



Bridging the gap for Research Analytics:

Fostering Collaboration between Research Administration, Institutional Research, Enterprise IT, and Research Computing in Higher Education

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Objectives

1. Describe key foundations to consider for building a data/research analytics program
2. Provide a mental model/framework for cross-functional collaboration
3. Define strategies for moving cross-functional work forward



What is Research Analytics?

The science of analyzing data to inform decision-making in research administration.

Includes:

- Business Intelligence
- Administrative/Operational Data
- Assessment/Evaluation

- We engage in research analytics for strategic planning, decision-making, and enhance operations

Robershaw, Katherine and Wolf, Baron, Research Analytics: A Systematic Literature Review (February 18, 2023). Available at SSRN: <https://ssrn.com/abstract=4363262> or <http://dx.doi.org/10.2139/ssrn.4363262>

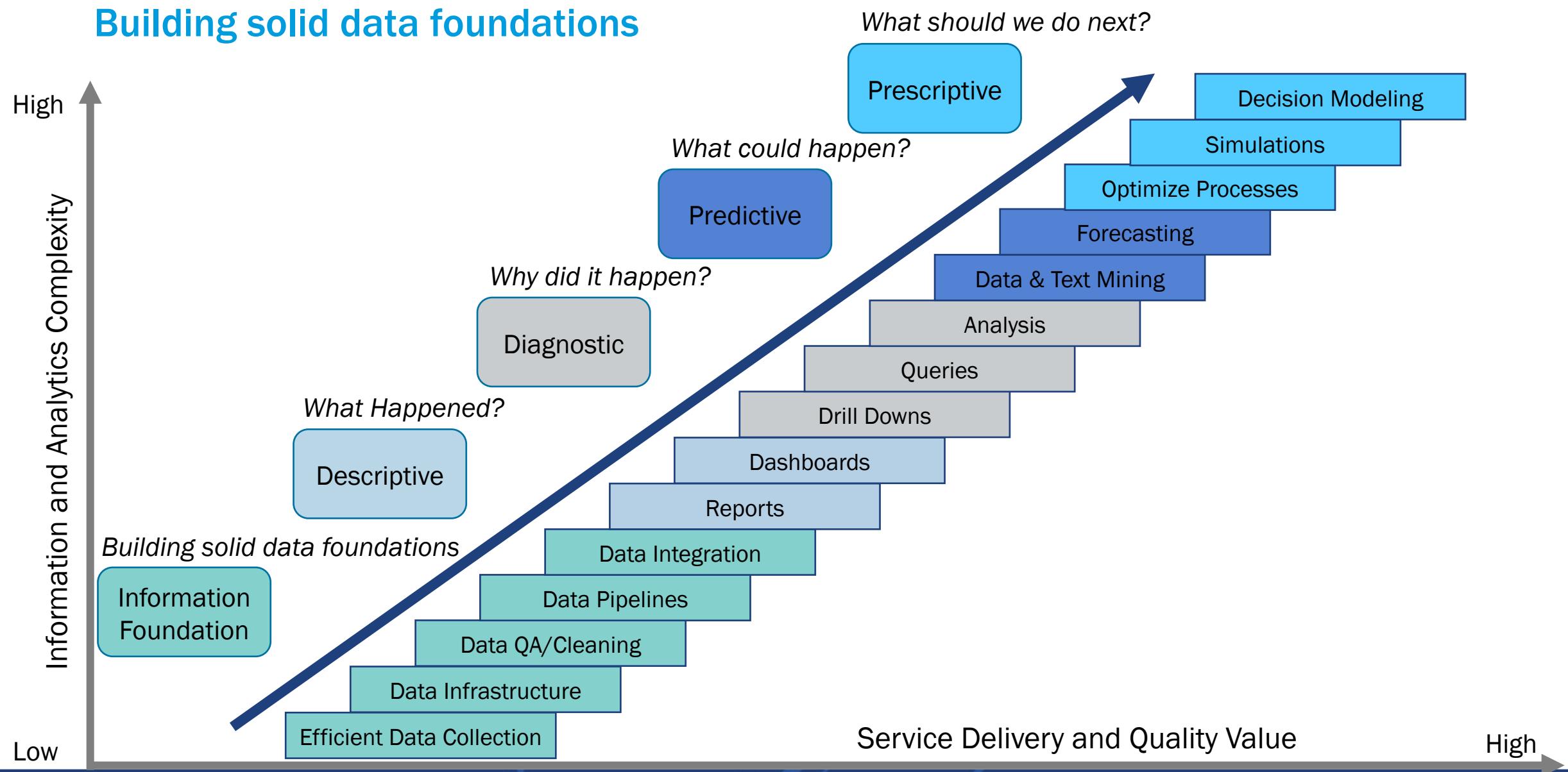


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Garbage in garbage out (GIGO)



Building solid data foundations



Data as an asset

Data needs to be seen as more than a by-product of business processes.

To truly understand the value of data as an asset, it's important to identify the key data assets within an organization.



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What is data silos?



Breaking down the silos – the path to value

Siloed resources can lead to redundancy, inefficiency, and increased costs.

Promoting **cross-functional collaboration** is essential in maximizing the value of data and resources



Data Democratization

Data Democratization is a data management approach that prioritizes access to data across an entire organization rather than keeping it restricted to a select few departments or teams.

This approach seeks to break down data silos, promote transparency, and empower employees with data-driven insights to make better decisions.



The Balancing Act: Data Democratization vs Trust

*“The benefit of democratization is that **everyone has access**. The risk of data democratization? **Everyone has access**.”*

Data democratization is a good strategy only if supported by good governance and sharing policies.



Can we trust the data?

- Ensuring quality of democratized data to avoid “garbage in, garbage out” situation by curating the data
- The need for training employees on data literacy and data management best practices



Data Governance

A shared vision, democratized data, support for people, and standardized processes are all part of a data governance plan.



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Building a Research Analytics Program – Taking Action

- Discussed Key Concepts & Values
 - Solid Data Foundations
 - Data Governance
 - Data as an asset
 - Data Democratization
 - Cross-functional collaboration
 - Creating value
 - Trust
 - Transparency
 - Quality



Building a Research Analytics Program: Where do I get started? Grassroots Efforts and Community & Coalition Building

- Coming together to advocate for something
- Broad organizational perspective – connecting dots
- Identifying common pain points, gaps, or needs across groups
- Identify who else is doing similar work
- Cross-functional
- Identify key partners
- Power in numbers



Typical Groups to partner with for Research Analytics

- Vice President for Research
 - Key business questions, leadership authority in research
- Research Administration
 - Business Context, Owners of key data assets, key biz questions
- Research Information Systems
 - Where the data lives, data stewards
- Institutional Research/Assessment
 - Knowledge of university data sources, how to request access
 - Data governance



Typical Groups to Partner with cont.

- Enterprise IT
 - Technology tools, networking, hardware, software,
 - Data classification & security, data storage
 - Cloud, applications, integrations
- Local IT
 - Help you set up your environment
- Research Computing / Research IT
 - Large-scale data strategies, optimizing code & workloads
- University Libraries
 - Services for students, faculty, & staff
 - Workshops on data management, data viz, open science
- Finance & Business
 - Financial Data, post-award processes



Others to collaborate with – Research Ecosystem

- ADRs, RD's, Department heads
- Researchers – open to collaborate



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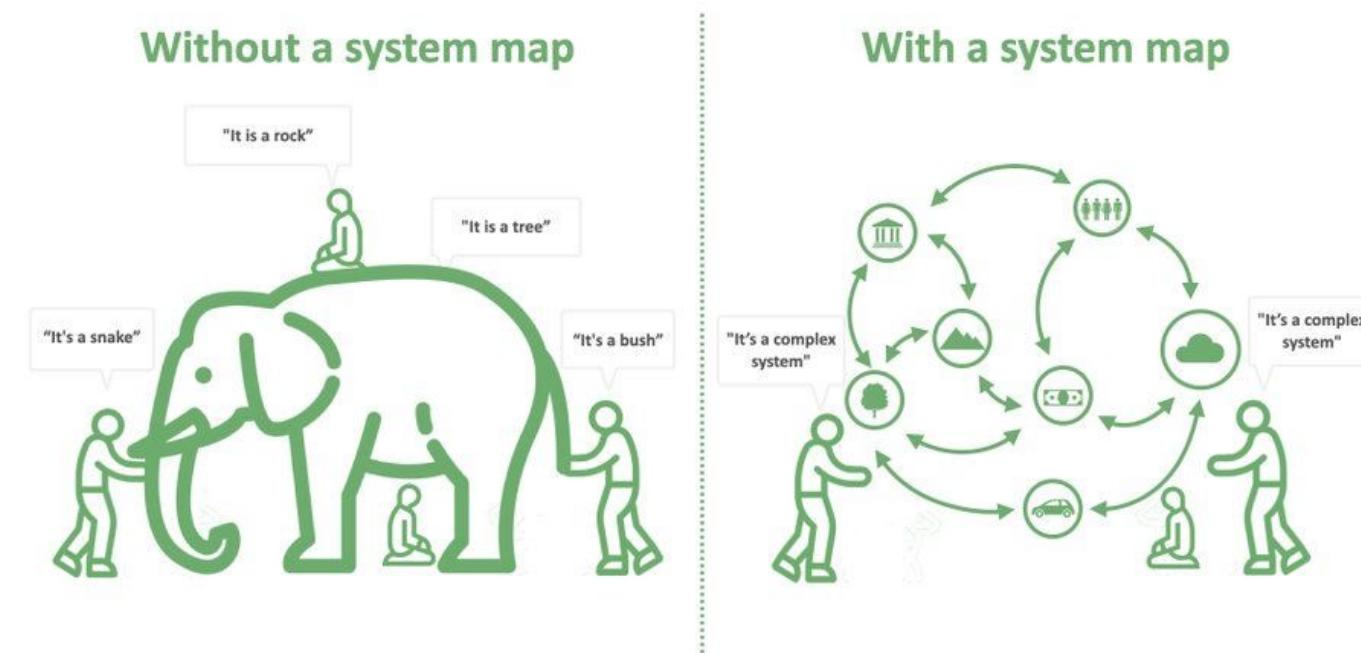
Mental Model

A mental model is a cognitive representation or framework that individuals use to understand, interpret, and navigate the world around them.



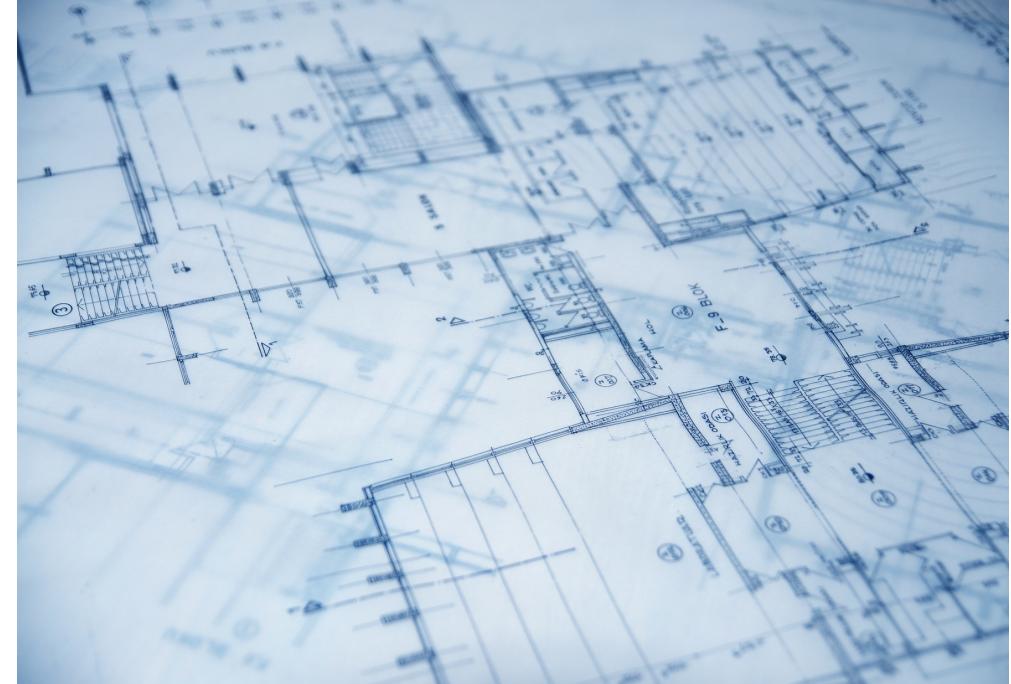
How to bridge the gap – Building a common mental model and framework for collaboration

- We all “grow up” in different professional homes
- Different mental models for what work looks like & how it gets done
- To bridge the gap, we need to start speaking the same language – work from a shared framework
- Empathy – listening



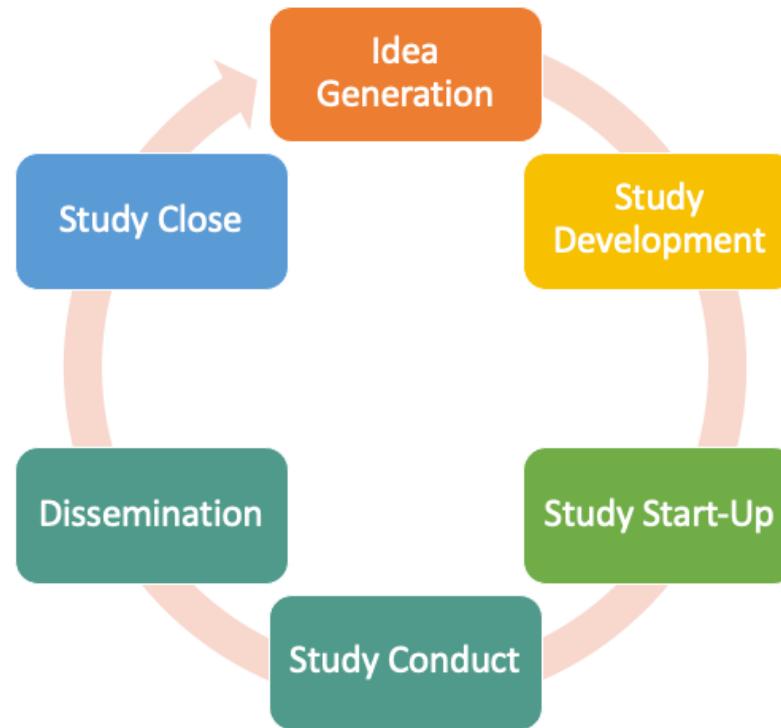
Building a shared framework – typical ingredients

- Overarching goals & objectives
- Shared Values and Principles
- Defined Roles and Responsibilities
- Communication Channels
- Decision-making processes
- Trust and Relationships
- Performance Metrics / Evaluation Criteria

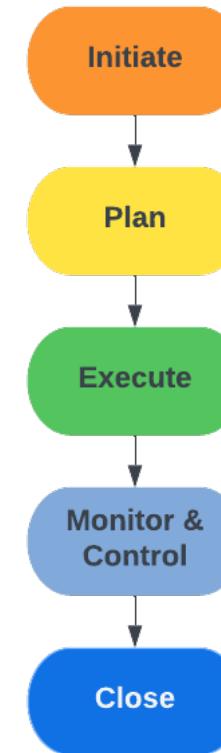


What framework to use for collaboration?

Research Project Lifecycle



PMI Project Phases



PMI Phases mapped to research study, grants, and data workflows

Audience	Project Manager	PI/StudyTeam	Grants & Contracts Administrators	IT/data
	PM Phase	Study Phase	Grants Phase	Data Phase
	Initiate	Idea Generation	Identify Funding	Identify data sources
	Plan	Study Development	Proposal development	Plan data management
	Execute	Study start-up	Study Account Setup	Data Acquisition/Collection
	Monitor & Control	Study conduct & Dissemination	Manage the award	Data processing & analysis
	Close	Study Close	Close the award	Dissemination, archive, preservation, destruction

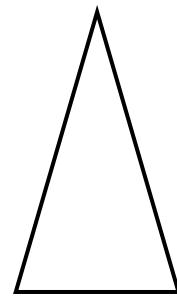
Why is this important?



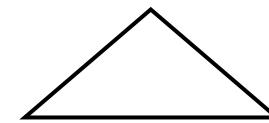
Because universities are complex networked organizations

1. We rely on others to move work forward (central offices, departments, units, subject matter experts, contractors)
2. Teams are interdisciplinary/cross-functional.
3. There are many layers of relationships and communications
4. A single unit cannot do all on their own
5. We work with partners to move work forward and achieve goals

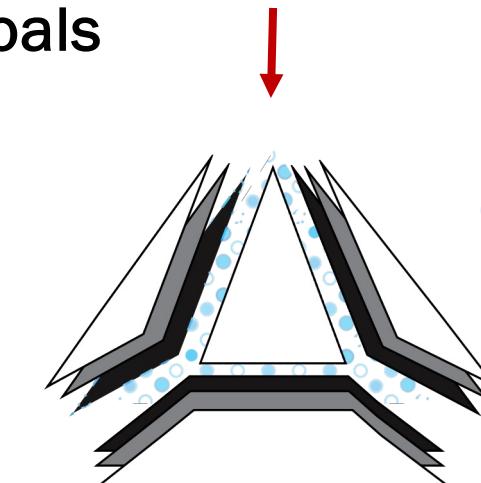
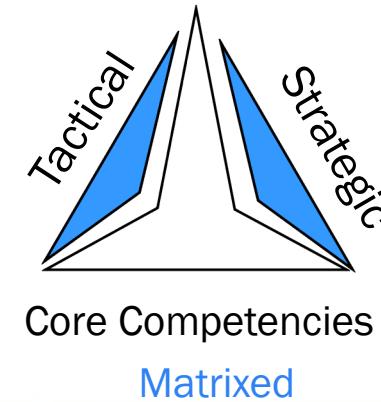
We are here



Hierarchical (top-down)



Flat org Structure



Complex Networked



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Foundations for Success – Important Elements

- Buy-in - Others agree there is a need
- Your manager is supportive
- You have time & energy to invest
- You have committed executive sponsorship
 - Financial & Non-Financial
- Ownership is defined
- You have identified a business need/gap, and your solution addresses this
- Your initiative is aligned with strategic goals and priorities
- You have the “right people” involved



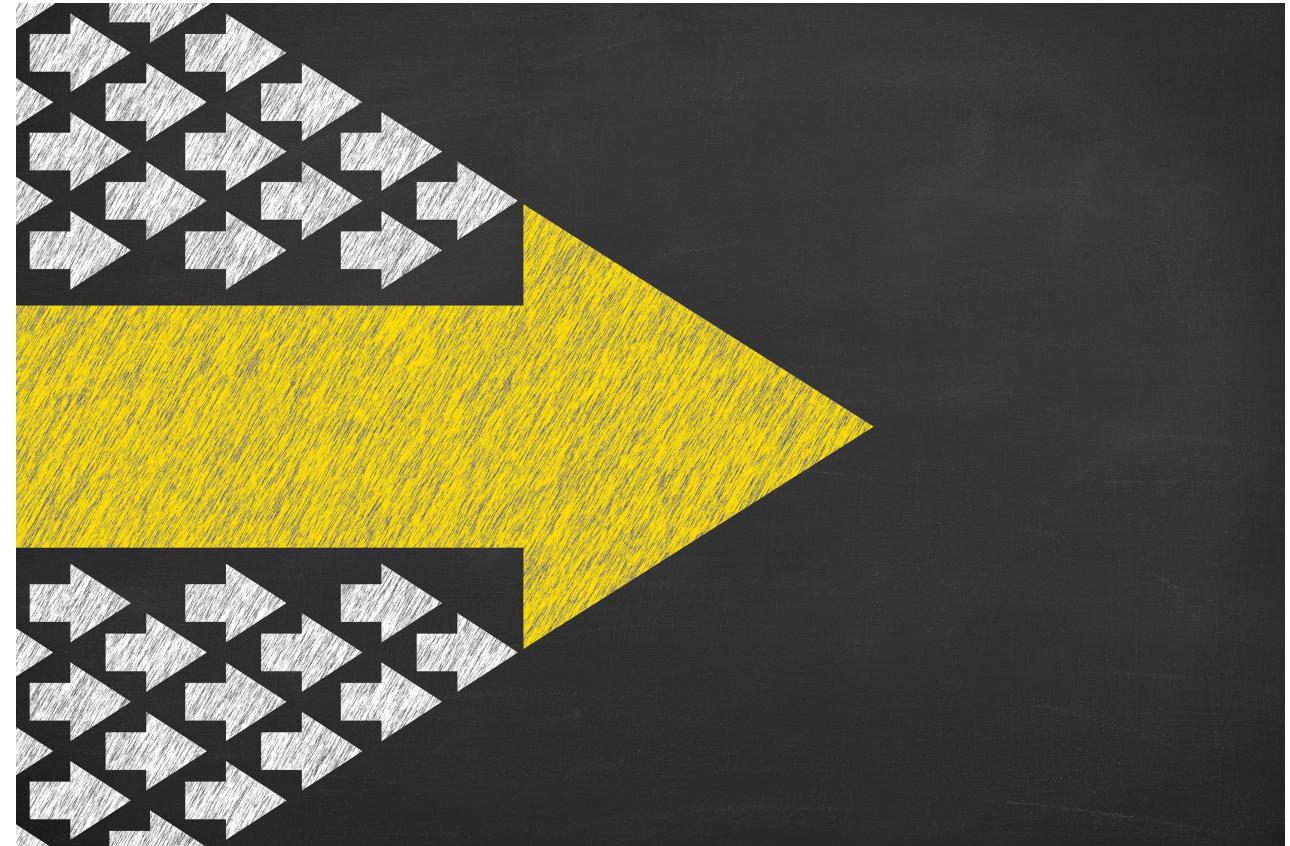
Building a Research Analytics - Team Members

- Typical roles on a data team
 - Data Architect, Data Engineer, Data Analyst, Data Scientist, Business Analyst, Project Manager, Team Lead
- Will vary based on size
 - Roles wearing multiple hats for smaller teams
 - The larger the team, the more focused a role becomes in a specific area



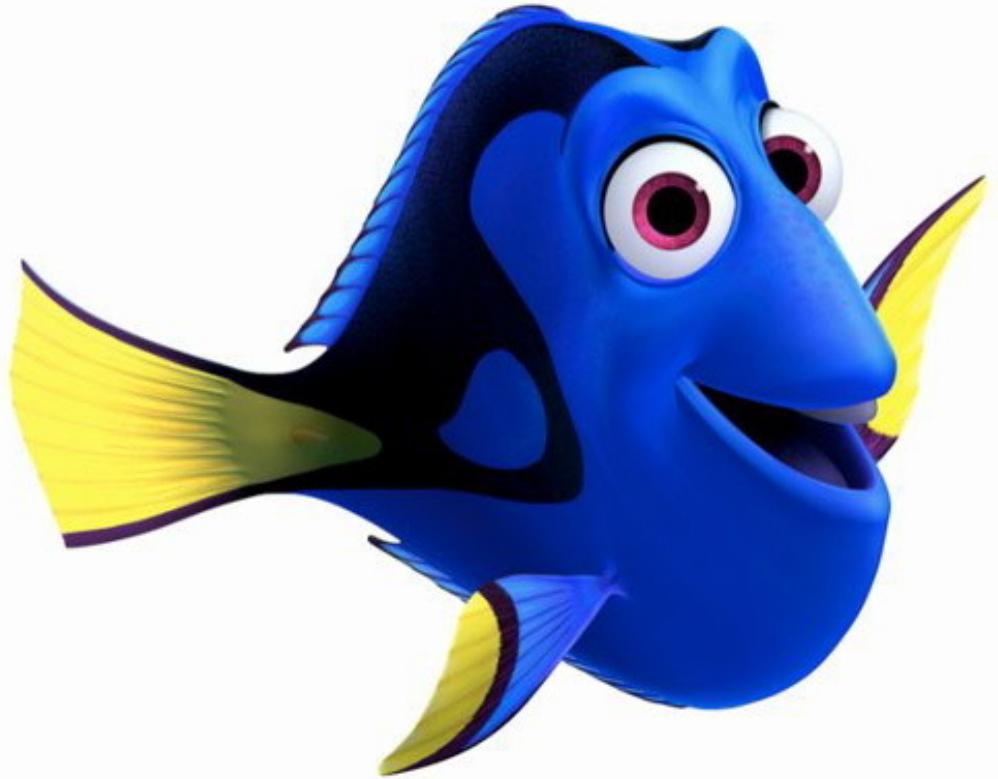
Strategies to move your initiative Forward and work cross-functionally

- Shared Frameworks
- Shuttle diplomacy
 - Speak to each group before getting them in the same room
- Build Community & Coalitions
- Start small - Proof of concepts / Pilots



Things to keep in mind

- This is a marathon, not a sprint
- You can't do it alone – leverage your partners
- Set your own milestones – progress is not linear and can be painfully slow
- Changing culture is a long-game



“Just keep swimming”



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Thank you!

Questions?

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Other Data Communities

- [Campus Research Computing Consortium \(CaRCC\)](#)
- [Research Data Access and Preservation Association \(RDAP\)](#)
- [Research Data Alliance](#)
- [US Research Software Engineer Association](#)



Higher Ed Power BI User Group

higheredpower-qwg4922.slack.com



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