Research Transitions in an Applied Science Program

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Outline

I Introduction

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Introduction:

- Call for useful scientific information
- Problem: a “Valley of Death” between R & O
- NOAA Administrative Order “Policy on Research and Development Transitions” 216-105A (2015)
  - Defines operations, application, commercialization
  - Spells out readiness levels
  - Requires transition plans
- Varying degrees of success

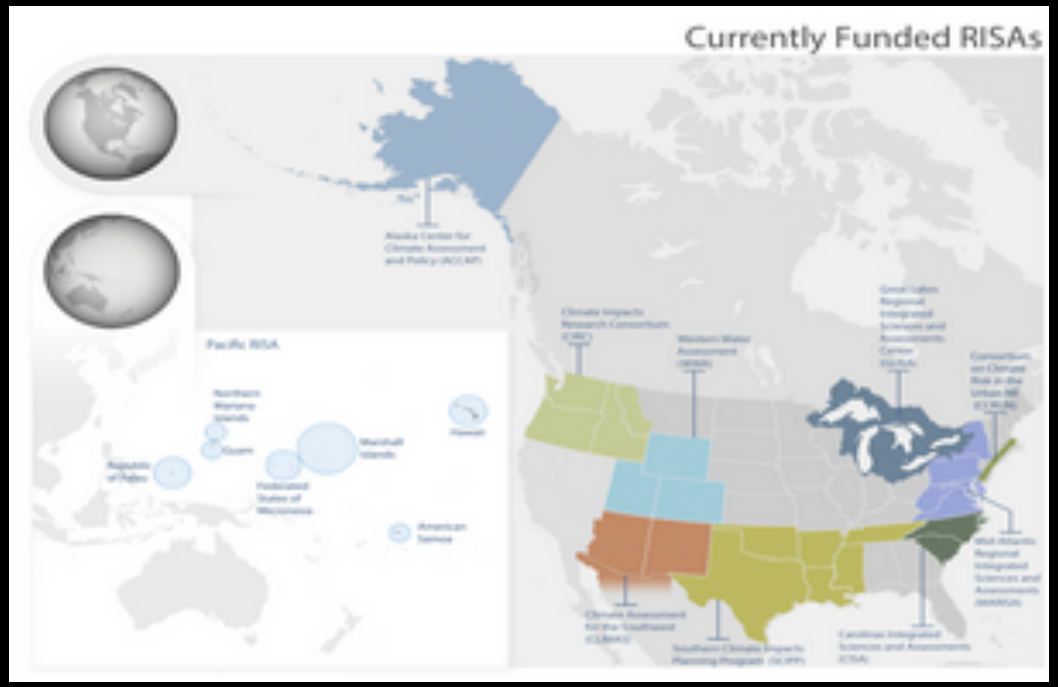
Introduction:

NOAA Administrative Order "Policy on Research and Development Transitions" 216-105A (2015)

> "*This order applies to all NOAA R&D activities, including those funded by NOAA but conducted by non-NOAA entities*."

Introduction:

The RISA program



RISA
Regional Integrated Sciences and Assessments

Introduction:

Our research asked:

- ✓ What factors inform successful/unsuccessful R2X in research and recipient organization?
- ✓ What resources do the RISA programs provide and what should they provide?
- ✓ How familiar are respondents with NOAA programs and activities that support R2X?
- ✓ What additional support would respondents like?

Literature

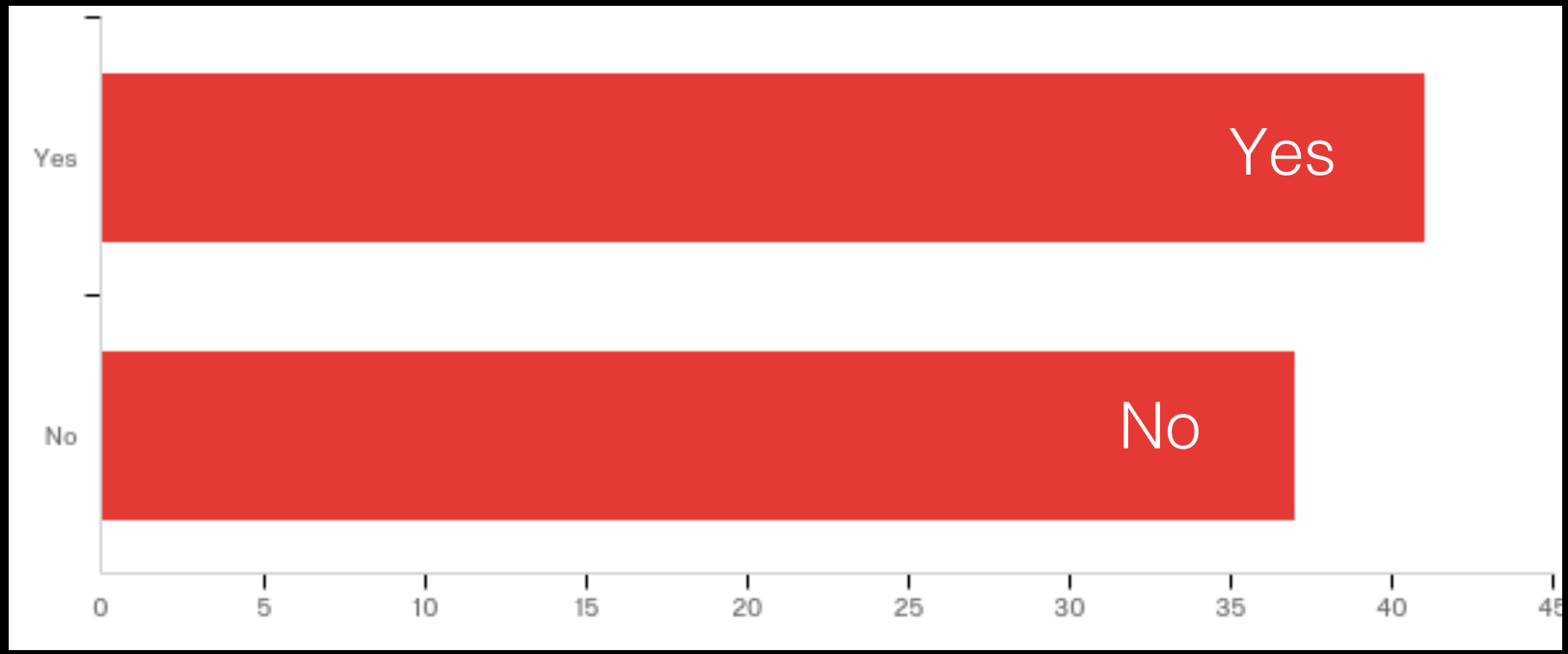
- National Research Council studies: 2000, 2003, 2012
- Gray and peer-reviewed literature

Methods

- Exploratory study
- Background interviews
- Survey instrument developed and tested
- N=145 NOAA Research and staff
- 82 responses (56%)
- 41 indicated they had worked on R2O projects
- Drop off rate significant (22% on some questions)

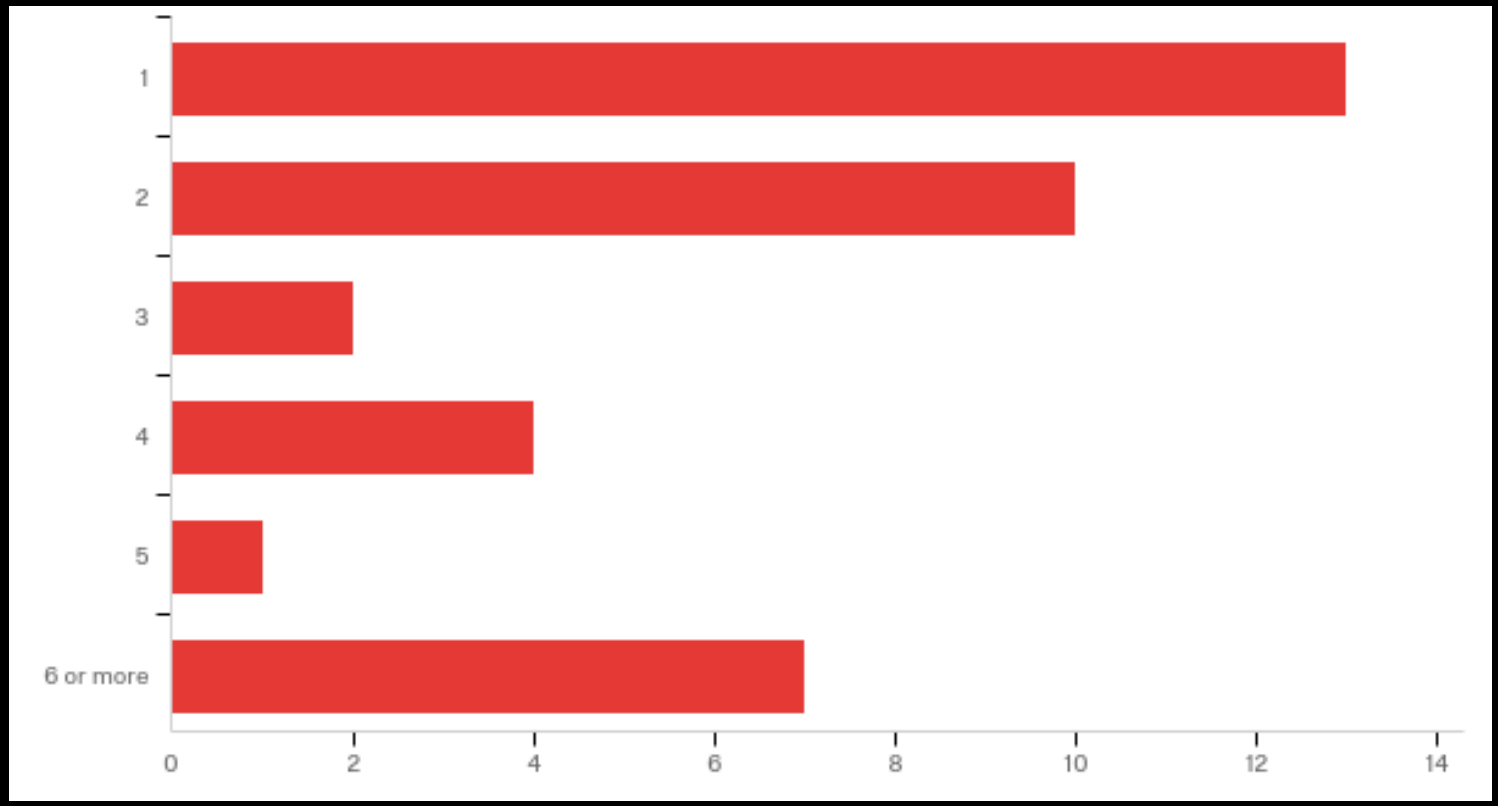
Findings

Have you ever conducted research transitions using definitions contained in NOAA AO?



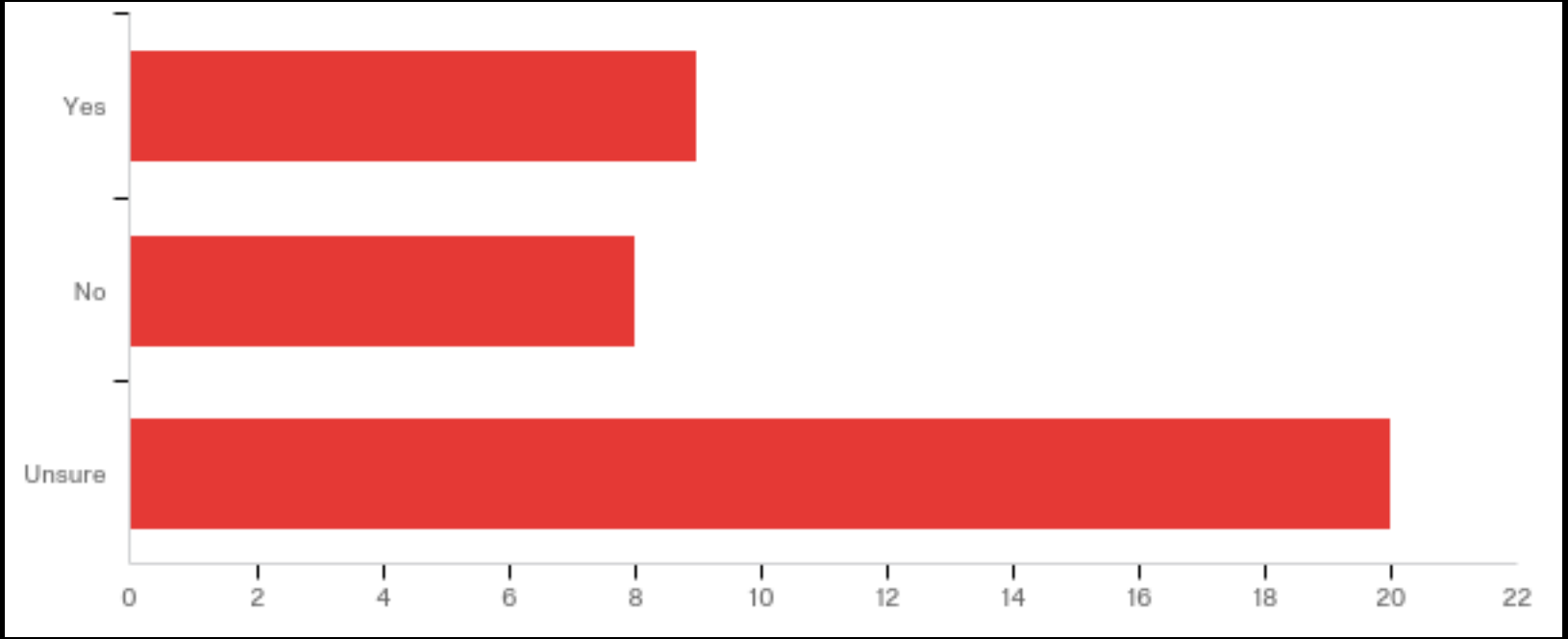
Findings

How many R2X projects have you done?



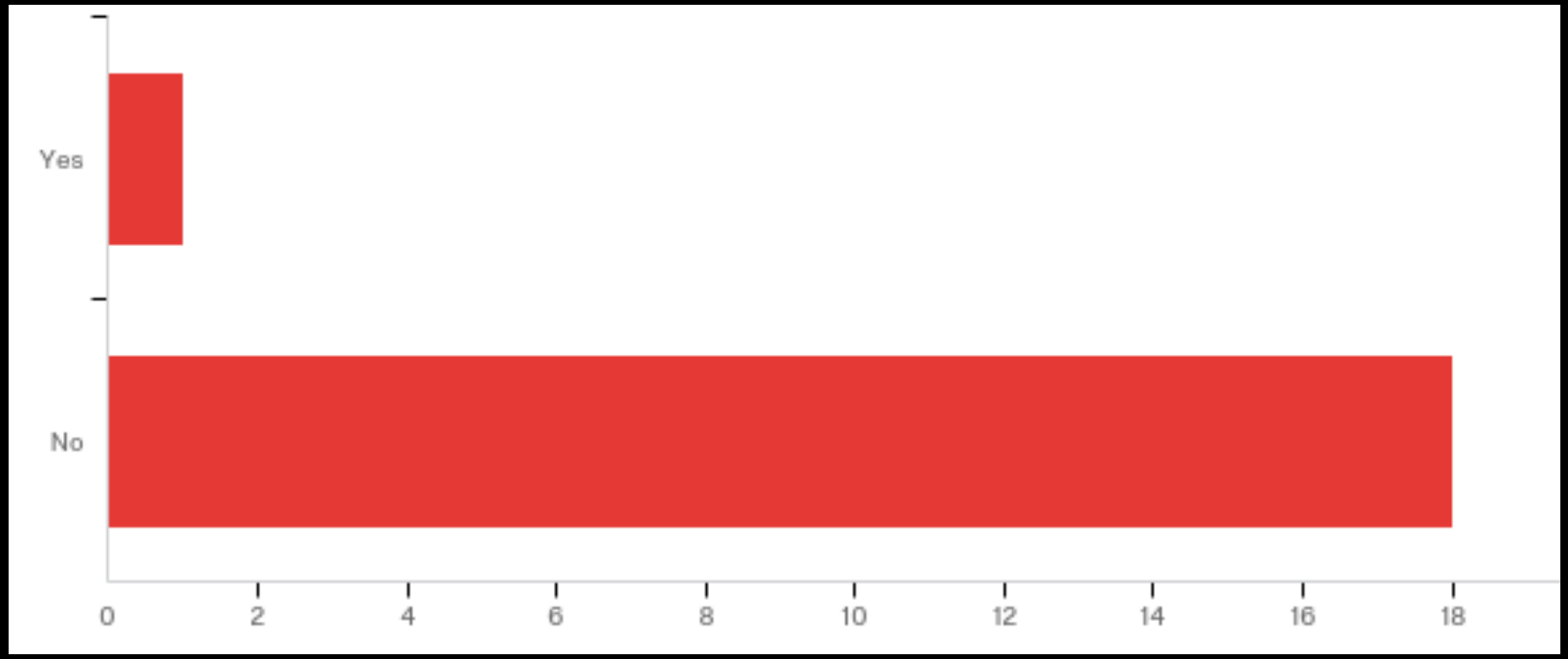
Findings

Do you plan on having any R2X projects in the future?



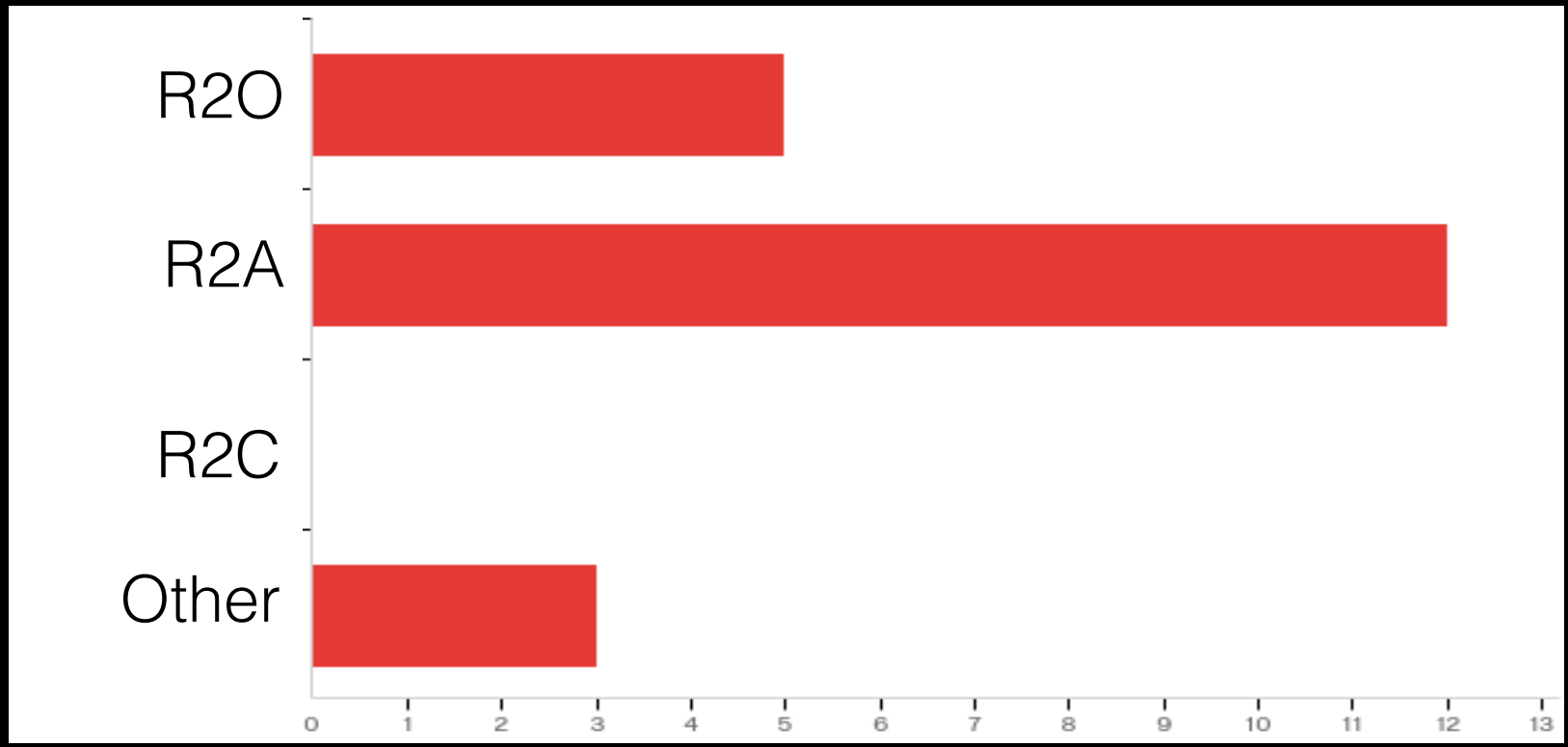
Findings

Did you use NAO 216-105A Readiness Levels to assess the maturity of your project?



Findings

Number of successful projects that were R2O, R2A, R2C, or other



Findings

Factors within your organization that led to successful transitions

- Skilled staff
- Graduate students
- Capable partners
- Prior experience with stakeholders/relationships
- Utilizing existing collaborations
- Funding
- Strong leadership
- Time
- Clear project design and planning

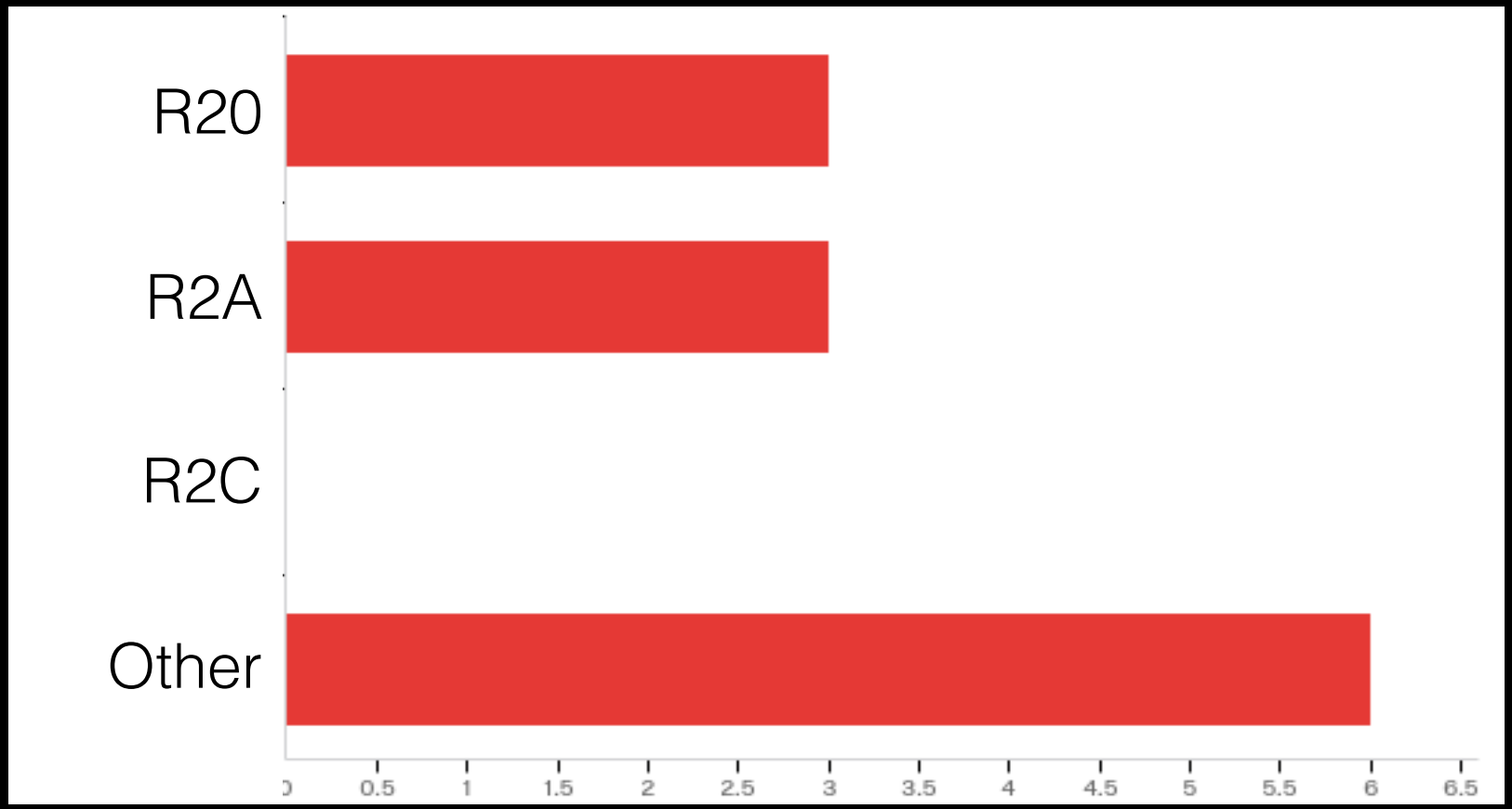
Findings

Factors in recipient organization that led to successful transitions

- Resources: funding, time, staffing and expertise
- Leadership/champion to support process
- Collaborations, stakeholder engagement
- Team continuity
- Organizational/institutional structure, culture
- Regulations requiring assessments, climate change consideration
- External environmental factors (e.g. drought)

Findings

Number of unsuccessful projects that were R2O, R2A, R2C or other



Findings

Factors within your organization that led to unsuccessful transitions

- Lack of graduate student capacity
- Budget limitations
- Inadequate staffing
- Inadequate planning
- Lack of social capital
- Non-renewal of RISA
- Lack of experience with recipient organization

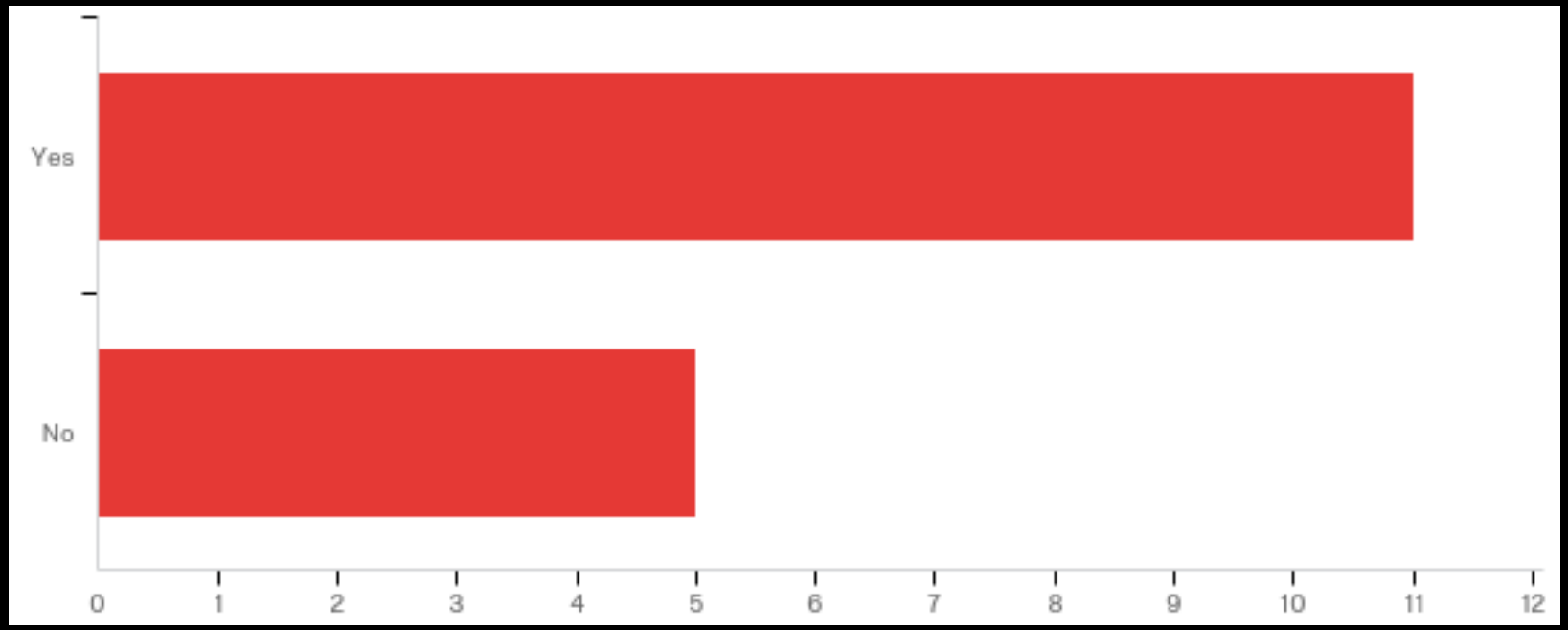
Findings

Factors in recipient organization that led to unsuccessful transitions

- 45% didn't identify any factors
- Inadequate planning
- Limited time and money
- Lack of clarity about how tool was to be used/ purpose of project
- Change in leadership/lack of supervisor support

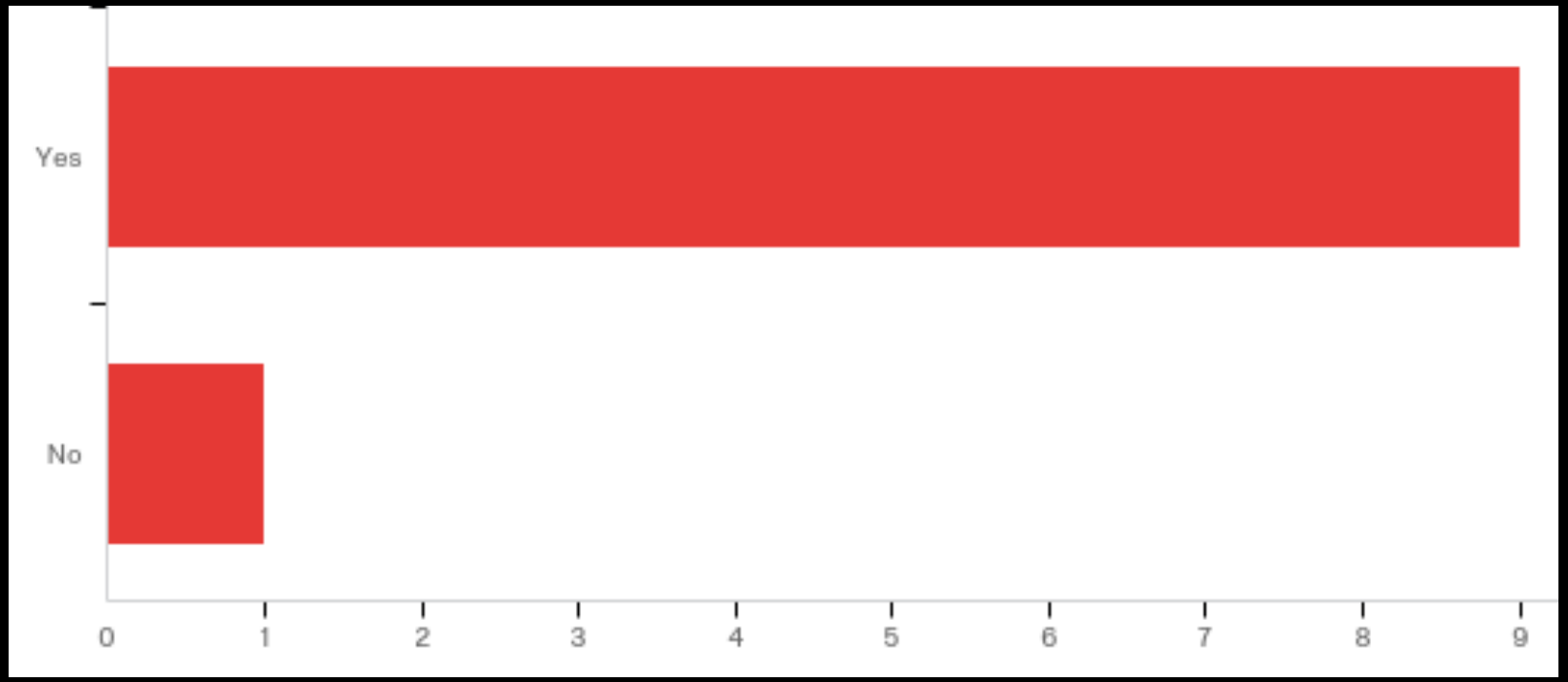
Findings

Does your RISA explicitly encourage R2X?



Findings

Does your RISA dedicate resources to R2X?



Findings

RISA resources in support of R2X

- Staff
- Funding
- Stakeholder relationships
- Workshop organization
- Travel support
- Researcher capacity
- Dataset, model development
- IT, web, graphic design

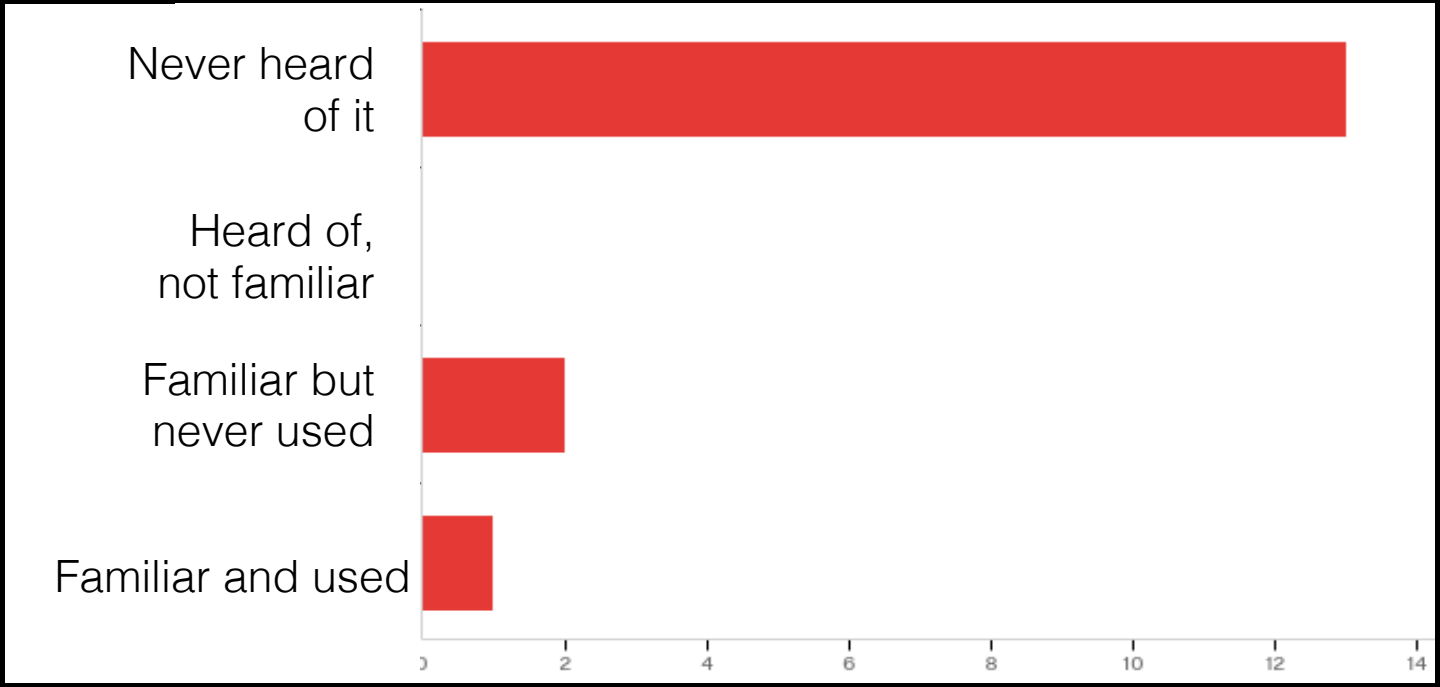
Findings

Desired resources

- $ specific for R2X
- Stakeholder support/training/engagement
- Dedicated specialty staff
- Sustained involvement post project
- IT resources and computational equipment

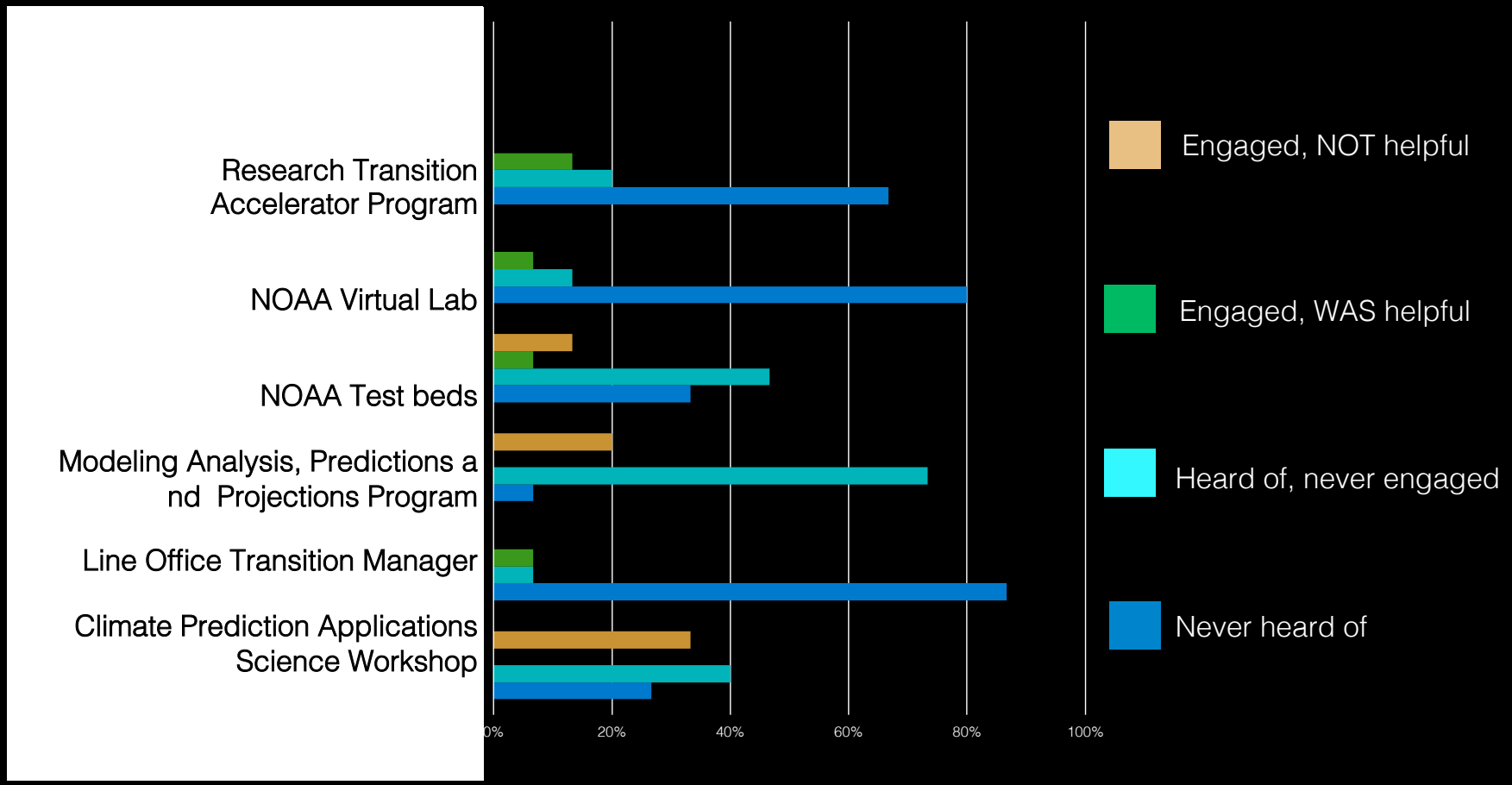
Findings

NAO 216-105A requires a transition plan for projects seeking to progress beyond Readiness Level 4. What is your familiarity with this requirement?



Findings

Familiarity with and helpfulness of NOAA Transition resources



Findings

What resources could NOAA provide to support R2X?

- Sustained funding for coproduction
- Staffing
- Dissemination of best practices
- Better understanding of ’end to end’ transition requirements
- Better integration and coordination with other agencies such as DHS, USGS, etc.

Discussion

Some caveats…

- Results are preliminary
- Drop off rate
- Results more applicable to R2A than R20

Discussion

Findings are consistent with NRC 2000 report:

- Strong research program
- Healthy infrastructure for transition… need for a long-term commitment for adequate resources
- Strong interface with user community

Except for…

- **International observation and data access partnerships
- **Continuous evaluation process

Discussion

RISAs are a fertile location for R2X

- Over 50% have done research transition project
- 24% plan to
- 69% of respondents belong to RISAs that explicitly encourages research transitions
- Of those, 90% provide resources to support transitions

Discussion

Room for improvement

- 31% of respondents belong to RISAs that do not explicitly encouragement research transitions
- 1 respondent was familiar with readiness levels
- 1 respondent had used a transition plan
- 1 respondent highly critical

Discussion

Take away

- RISAs are an active location for R2A and R2O
- Findings similar to previous NRC reports
- Greater emphasis on social capital and coproduction
- Respondents largely unfamiliar with NOAA R2X support programs
- Opportunities for NOAA to reach out more to RISA

Discussion

The END

Thanks very much to Bobbie Klein!

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