

IPD: Performance, Expectations, and Future Use

A Report On Outcomes of a University of Minnesota Survey

September 25th, 2015

Contents

Overview

Key findings

Challenges and Needs

Description of data set

Performance / Expectations / Likelihood (all responses)

Performance / Expectations / Likelihood (by stakeholder group)

Survey Still Open!

Acknowledgements

Overview

Effective project delivery meets or exceeds owner's expectations for schedule, cost and quality. There is an emerging body of research that shows more collaborative/integrated delivery is more likely to lead to successful outcomes and high-level team performance. Within that context, this survey takes a snapshot of current perceptions of effectiveness on projects using multiparty agreements, the most formal and contractually binding of the integrated delivery methods.

Conducted by the University of Minnesota and sponsored by Canada's Integrated Project Delivery Alliance, the goal of this survey was to understand the current state of Integrated Project Delivery (IPD).

This goal was pursued through use of a broad-based comparative survey. Each survey response collected data for one IPD project from one respondent's experience. If the respondent had multiple IPD project experience, they could take the survey multiple times, entering data for one project each time. Individual stakeholders on the same project could be matched by project name during the data analysis. For the purpose of this survey, IPD was defined as a multi-party agreement.

The survey was short and required no preparation. With one specific IPD project in mind, respondents began the survey by verifying the use of a multiparty agreement (those with other types of agreement were thanked and survey ended). For those who confirmed multiparty, survey gathered basic demographic data about the respondent and their project, followed by three questions:

- Comparison of this IPD experience with non-IPD project experience
- The meeting of expectations on this project
- Likelihood of future use of IPD

Key Findings

Significantly Positive

- Responses are significantly positive, strongly supportive of IPD as a superior delivery method.
- Distribution of responses is weighted heavily toward the most positive possible answers, not clustered around the neutral point.
- The overwhelmingly positive response is consistent across all demographics: stakeholder type, project type, project progress, project averages, and past respondent experience.

Owner Expectations

- Owners' expectations were met or exceeded more than architects, contractors, or others. When owners compare their expectations of IPD at the start of the project to the project outcomes, they overwhelmingly say their expectations were met, exceeded, or significantly exceeded.

Choosing IPD

- Reasons for choosing IPD are varied but seem to be most important where there is a desire for more team integration, a challenging budget, and/or where the owner requires the use of IPD.

Diverse Data Set

- The 108 response / 59 project data set represents a broad cross-section of building type, project location, project scope, project progress, and stakeholder background. BIM and Lean tools were used to varying degrees on almost all projects.

For Consideration

- Positive survey outcomes may reflect interest, engagement, and approval of early adopter owners and AEC professionals, and may additionally be influenced by project teams constructed of skilled and motivated practitioners.

Challenges and Needs

Respondents had an opportunity to comment on their experience. Some comments reflect challenges and needs:

Challenges IPD teams face

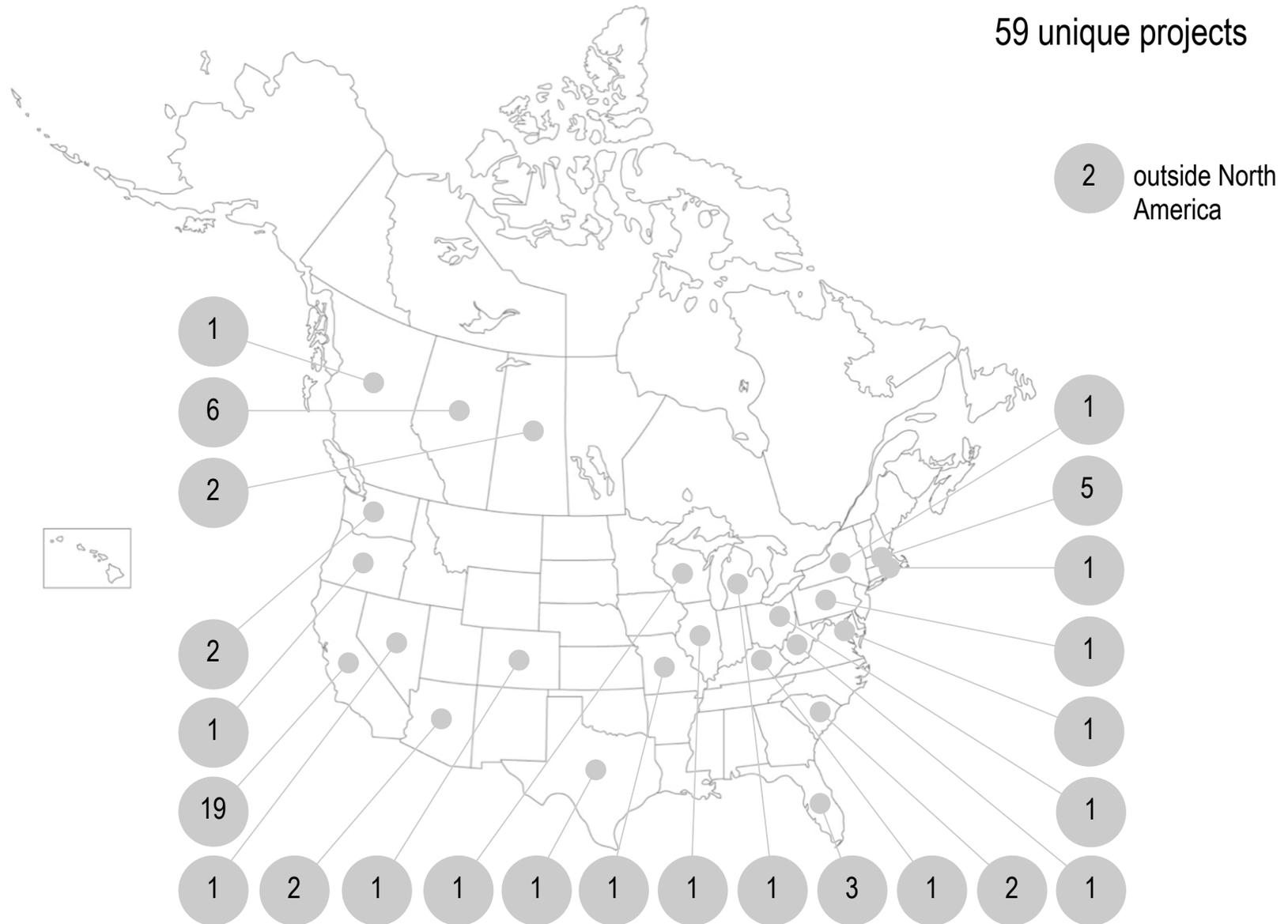
- Unwillingness to fully embrace IPD, its hard to let go of traditional roles
- Understanding of what is IPD (and what it takes to succeed) is uneven in the industry
- Negative performance by any single stakeholder can disrupt the whole team
- Changes in personnel can have a large negative impact

IPD Teams have particular need for:

- Alignment and commitment across the team
- Strong owner involvement
- Strong leadership
- Having the right people involved at the right time
- Increased and earlier planning
- Careful attention to fees/time
- Maintaining focus on key project goals
- Accountability among team members.

Projects | Distribution

59 unique projects



Projects | Breakdown

Location	Type	Scope	Progress	Year	
Arizona	1 Health Care	\$10-\$25 million	Completed	2014	
	2 Industrial	over \$50 million	Completed	2014	
	3 Government/Civic	under \$10 million	Completed	2015	
	4		Completed	2010	
	5		Completed	2014	
	6		under \$10 million	Completed	2012
	7		Completed	2014	
	8		Completed	2015	
	9		Completed	2015	
California	10		Completed	2010	
	11 Health Care	\$10-\$25 million	Completed	2008	
	12		Completed	2014	
	13		over \$50 million	Construction	
	14			Construction	
	15			Completed	2014
	16			Completed	2013
	17		over \$50 million	Completed	2014
	18			Completed	2013
	19	Industrial	\$10-\$25 million	Completed	2015
	20		\$25-\$50 million	Design	
Colorado	21 Other	under \$10 million	Construction		
	22 Education (college/university)	over \$50 million	Completed	2008	
District of Columbia	23 Cultural	over \$50 million	Design		
	24 Health Care	under \$10 million	Completed	2015	
Florida	25 Other	over \$50 million	Construction		
	26 Recreational	over \$50 million	Design		
	27 Education (college/university)	\$25-\$50 million	Completed	2014	
Illinois	28 Health Care	\$25-\$50 million	Design		
	29 Mixed Use	\$10-\$25 million	Construction		
Kentucky	30		Design		
	31		Construction		
	32 Office	\$10-\$25 million	Design		
	33		\$25-\$50 million	Design	
Michigan	34 Education (college/university)	\$10-\$25 million	Completed	2014	
Missouri	35 Health Care	\$10-\$25 million	Completed	2008	
Nevada	36 Health Care	\$25-\$50 million	Construction		
New York	37 Other	over \$50 million	Completed	2015	
Ohio	38 Health Care	over \$50 million	Completed	2015	
Oregon	39 Other	over \$50 million	Design		
Pennsylvania	40 Utilizes/Power/Water/Sewer	\$10-\$25 million	Completed	2013	
Rhode Island	41 Education (college/university)	\$10-\$25 million	Completed	2013	
South Carolina	42		under \$10 million	Completed	2012
	43 Health Care	over \$50 million	Design		
Texas	44 Office	\$25-\$50 million	Completed	2013	
Washington	45 Health Care	\$10-\$25 million	Completed	2014	
	46		over \$50 million	Completed	2010
West Virginia	47 Utilizes/Power/Water/Sewer	\$10-\$25 million	Completed	2012	
Wisconsin	48 Education (college/university)	over \$50 million	Completed	2011	
Alberta	49 Education (K-12)	over \$50 million	Completed	2017	
	50		Construction		
	51 Government/Civic	under \$10 million	Completed	2015	
	52 Mixed Use	\$25-\$50 million	Design		
	53 Multi-family Residential	under \$10 million	Design		
British Columbia	54 Office	under \$10 million	Completed		
	55 Office	under \$10 million	Completed	2010	
Saskatchewan	56		over \$50 million	Completed	2015
	57 Health Care	over \$50 million	Design		
New South Wales	58 Single-family Residential	under \$10 million	Completed	2015	
Jordan	59 Health Care	over \$50 million	Construction		

59 unique projects

- 48 in U.S.
- 9 in Canada
- 2 outside of North America

Project Types

- Education (K-12) 1
- Education (college/university) 5
- Health Care 28
- Cultural 1
- Recreational 1
- Office 5
- Industrial 3
- Mixed Use 3
- Government/Civic 3
- Single Family Residential 1
- Multi-Family Residential 1
- Utilities Power/Water/Sewer 2
- Other 5

Project Scopes

- Under \$10M 15
- \$10M to \$25M 16
- \$25M to \$50M 7
- Over \$50M 21

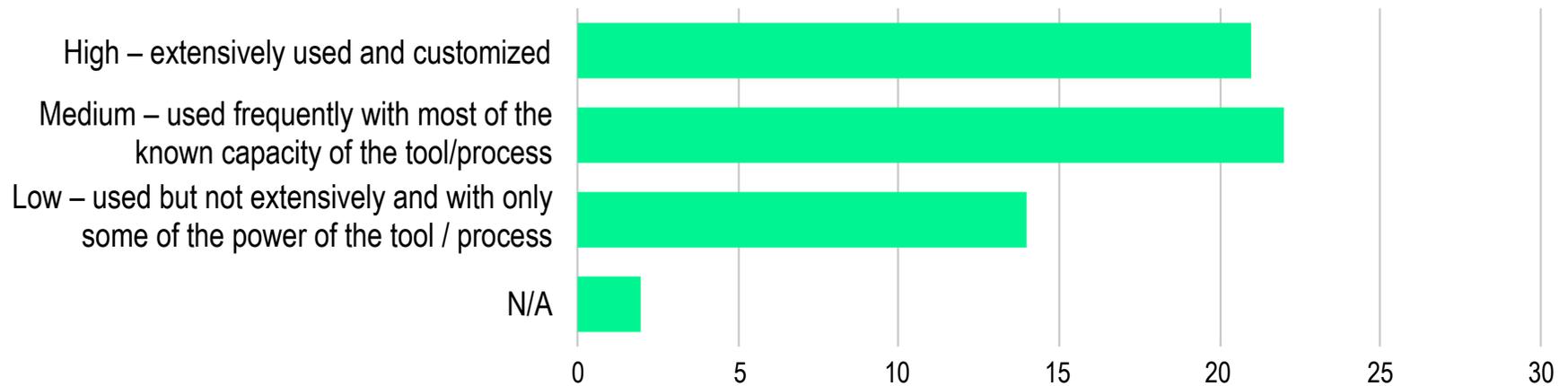
Project Status

- Design 12
- Construction 9
- Complete 38

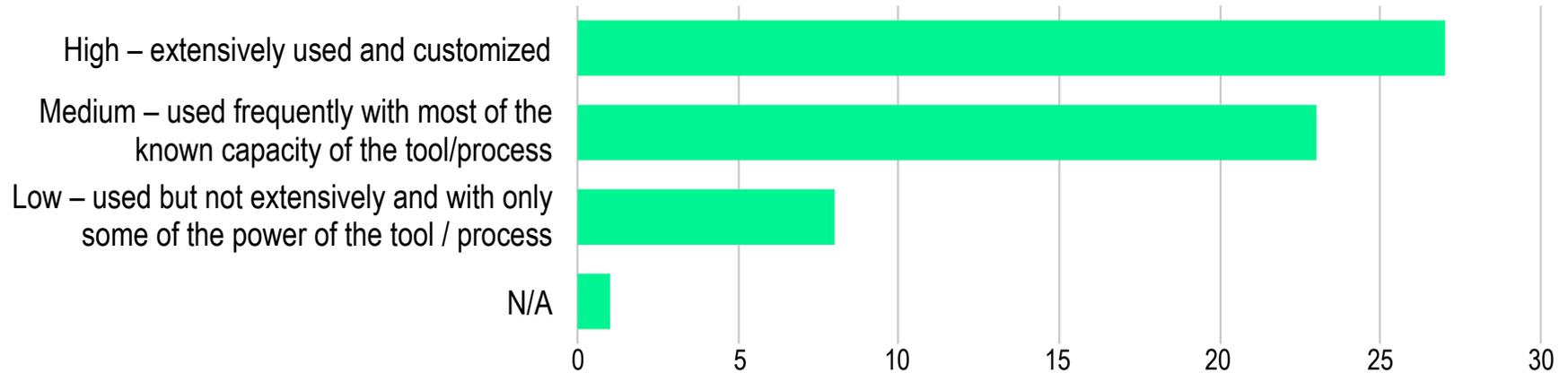


Projects | Use of BIM and Lean

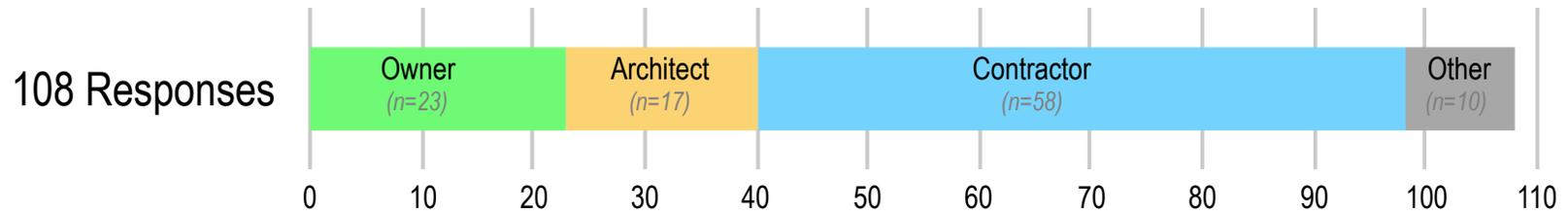
BIM tools and processes utilized on this project (n=59)



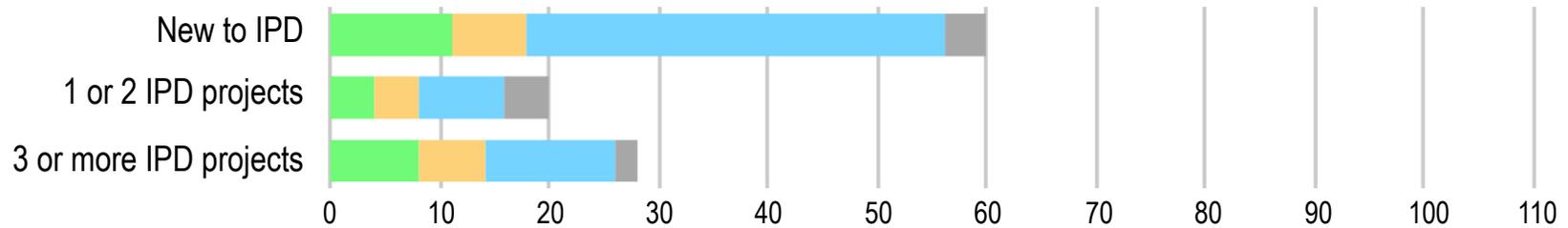
Lean tools and processes utilized on this project (n=59)



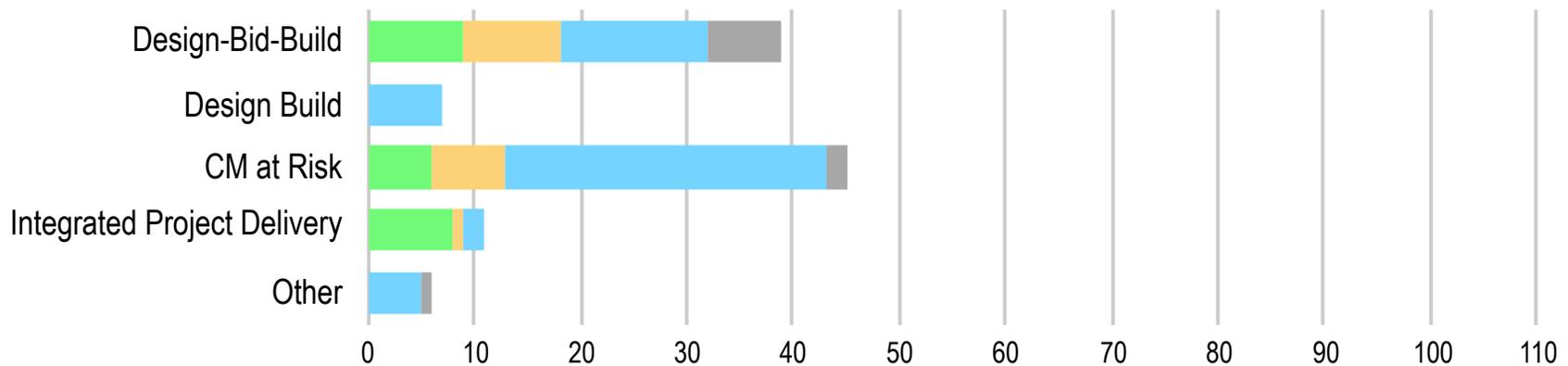
Respondents | Past Experience



Stakeholder experience in IPD for this project:



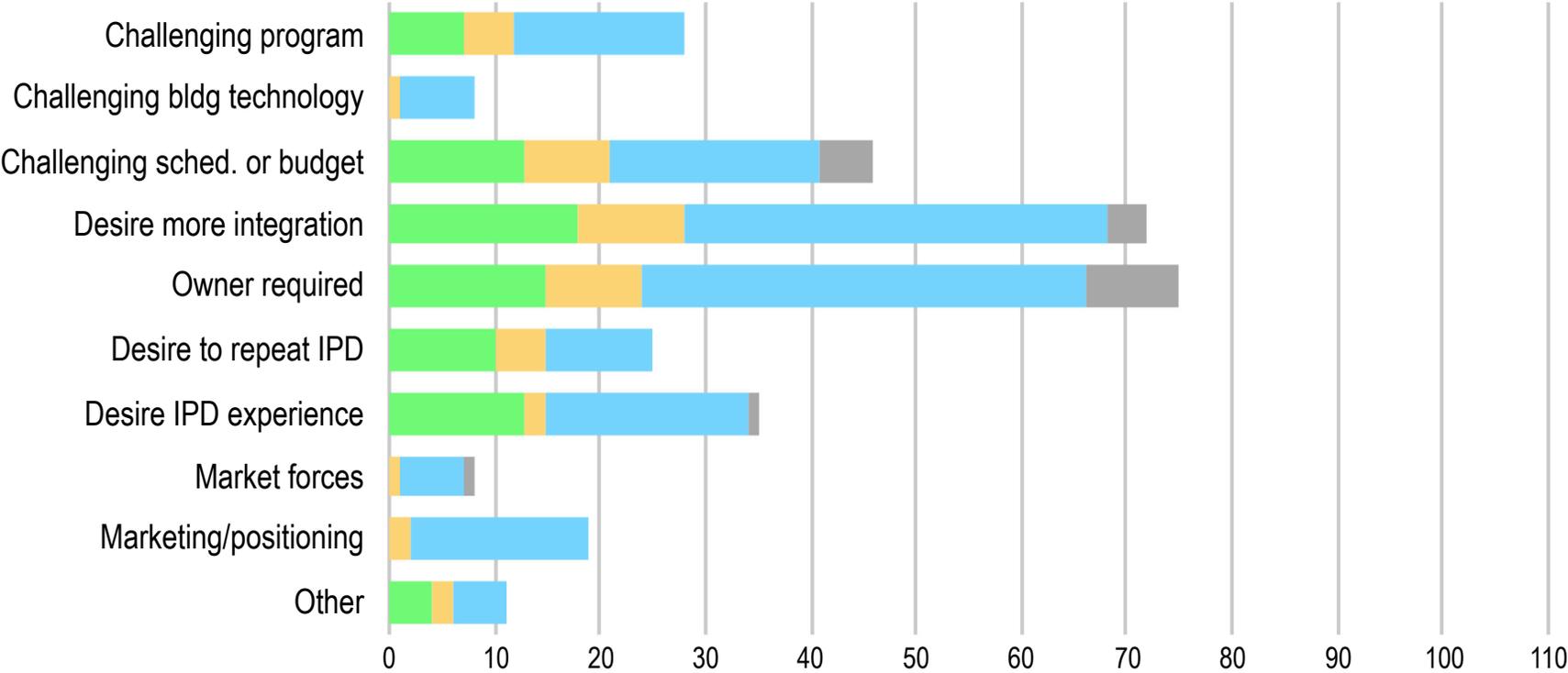
Outside of this project, the majority of my project delivery experience is in:



Respondents | Why IPD?

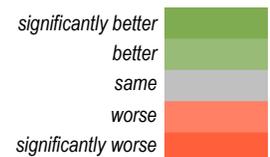
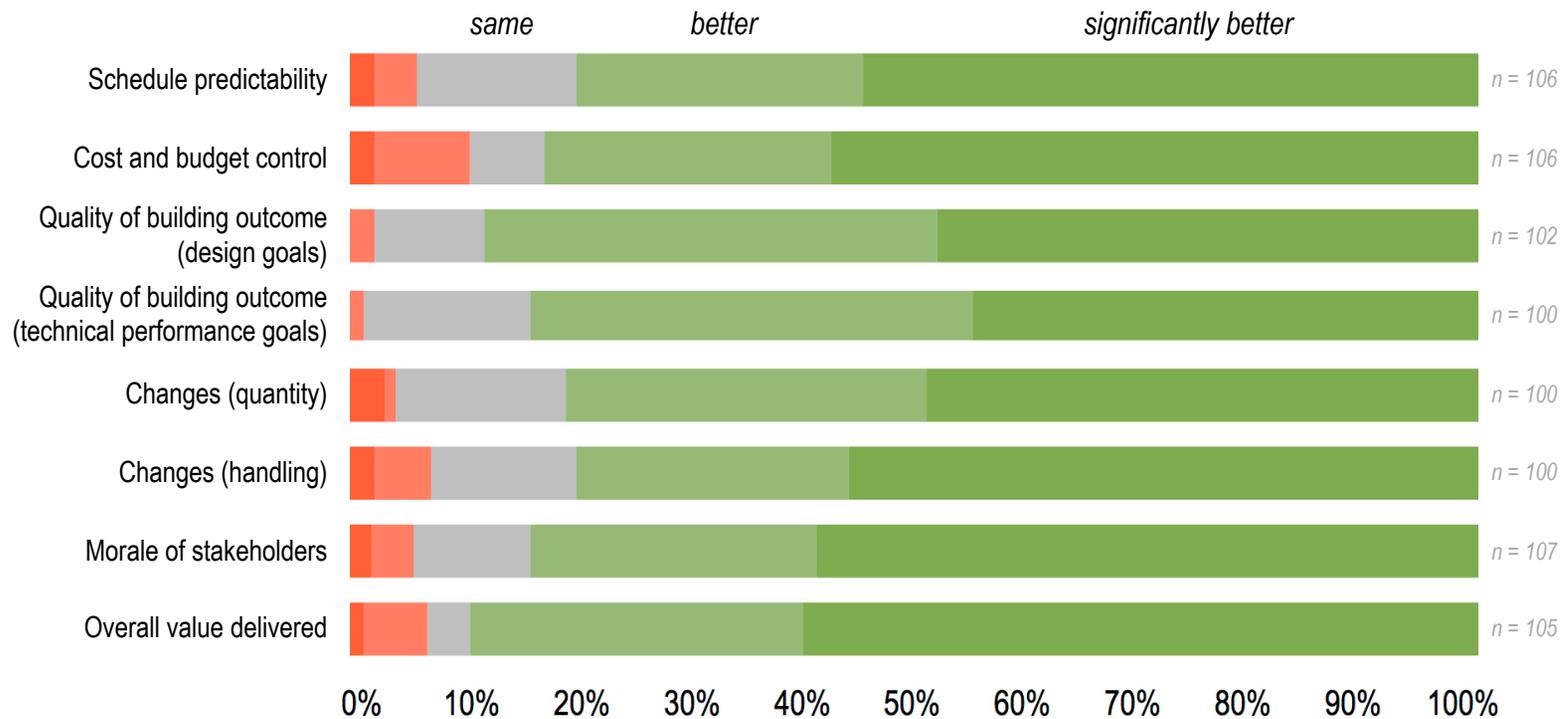


The reason(s) we chose IPD were:



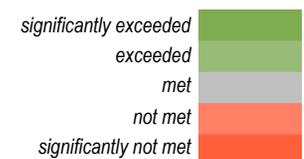
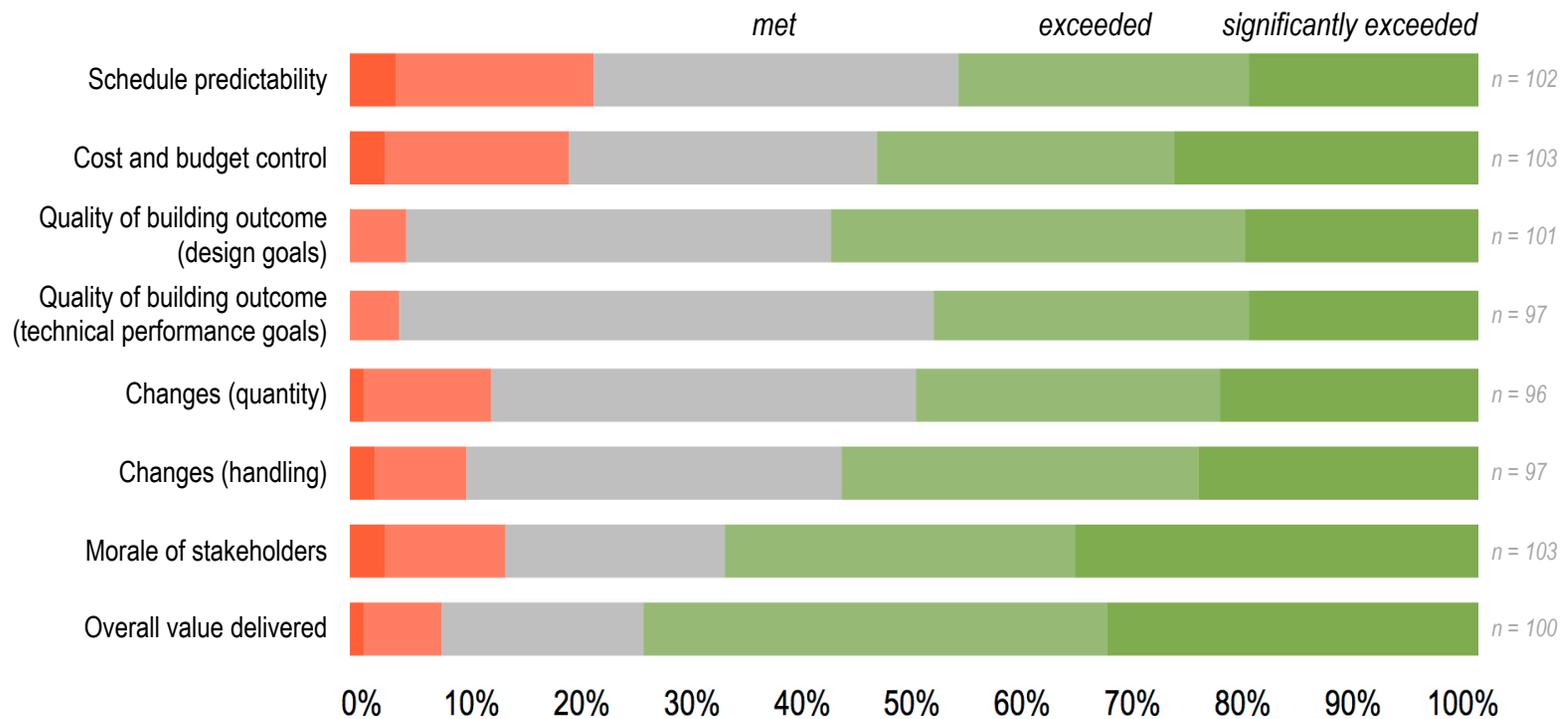
Performance | All Responses

Compared to your experience on non-IPD projects, rate your impression of the performance of this project in each of the categories below.



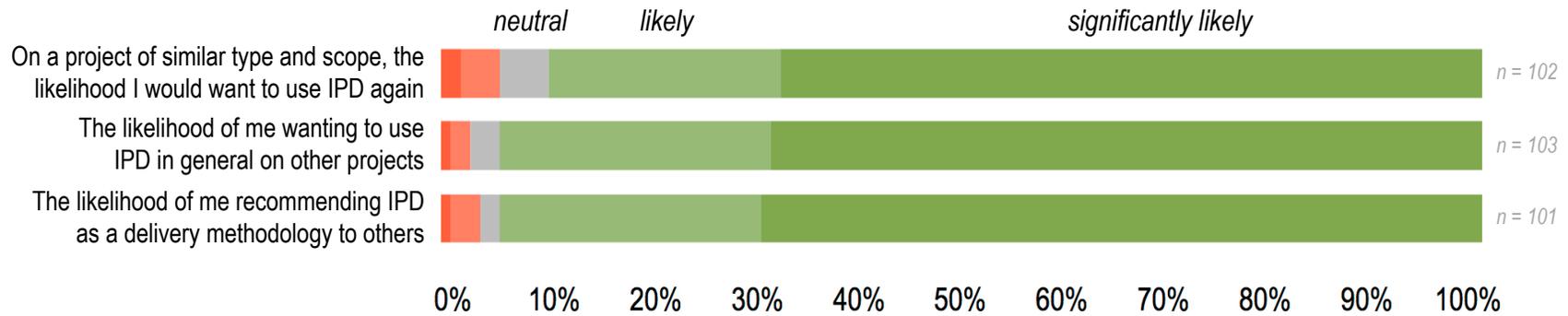
Expectations | All Responses

Considering your expectations at the start of this project, rate the outcomes of this project in each of the categories below.



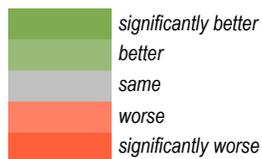
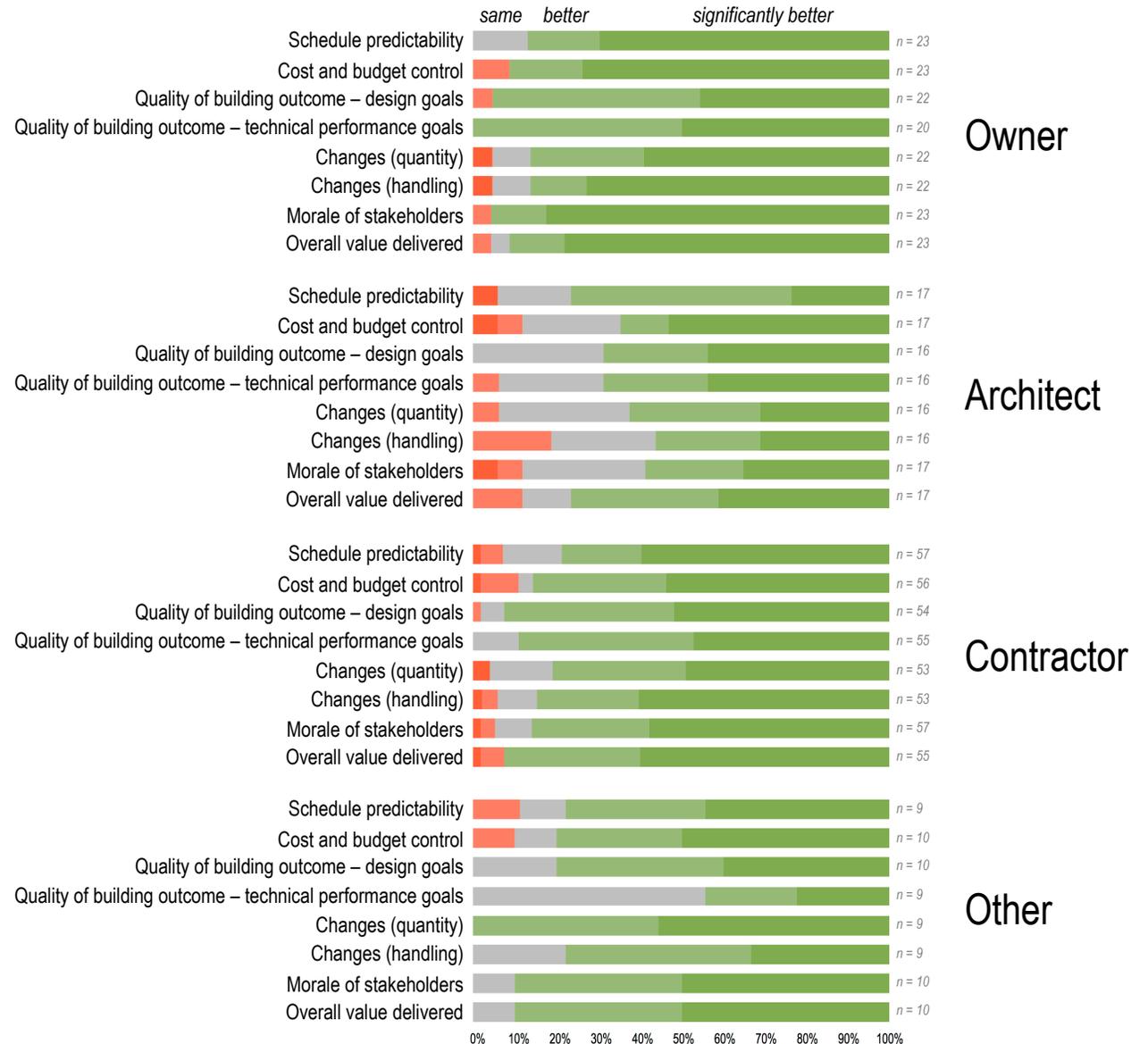
Likelihood | All Responses

Identify the likelihood for each of the following statements:



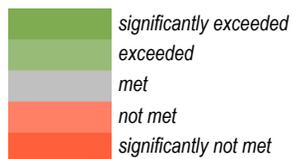
Performance | Stakeholder

Compared to your experience on non-IPD projects, rate your impression of the performance of this project in each of the categories below.



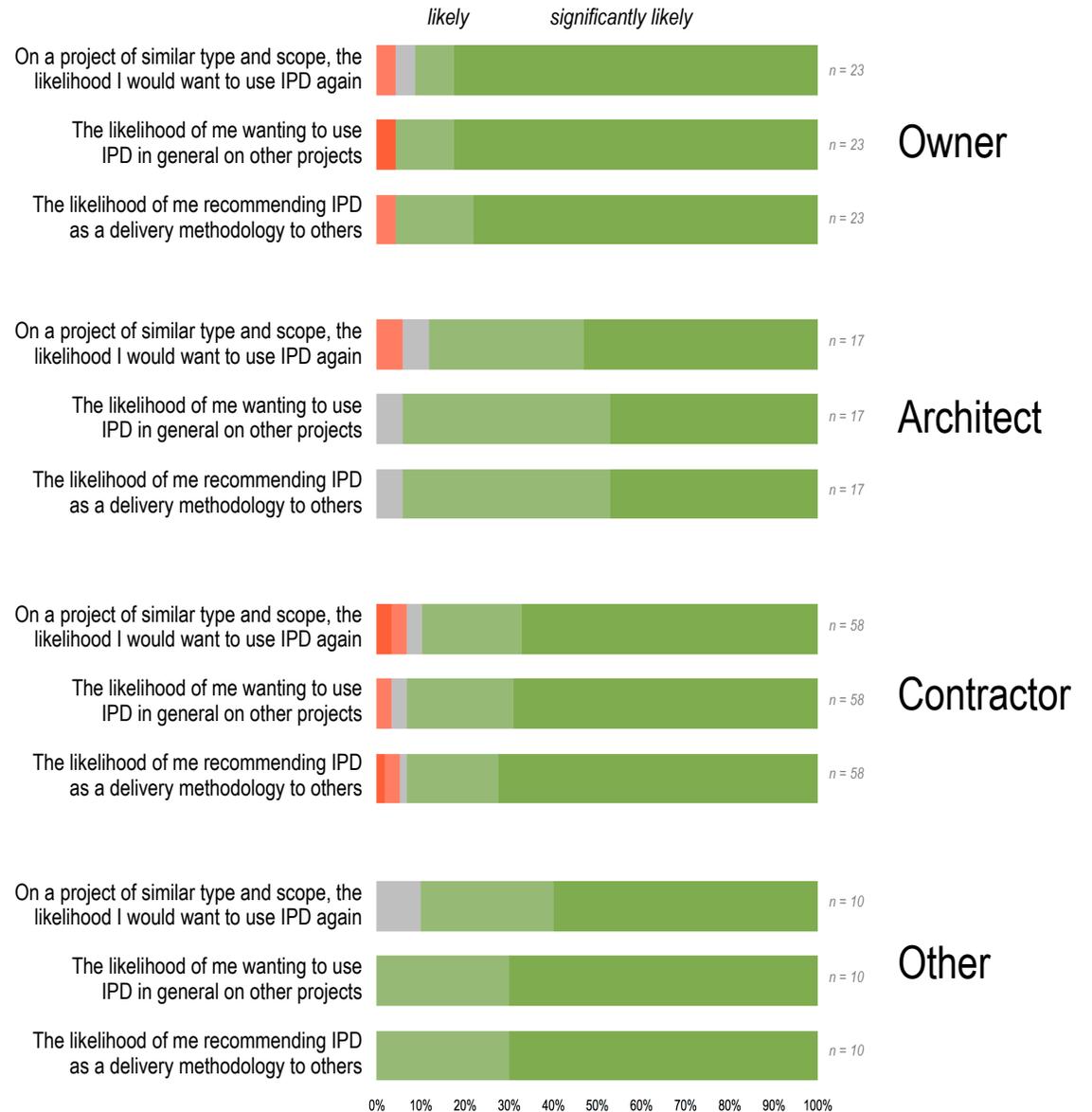
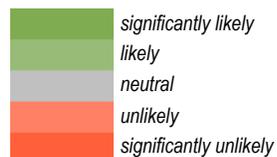
Expectations | Stakeholder

Considering your expectations at the start of this project, rate the outcomes of this project in each of the categories below.



Likelihood | Stakeholder

Identify the likelihood for each of the following statements:



Survey Open Through September 2016!

The data in this report was collected between July 9th and September 15th 2015. We recognize that many stakeholders on past or current projects did not have the chance to participate and as such their experiences are not represented in this data set.

To increase the robustness of the report, the survey will remain open until September 15th 2016, followed by a revised report.

If you have worked on or are currently working on an IPD project, please take the survey here:

http://survey.az1.qualtrics.com/jfe/form/SV_5uPcumvO8xJu9CZ

Acknowledgements



This work was funded by the Integrated Project Delivery Alliance.

The Integrated Project Delivery Alliance (IPDA) is a group of organizations that seek to advance integrated project delivery (IPD) as a delivery method in Canada. The mission of the IPDA is to promote best practices that enhance IPD.

www.ipda.ca

Special thanks to the following individuals and organizations for promoting participation in the survey:

Associated General Contractors (AGC)

Construction Owner's Association of America (COAA)

Dan Fauchier | ReAlignment Group

David Umstot | Umstot Project and Facilities Solutions, LLC

Howard Ashcraft | Hanson Bridgett

Randy Deutsch AIA

Rex Miller

P2SL

Project Team

Renee Cheng AIA | University of Minnesota | rcheng@umn.edu

Markku Allison AIA | Scan Consulting | markkuallison@scanconsulting.us

Carrie Sturts Dossick PE PhD + Chris Monson RA PhD Candidate



UNIVERSITY OF MINNESOTA

Driven to DiscoverSM