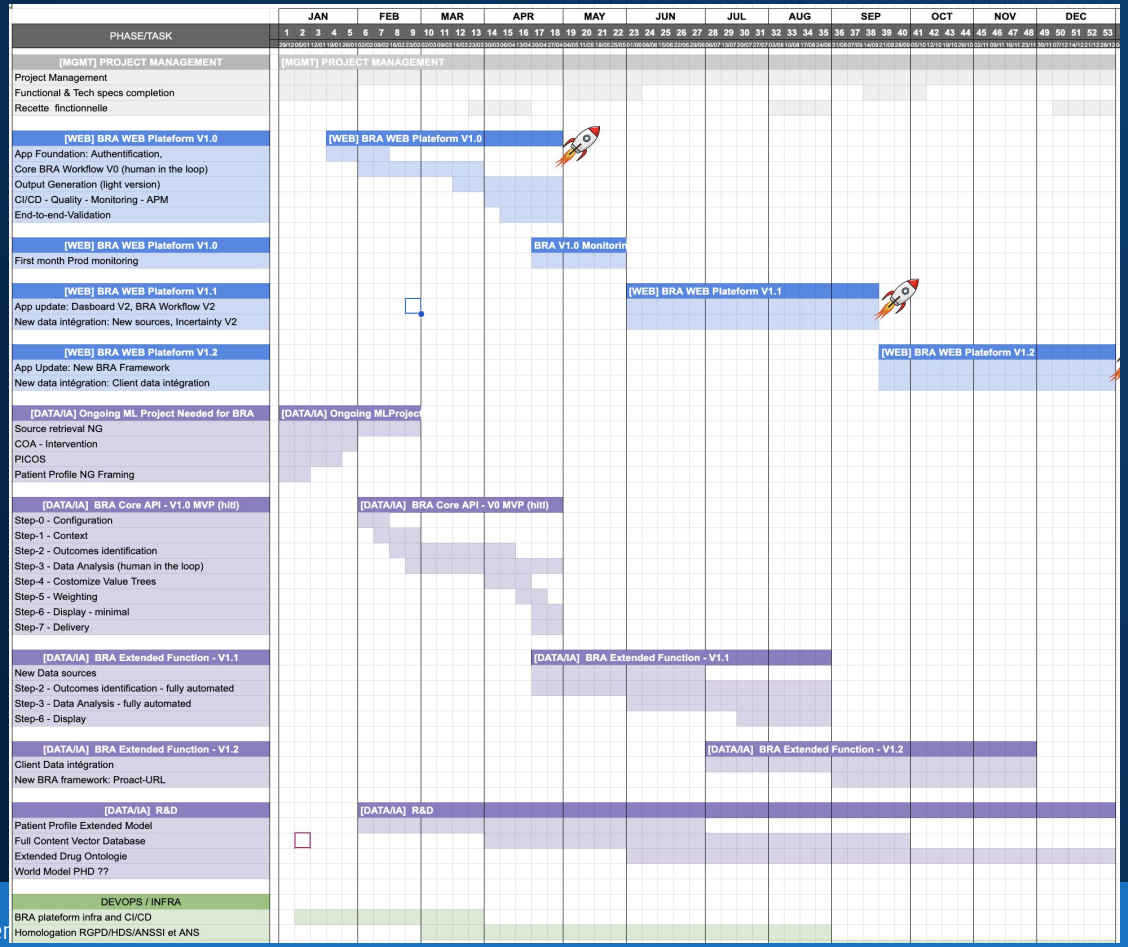
BRAT framework Steps



BRA Platform Global planning



BRA Platform Global planning



More resources

BRA SaaS – Technical Assessment V1.0 (MVP)
https://docs.google.com/presentation/d/1HUXHti_Jy84fLCcmjYociu8yX8xAYVw3jfcew9vOLPo/edit?usp=sharing

AS – BRA SaaS – Workload / Planning / Data/ML work
https://docs.google.com/spreadsheets/d/19XfbxlOwSpdxaikaOC_V8j2wMOIQto0_p9H_a0_zleg/edit?usp=sharing