### Information Infrastructure to address Societal Grand Challenges

Donald J. Waters CNI Fall Meeting Washington, DC December 10, 2024

### **Special Thanks**

### CNI

Brown University Library

40+ researchers, information experts, and administrators who gave me time for interviews

## The top 8 things I learned

1. Climate change is a "wicked" problem (uncertainty about relevant factors and desired outcomes) 2. Research on wicked problems is different from research defined within disciplinary structures (relative certainty about relevant factors and desired outcomes) 3. Research into wicked problems requires special structures, such as research centers and institutes capable of fostering information sharing across disciplines and with the public

### 4. Campus information experts, such as library liaisons, tend to focus on departments, not research centers and institutes

# 5. There are different types of research centers and institutes, most of which are faculty-focused

6. "Standard" research centers institutes are institutionally supported, problem-focused, and interdisciplinary 7. Science policy favors "integration" as the goal of interdisciplinary work, which favors interaction among researchers in closely related disciplines

8. Because wicked problems require broad interaction across many disciplines and with the public, "problem feeding" is a more practical and effective goal for work across disciplines and with the public I recommend four adjustments in the service policies of campus information experts to more effectively support wicked problem research:  Focus on "standard" (universitysupported) centers and institutes devoted to wicked problem research,

And within these centers:

### 2. Foster skills needed for problem-feeding across fields in the sciences, social sciences and humanities

3. Support the engagement of researchers with local communities in defining and co-producing research

4. Enhance data support to accommodate the nature and scale of interdisciplinary and public contributions



# How can I improve the report?

### Thank You!

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