



Empowering Discovery and Collaboration: the HEAL Data Ecosystem

May 17, 2021

Presented by The HEAL Data Stewardship Group



NIH HEAL Initiative and Helping to End Addiction Long-term are service marks of the U.S. Department of Health and Human Services.

Our mission is to work with the HEAL ecosystem to develop processes and solutions for data harmonization, metadata collection, and sharing within a federated data ecosystem.

HEAL Data Stewardship Group

Stan Ahalt,
Principle Investigator

Kira Bradford,
co-PI, Tech Lead

Rebecca Boyles, co-PI
Helping to navigate the
complex data landscape.

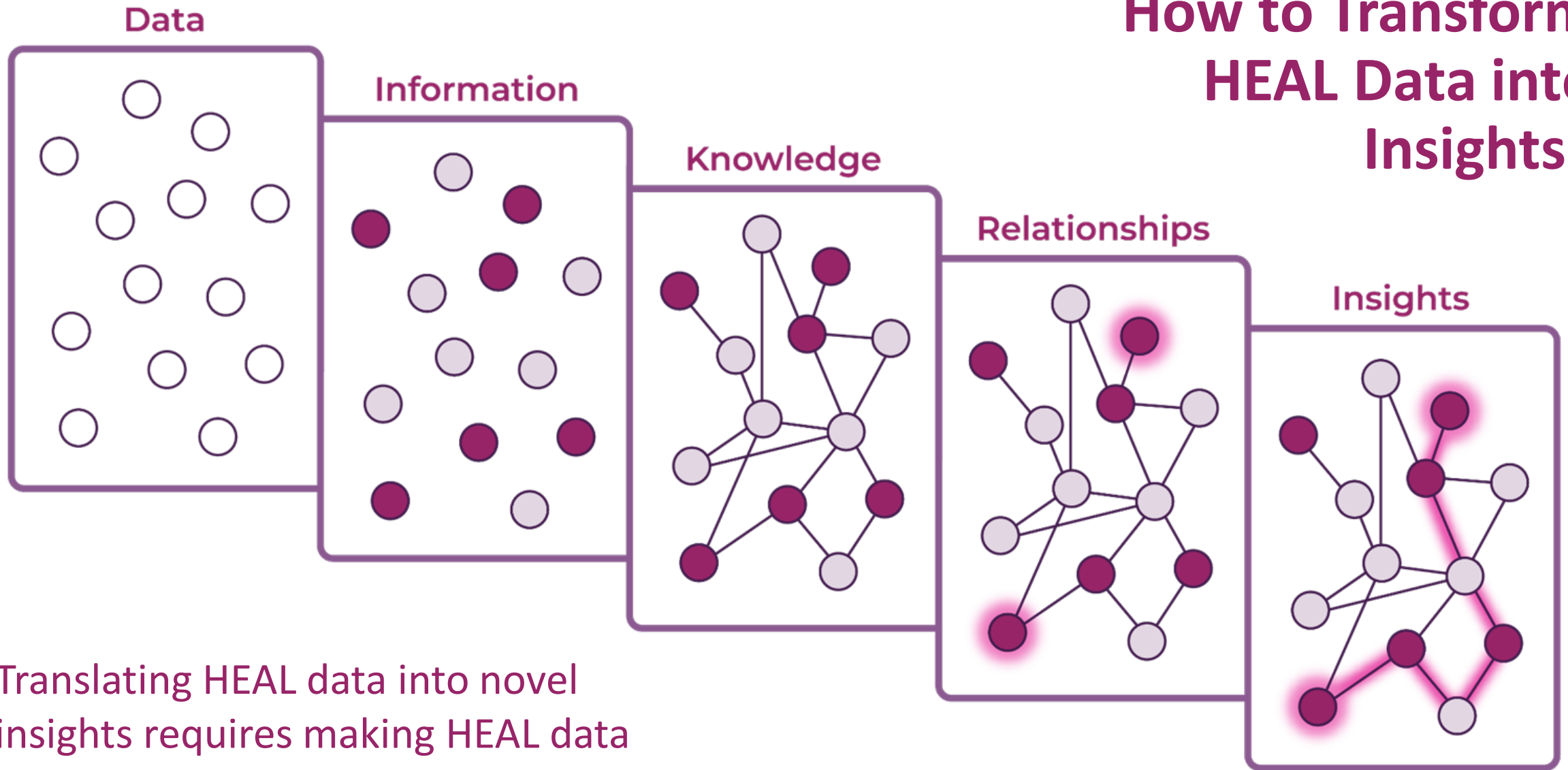
Steve Cox, co-PI
Connecting with
the ecosystem.



Asia Mieczkowska, co-PI
Facilitating coordination, assisting in
communications, and incorporating ideas and feedback.

How can we help?

How to Transform HEAL Data into Insights?



Translating HEAL data into novel insights requires making HEAL data FAIR

What datasets will allow me to validate a novel drug target in multiple species?

What downstream biological targets are associated with chronic pain among study subjects?

How do socioeconomic factors influence opioid use disorder among subjects in urban vs rural regions?

What genes and biological pathways are associated with opioid-induced hyperalgesia?



Research Process Without HEAL Ecosystem Resources

Literature search, identifying datasets, getting access



Process data and harmonize datasets before combining for analysis



Discover new insights as a result of combining datasets



How to Make HEAL Data Findable?

Use FAIR principles to ensure HEAL data is accessible and useful in the future.

Findable

- ▶ Data discoverable in public repository
- ▶ Unique, persistent identifiers for data sets

Accessible

- ▶ Managed consent and risk
- ▶ Controlled access

Interoperable

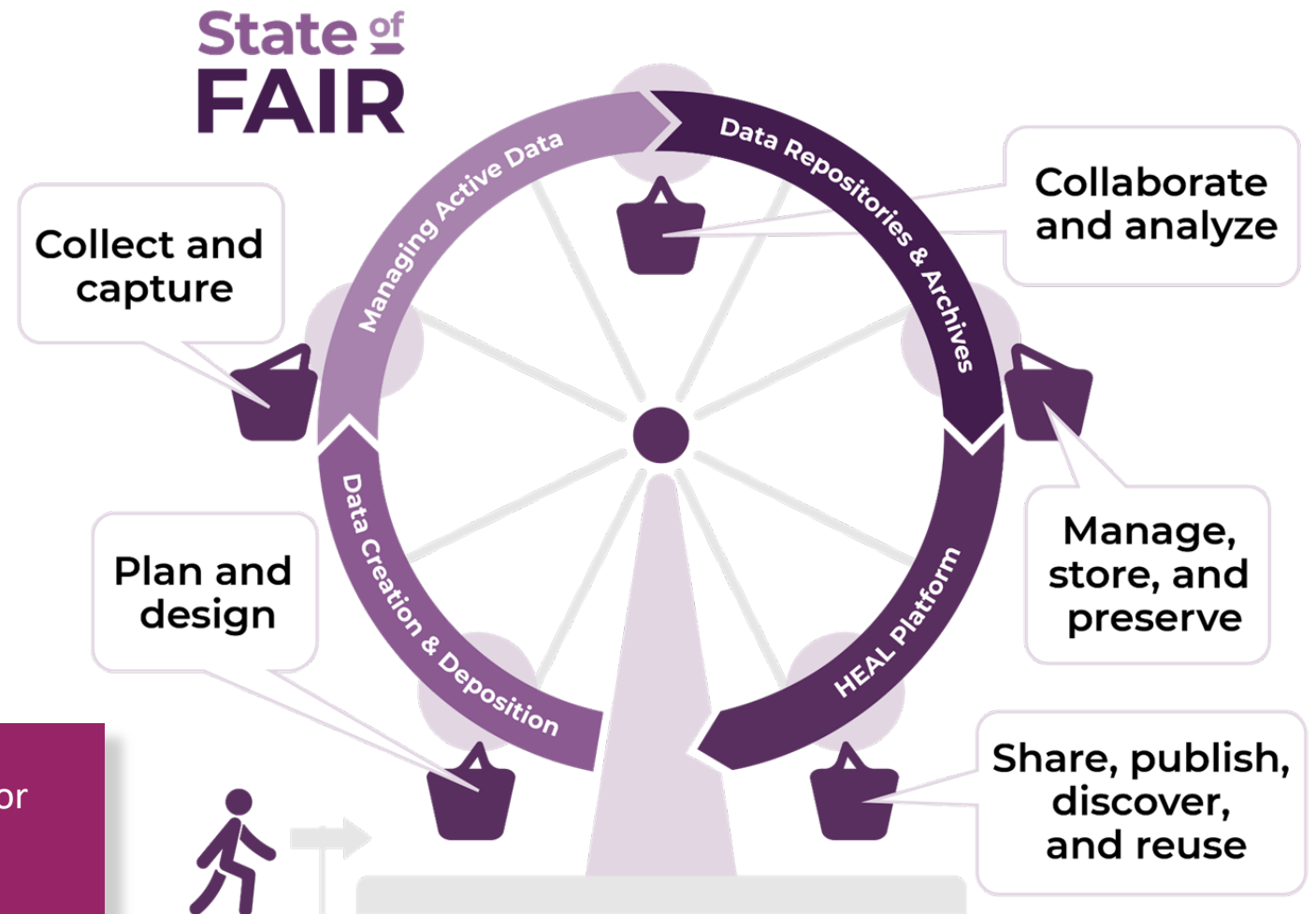
- ▶ Harmonized data within identified repository
- ▶ Uses standard vocabularies & ontologies

Reusable

- ▶ Defined use
- ▶ Metadata richly describes data

How to Make HEAL Data Findable?

- HEAL data can be FAIR regardless of where the research is in the data life cycle
- By making data FAIR, the data is more easily findable on the HEAL platform
- Researcher incentives: FAIR data as a publishable element



View our poster on the State of FAIR for more information about making your data FAIR.

Research Process Without HEAL Ecosystem Resources

Literature search, identifying datasets, getting access



Process data and harmonize datasets before combining for analysis



Discover new insights as a result of combining datasets



Research Process with HEAL Ecosystem Resources

HEAL researchers can use the HEAL Platform to discover and get access to datasets of interest



By making HEAL datasets FAIR, datasets can be more easily combined for analysis



Using the HEAL ecosystem resources, researchers accelerate discoveries



Getting to Know You and Your Data



Data Asset Inventory



For more information on how to make your data FAIR, visit the HEAL Stewards' poster "The State of FAIR."

Goal: Deep dive into data processes

Method: Inventory and interviews

Datasets and metadata enable discovery, reuse, and citation of datasets.

Anticipated start: Coming Soon!



For more information on how the HEAL Stewards will help translation across data types, visit the HEAL Steward's poster "Diversity of HEAL Data Types."

12