



Northeastern  
University

## REQUEST FOR PROPOSALS OHDSI Lab 2.0 MVP

### NORTHEASTERN UNIVERSITY

#### **Background:**

OHDSI (Observational Health Data Sciences and Informatics) is a multi-stakeholder, interdisciplinary collaborative to use health data for large data analytics, through open-source solutions. OHDSI has an international network of researchers and observational health databases including an administrative oversight function at the OHDSI Center at the Roux Institute at Northeastern University. The Experiential AI Institute (EAI Institute) at Northeastern University leads in the research and application of AI. There is opportunity to expose data and toolchains from OHDSI to the capabilities of the EAI Institute capabilities to develop novel mechanisms and methods that can be utilized by the OHSDI community.

Statistical methods and machine learning applied to clinical research problems require sufficient compute power and large longitudinal patient data. The former can be expensive, and their use needs to be managed tightly. The latter needs a special infrastructure for their protection, as they contain very sensitive personal data and because there are legal and regulatory requirements.

Therefore, a dedicated infrastructure hosting sensitive patient data in combination with self-service management of computing resources is required. We call this the OHDSI Lab. A similar solution was implemented at OHDSI's predecessor project OMOP, then called OMOP Lab. This Version 2.0 is considered the next generation solution.

#### **Project Goals and Scope of Services:**

Create an OHDSI Lab 2.0 MVP (minimum viable product) and the execution of this MVP. This project must be compliant with HIPAA (Health Insurance Portability and Accountability Act) regarding the lawful use and disclosure of protected health information.

The entire platform shall be provided as service on customer cloud. It should provide:

- OMOP-formatted datasets
- Prespecified OHDSI tool stack to process the data. The tool stack consists of some web applications, a SQL client, R and Python.
- User access and resource management functionality. Each user should be able to specify the data, the tools and the compute resources (s)he wants to use, and a budget to support these resources.

The successful respondent should propose a base operational workflow for the OHDSI Lab, an MVP product plan and a development roadmap to deliver a fully executed MVP.

The deliverables must consider:

- Reference dataset list and governance requirements.
- Formal specification document for the operational workflow of the OHDSI Lab that includes:
  - Pool diagrams of execution of all relevant processes.
  - Wireframes of all relevant views and reports.
  - Proposed architecture.
- MVP plan that addresses critical gaps between 1.0 and 2.0 needs.
- A development roadmap.
- Deployment of MVP.

### **Anticipated Selection Schedule**

RFP: **2<sup>nd</sup> June, 2021**

Deadline for applicants: **11<sup>th</sup> June, 2021 by 5PM Eastern Standard Time**

Selection of Top Applicants and notification of Unsuccessful Applicants: **17<sup>th</sup> June, 2021.**

### **Time and Place of Submission of Proposals**

The RFP will be posted on: <https://zenodo.org/communities/ohdsi>, and will be available for download from **2<sup>nd</sup> June, 2021.**

Submissions must be sent in the following format: PDF to **The OHDSI Center at the Roux Institute (OHDSICenterRoux@northeastern.onmicrosoft.com).**

### **Timeline**

All applicants must complete this project in a matter of 3 months with completion of the milestones.

### **Elements of Proposal**

Elements in these proposals must include:

- Description of the firm that includes an overview, names and credentials of the potential team.
- Relevant previous experience regarding MVP plans and execution.
- A plan to incorporate a discovery process to acquire knowledge of existing OHDSI community artifacts to be leveraged in the MVP
- Brief risk management plan for onboarding healthcare data within a HIPAA complaint cloud environment.

### **Evaluation Criteria**

The successful respondent will:

- Have been operating for at least 24 months and possess capabilities for the degree of this project.
- Competitive costs of service.
- Experience, knowledge and skills available to provide relevant services.

## **Possible Roadblocks**

The vendor will be reliant on institutional support for:

- Access to reference data
- Access to reference customers
- Fulfillment of user acceptance testing