

STITCH FIX

Enabling Full Stack Data Scientists at Stitch Fix

Juliet Hougland

@j_houg

April 2018

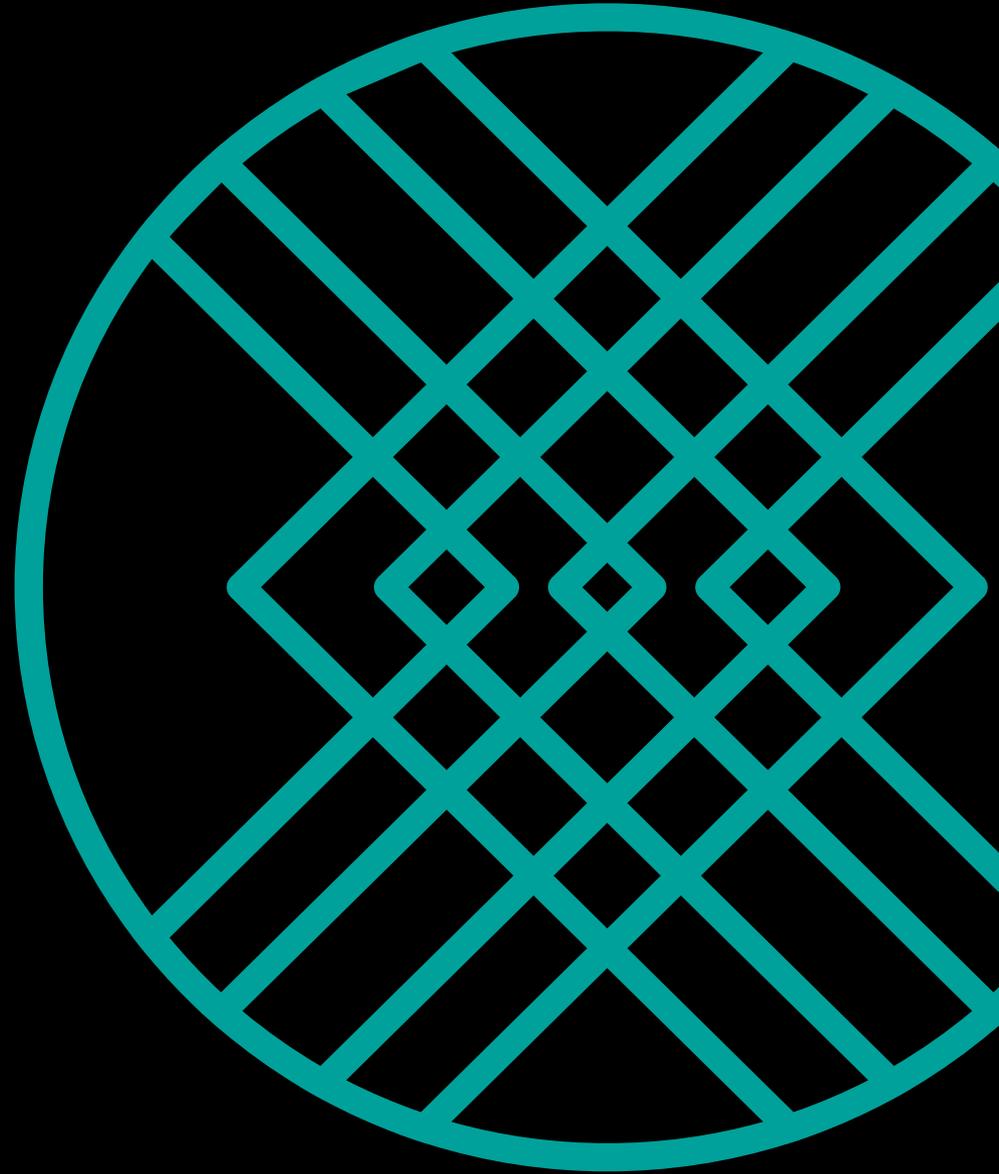


Agenda

WHAT WE DO

HOW WE OPERATE

**TRANSFORMING THE WAY
DATA SCIENTISTS
DO WHAT THEY LOVE**



What We Do

The Business

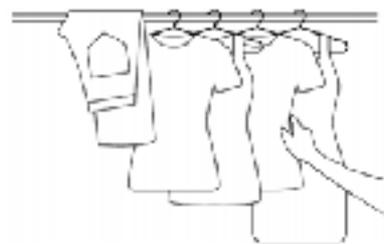
The Customer Experience

The Data





Transforming The Way People Find What They Love

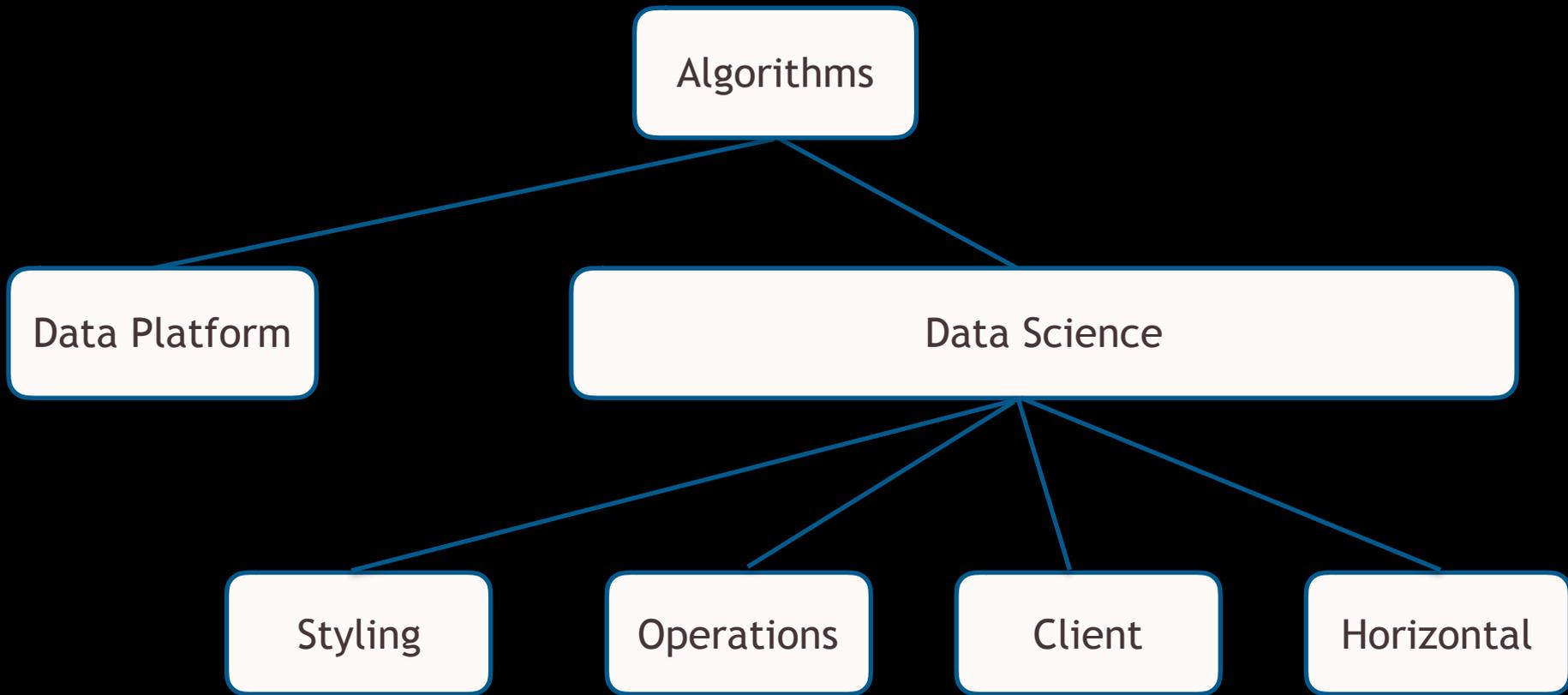


How We Operate

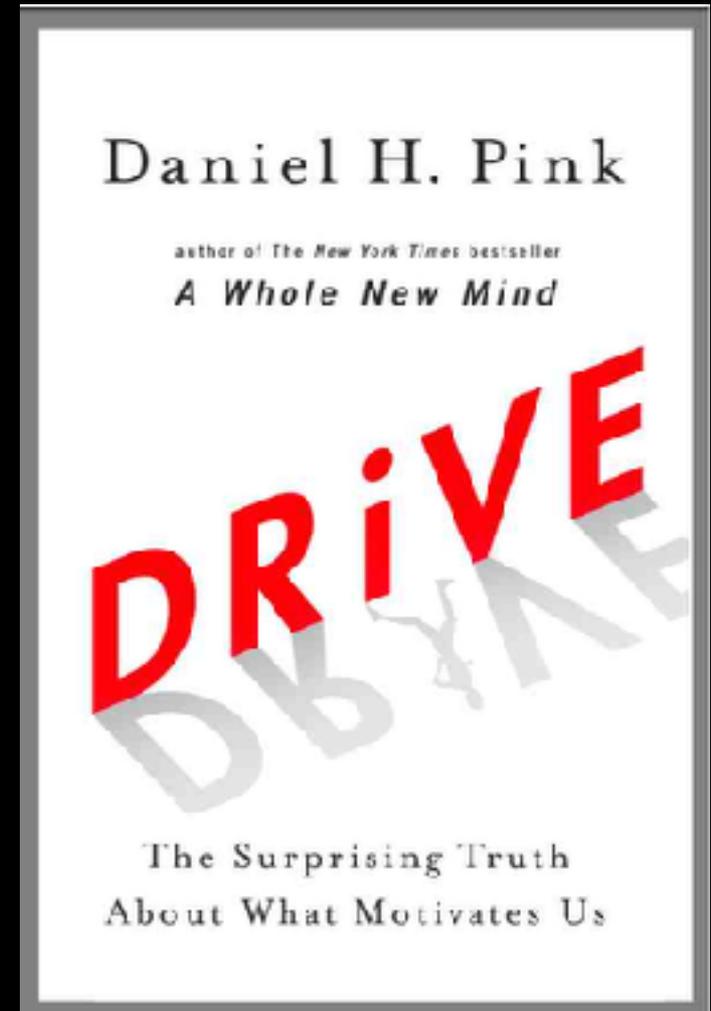
The Algorithms Org

Operating Principles

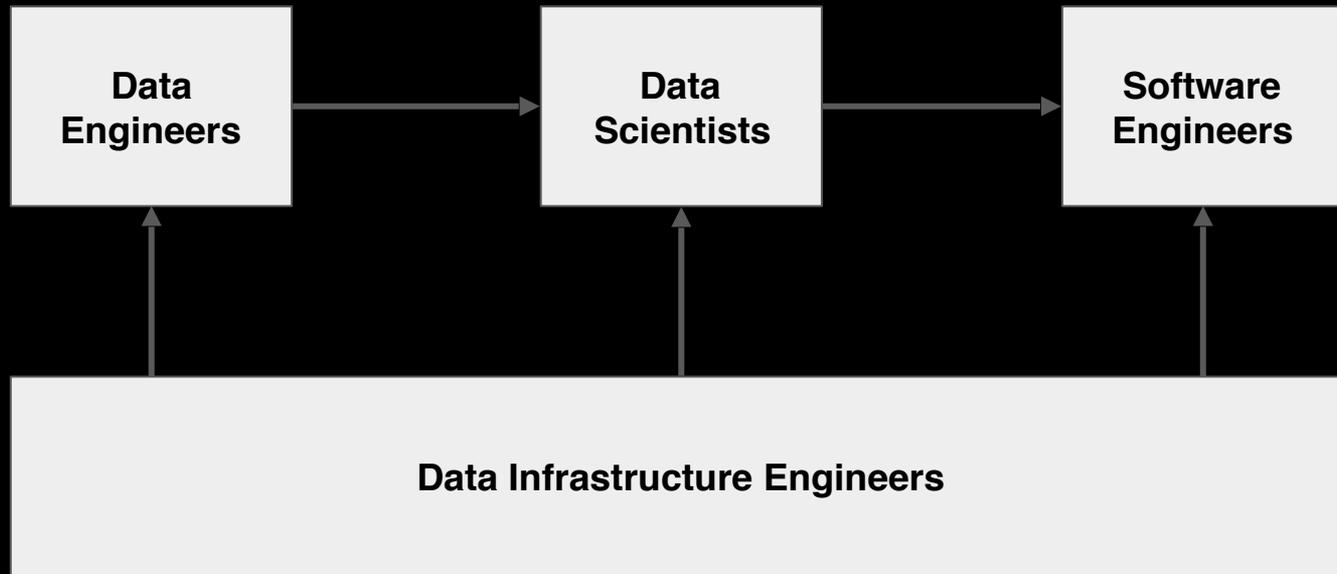
Data Platform



Autonomy & Ownership

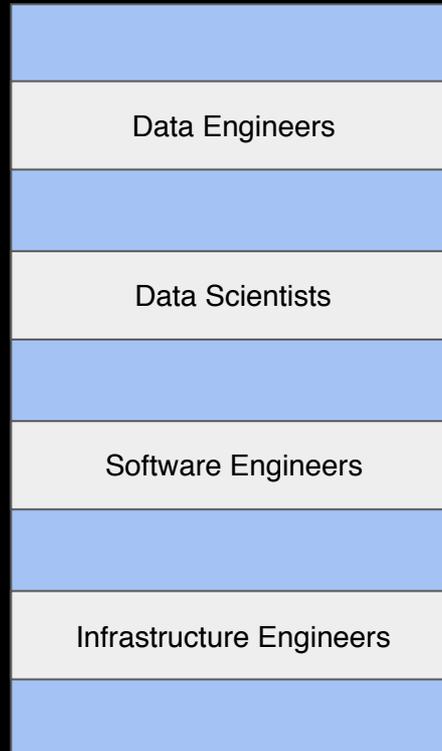


Typical Data Science Department

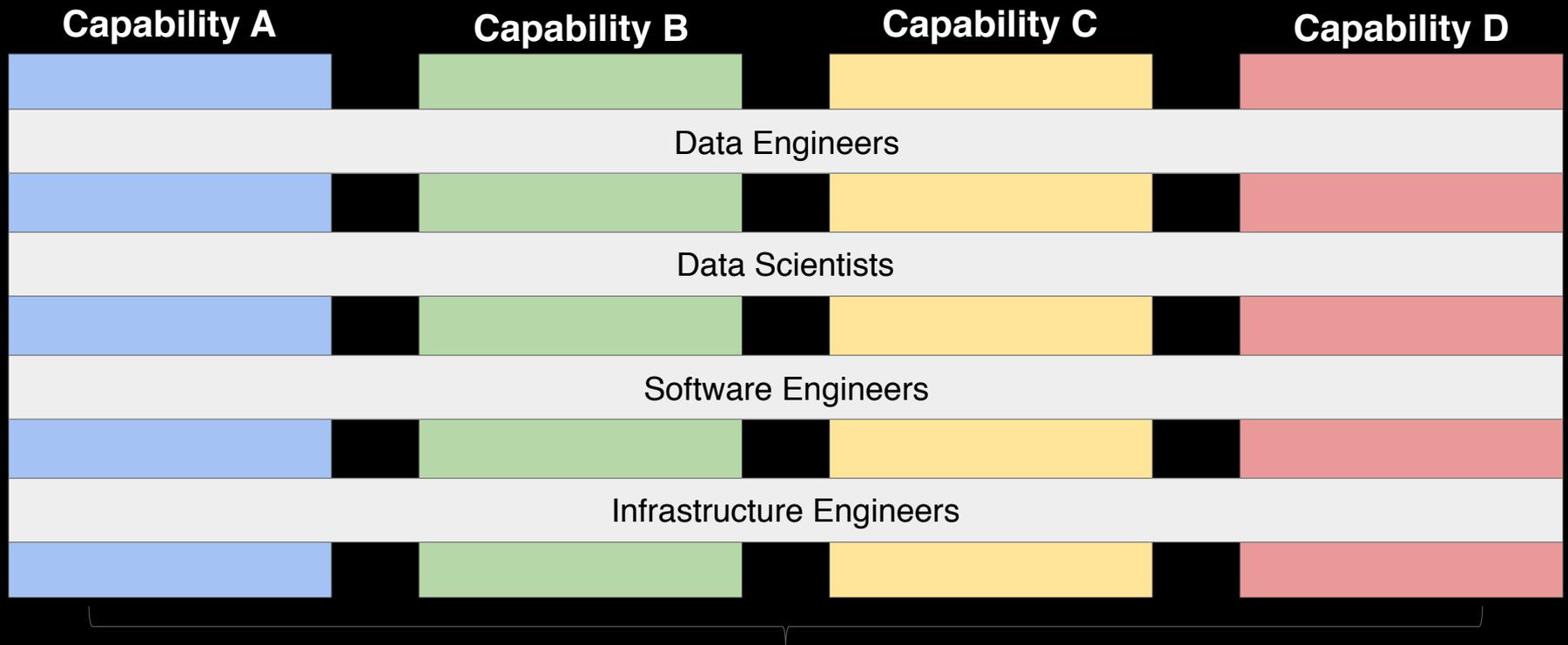


Typical Data Science Department

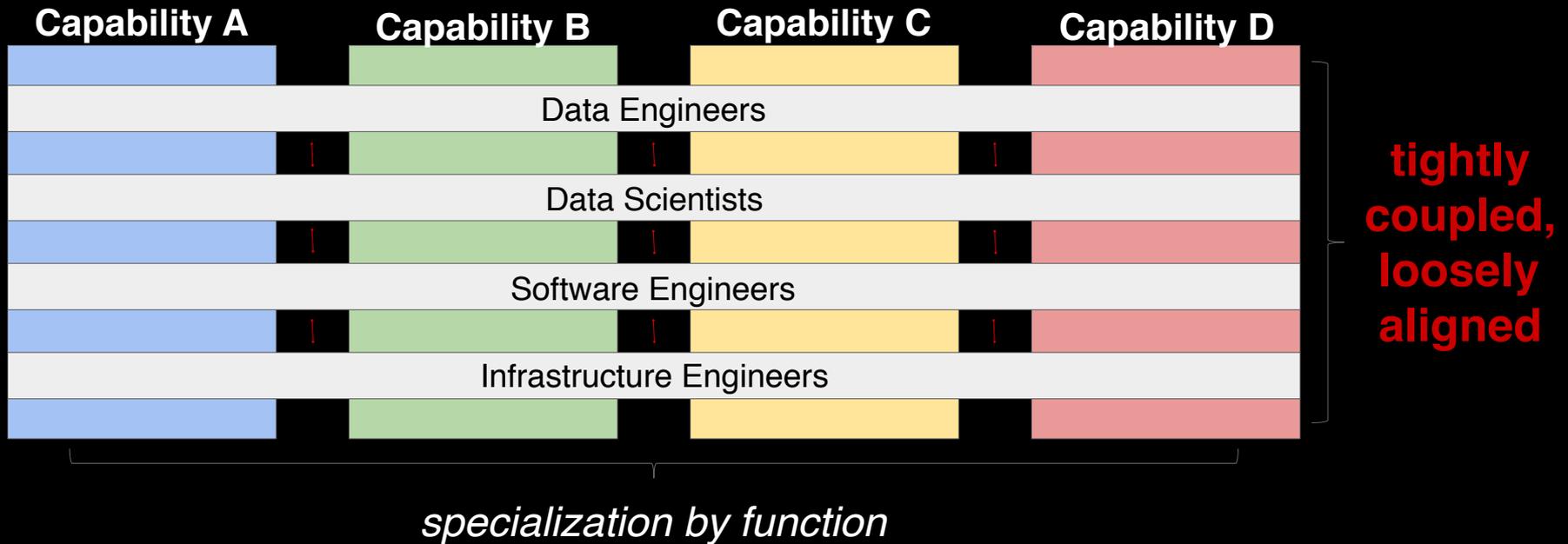
Data Driven Capability



Another View

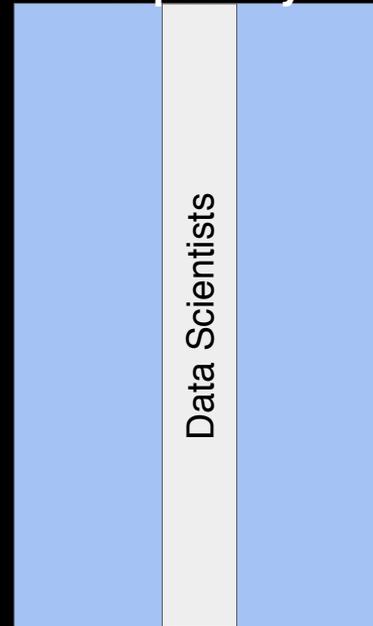


High Coordination Cost

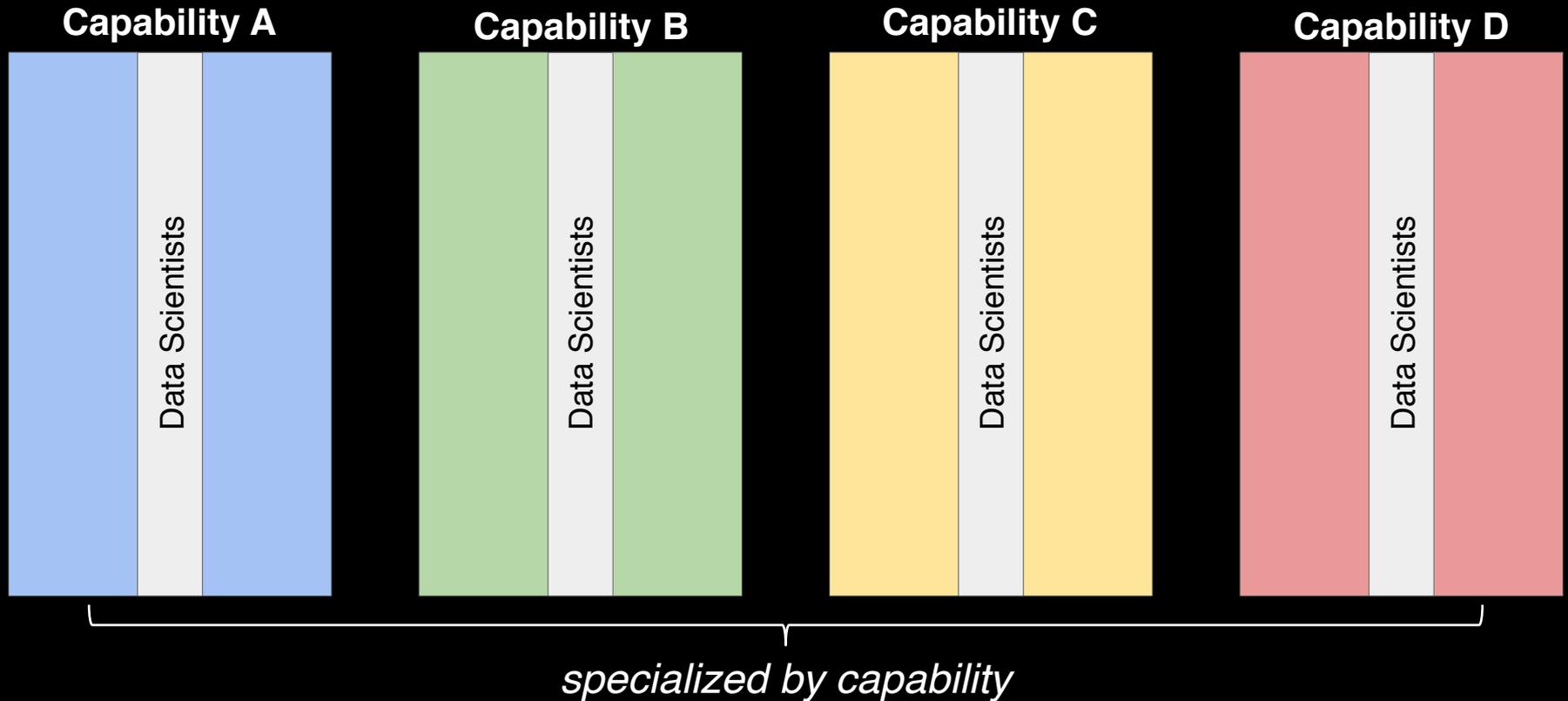


A Different Way to Organize

**Data Driven
Capability**

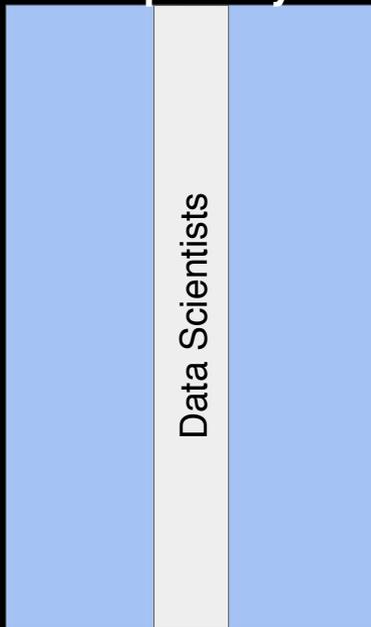


Organized by Capability

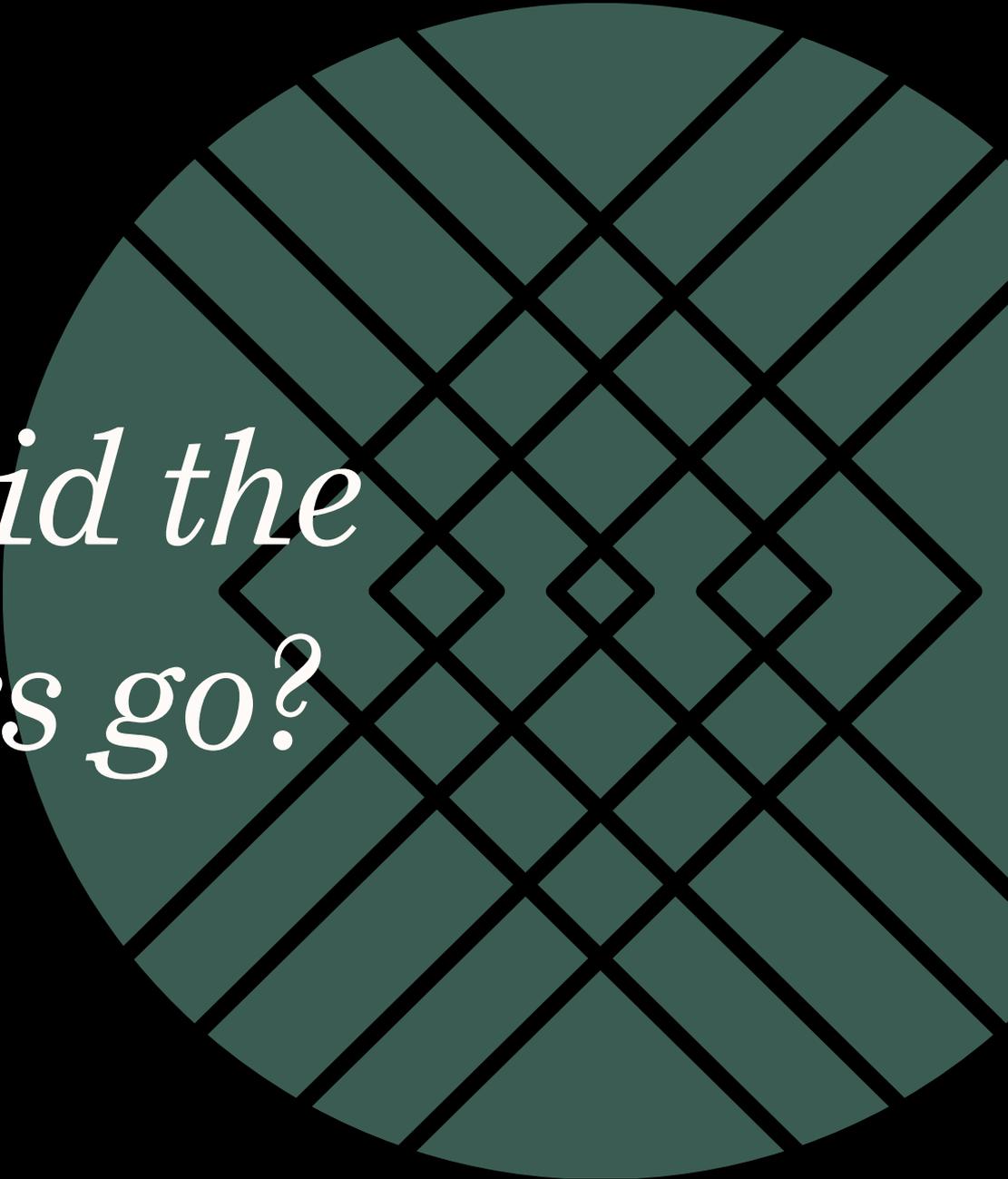


Focus on Capabilities

Data Driven Capability

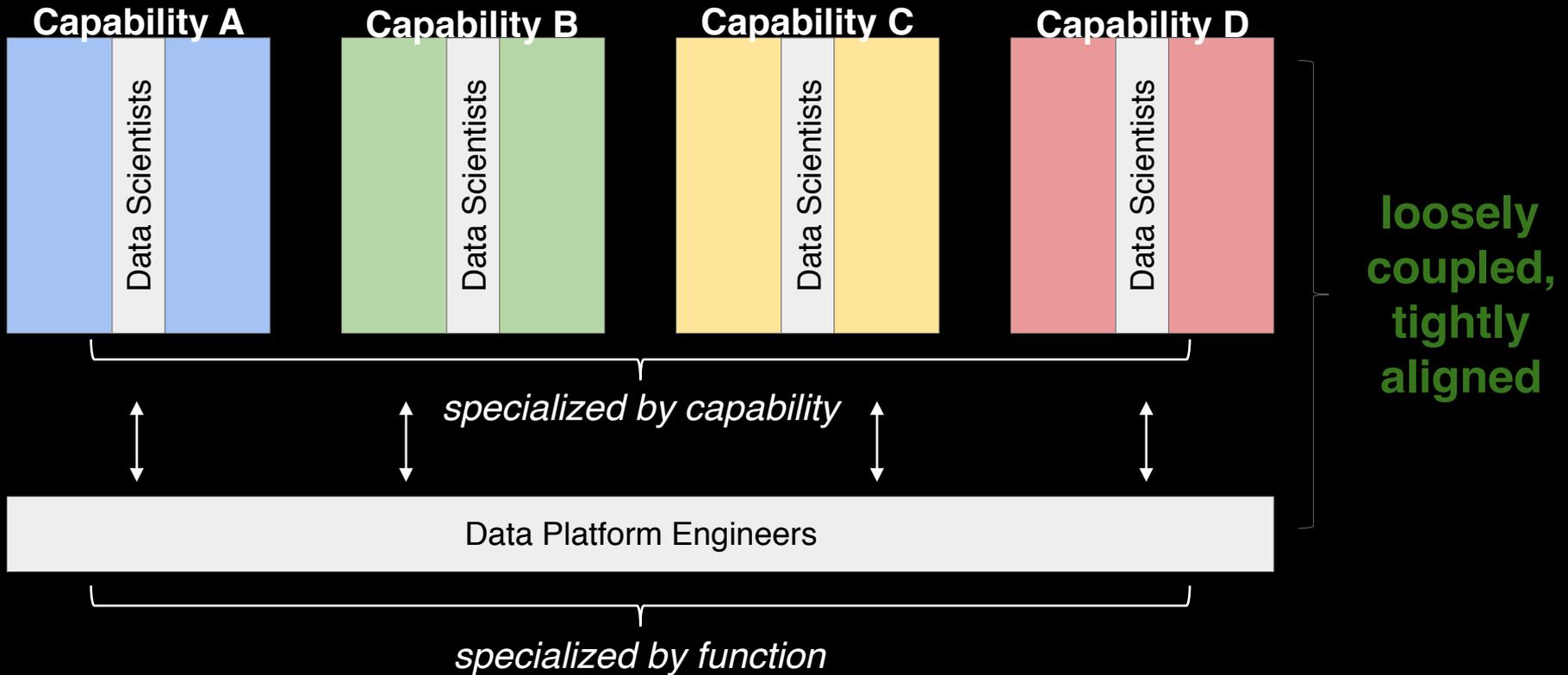


Full Stack Data Scientists Own:
Implementation
Coordination with the business
Production support (sort of)

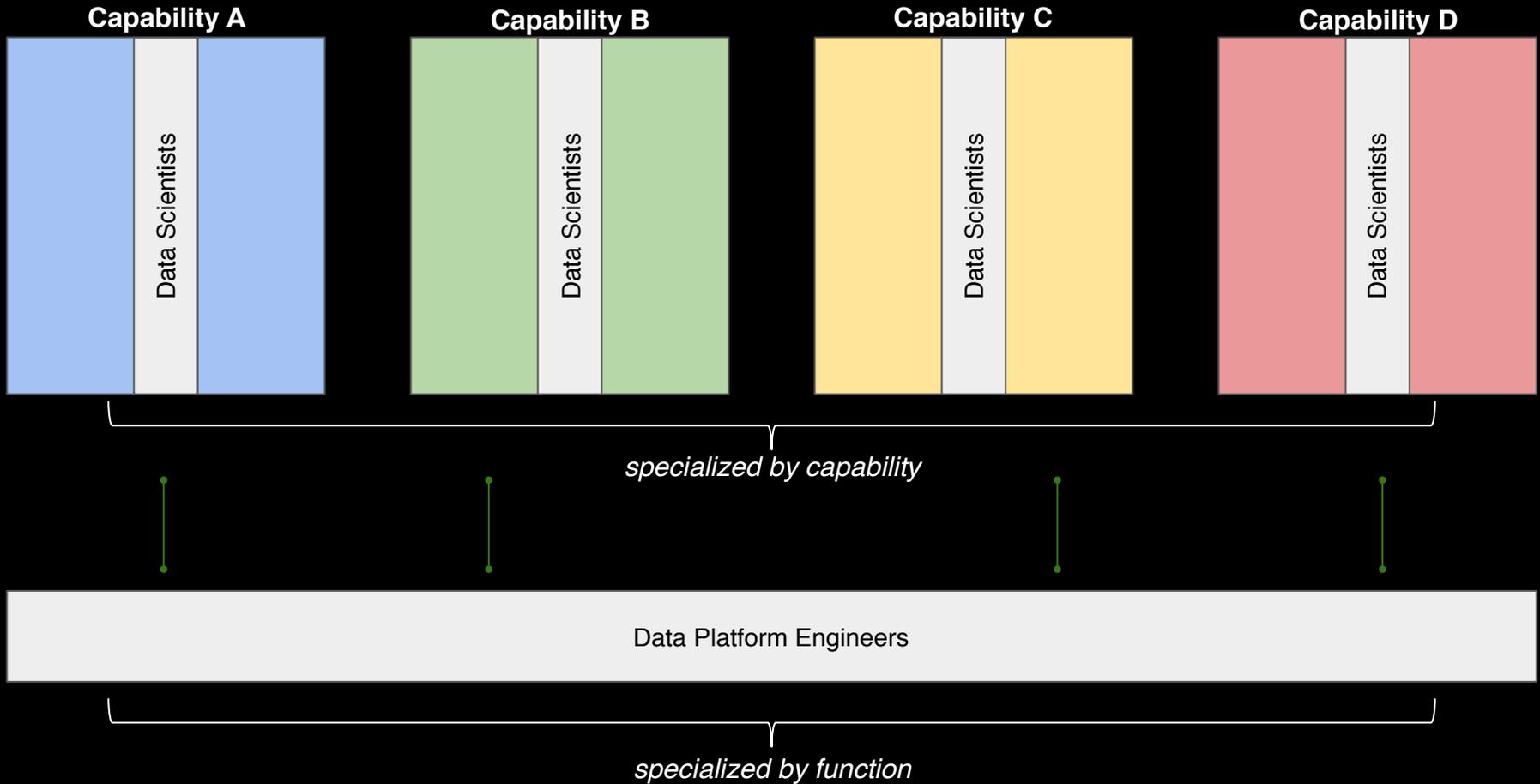


*Where did the
engineers go?*

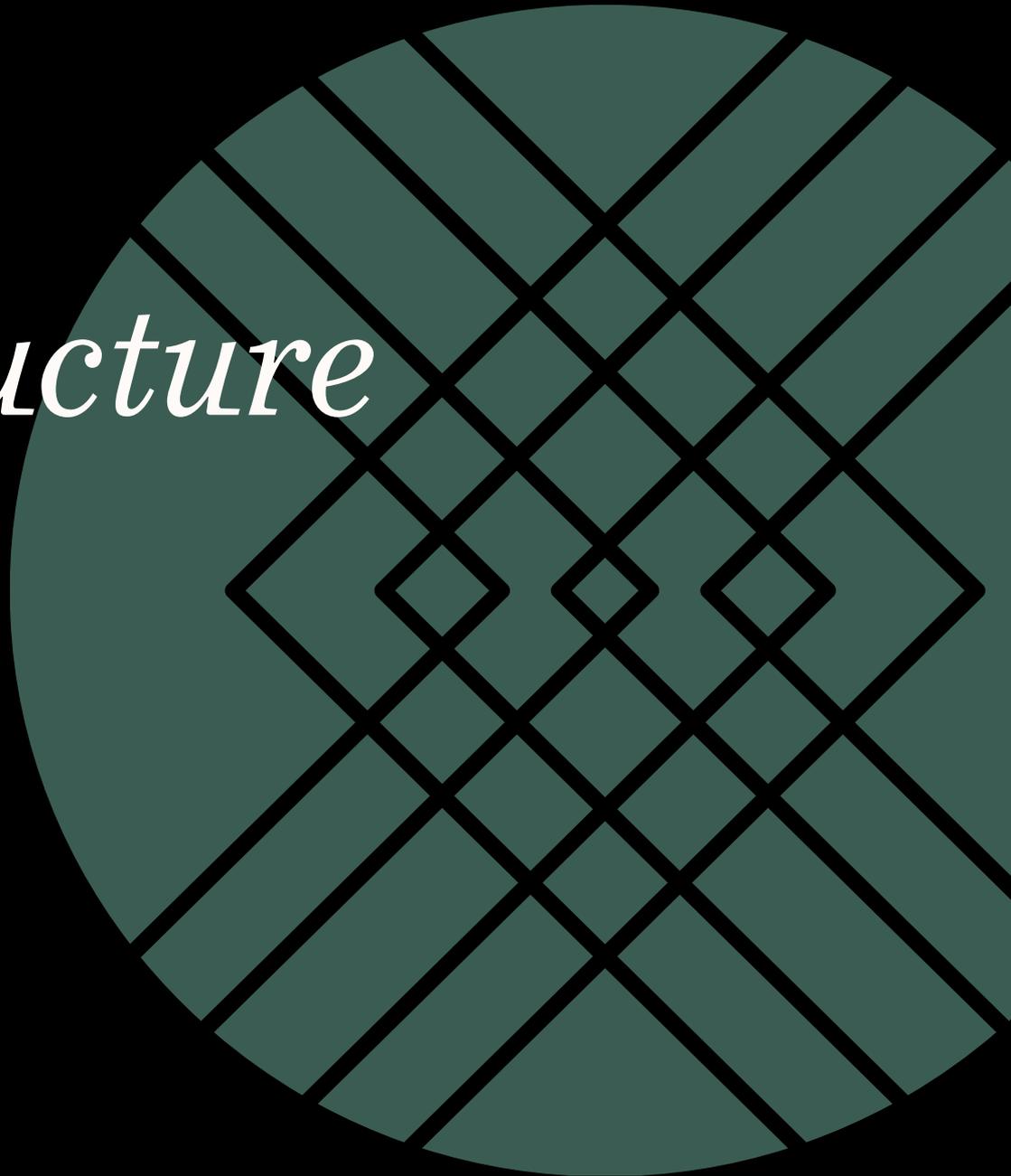
Focus on Capabilities



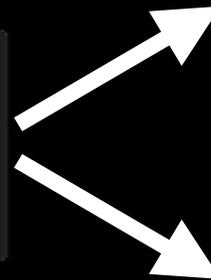
Capabilities



Infrastructure



Black Box Data Scientists

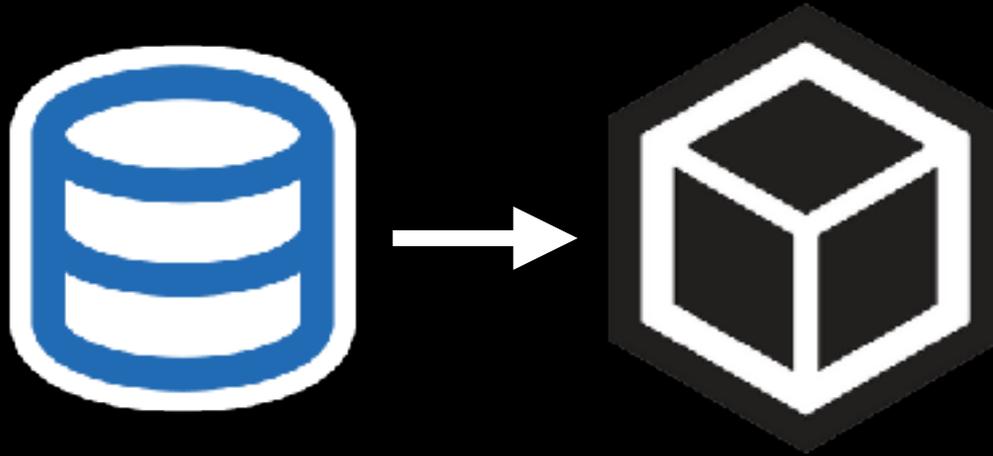


```
users-controller : Users Controller
POST /api/1.0/users/
GET /api/1.0/users/all

Response Class (Status 200)
OK
Model Example Value
{
  "address": "string",
  "cardExpirationMonth": 8,
  "cardExpirationYear": 8,
  "cardNameOnCard": "string",
  "cardNumber": "string",
  "cardType": "string",
  "email": "string",
  "firstName": "string",
  "lastName": "string",
  "password": "string",
  "username": "string"
}
```



Data Transport



Analysis & Model Building



Analysis & Model Building



Flotilla > Create Task

CANCEL SAVE

Task Definition

ALIAS

GROUP

Select... x

IMAGE

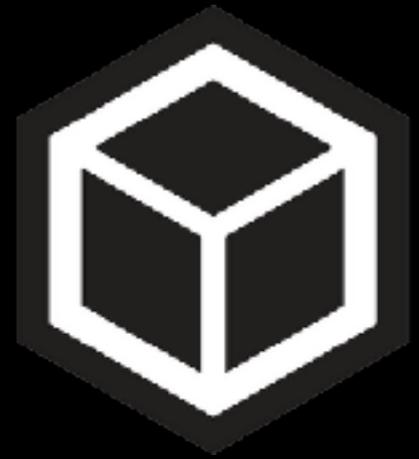
Select... x

IMAGE TAG

Select... x

COMMAND

Analysis & Model Building



Hard:

- Reproducible
- Accurate
- Collaborative

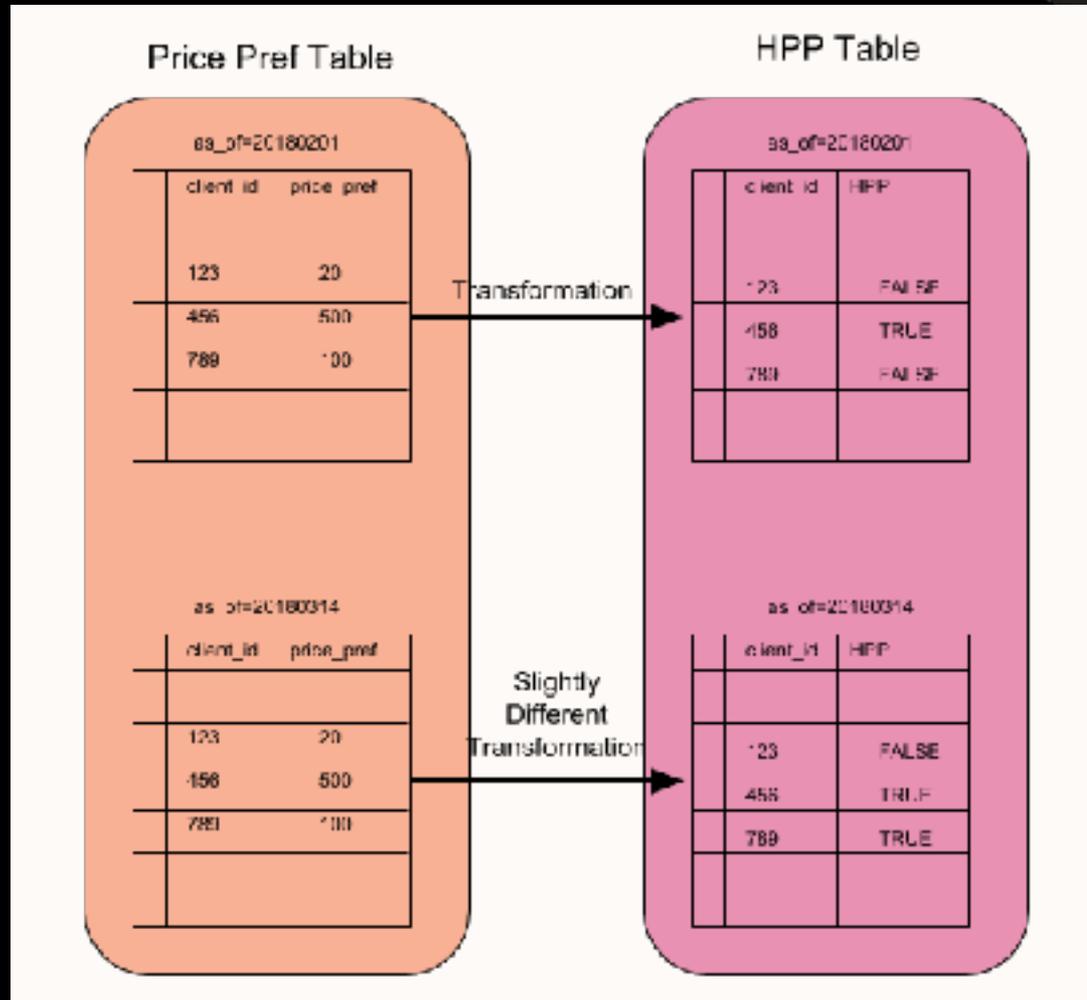
Opinionated Analysis Development —
Hilary Parker

<https://peerj.com/preprints/3210/>

Analysis & Model Building



Analysis & Model Building



Dashboards

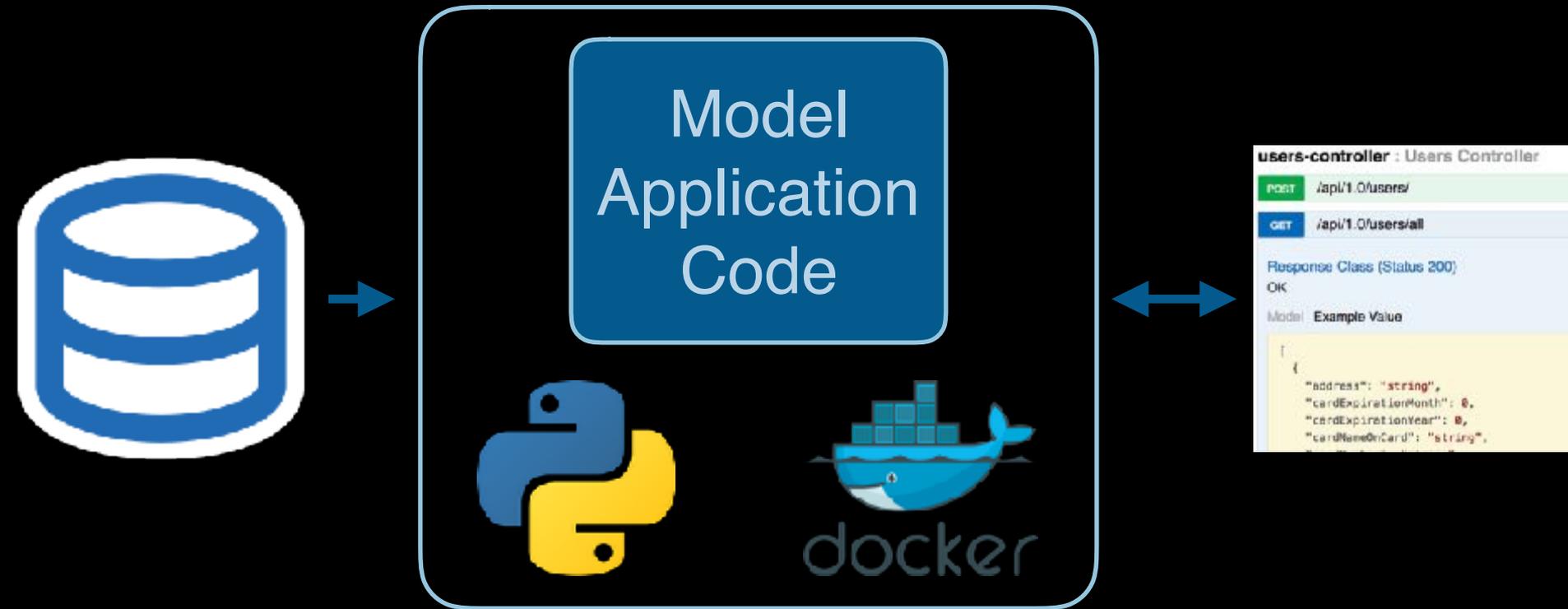


Daylight Apps filter apps Users Juliet Houglan

Actions	App Name	Shared With	Deployments	Source
 	AR magic-mirror-raps	AR AR Reporting Data Platform Kinokan Group 1	prod staging	git update
 	aa-react-felch zola-v30	AR Eng Kinokan Group 1	prod staging	git update
 	aa-react-toolbox zola-v30	AR Kinokan Group 1	prod staging	git update



Services



Services

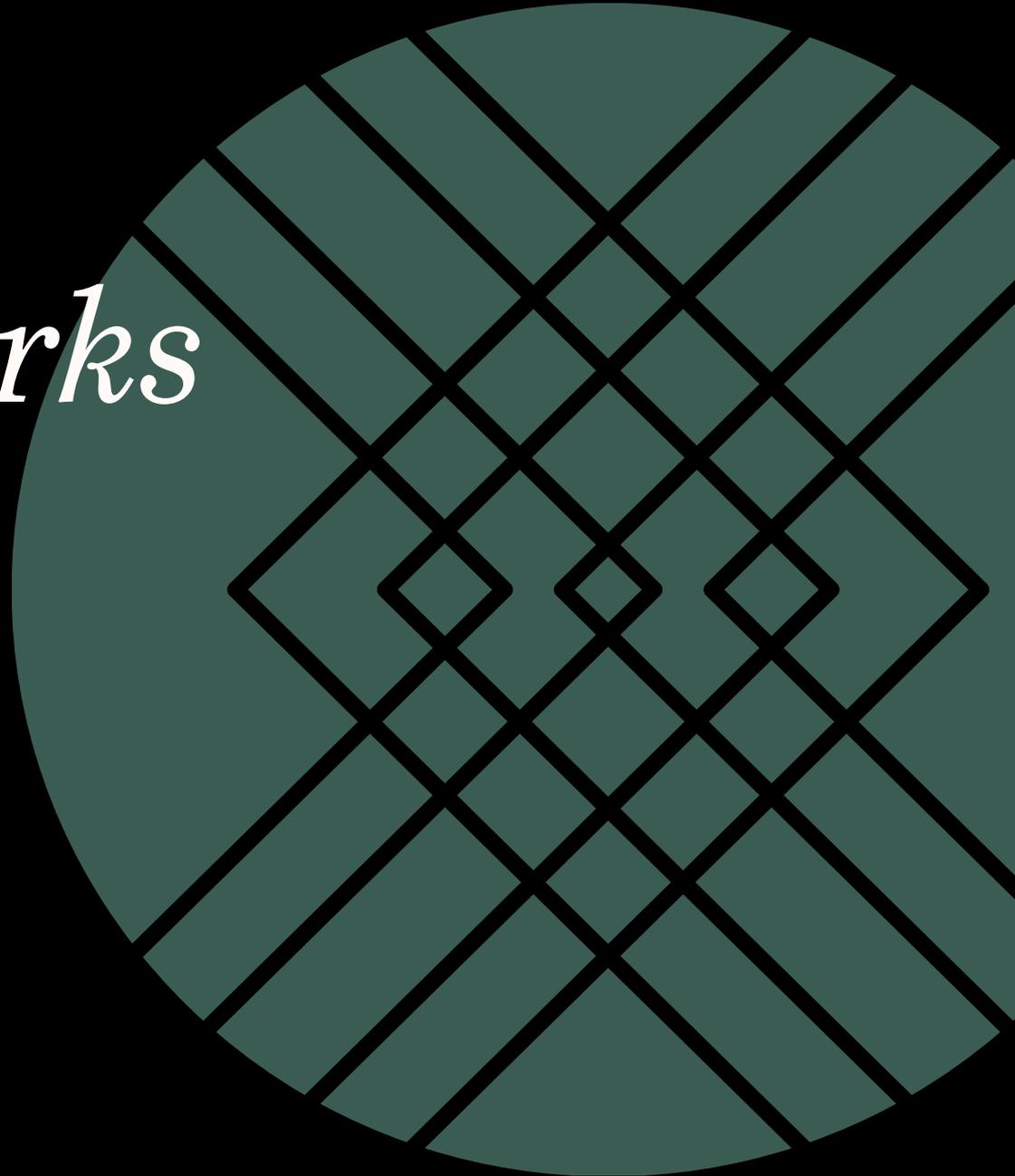


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OK
Model Example Value
{
  "address": "string",
  "cardExpirationMonth": 8,
  "cardExpirationYear": 8,
  "cardNameOnCard": "string",
}
```



*What works
well?*



*What are the
challenges?*

Thanks!





*Interested in
what you heard?
We are hiring!*

Questions?

