Evolving strategies and program development

*Perspectives from The Kavli Foundation*
The Kavli Foundation

**Vision:** Advance science for the benefit of humanity

**Goal:** Catalyze innovation and stimulate basic research in astrophysics, nanoscience, & neuroscience.
Guiding Principles

- Partner to Advance Science
- Take the Long View
- Be Adventurous
- Act Globally
- Embrace Diversity
Neuroscience Program: Open Data in Neuroscience

- Critical to promote accessibility, reproducibility and transparency of research
- Facilitates collaboration
- Multiplies impact by enabling data reuse
- Increases return on investment

- Accelerates scientific discovery
Vast quantities of data are being generated by neuroscientists, with great effort and expense to make data open.

The Problem:
Neuroscience has unique challenges that block effective data sharing and data reuse.

Approach:
- Support projects to make it easier for scientists to standardize and share data
Neurodata Without Borders (NWB)

**Opportunity**: Breakdown barriers in data sharing and enable brain research worldwide

In 2014, The Kavli Foundation partnered with others to develop NWB as a data standard for cellular neurophysiology.
Neurodata Without Borders (NWB)

Main Activities:
- Meeting/hackathon support
- Software development projects
- Seed grant program for individual labs to adopt NWB

Indicators of Success:
- NIH support for NWB adoption, sustainability and data archive
- 400 available NWB open datasets
- Grantee feedback
Factors that inform Future Program Design

- New Leadership
- Program Evaluation
- Resource Allocation
- Community Feedback
1. Review current landscape

What changed since we began supporting NWB data standard?
2. Review problem statement

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**The Problem:**

Neuroscience has unique challenges that block effective data sharing and data reuse.

**Approach:**

- **Support projects** to make it easier for scientists to standardize and share data

What aspects of the problem persist?

What are alternative or complementary approaches?
3. Review strategic guidance and new information

**Mission**
Are we advancing science in a way consistent with our founder’s vision?

**Goals**
What opportunities can we create to stimulate basic research in neuroscience?

**Guiding Principles**
What guiding principles can we leverage?

**New Information**
How can we balance stakeholder needs and requirements while maximizing impact?
4. Develop new approaches and opportunities

**Software**

Support projects to make it easier for scientists to standardize and share data.

**Research**

Launch new funding opportunities to maximize novel use and discovery from open data.
NWB GUIDE: An intuitive app to convert data

“Ultimately the most useful tools for promoting adoption of NWB will be excellent web-based interfaces that require minimal programming expertise. Not everyone is equally computer savvy, but everyone generates data files. There needs to be an interface that acknowledges the diversity of expertise.”

- NWB Seed Grant Recipient
NeuroData Discovery Grants

Hackathon participants were eligible to apply for a one-year award aimed at generating new discoveries from reanalysis of publicly available datasets in the NWB format.

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