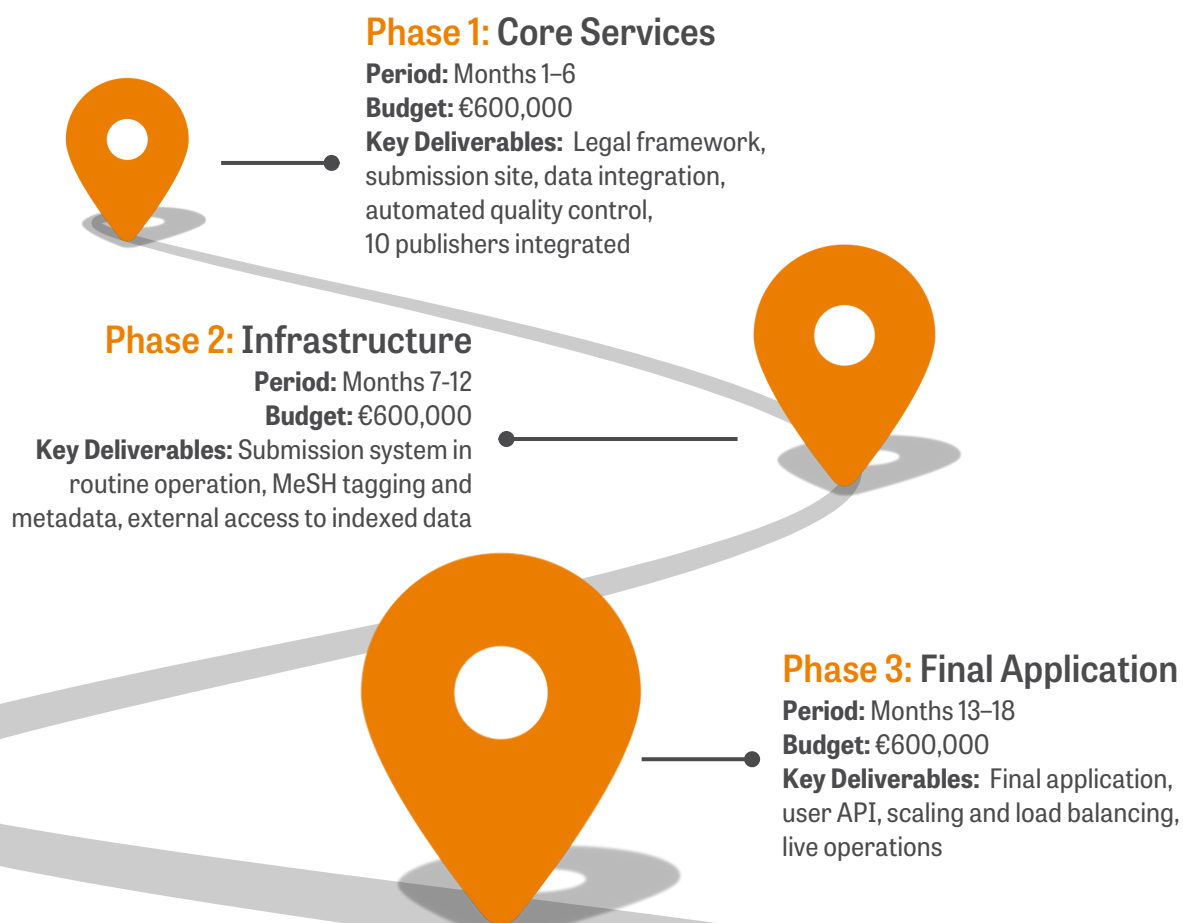


# The information supply in the life sciences is secure.

## Open Life Science Publication Database (OLSPub)

Three sequential development phases





## Phase 1: Core Services (Months 1–6) – €600,000

**Aim:** Establish the technical and legal foundations for the repository

### Detailed work packages

#### 1.1 Contractual and legal basis (€120,000)

Contract negotiations with publishers (open access, smaller publishers); licence agreements enabling automated generation and integration of metadata; legal opinions on copyright and data protection (EU GDPR compliance); establishment of governance structures (Advisory Board; Steering Committee).

**Staffing:** Licensing Manager; Lawyer

#### 1.2 Data pipeline development (€240,000)

Technical infrastructure (servers, cloud storage, databases; approx. €40,000); development of automated harvesting processes for open access repositories; implementation of an ETL (Extract, Transform, Load) pipeline for structured metadata; creation of an index; integration of the PubMed Central (PMC) Open Access Subset, Europe PMC data and LIVIVO holdings to establish the repository (approx. 5–10 million publications). This step also includes quality assurance and data validation, data cleaning and deduplication.

**Staffing:** DevOps Engineer; Data Engineer; Data Scientist; Senior Developer (50%)

#### 1.3 Data access (€120,000)

Requirements capture and user interface specification (see 1.4; Community Engagement), as well as specification of additional access points (download site). Adaptation of Pubservatory to the repository and provision of repository access to users.

**Staffing:** 2 Software Developers

#### 1.4 Project and community coordination (€120,000)

Stakeholder communications, establishment of an Advisory Board, creation of an Editors' Board (for journal selection), coordination and alignment of activities, ongoing project management, organisation of workshops, meetings on data standards and requirements gathering, creation of documentation, and preparation of open access and open source initiatives.

**Staffing:** Project Manager; Community Manager



**Phase 1 milestone (Core Services):**  
Early alpha release (Pubservatory; download site) with 5–10 million publications, 10 publisher partnerships and community workshops.

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## Phase 2: Infrastructure (Months 7–12) – €800,000

**Aim:** Provide access to the repository (alpha release) and substantially expand content holdings.

### Detailed work packages

#### 2.1 Expand publisher agreements (€150,000)

Negotiations with medium-to-large publishers (Springer Nature, Wiley, Elsevier); content agreements for metadata, abstracts, and potentially full-text licences; integration of approx. 15–20 million additional publications.

**Staffing:** Licensing Manager; Lawyer

#### 2.2 Implement MeSH tagging (€120,000)

Development of automated MeSH tagging using machine learning; training on existing PubMed MeSH assignments to achieve 85%+ accuracy in automatic indexing; community-based quality control (see 2.4); integration into automated indexing and quality assurance workflows.

**Staffing:** 2 Data Scientists

#### 2.3 Develop search interface (€300,000)

Provision of an API for the search index and external access to the repository; development of a prototype user-friendly web interface; set-up of development, test and production environments with virtualisation; basic search and expert field-specific search with Boolean operators, proximity searching, and additional index operators (cf. PubMed/MEDLINE); interactive, responsive design for mobile devices.

**Staffing:** DevOps Engineer; 2 Software Engineers; Web Designer; Senior Developer (50%)

#### 2.4 Project work, community testing and feedback (€120,000)

Project management; organisation of user testing with libraries, clinicians and researchers; workshops and meetings on data use and integration into external systems; quality control (MeSH); participation in community meetings; planning and implementation of feedback integration with iterative improvement.

**Staffing:** Project Manager; Community Manager

### Phase 2 milestone (Infrastructure):

Alpha release with 20–30 million publications, MeSH tagging and publisher partnerships with 30+ publishers.



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## Phase 3: Production-ready app (Months 13–18) – €600,000

**Aim:** Finalise the application for production (beta release, including a user-facing API) and finalise European governance.

### Detailed work packages

#### 3.1 Fully integrate publisher content (€120,000)

Negotiations with European and US publishers and learned societies; content agreements for metadata, abstracts and potentially full-text licences. Target coverage: Europe > 80% of PubMed content for European publishers and > 50% for US publishers, plus automated annual ingestion of 1 million abstracts and associated metadata. Content alignment with the Editors' Board (quality assurance).

**Staffing:** Licensing Manager; Lawyer

#### 3.2 Beta release of final application (€330,000)

Complete the development work: final requirements and full app functionality (user API), bug fixing, implementation of requirements identified in user testing, and A/B testing. Deploy solution to test and production environments; develop a RESTful API (similar to PubMed E-utilities); implement authentication, rate limiting, load testing, performance tuning, load balancing and security hardening. Integrate with existing services (e.g. Zotero, EndNote) and implement the backup and disaster recovery strategy.

**Staffing:** DevOps Engineer; 2 Software Engineers; Web Designer; Senior Developer (50%)

#### 3.3 Sustainable European network (€60,000)

Organise a European partner network workshop (20+ institutions), agree Memoranda of Understanding with European libraries, and define a governance model for long-term operations (EMBL-EBI, de.NBI, potentially NLM).

**Staffing:** Project Manager; Community Manager

#### 3.4 Project delivery, beta testing and launch (€120,000)

Organise workshops and beta-testing sessions; participate in community meetings; run Editors' and Advisory Board meetings. Conduct external user testing and bug fixing, carry out A/B testing, commission an external security audit and plan a marketing campaign for the beta launch. Plan and implement institutional operations; develop, agree and formally conclude the European governance arrangements.

**Staffing:** Project Manager; Community Manager

### Phase 3 milestone (Final Application):

Beta release with 38+ million publications (approx. 1 million additional publications per year), a public API and an established European governance model.

