VIVO connect share discover

VIVO development
- Technical Roadmap and Platform Evolution -

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Agenda

- Motivation
  - Current challenges
  - The vision behind roadmap
- Roadmap
  - Installation/update
  - Data ingestion
  - Data curation workflow
  - Data export / usage
  - UI improvements
  - Security / privacy improvements
  - AI
- Conclusion

Motivation

Current challenges

- Complex deployments and upgrades
- Difficult customization workflows
- Fragmented ingest pipelines
- Manual curation overhead
- Increasing security and accessibility requirements
- Integration with other platforms

The vision behind roadmap

The roadmap aims to create a VIVO that:

- Is simpler to install and customize
- Easily ingests data from key sources
- Supports advanced curation workflows
- Enables flexible data re-export
- Remains secure and privacy-aware
- Is documented for all audiences

Roadmap

Installation/update

- Hosting providers
- Ready for cloud-native hosting (e.g. AWS)
  - Components
    - Graph database (e.g. Neptune)
    - Search engine (e.g. OpenSearch)
- Improvement of Docker-based deployments
- UI/configuration for branding, data ingestion, etc.

Data ingestion

- VIVO-Harvester integrated in deployment process and available through UI
- OpenAlex
- PubMed
- DataCite
- DSpace
- EPrints
- CSV-based ingestion

Data curation workflow

- Data ingestion (to internal graph)
- Data consolidation (deduplication / disambiguation engine)
- Public data

Data export / usage

- Data Distribution APIs
  - Reporting based on templates
- OAI-PMH support
  - OpenAIRE guidelines for CRIS managers
- Flexible export formats
  - Source for analytics tools (e.g. csv for PowerBI or Tableau)
- ORCID (push)

UI improvements

- WCAG 2.2 AA compliance
- Branding VIVO through UI
  - logo
  - institutional colors
  - upload custom css
- Responsive wilma theme

Security / privacy improvements

- Private data
  - individual
  - all individuals of a class
  - properties
  - SPARQL based
- Ingestion of data into non-public graph
- Signing-in by using ORCID credentials
- CAPTCHA

AI

- Making data ready for AI-agents
  - MCP
- Using AI into cataloguing process
- Building AI-services on top of graph data
- Using AI into the contribution process
  - Producing contributions based on specification
  - Reviewing contributions

Conclusion

The status and timeline

- VIVO 1.16.0 - before summer
- VIVO 2.0.0 - beginning of 2027

The next generation VIVO

- Preparing research infrastructure for the next decade
  - A modern research knowledge graph platform
  - An integration-ready infrastructure layer
  - An AI-compatible metadata ecosystem
  - A sustainable open-source platform

Thank you for your attention

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Roadmap - https://vivoweb.org/roadmap/
Development fund - https://vivoweb.org/development-fund/