coalesce

So you want to build a data mesh

Jenna Jordan

October 13–16, 2025

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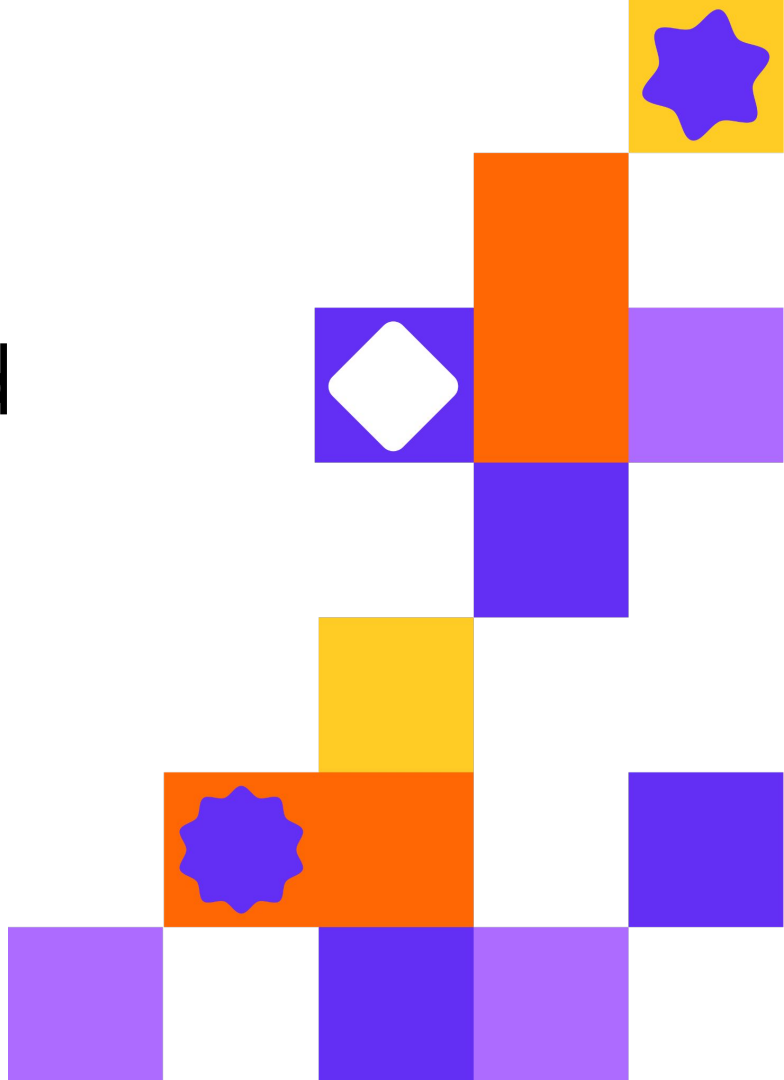


Agenda

1. **Introductions**
   Let's get to know each other
2. **What is data mesh?**
   And why does it matter for implementing dbt Mesh?
3. **Domain Ownership**
   How to go from 1 dbt project to many - the easy way
4. **Data as a Product**
   dbt features you need to build dbt models according to the 8 characteristics of data products
5. **Self Serve Data Platform**
   3 tips for making data product model development easy for your domain teams
6. **Federated Computational Governance**
   CI/CD is your most important feedback loop
7. **People & Process**
   The squishy stuff
8. **Questions?**
   I know you have them

Meet the speaker

Jenna Jordan

Sr Analytics Engineer

Ratio PBC
(formerly Analytics8)

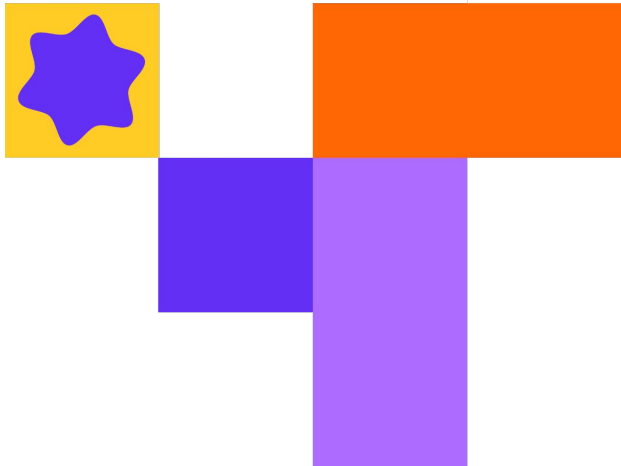
jennajordan.me

Meet the audience! Raise your hand if...

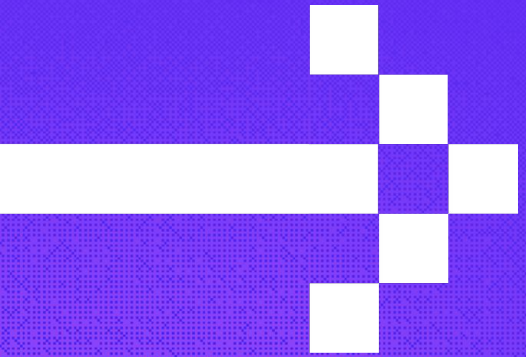
- You have a functioning dbt Mesh in operation/production, with many projects that depend on each other
- You are actively working towards a dbt Mesh, and are in the process of figuring out how to get it fully operational
- You have one dbt project, but you are interested in expanding to more and having a dbt Mesh of many projects
- You are interested in (or curious about) the idea of data mesh and/or dbt mesh
- Your organization has an Enterprise or Enterprise+ plan on dbt Cloud
- Your organization has a team plan on dbt Cloud
- Your organization is sticking to dbt Core only - open source FTW

What is data mesh?

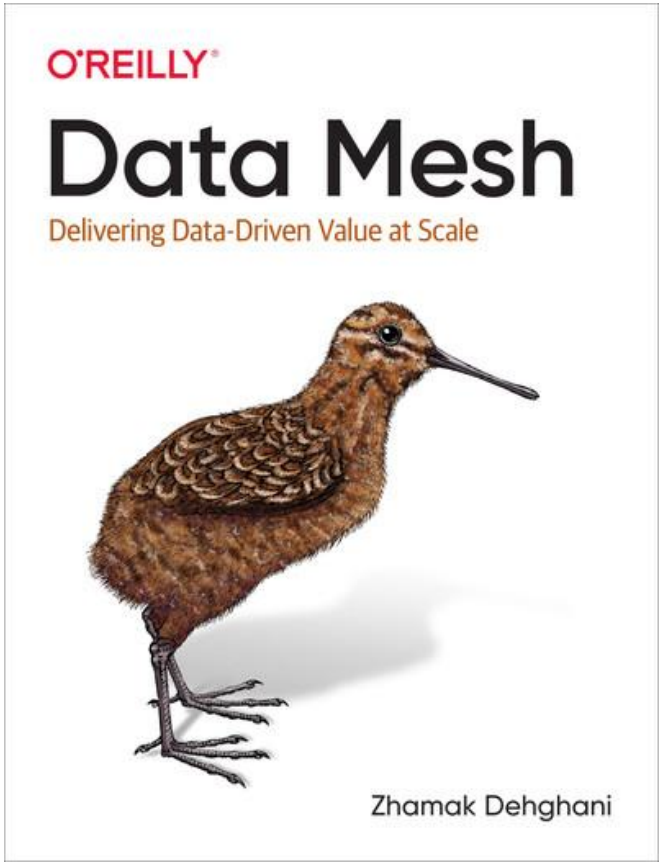
And how does dbt Mesh fit in?

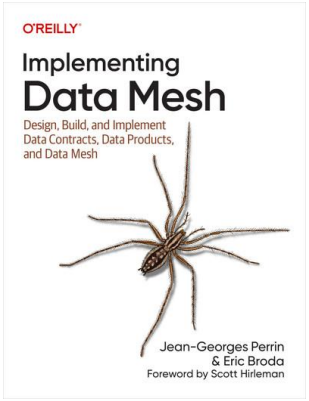


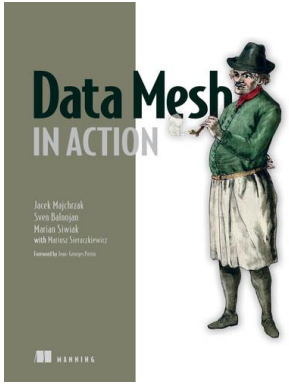
Data mesh, a socio-technical approach to **distributed data management at scale**, provides a driving philosophy for how to evolve your data practice.

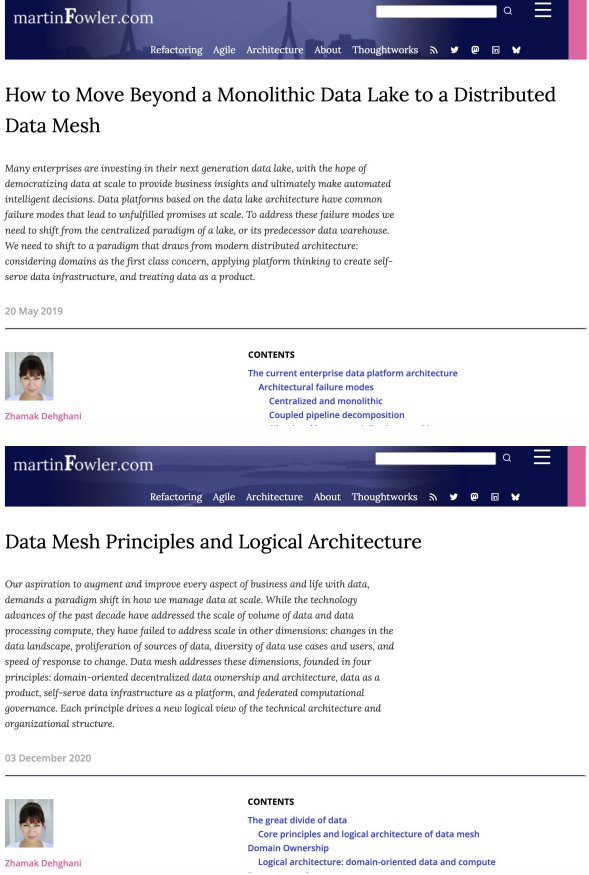


dbt Mesh, a set of dbt features that empower data teams to work independently and collaboratively, provides tooling for **distributed data management at scale**.

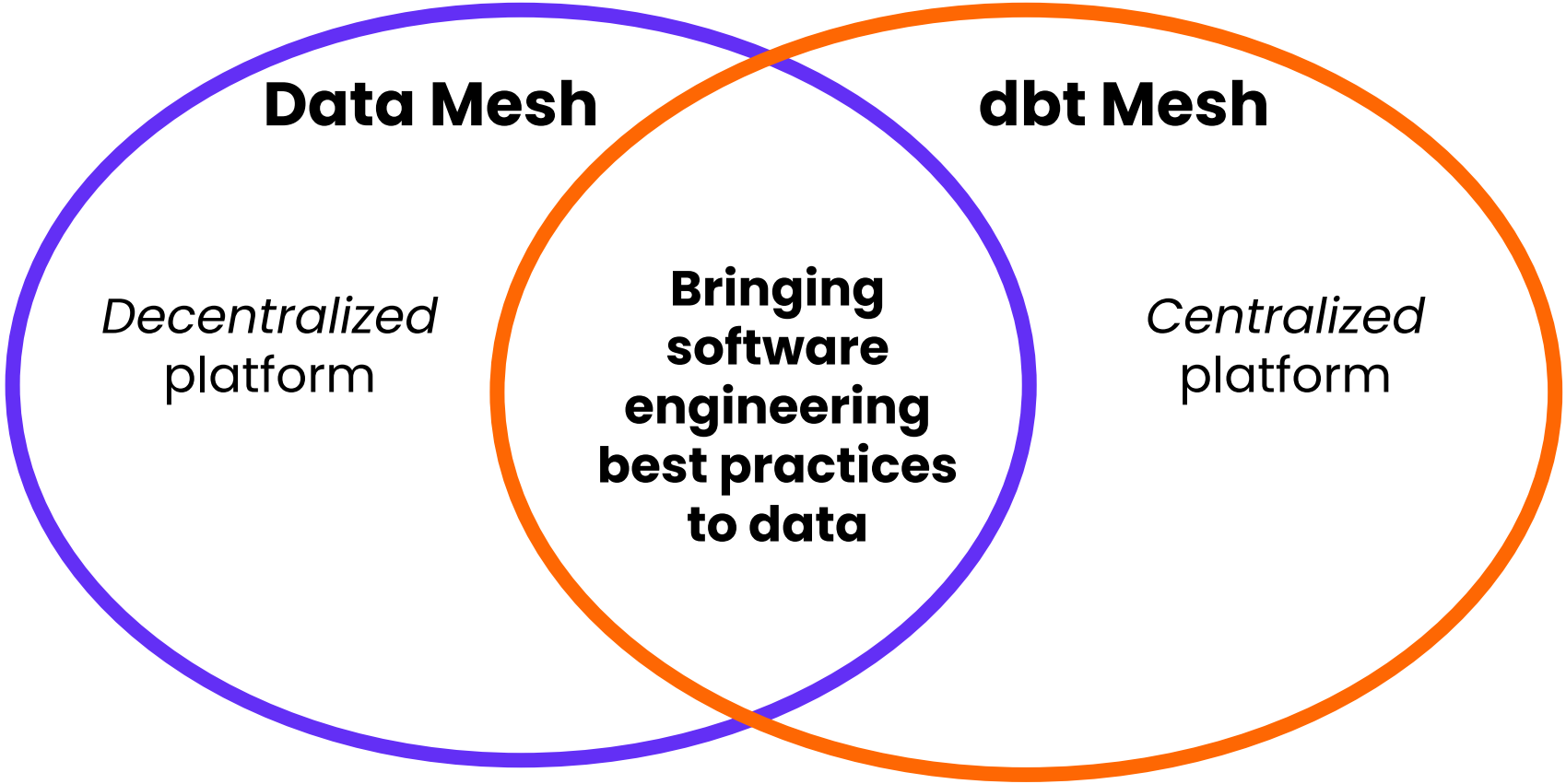




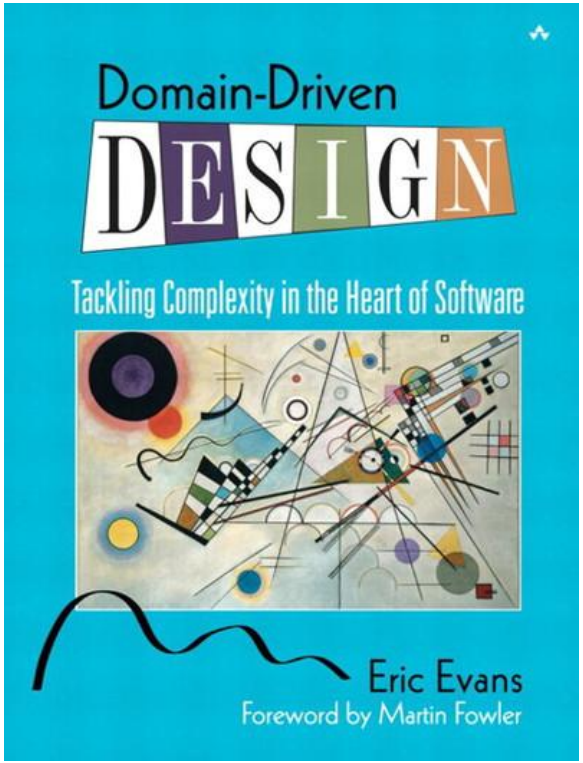


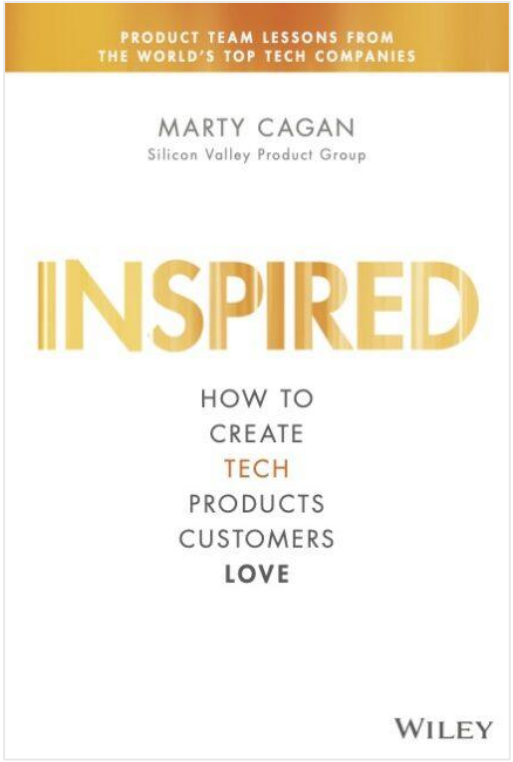


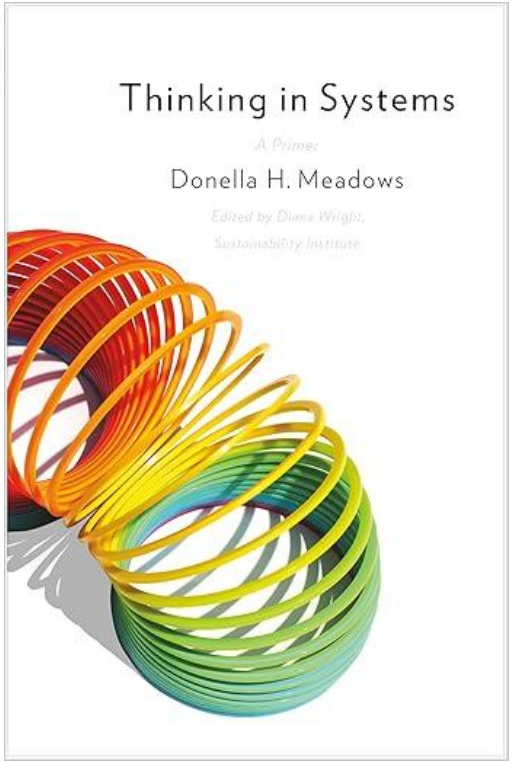
Some books and blog posts to read if you want to learn more



Data mesh and dbt are united by a foundational mission



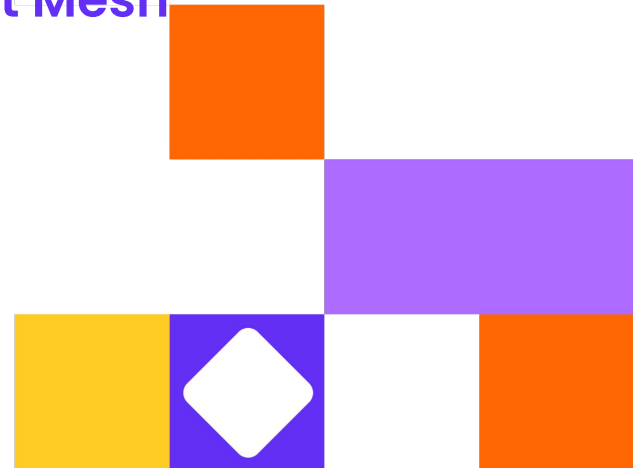


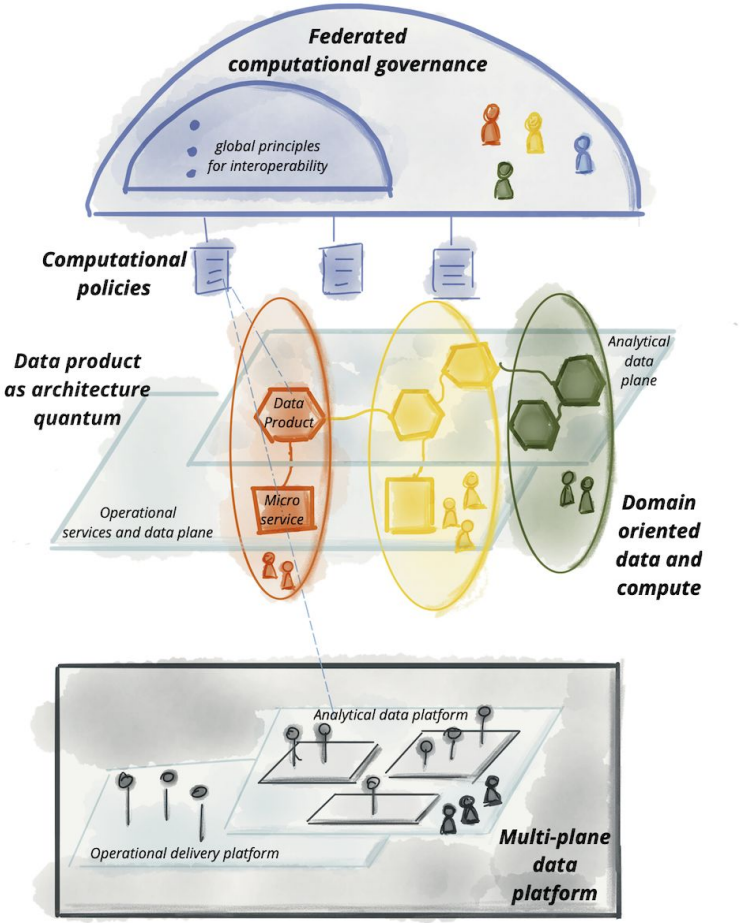


Books that influenced Zhamak Dehghani's thinking for data mesh

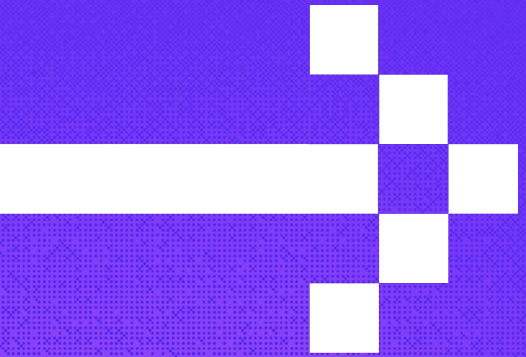
The 4 principles of data mesh

and how to follow them while building a dbt Mesh

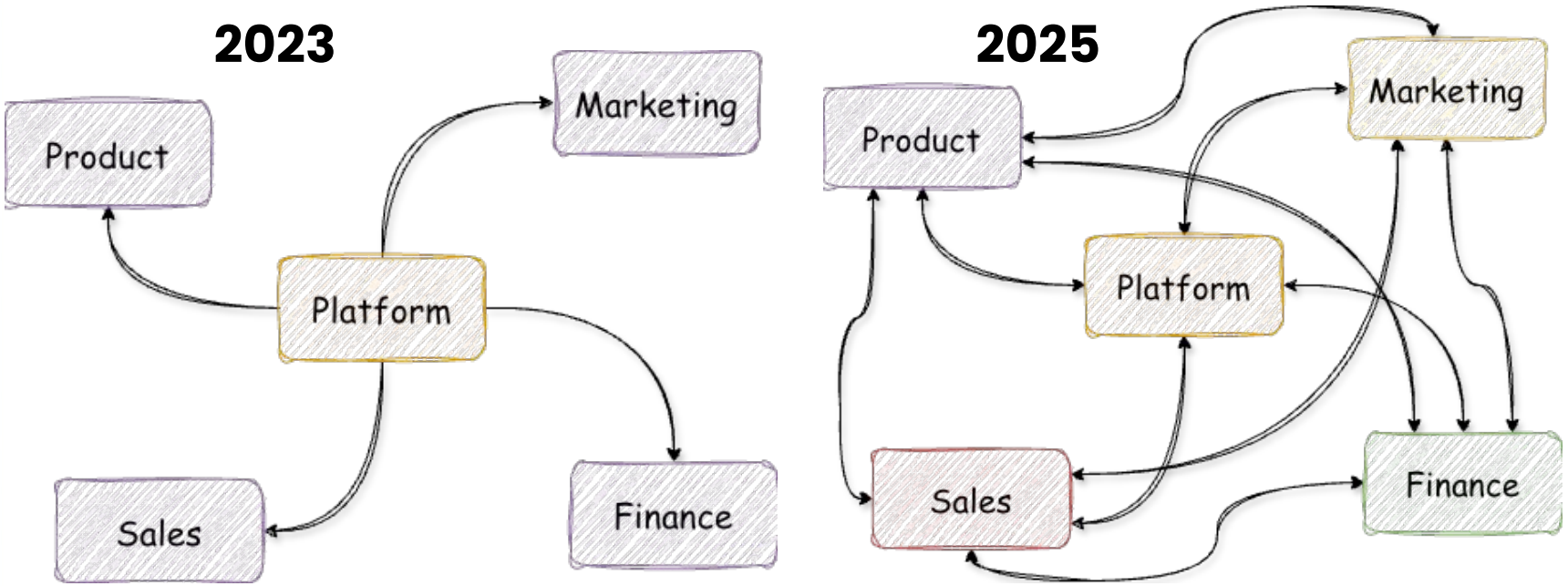




1. Domain Ownership
2. Data as a product
3. Self-serve Data Platform
4. Federated Computational Governance



Principle 1:
Domain Ownership

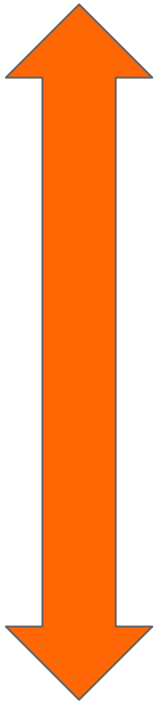


Hub & Spoke pattern vs... a meshier pattern

Pro Tip: don't start with multiple dbt projects!

Where does your organization fit on this spectrum?

dbt Mesh Organizational User Profiles

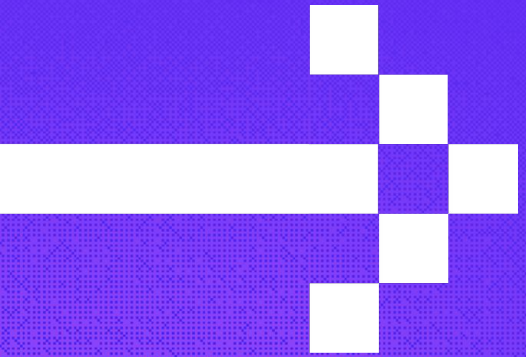


Aligned with the data mesh approach, but brand new to dbt

dbt veteran with a spaghetti monster DAG ready for change

Transitioning from 1 dbt project to many

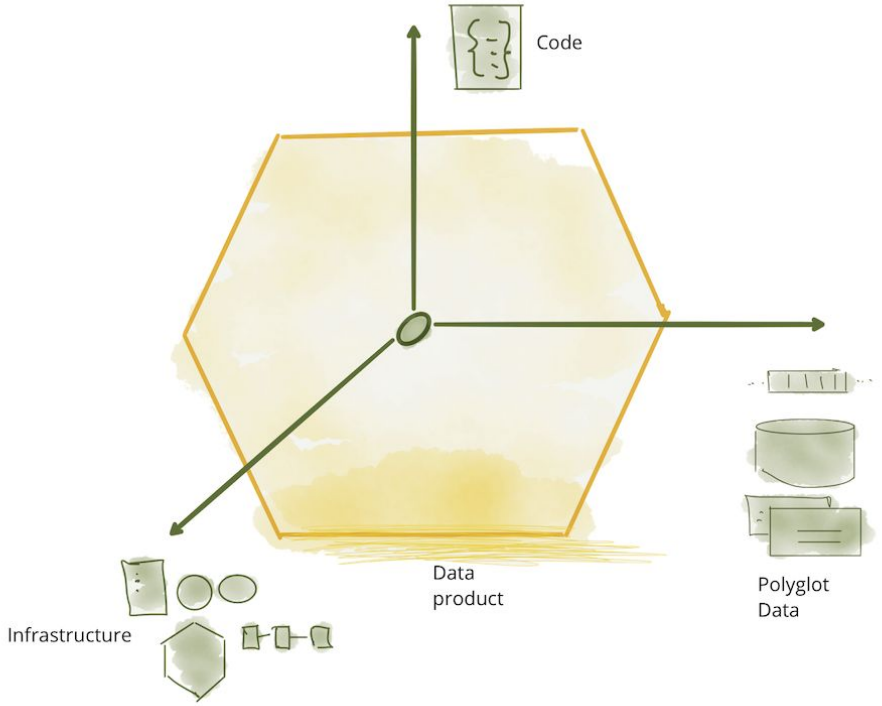
1. dbt Groups to draft domains
2. Align project folder structure to the groups
3. Update model access:
    a. default to “private”
    b. decide which models should be “public”
4. Transition dbt project management responsibilities to domain teams
    a. Enforce domain ownership in PRs with a codeowners file
    b. Domain ownership over dbt jobs (orchestration)
5. Domain teams spin out into their own dbt projects as they are ready



Principle 2:
Data as a Product

8 Characteristics of Successful Data Products

1. Discoverable
2. Addressable
3. Understandable
4. Trustworthy & Useful
5. Natively Accessible
6. Interoperable
7. Valuable on its own
8. Secure



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model contracts, versions, deprecation_date

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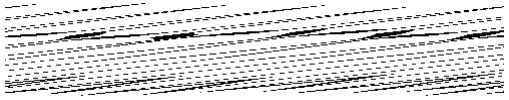
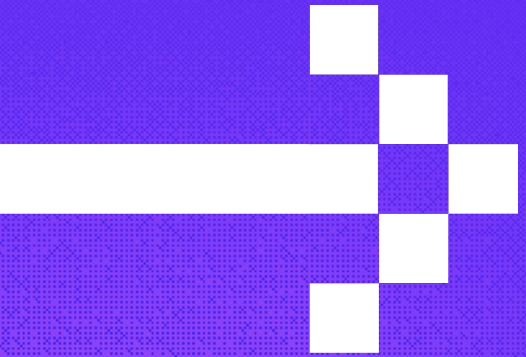
8.	**Secure**	grants config, terraform

Iteratively grow mart models into data product models

- Model access set to “public”
- Enforce model contracts, use model versions, set deprecation dates
- Doc blocks for DRY and more expansive documentation
- Test data before it hits the data product model
- Add metadata
- One Big Table
- dbt grants to enforce data access policies
- Iceberg materialization if needed/possible

Score your data products on these standards!





Principle 3:
Self-serve Data Platform

dbt Studio IDE

dbt Semantic Layer

dbt VSCode Extension

Cross Platform

dbt Canvas

dbt Mesh

dbt Copilot

dbt Catalog

dbt Learn

Course Catalog

dbt Insights

dbt Platform products that make your jobs easier

3 suggestions to make dbt project development easier

Pro-Tip #1: Create an internal dbt package

Pro-Tip #2: Create a template for new dbt projects

Pro-Tip #3: Create dbt projects specifically for learning

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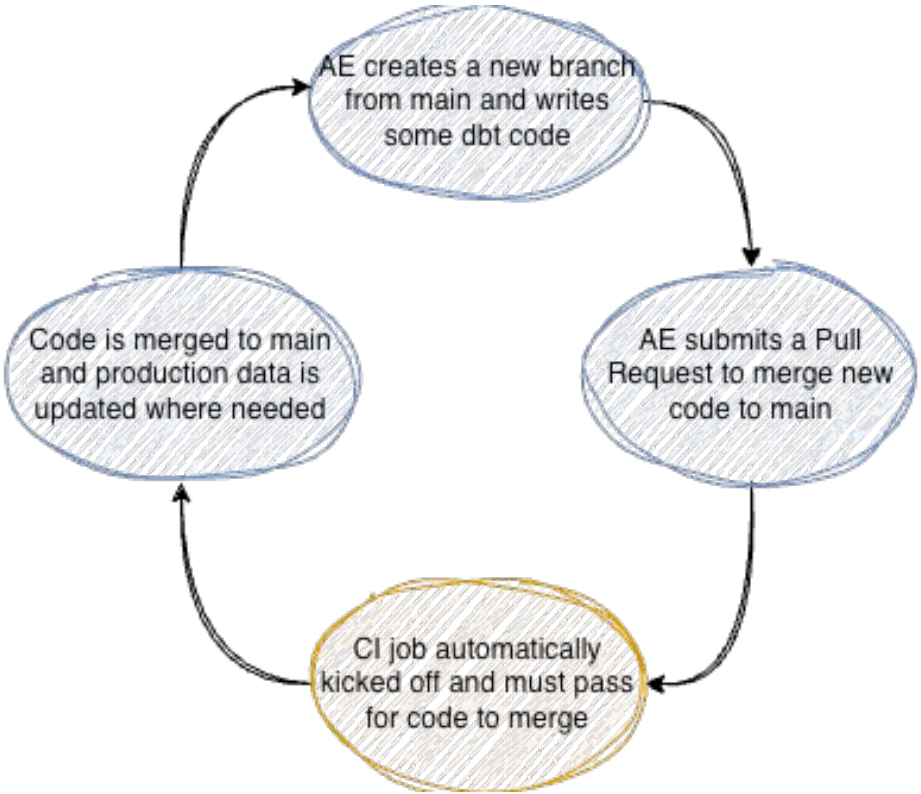
Principle 4: Federated Computational Governance

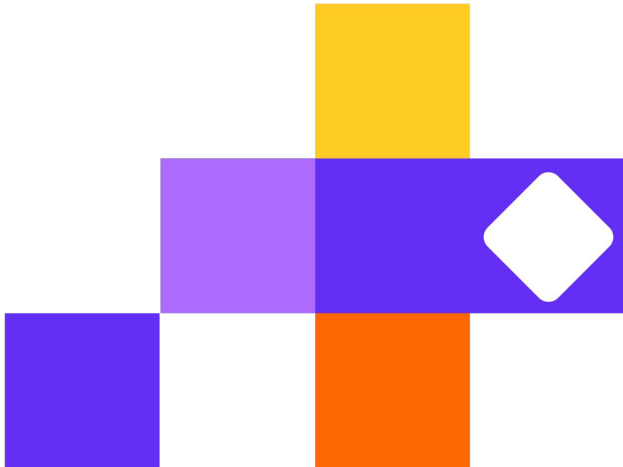


CI jobs are the leverage point in the CI/CD pipeline feedback loop

- Don’t break prod by accident!
- Use the dbt Project Evaluator package to enforce project standards
- Build on the Project Evaluator models to create custom ***mesh-wide*** tests
- Turn your internal package into mesh monitoring project

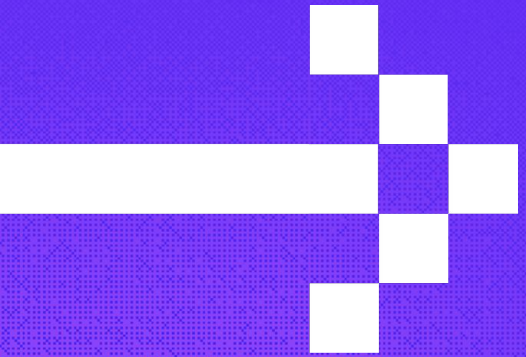
People & Process

The squishy stuff

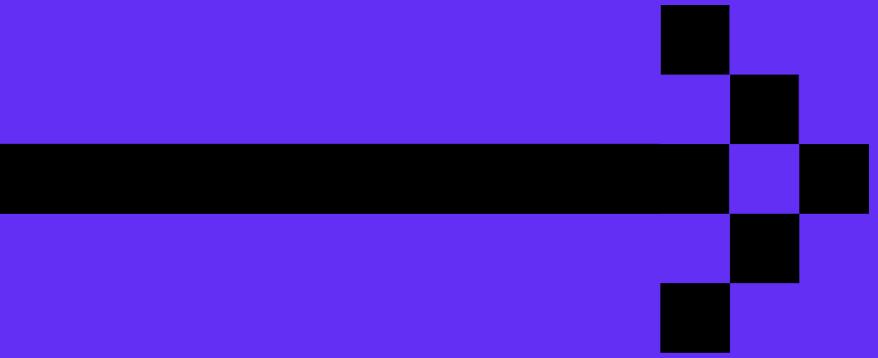


You have a lot of decisions to make! Let's review...

- Domain Ownership
- Data as a Product
- Self-serve Data Platform
- Federated Computational Governance



Convene your mesh - and map out the process of crafting new policies



Have a question?

- Find the accompanying blog post at https://jennajordan.me/
- Find me in the dbt community slack: @Jenna Jordan
- Find me on social media
  - LinkedIn: /in/jennajordan1
  - Bluesky: @jennajordan.me

Continue conversations in chat
#coalesce-2025

Thank you

Please be sure to take the post-session survey