

# Internationalization

## a major driver of growth for VIVO

Rachid Belkouch, research data management advisor  
Pierre Roberge, VIVO project manager

**Université du Québec à Montréal (UQÀM)**

# focus of the presentation / discussion

- gather the VIVO community around the benefits of internationalization
- briefly discuss what is done, and what need to be done
- create a synergistic involvement in the internationalization of VIVO

**Internationalization** (abbreviated **i18n**) *is the process of designing a software so that it can be adapted to various languages and regions without engineering changes.*

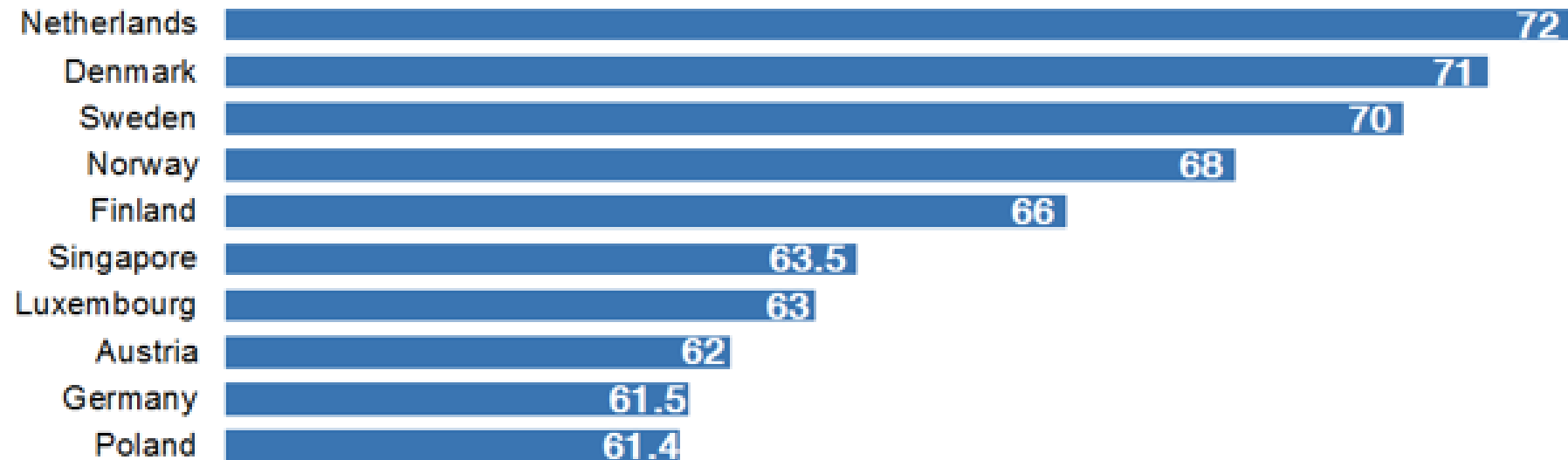
# key argument for VIVO i18n

A complete VIVO internationalization (i18n) is critical to reach a major adoption at an international level, as many institutions need to have support for languages other than English.

It is an important driver of growth for VIVO, but only if the interface and the data can use multiple languages.

# Countries best at English as a second language

The English Proficiency Index 2016





# Canada

Two official languages :  
English and French



# VIVO @ Université du Québec à Montréal (UQÀM)

Before VIVO and still in operation:

- homegrown faculty profile management <http://professeurs.uqam.ca>
- using a CMS and a relational DB, with gateways to Library information system (publications) and Registrar information system (courses)

VIVO phase I launch in march 2019 : "Cartographie des expertises"  
<http://expertises.uqam.ca> - french version of the "capability map" only

VIVO phase II starting in septembre 2019

- Expecting to replace the homegrown faculty profile management but need a **full internationalization** of VIVO to support French and English



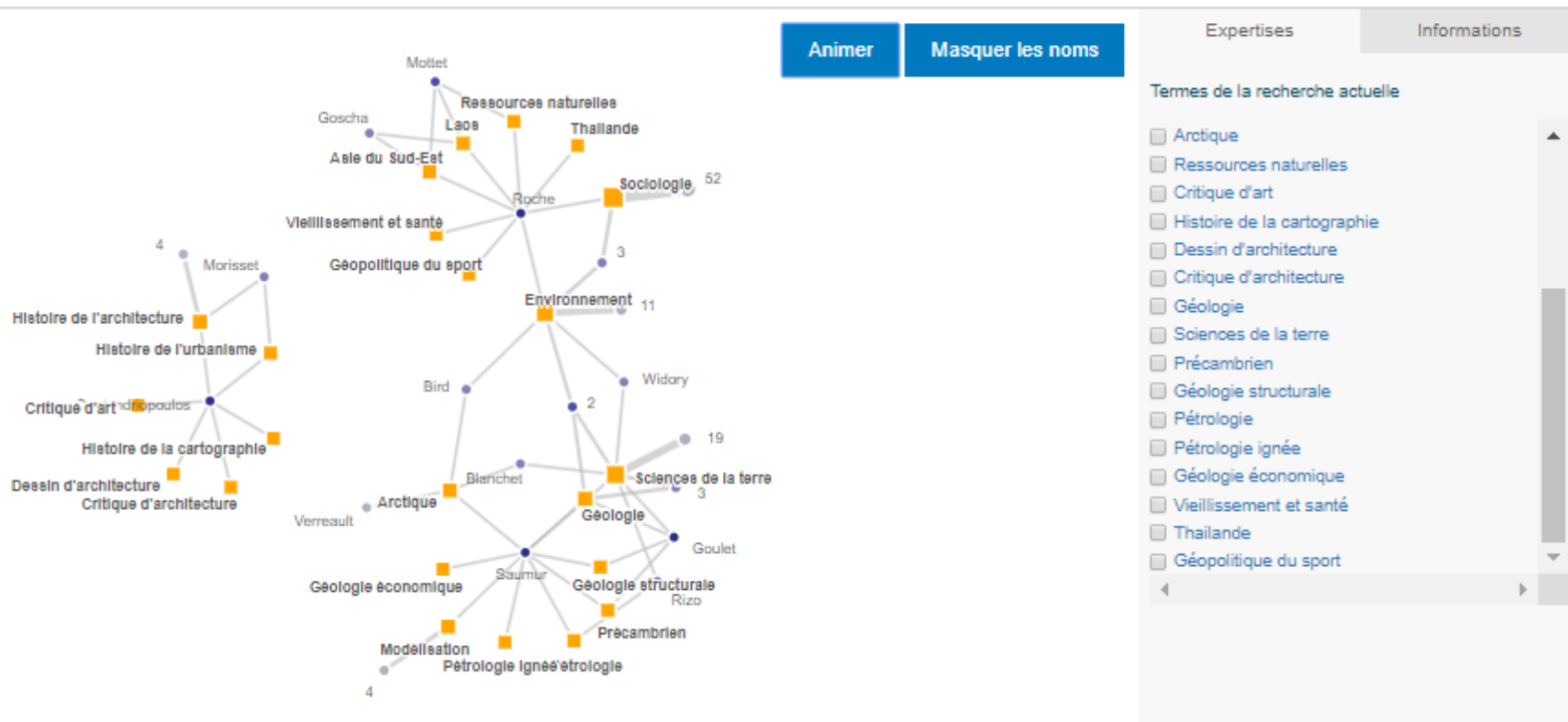
Bienvenue sur la cartographie des expertises des professeur(e)s de l'UQAM.

cartographie

Chercher

Vider

Aide à l'utilisation





# what is done, and what needs to be done

The **VIVO i18n internationalization task force** has established the roadmap to achieve this goal :

- **Phase 1** read-only support of public pages **(done)**
- **Phase 2** read-write support of profile pages: users will be able to edit language-specific data in profile pages.
- **Phase 3** administrative pages: creating user accounts, manipulating RDF data and other administrative functions. This is a "nice-to-have"
- **Phase 4** will support "back-end" pages used to edit the ontology, or to do low-level editing on individual entities.

# decoupling

**Decoupling** is a key idea in VIVO Conference 2019:

- decoupling the frontend and the backend
- decoupling the application and the ontology

With i18n : **decoupling** the languages and the application

- so we have the flexibility to use any language, as separate language files are called at the initialization

# where should be the language strings

- **language in the data model:** RDF include multiple labels for a single individual, each with a language specifier. If language filtering is enabled, VIVO will display the value that matches the user's preference.
- **language in VIVO pages / interface:** mechanism for managing them is based on the Java language's built-in i18n framework: the Java i18n framework has access to properties files which are loaded during program execution as needed

(source : i18n task force)

# Resources and links

[VIVO I18n requirements document](#)

Wiki

<https://wiki.duraspace.org/display/VIVO/Internationalization+Task+Force>

<https://wiki.duraspace.org/display/VIVODOC110x/Internationalization>

VIVO Slack channel

Langage files on Github

- <https://github.com/vivo-project/Vitro-languages>
- <https://github.com/vivo-project/VIVO-languages>