

Unlocking the power of data to catalyze breakthroughs in disease research.

The challenge

Dementia is difficult to diagnose, treatments are limited, and there is no cure. Cutting-edge data analysis could offer a solution. In recent years, researchers have generated staggering amounts of data across multiple modalities, creating the potential to accelerate progress dramatically.

Data modalities

- Increasingly sophisticated clinical data
- MRI, PET, and other imaging data
- Plasma biomarker panels
- Speech samples and other digital data
- Different types of -omics data

However, the development of systems and tools that empower the scientific community to use data has not kept pace with the data itself. The process of ingesting data and cleaning data, harmonizing it across all these modalities, and visualizing it is prohibitively expensive and time-consuming. In addition, for administrative, legal, and logistical reasons, data sharing is still the exception, not the norm, so data analysis continues to happen mostly one data set at a time.

These barriers have prevented researchers from fully tapping into the discoveries that multi-modal data and modern analysis tools should be making possible.

The solution

GRIP is a user-friendly one-stop shop where researchers can:

- ✓ Ingest data of multiple different types and formats
- ✓ Process complex data via access to flexible, standardized tools and workflows
- ✓ Leverage powerful analysis tools and collaborative synergy in secure workspaces
- ✓ Share data insights easily with project partners and/or the entire community



Discover how GRIP supports analysis of data modalities, including imaging, digital, and -omics data

The status quo is that researchers must build their own custom tools to facilitate a multi-step data curation process, including ingestion, standardization, anonymization, annotation, quality control, mapping, and visualization.

GRIP makes standardized but flexible tools affordably available so researchers can use them on demand in the precise configuration that meets their individual needs.

Then GRIP provides a space where researchers can share their data and collaborate on sophisticated analyses powered by another set of built-in tools.

GRIP is being co-developed by teams currently doing Alzheimer's research at major academic centers and research organizations, so its functionality is continually informed by the experiences of researchers managing challenges in real time.

GRIP is intended to save money and time for researchers, funders, and investigators. More importantly, it is intended to facilitate cutting-edge research that isn't happening now because the infrastructure for it doesn't exist. That research could lead to insights that result in better options for the 50 million people worldwide living with Alzheimer's and related dementias.

Background and vision

The idea for GRIP originated when several partners approached Gates Ventures separately for help meeting a similar need: managing workflows for the increasingly complex work of data curation and analysis. Given that many of these challenges are disease agnostic, GRIP is intentionally designed to enable multiple use cases and is equipped to accelerate research more broadly. Among our first use cases are maternal and child health as well as Alzheimer's disease and related dementias.

We continue to operate with the philosophy of "build it once and re-use," and we have taken a collaborative, participatory approach with partners, co-building the platform together. GRIP remains open-access and modular, and its tools and workflows are open source, so its functionality will continue to grow and evolve over time based on the needs of researchers. A white-labelable approach also makes it attractive for expansion across multiple therapeutic/research areas.