Research Portal for Secure Data Discovery, Access and Collaboration

CANARIE RDM Workshop & NDSF Summit

January 23-25, 2019

Moyez Dharsee
Indoc Research

Brendan Behan, PhD
Ontario Brain Institute

indoc RESEARCH

canarie

ONTARIO BRAIN INSTITUTE | INSTITUT ONTARIEN DU CERVEAU

Brain-CODE

Researcher

External Restricted Data

Administrative | Hospital | International

Portal

Researcher Support

External Linkage

Data Capture Resources

External Data Sources | Program Specific EDC Databases | XNAT | REDCap | LabKey | OpenClinica | Subject Registry

Electronic Health Information Laboratory

Homomorphic encryption-based linkage

Centre for Advanced Computing

Curation Systems & Processes

Airflow

redis

KEYCLOAK

kafka

Federated Data Warehouse

IBM DB2 | PostgreSQL | elastic | Spark SQL | Apache Thrift ™ | API

Platform Services

Security and Privacy

ID, Permissions & Ethics Management

Data Marshalling and Linkage

Provenance

Canvas

Admin Dashboards and Quality Control

Analytics Workspace

jupyter | R | MATLAB | SPSS | SAS

Study Dashboards

(meta)Data Query and Release

Project overview

- We work within a growing ecosystem of research teams and technology partners

- These research teams need data portals to
  - Publish content
  - Manage users
  - Contribute and access data
  - Share and collaborate

Project overview

We will leverage the experience of our collaborators

and integrate existing software tools to develop a portal framework that abstracts complexity and that is easy to use and adapt

Planned functionality and supporting tools

customizability, multi-tenancy

Drupal™ · Joomla! · ckan · OSF · Plone · The Dataverse Project · UDATA

identity, authentication, authorization

freeIPA identity | policy | audit · 389 DIRECTORY SERVER · KERBEROS · keycloak · ORCID

data access

REDCap Research Electronic Data Capture · XNAT · RStudio · TIBCO Spotfire · LabKey · OpenClinica Open Source for Clinical Research · elastic

collaboration

Seafile · Atlassian Confluence · Office 365 · jitsi.org · Atlassian JIRA · ROCKET.CHAT · Mattermost · GitLab · slack

indoc

FAIR intersections

- **Findable, Accessible**
  - immediate goals of this project
  - consistent ways to discover and access data across research projects

- Interoperable, Reusable
  - secondary goals
  - supported by our parallel efforts in CONP, INCF, GA4GH
    - standardization
      - DATS, BIDS, W3C PROV ...
    - federation
    - open data when applicable
    - data sharing frameworks

CONP PCNO
Canadian Open Neuroscience Platform

incf
International Neuroinformatics Coordinating Facility

Global Alliance for Genomics & Health
Collaborate. Innovate. Accelerate.

indoc

ONTARIO BRAIN INSTITUTE INSTITUT ONTARIEN DU CERVEAU

NDSF intersections

We hope to work with this vibrant RDM/RDC community to

- help address gaps/opportunities within Canada's digital research infrastructure

- learn from and contribute to an emerging National Digital Services Framework

Team & acknowledgements

Indoc Research

Apurv Samant
Frontend Developer

Abraham Prince
Web Developer

Salim Haniff
DevOps Lead

Sara Latour
Data Mgmt Specialist

Fan Dong
Director, Systems Dev

Moyez Dharsee
CTO

Mojib Javadi
Director, Program Dev

Ken Evans
President & CEO

Tom Gee
VP, Engineering

Ontario Brain Institute

Brendan Behan
Program Lead
Informatics & Analytics

Shannon Lefaivre
Program Lead
Informatics Governance

Elizabeth Theriault
Director
Informatics & Analytics

Collaborators and partners

indoc

camh
Centre for Addiction and Mental Health

The Royal
Mental Health - Care & Research
Santé mentale - Soins et recherche

St. Joseph's Healthcare Hamilton

canarie

ONTARIO BRAIN INSTITUTE | INSTITUT ONTARIEN DU CERVEAU