Vanguard

Creating Enterprise Data Product Ownership at Vanguard

Brian Charles
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Investment Data and Analytics

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Senior Solutions Consultant,
Investment Data and Analytics

Alexa Cain
Investment Data Architect

Taylor Swift: The Eras Tour

PG-13 2023 · Documentary/Musical · 2h 49m

About

8/10	99%	82%
IMDb	Rotten Tomatoes	Metacritic

89% liked this movie

Google users

Renaissance: A Film by Beyoncé

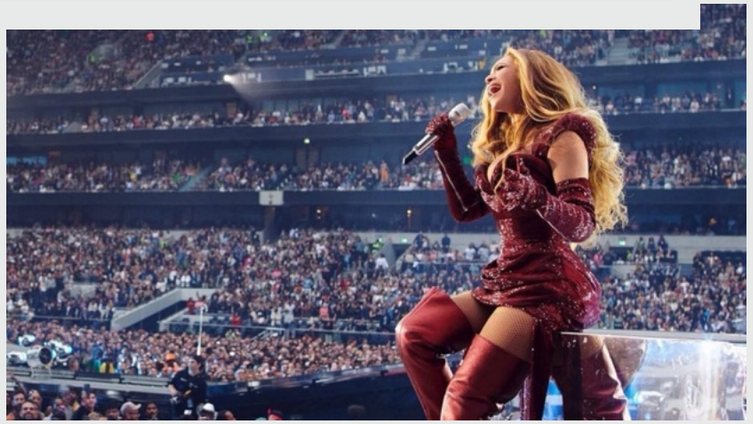
Not Rated 2023 · Musical/Documentary · 2h 48m

About

8.6/10	99%	86%
IMDb	Rotten Tomatoes	Metacritic

97% liked this movie

Google users



U2: Rattle and Hum

1988 · Documentary/Music · 1h 39m

97% liked this movie

Google users

Data is like a song.

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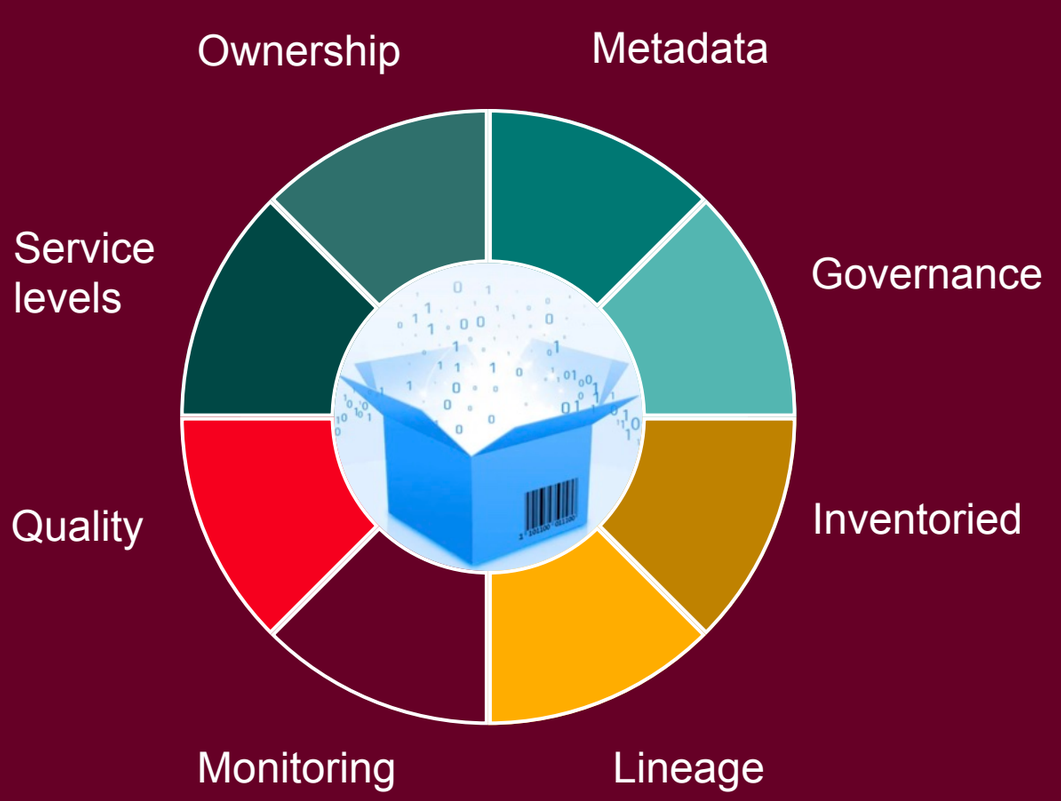
Success by design



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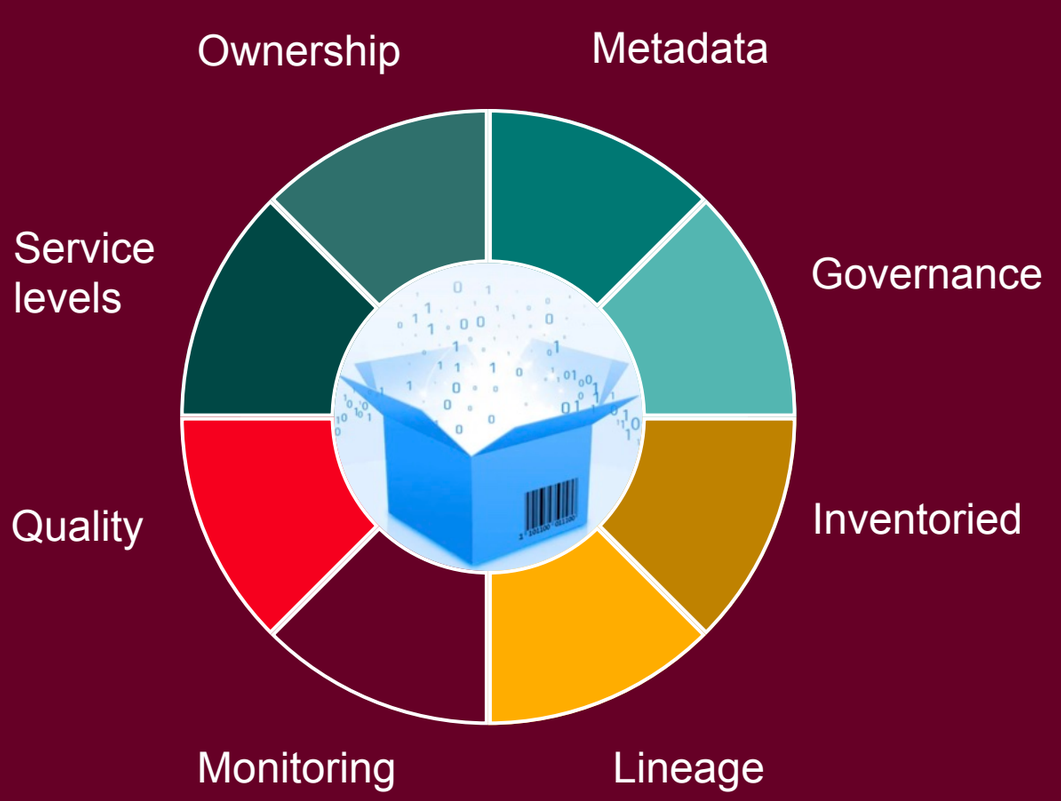

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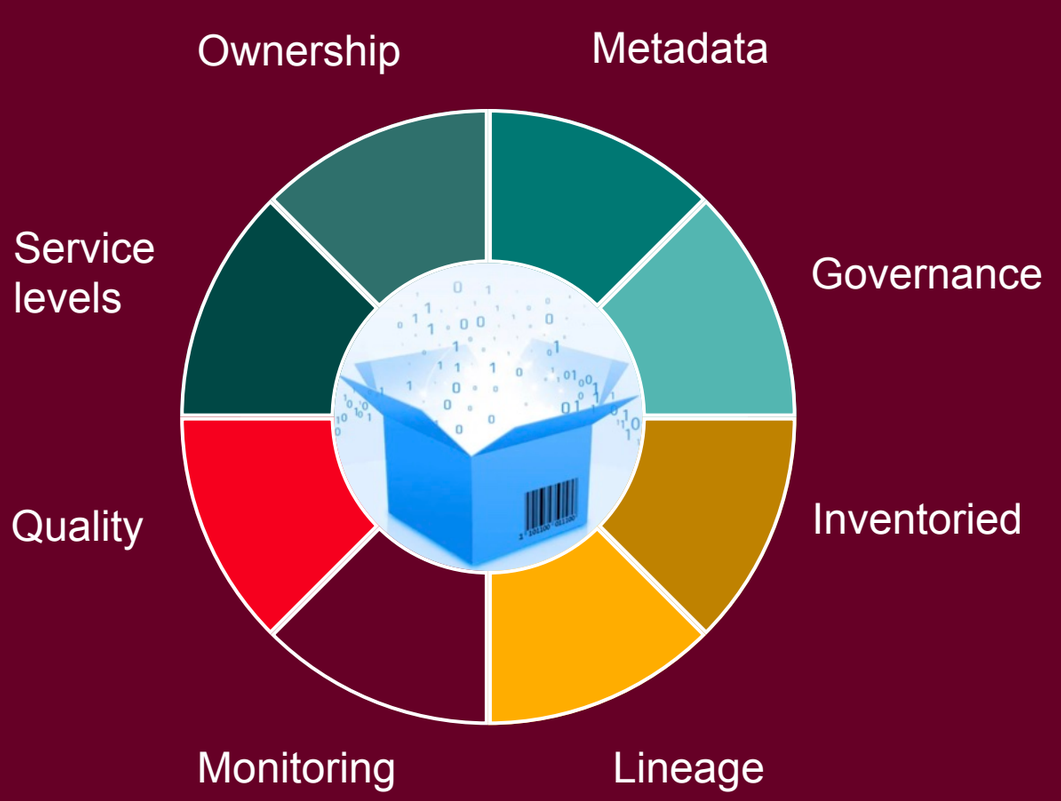
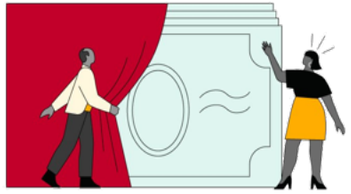


Who is Vanguard?

50M+
Investors globally



$9.5
Assets under management

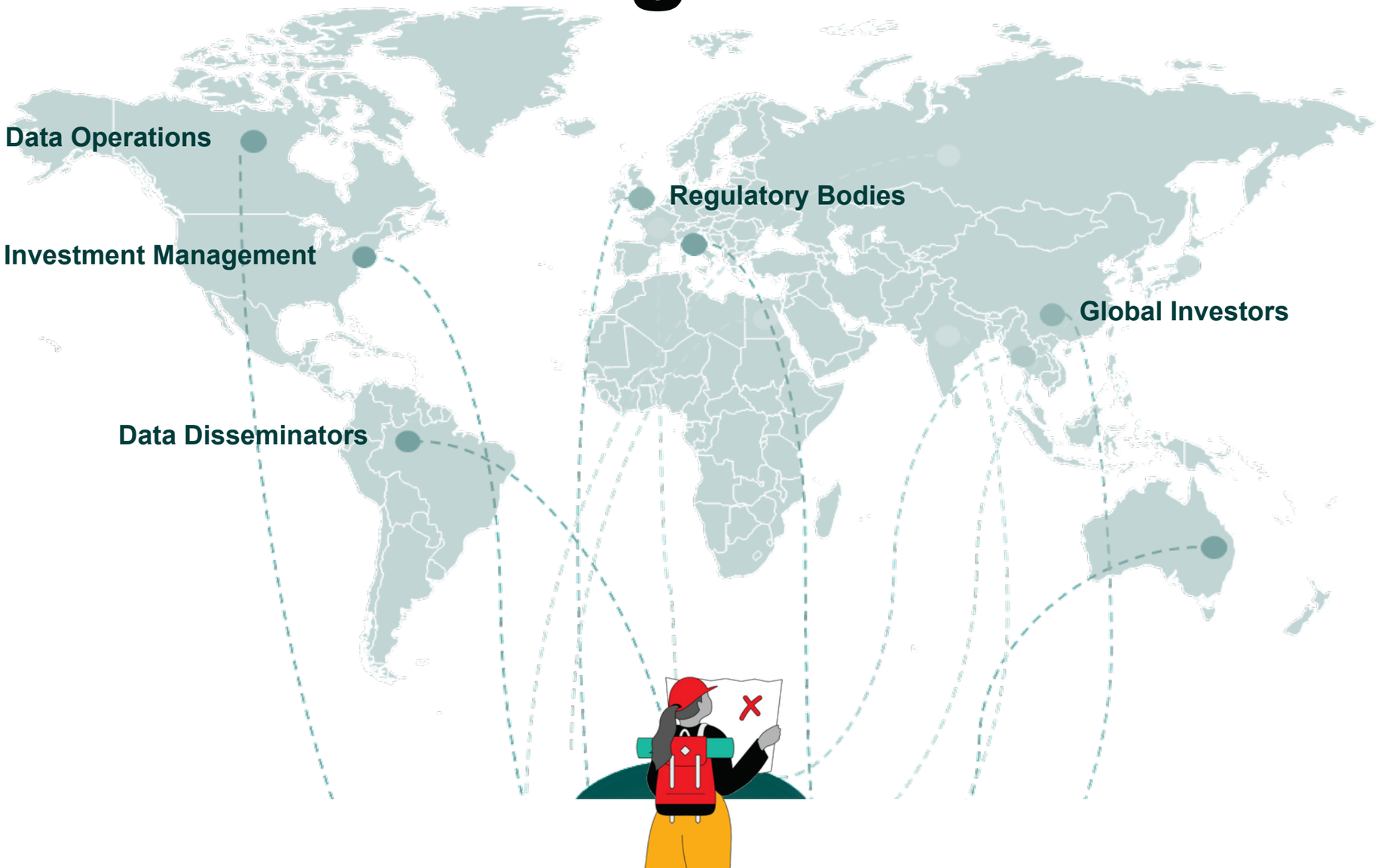
$200b
Cashflow in 2023

423
Funds offered globally

20K
Global employees

18
Locations across the globe

Our role at Vanguard



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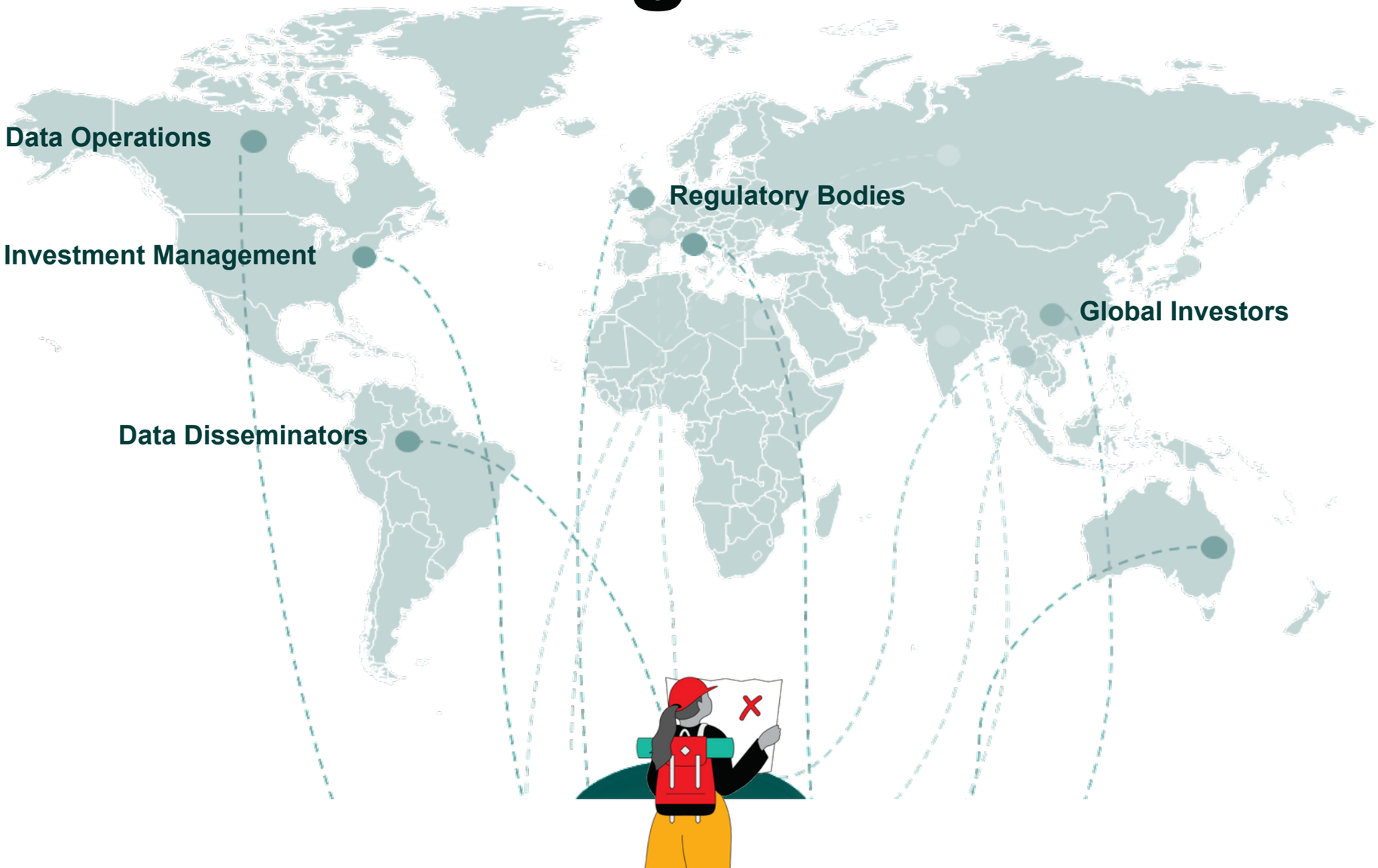
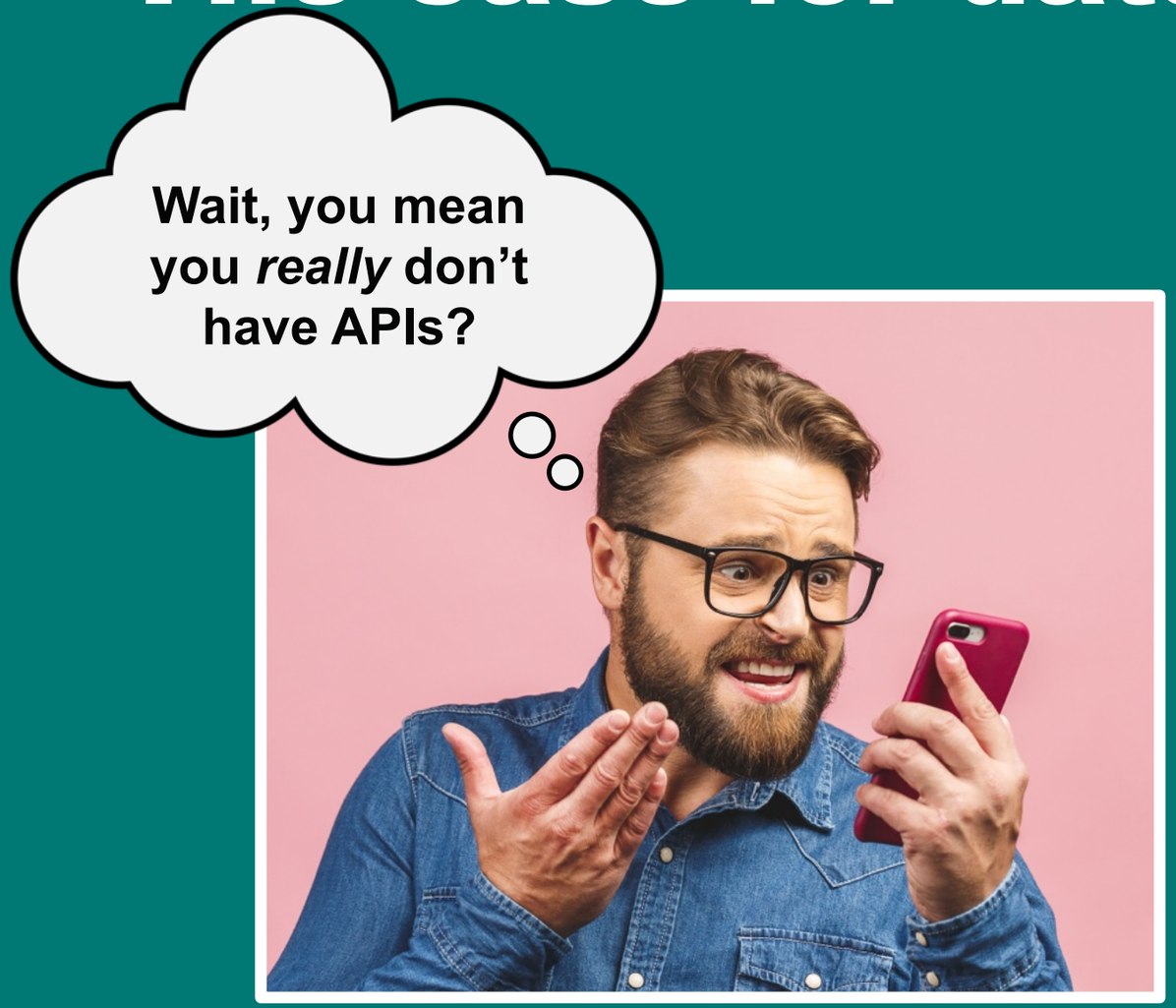


The case for data product maturity



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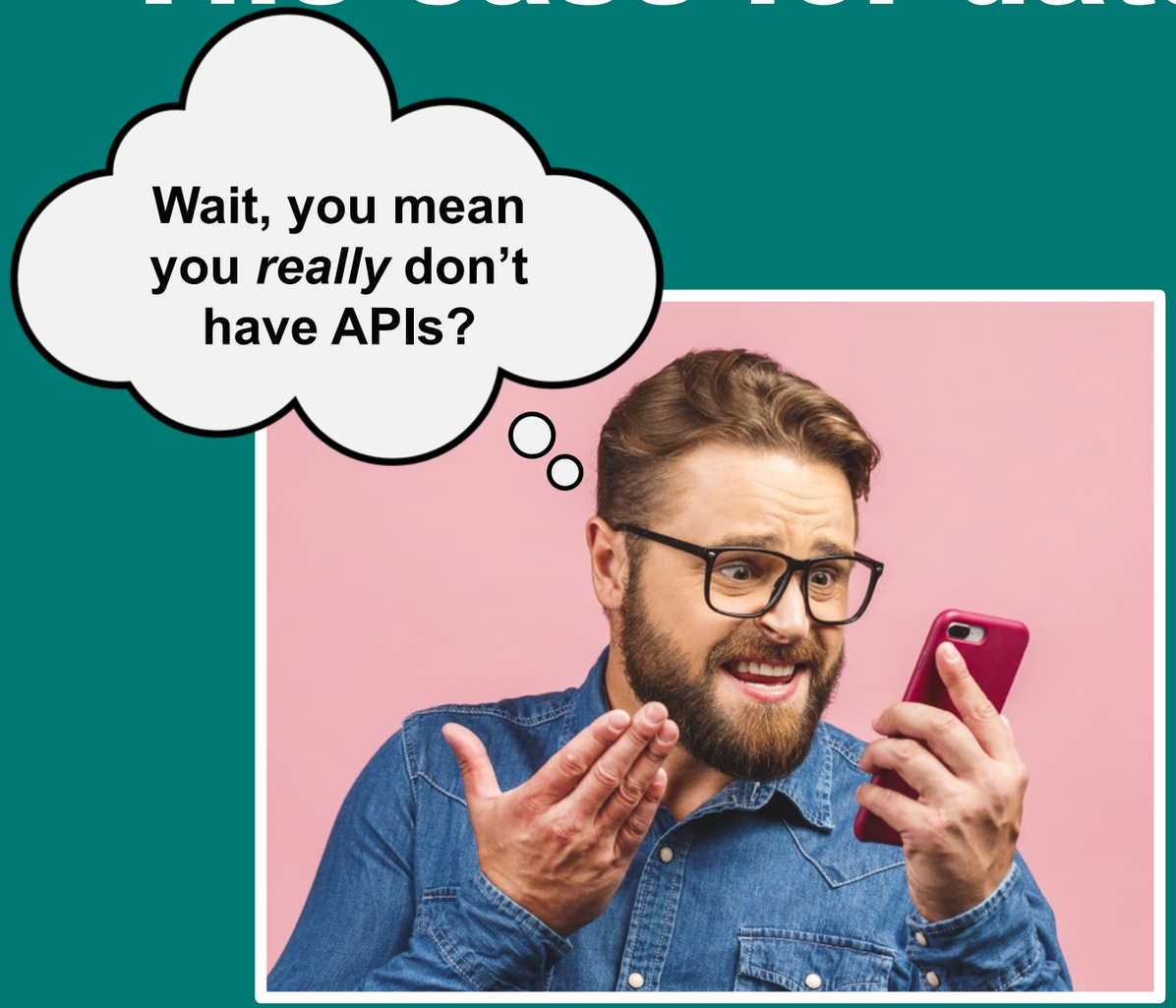

Critic reviews for investment data

I can’t find the data I’m looking for?

Paul Smith
Quantitative Model Developer
★ TOP CRITIC

I can’t join these data sets together!

Christine Chang
Portfolio Manger
★ TOP CRITIC

Global Investment Data Management

50%
Producer score

13%
Consumer score

The quality of this data is lacking.

Amy Nichols
Data Analyst
★ TOP CRITIC

It took too long to get access to the data!

Malik Readdy
AI/ML Developer
★ TOP CRITIC

This data format does not work for me

Fred Patel
Data Scientist
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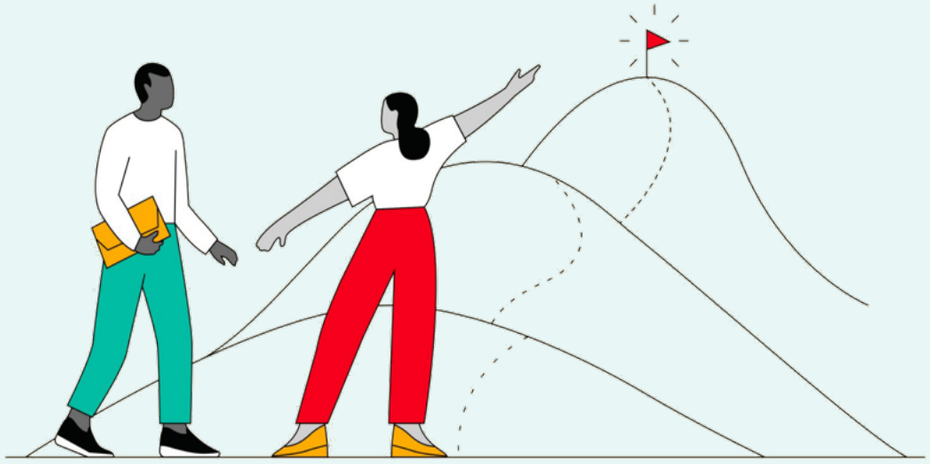
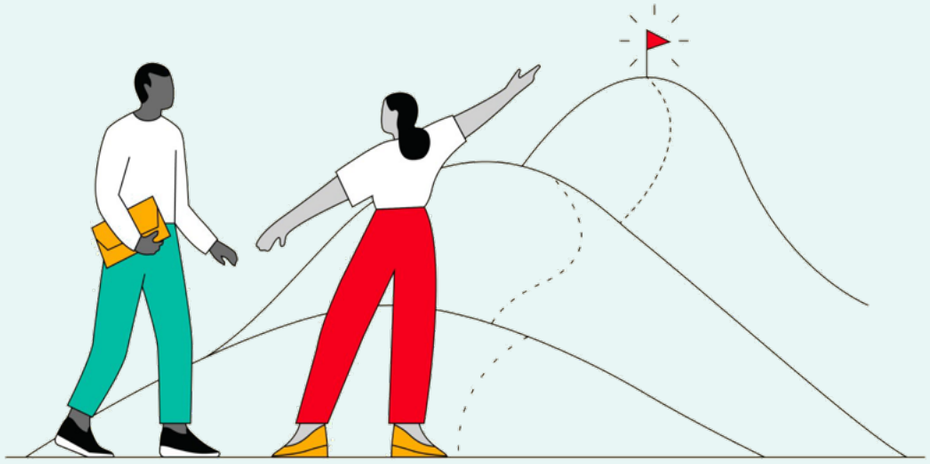
Building a better reputation for investment data



Data strategy	**Data as the system by-product**	**Data as a product**
Architecture	**Monolithic architecture**	**Microservice architecture**
Consumer friendly formats	**Operational vs analytical**	**All use cases welcome**
Consistent product offering	**Differing product implementations**	**Data maturity as a scalable blueprint**

We will treat data as a product and create a roadmap to maturity

Building a better reputation for investment data



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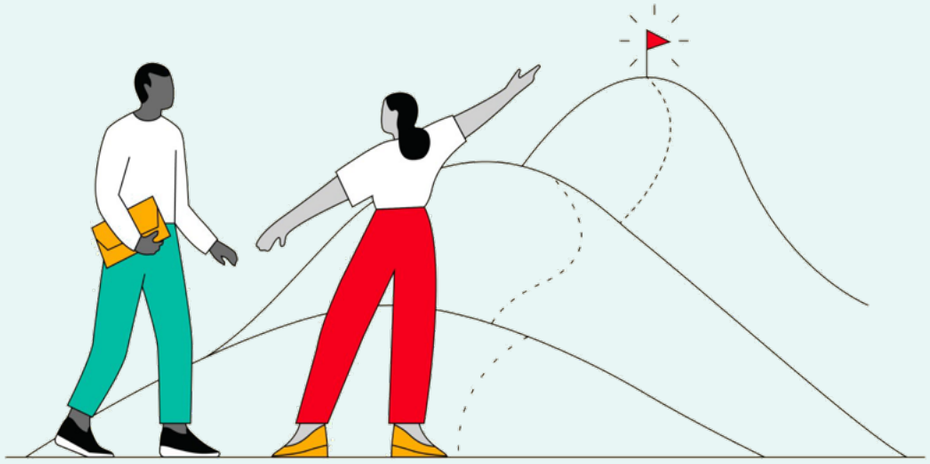

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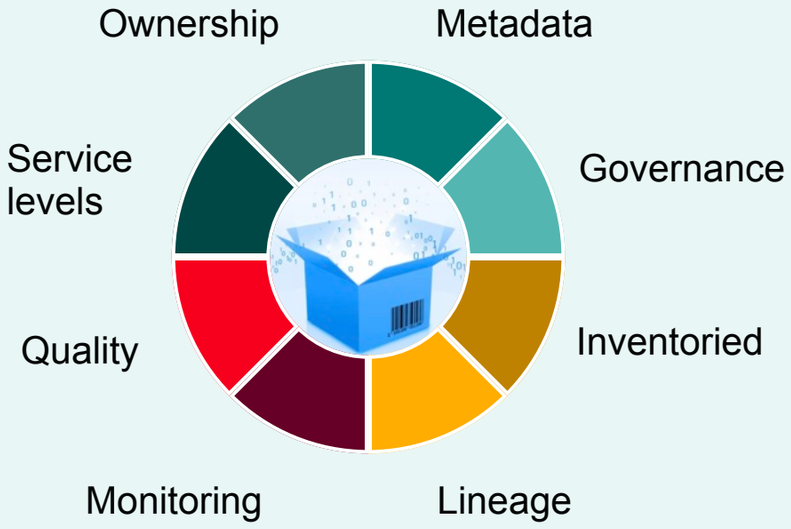
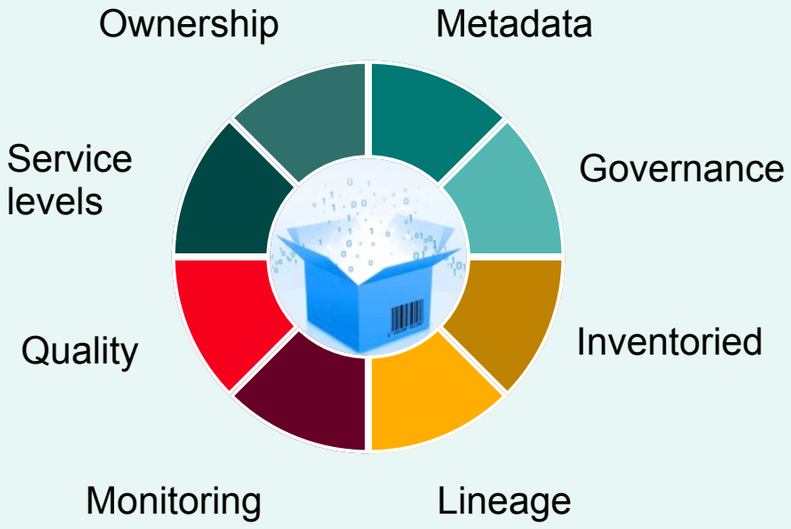
GIDM maturity: A new framework



Mature data product

GIDM maturity: A new framework



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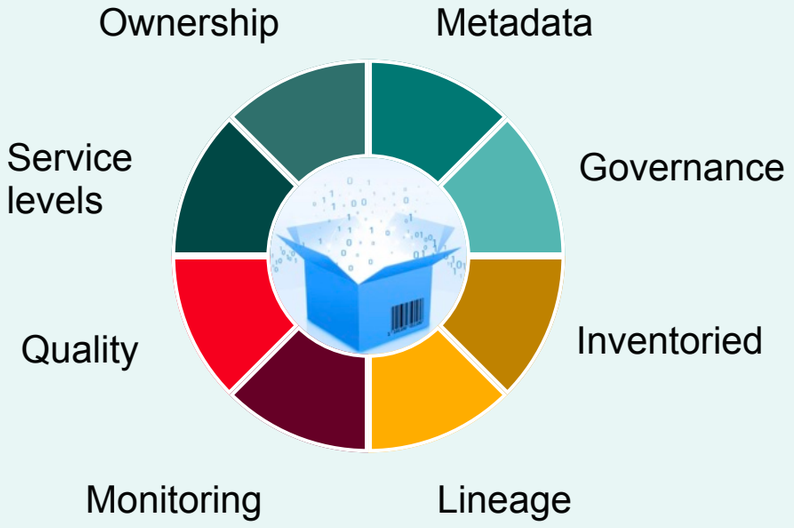


Mature data product

Foundational

- Empowered product owner
- Governed access
- Operational observability
- Raw data format

Enhanced

- Connected metadata
- Consumer data events & notifications
- Available in a marketplace
- Analytic friendly data formats

Mature

- Operational data management
- Globally resilient
- Data streaming
- High-performance analytics

Critic reviews for GIDM data products

Weeks to minutes improvement on speed of data access

Christine Chang
Portfolio Manager
★ TOP CRITIC

Solves SQL problems and is significantly quicker!

Amy Nichols
Data Analyst
★ TOP CRITIC

Global Investment Data Management

90% **Producer score**

87% **Consumer score**

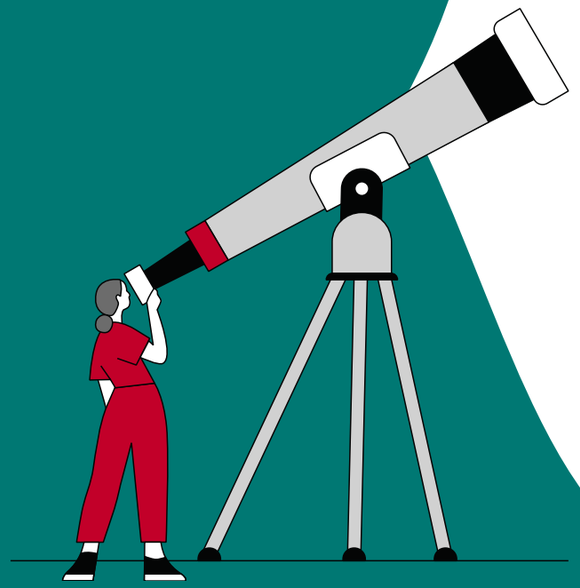
Gold Star for Jupyter Notebook export

Fred Patel
Data Scientist
★ TOP CRITIC

Provide more metadata!

All Users
Analysts, Data Scientists
★ TOP CRITICS

Where are we going next?



Vanguard | DATA EXPLORER

Brian A. Charles

data explorer

Enter search terms separated by comma...

AND

All | Accessible

Favorites

Data products you've saved for quick and easy access.

What's New

Data products most recently onboarded to Data Explorer

Recommended

Recommended data products based on the Data Explorer usage patterns of crew in your department.

Aladdin by BlackRock

Aladdin is the Order Management System for Vanguard's Taxable Fixed Income Portfolios and acts as the Investment Book of Record (IBOR).

Bancs

The Bancs application is used to capture corporate action event information received from custodian banks and IHS Markit for Vanguard's Securities of Interest List (SOI) associated with Vanguard's equity portfo...

Barclays

Barclays currently provides Liquidity Cost Score data at the bond level on a monthly basis. Additional Barclays data sourced outside of the Fixed Income domain could be onboarded at a future date.

Bloomberg

Bloomberg is a global provider of financial market information.

Book of Record

The book of record data domain consists of data products for both the accounting and investment books of record, including: Positions and transactions (ABOR and IBOR) and general ledger and tax lots (ABOR only)...

CMG

Capital Markets Gateway (CMG) provides deal offering data for allocation, offerings (initial and follow-on), and high-level issuer for US ECM (Equity Capital Market) transactions. History from 2011 is available...

CRIMS

Charles River system data representing back office reconciliations and compliance for positions and cash as well as Fixed Income Muni EOD and SOD data, including positions, SRM and analytics.

The help we're looking for:

Custom implementation stories about…

Data mesh and data marketplace

Knowledge graphs

Semantic layers