



Flanders
State of the Art

Opening up data on research as a driver of innovation in Flanders.

The use case of FRIS.

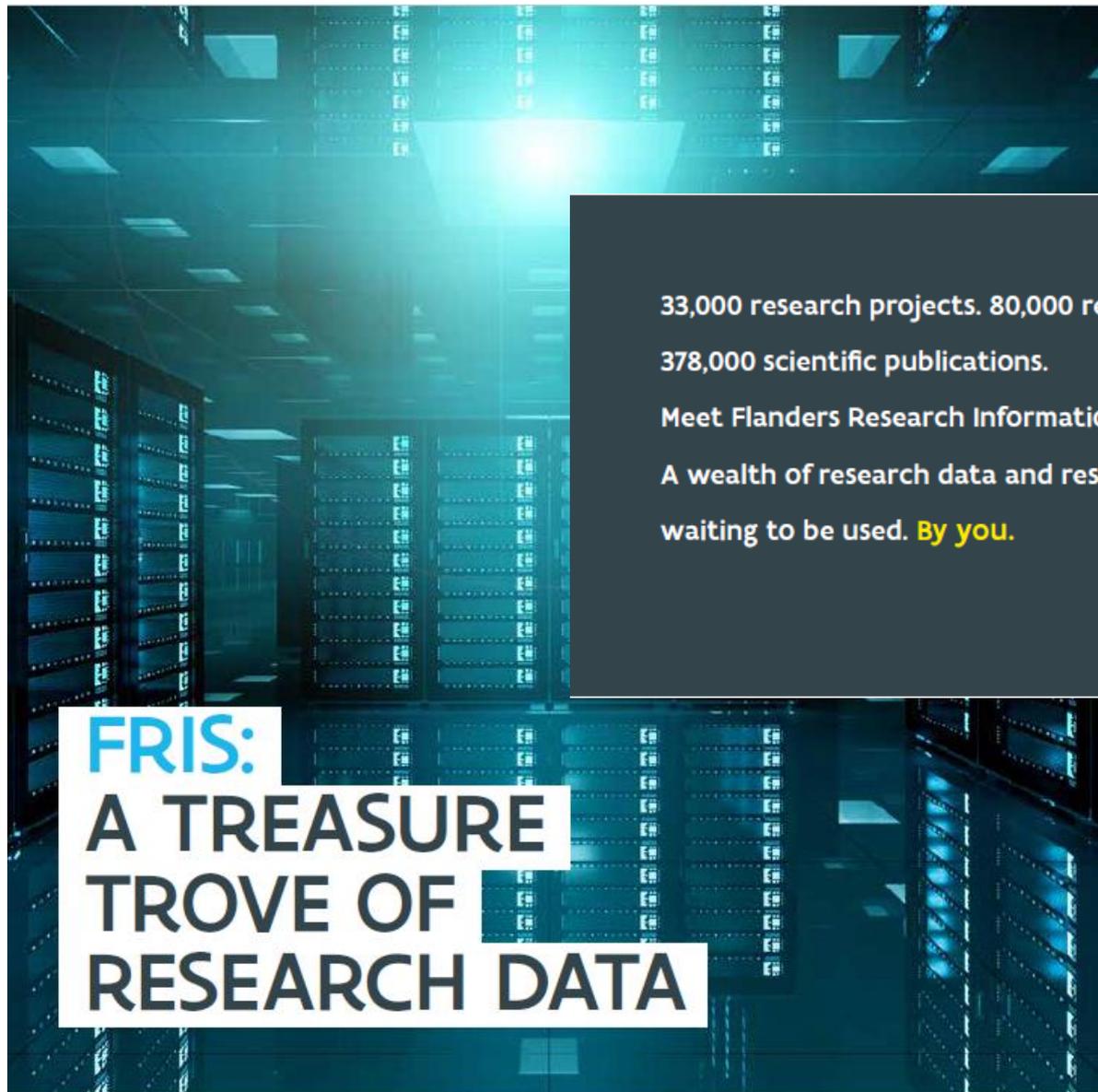
Leen Van Campe - Program Manager FRIS

Department Economy, Science and Innovation

Flemish Government

*Helsinki, FRIS@EuroCRIS,
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FRIS:
**A TREASURE
TROVE OF
RESEARCH DATA**

33,000 research projects. 80,000 researchers.

378,000 scientific publications.

Meet Flanders Research Information Space (FRIS).

A wealth of research data and results,
waiting to be used. **By you.**



Unique **window**
on all publicly
funded research

FRIS DATAPROVIDERS

RENOWNED RESEARCH PARTNERS

- KMDA
KONINKLIJKE MAATSCHAPPIJ VOOR DIERKUNDE VAN ANTWERPEN
- KONINKLIJK MUSEUM VOOR SCHONE KUNSTEN ANTWERPEN
- KU LEUVEN
- VUB
VRIJE UNIVERSITEIT BRUSSEL
- INSTITUTE OF TROPICAL MEDICINE ANTWERP
- ILVO
Flanders Research Institute For Agriculture, Fisheries and Food
- DEPARTMENT OF ENVIRONMENT & SPATIAL DEVELOPMENT
- RESEARCH INSTITUTE NATURE AND FOREST
- University of Antwerp
- UHASSELT
- VLIZ
- GHENT UNIVERSITY
- Meise Botanic Garden
- ECOOM
Expertisecentrum O&O & Innovatie
- Flanders Hydraulics Research

Will your research institute be joining our other partners?

4 OBJECTIVES as principles of implementation



- ▶ **Open information = faster innovation. Accelerate the chain from idea to innovation** by ensuring a better information flow between research institutes and innovative organisations



- ▶ **Simplifying administration through webservices (e-gov)**
- ▶ Obtaining information directly from systems
- ▶ Requesting information just once, sharing and reusing it to get the most out of it



- ▶ Having up-to-date information available = making research **innovation strategy** more **effective** and **efficient**



- ▶ To make research information **publicly available** so that everyone can use it freely

TARGET GROUPS

RESEARCH INSTITUTE

- Details on your research and its results are shared **with all FRIS research partners and users**.
- **Become known** in your field as we share your **research data** with various companies, allowing them to develop applications that rely on your area of expertise.

RESEARCHER

- **Quickly** and **easily** reach out to other researchers.
- **Find partners in your area of expertise** with whom you can collaborate or who can help give your application for funding a better chance at success.
- **Increase your project's market value** by gaining national and international name recognition.
- Get **access** to all **publicly funded research** in Flanders and see how innovative your research is.

TARGET GROUPS

INDUSTRY

- Quickly find the **experts** you seek, even in very specific disciplines.
- Enjoy access to the **open data of all Flemish research**, so you can develop your own applications.
- Attract **researchers** in very specific scientific domains more easily.
- **Save** on your own **research costs**: data from earlier research projects is quickly available.
- Get access to **new technologies**. So you can find **ideas** to **commercialise** more easily.

GOVERNMENT BODY

- Use FRIS as **reliable source** to monitor your own policy.
- See the results of research you are funding, discover **trends** and conduct impact analyses.
- Look up what research has already been conducted in your policy domain and who the experts are.

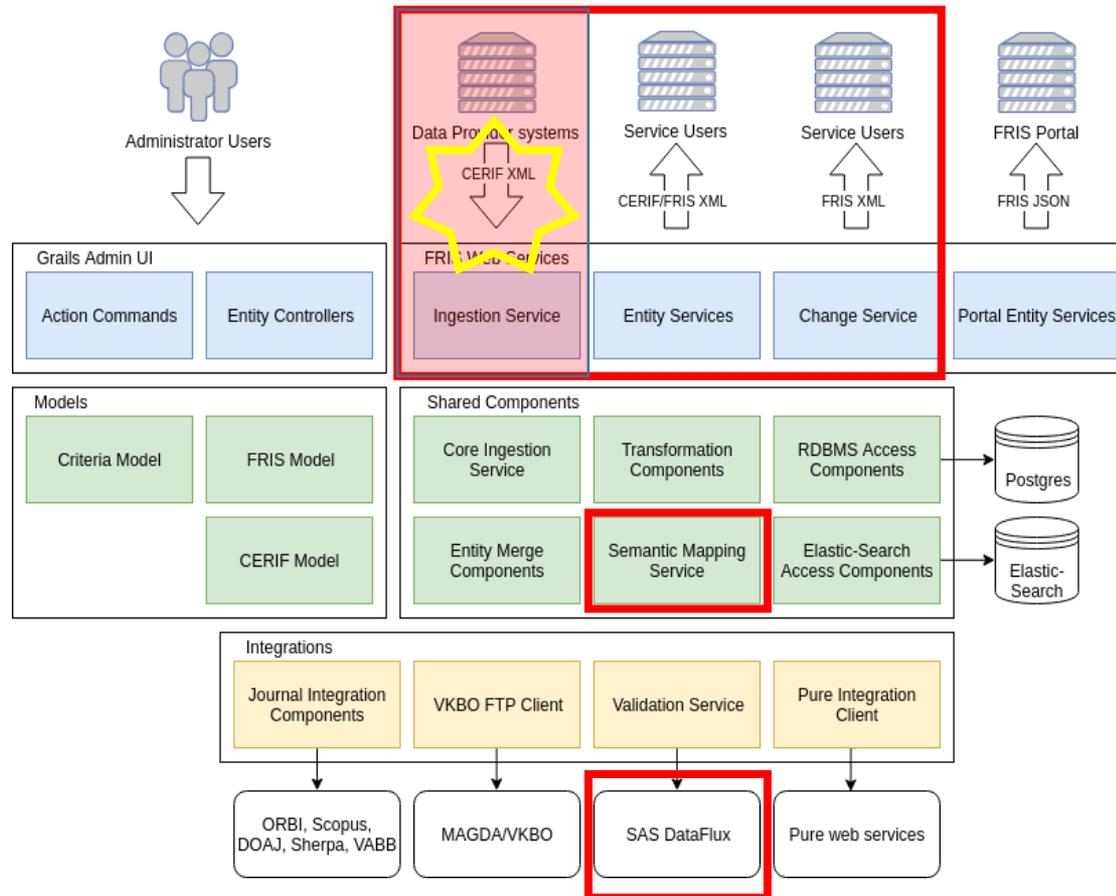
FRIS is ALWAYS UP TO DATE

GOAL: accurately reflect the state of research in the region

- ▶ **IT – infrastructure as Service Oriented Architecture** to provide a sustainable and more agile IT-system using standard compliant technology
 - SOAP webservices : technology independent components
 - Data quality tooling
 - Semantic platform using webservices
 - CERIF standard: neutral architecture - interoperability

FRIS is ALWAYS UP TO DATE

SOA architecture



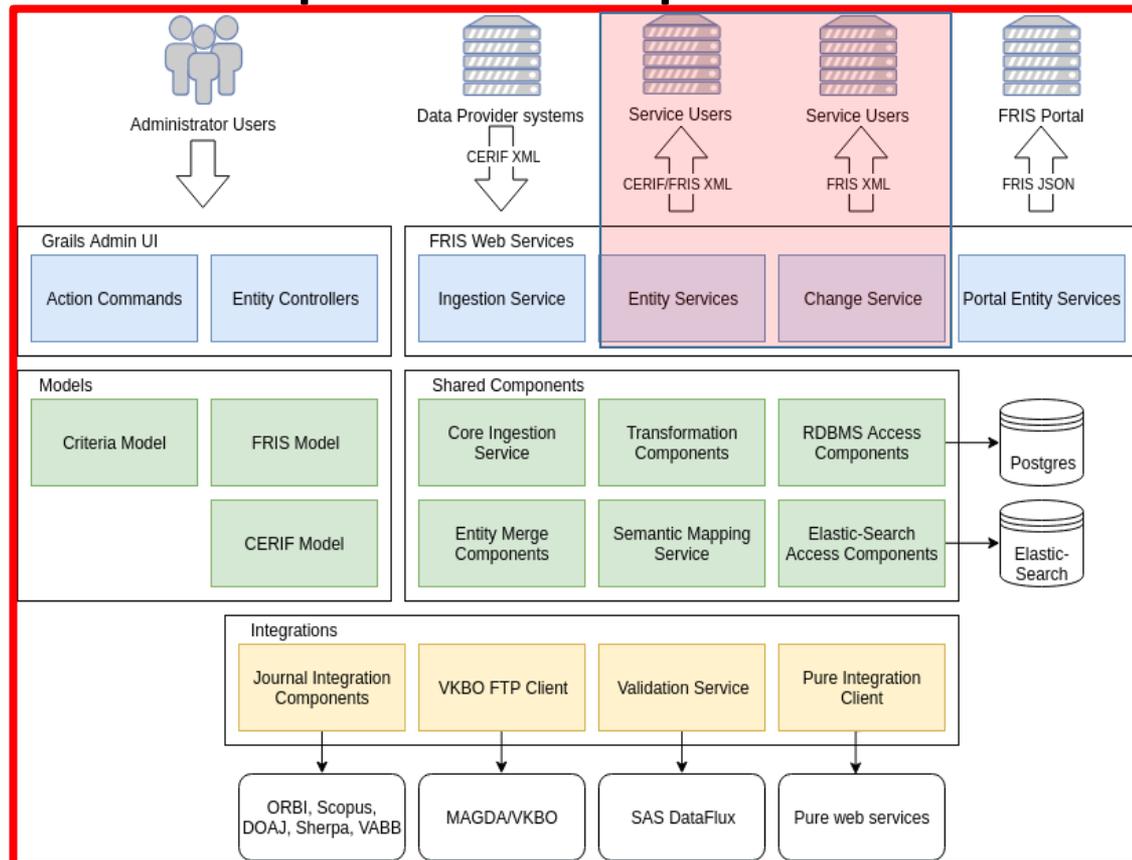
FRIS is ALWAYS UP TO DATE

GOAL: accurately reflect the state of research in the region

- ▶ **System-to-system integration between research institutes and FRIS**
 - From bulk based yearly upload to incremental model with changes in real – time
 - Research institutes in Flanders have linked their systems directly to FRIS: tight integration based on state and workflow changes
 - Changes in source systems are immediately reflected into FRIS

FRIS is ALWAYS UP TO DATE

- ▶ **GOAL: accurately reflect the state of research in the region**
- ▶ **FRIS webservices geared towards public access with all public information as open data and open API's**



ACCESS to FRIS



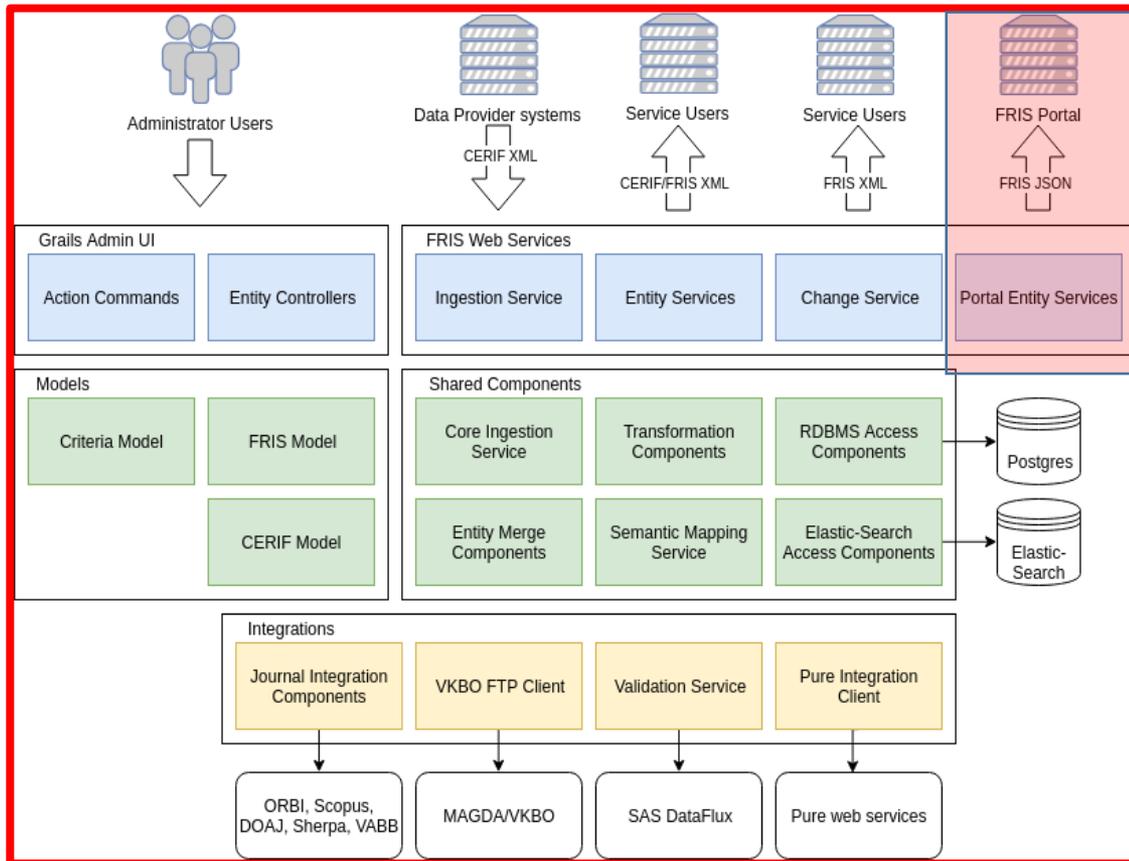
How to access the FRIS data?

There are two ways.

The online portal researchportal.be will tell you anything you want to know about research in Flanders.

And with our [free license](#) you can request all research data you want to use for your own research and development.

ACCESS to FRIS: FRIS PORTAL



There are two ways.

The online portal researchportal.be will tell you anything you want to know about research in Flanders.

Online catalogue.
Various search filters.

ACCESS to FRIS: information as OPEN DATA

- ▶ **Flemish government as a trailblazer for open data**
- ▶ Opening up FRIS-data for researchers, government bodies, industry
- ▶ **Free open data license through open API's**
- ▶ Allowing you to work with all publicly funded research in Flanders



You exchange information with us through

CERIF XML,
a European standard.

You can access FRIS data through

SOAP online services.



You can access them via a

FRIS SOAP API
and a
CERIF SOAP API
on

<https://fris3.researchportal.be/ws/>

SUCCESS STORIES: FRIS as a TRUSTED data source

▶ ONTOFORCE: MEDICAL DATA SEARCH PLATFORM

- Belgium company in biotech and life science
- Extract information from public, third party, private big data
=> searchable and easy to be interpreted



- More data, more insights: smart decisions and innovation
- FRIS as a trusted source



Hans Constandt
CEO ONTOFORCE

“Open data is given a score of 1 to 5 stars. I rate FRIS research data 4 to 5 stars. The highest score, because their data is ready to be linked to other datasets. It is the first databank that we can use so quickly and easily.”

SUCCESS STORIES: FRIS as a TRUSTED data source

- ▶ **IdFuse** : RESEARCH BENCHMARKING TOOL IMPACTER
 - Assisting researcher with writing impact paragraph of grant proposal
 - Comparison to the state-of-the-art in global science
 - FRIS as a trusted source



WINNER AGORIA E-GOV AWARDS

Vlaams onderzoeksplatform wint e-Gov Award

maandag 10 december 2018



FRIS as winner
of e-gov award
“Open Data”
“Best Project
2018”

<https://www.youtube.com/watch?v=c3t4wMUyPKU&feature=youtu.be>

ONE STOP RESOURCE OF R&D

- ▶ **“Collect only once, reuse where possible” - principle**
- ▶ **FRIS as a one stop resource in Flanders** for any **process** where **research information** can be re-used
 - FRIS is a trusted source
 - Information is coming from controlled processes with quality control
- ▶ **FRIS as a digital information hub in the Flemish ecosystem**
 - FRIS as a **building block** within the research information **lifecycle**
 - Redesigning some of the existing information **flows in Flanders**
 - × FRIS will be using authoritative sources
 - such as ingesting the project information directly from the main research funding organisations in Flanders
 - × FRIS opening them up for re-use
 - = distributing the information to the research organisations where metadata can be enriched again and sent back to FRIS and, via FRIS, to the research funding organisations (output reporting)
 - **E-gov strategy** of the Flemish Government

What's NEXT? FRIS CONTINUES to IMPROVE

- 1 MORE CLIENTS and INFORMATION PROVIDERS**
Additional innovation partners such as strategic research centres , university colleges
- 2 EXTRA DATA**
Information on patents, equipment, datasets + financial reporting
- 3 USER FRIENDLY VISUALISATIONS**
- 4 LINKED OPEN DATA**
Linking to other data sources (national – international)
- 5 FLEXIBLE INFORMATION EXCHANGE (for REPORTING)**
Easier request, delivery, access to data

FRIS and OPEN SCIENCE



Make data Open and FAIR

METADATA

Findable = Assign persistent ID's, provide rich metadata, register in a searchable resource

Accessible = Retrievable by their ID using a standard protocol, metadata remain accessible even if data aren't

Interoperable = Use standard vocabularies and qualified references

Reusable = Rich accurate metadata, clear provenance, use of community standards

MONITORING of OPEN SCIENCE



Flanders Research Information Space

>> <https://www.ewi-vlaanderen.be/en/fris-flanders-research-information-space>

Leen Van Campe
leen.vancampe@vlaanderen.be

