



HOW TO EFFECTIVELY MANAGE
BIG DATA + AI
IN A SMALL TEAM

A StarHub Story

Victor Chua - Principal Data Scientist - StarHub Ltd.

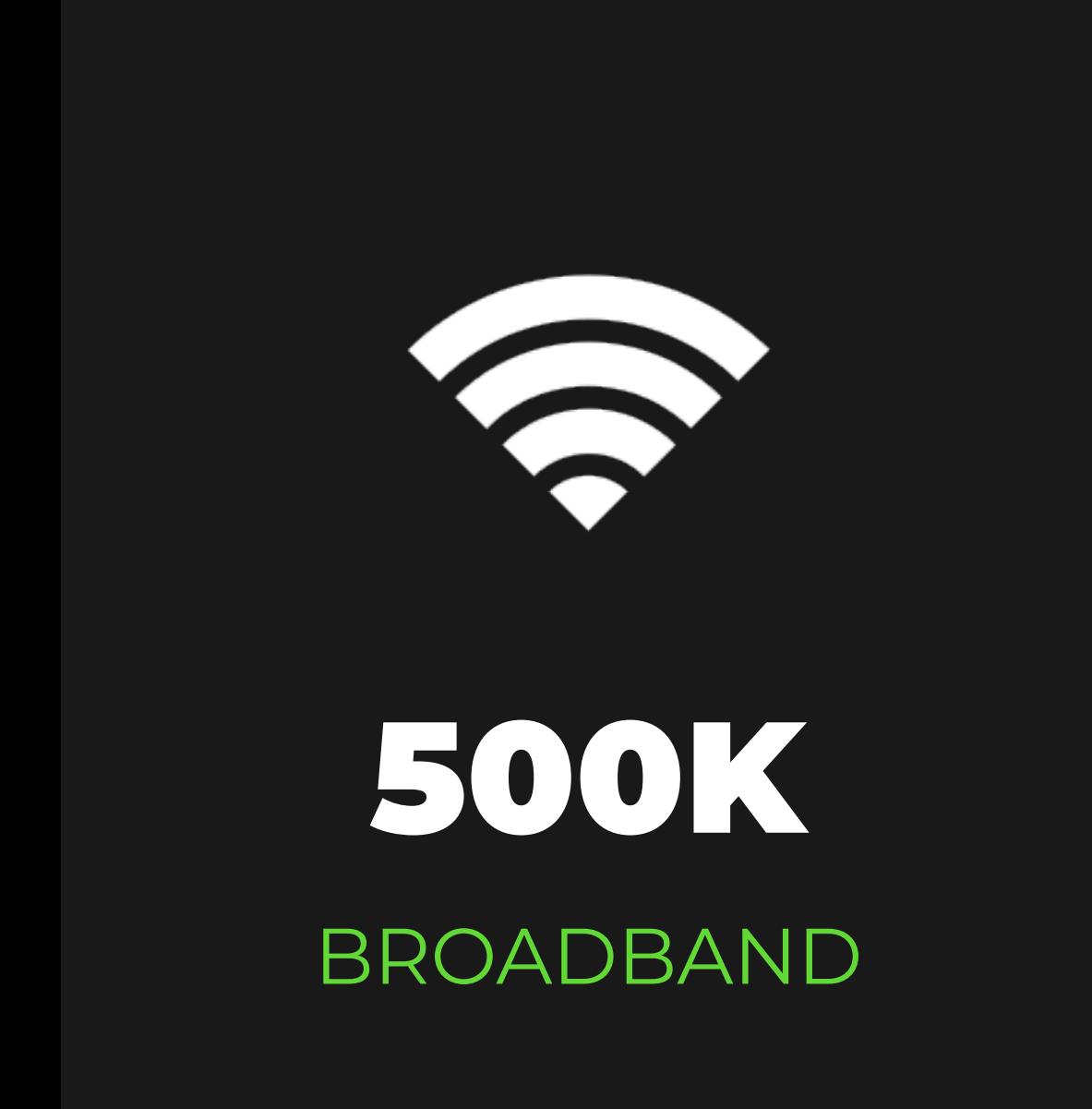


HOW TO MAKE A BIG IMPACT IN **BIG DATA + AI**

WITH A SMALL FOOTPRINT

A StarHub Story

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CUSTOMER BASE





2.2 Million

MOBILE



500K

BROADBAND



350K

PAY TV



ENTERPRISE

CUSTOMER BASE

 **StarHub**

SMARTHUB?

A **Knowledge-as-a-Service (KaaS)** for enterprises.

Our Mission:

To help enterprises drive tomorrow's business innovations
via Telco insights



Multiple Live Data Sources

Billions of records per hour

>10 Terabytes of data / day



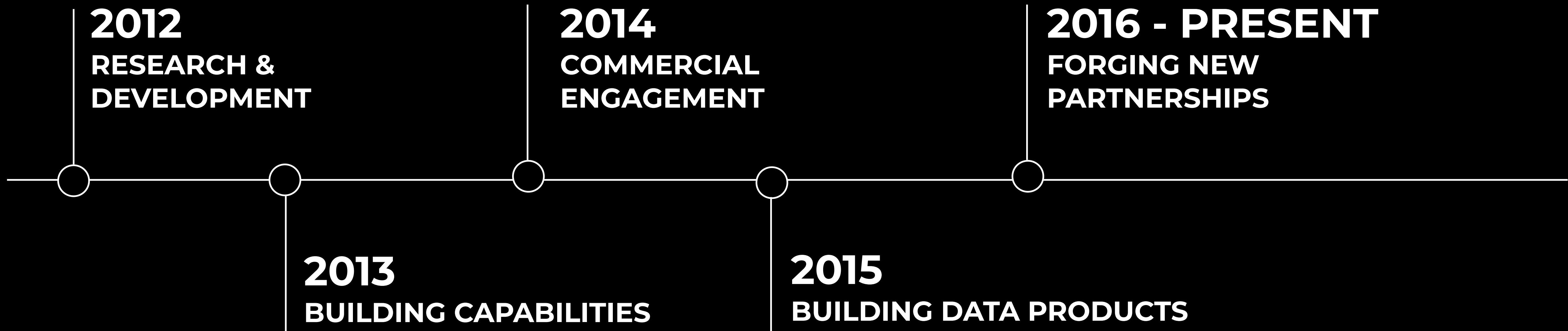
Multiple Live Data Sources

Billions of records per hour

>10 Terabytes of data / day



SMARTHUB'S JOURNEY



DeepSense
LifeSphere



Consumer360

Consumer Intelligence

Who are your consumers?

Demographics & psychographics



Grid360

Geo-location Intelligence

Where do they come from?

Mobility & dwell patterns

DeepSense

Online Analytics

What are their online interests?

Online footfall & behaviours

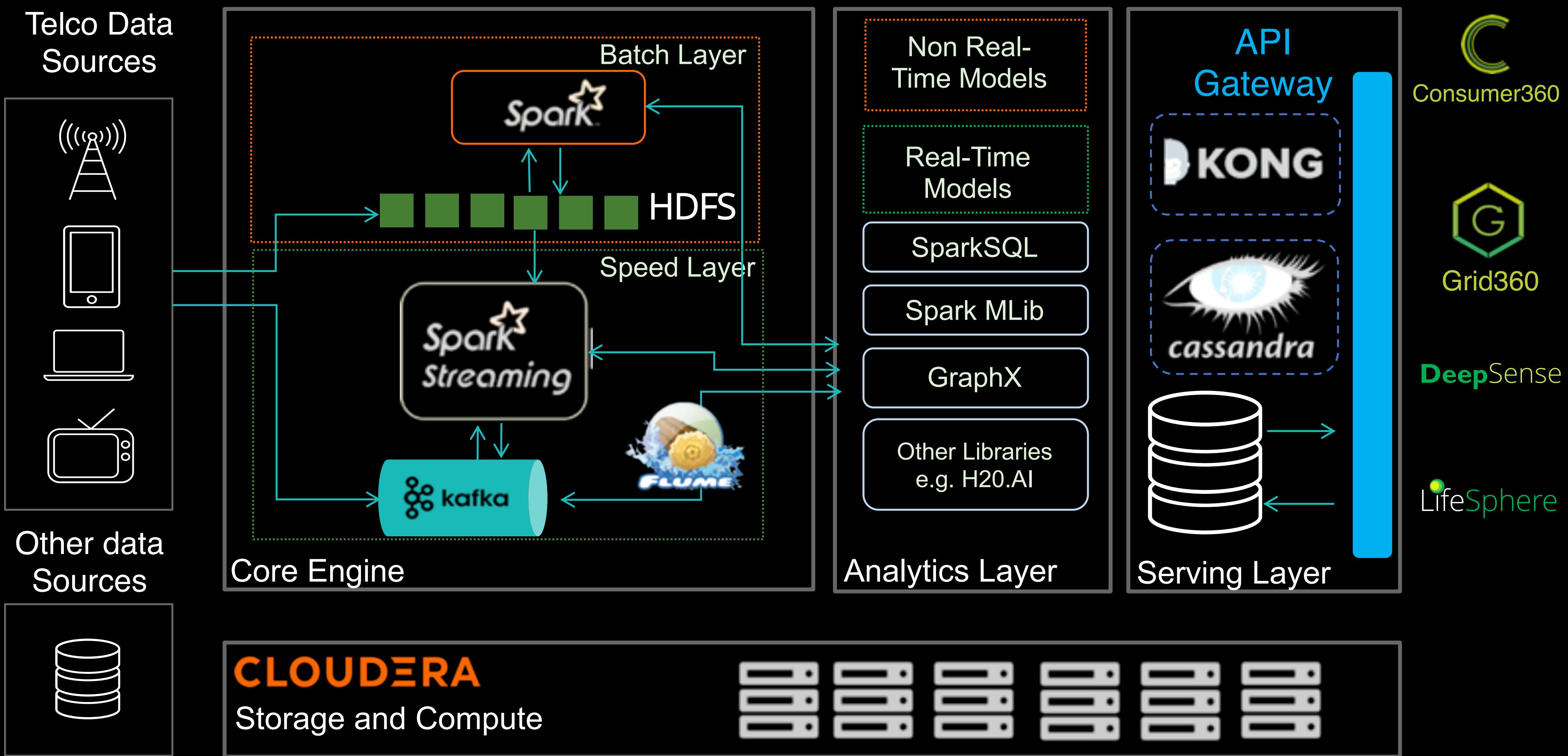
LifeSphere

Nano Segments

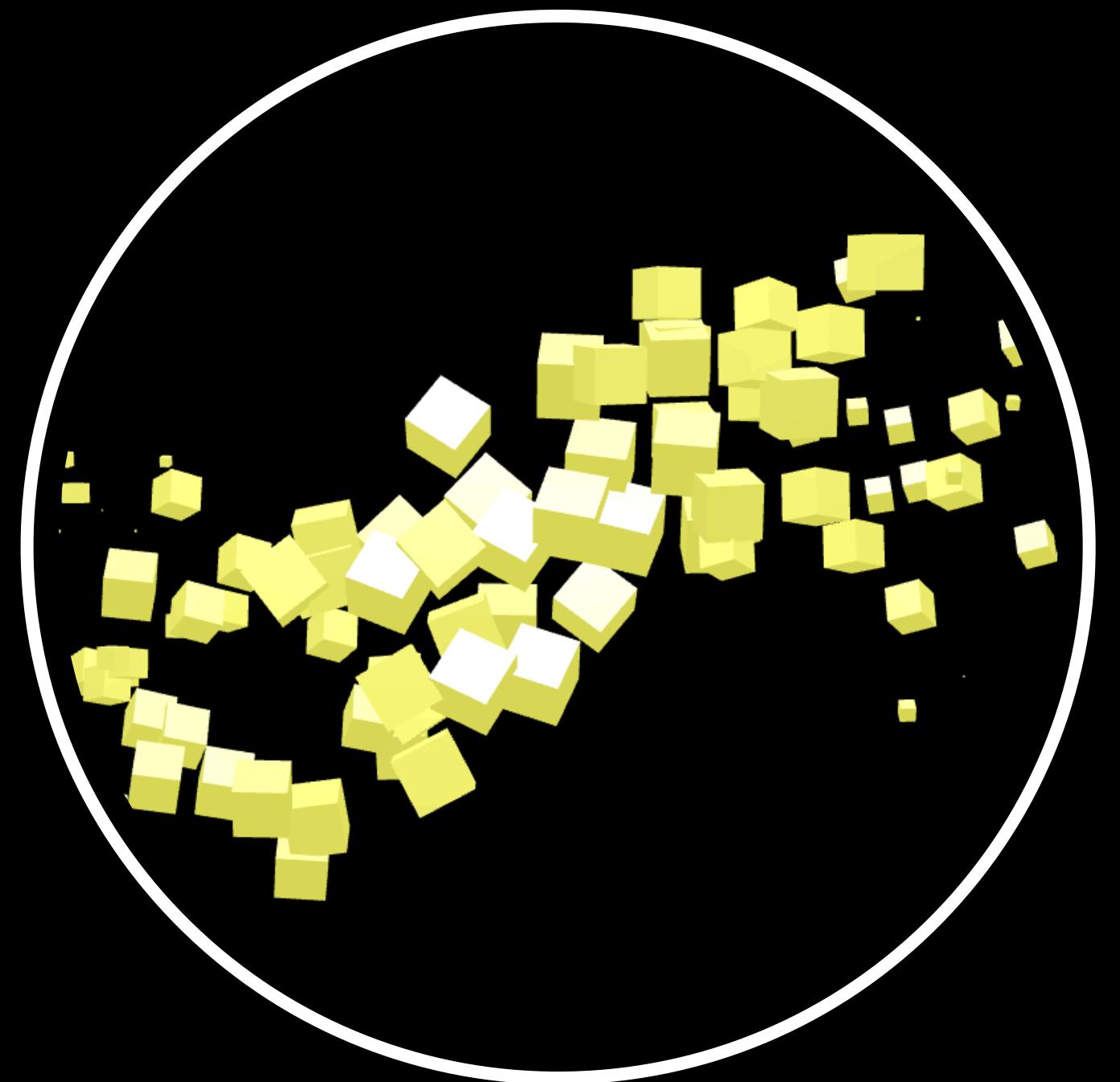
What are the niche segments?

Patterns of life & unique appeals

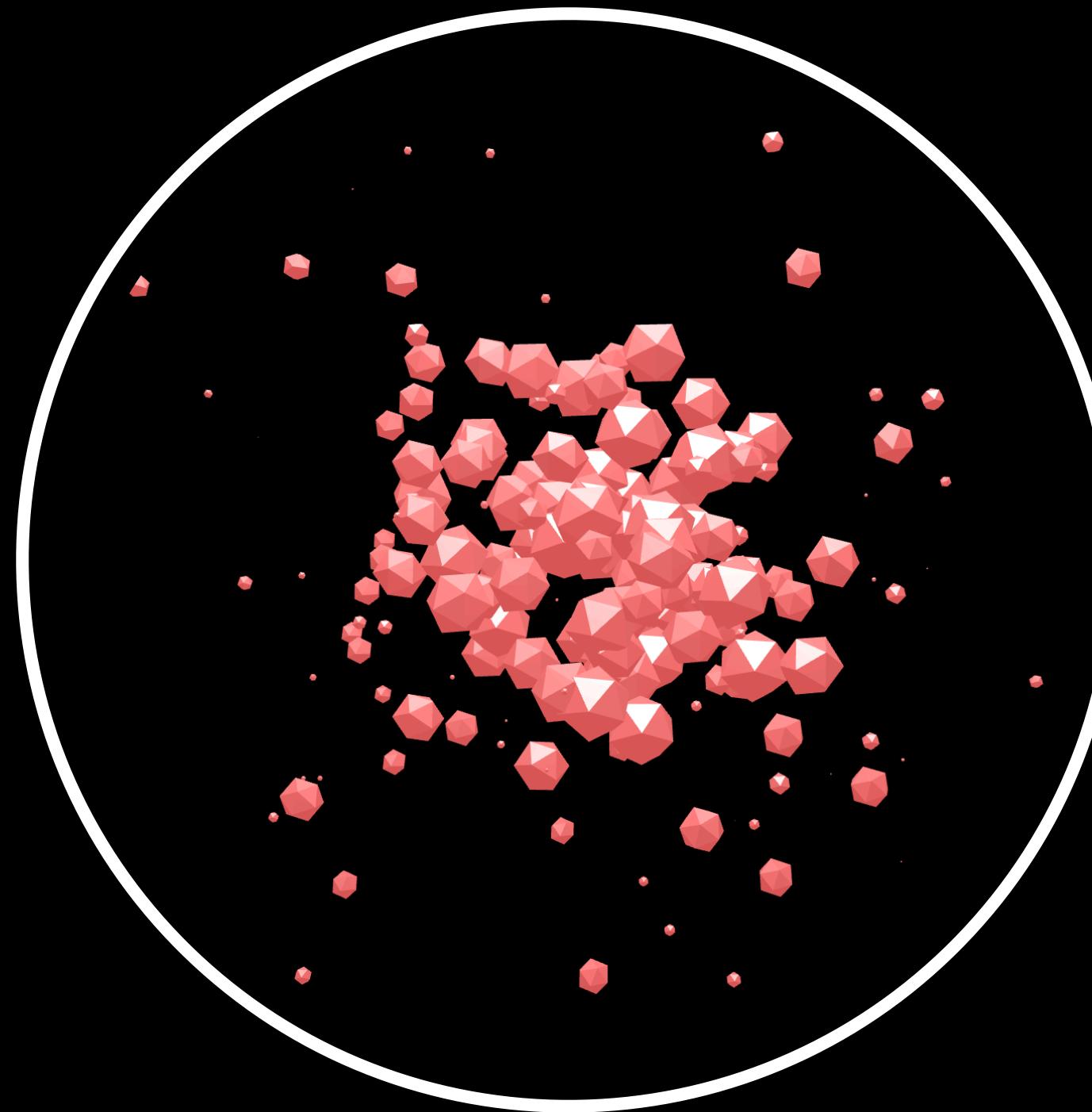
BIG DATA ARCHITECTURE



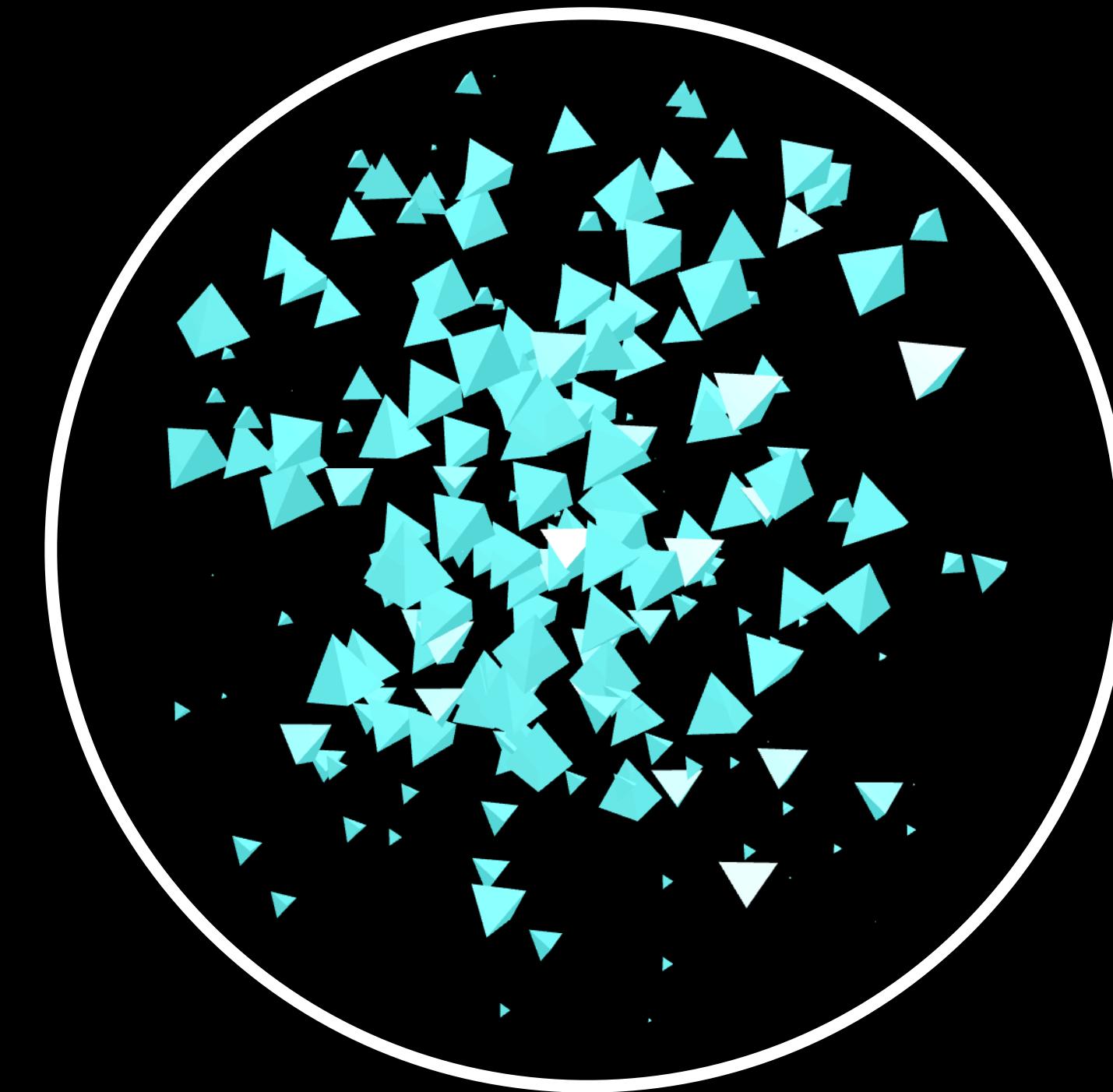




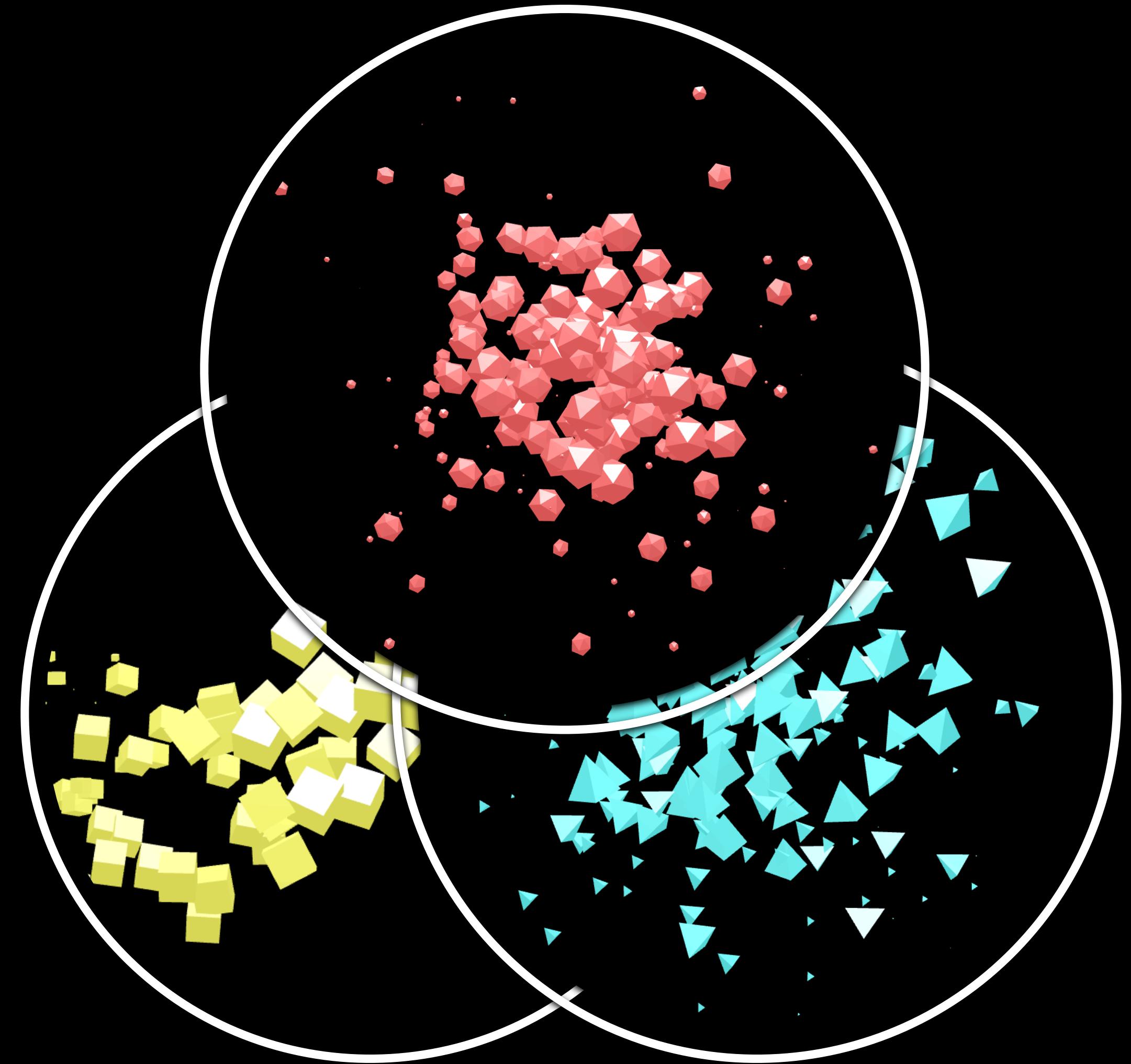
People



AI

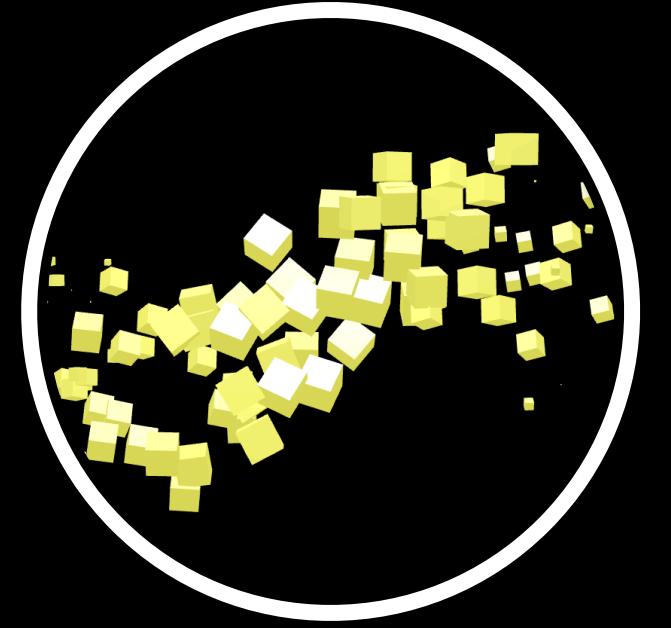


Big Data

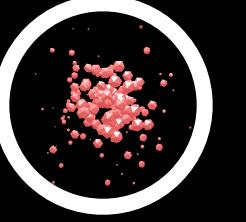




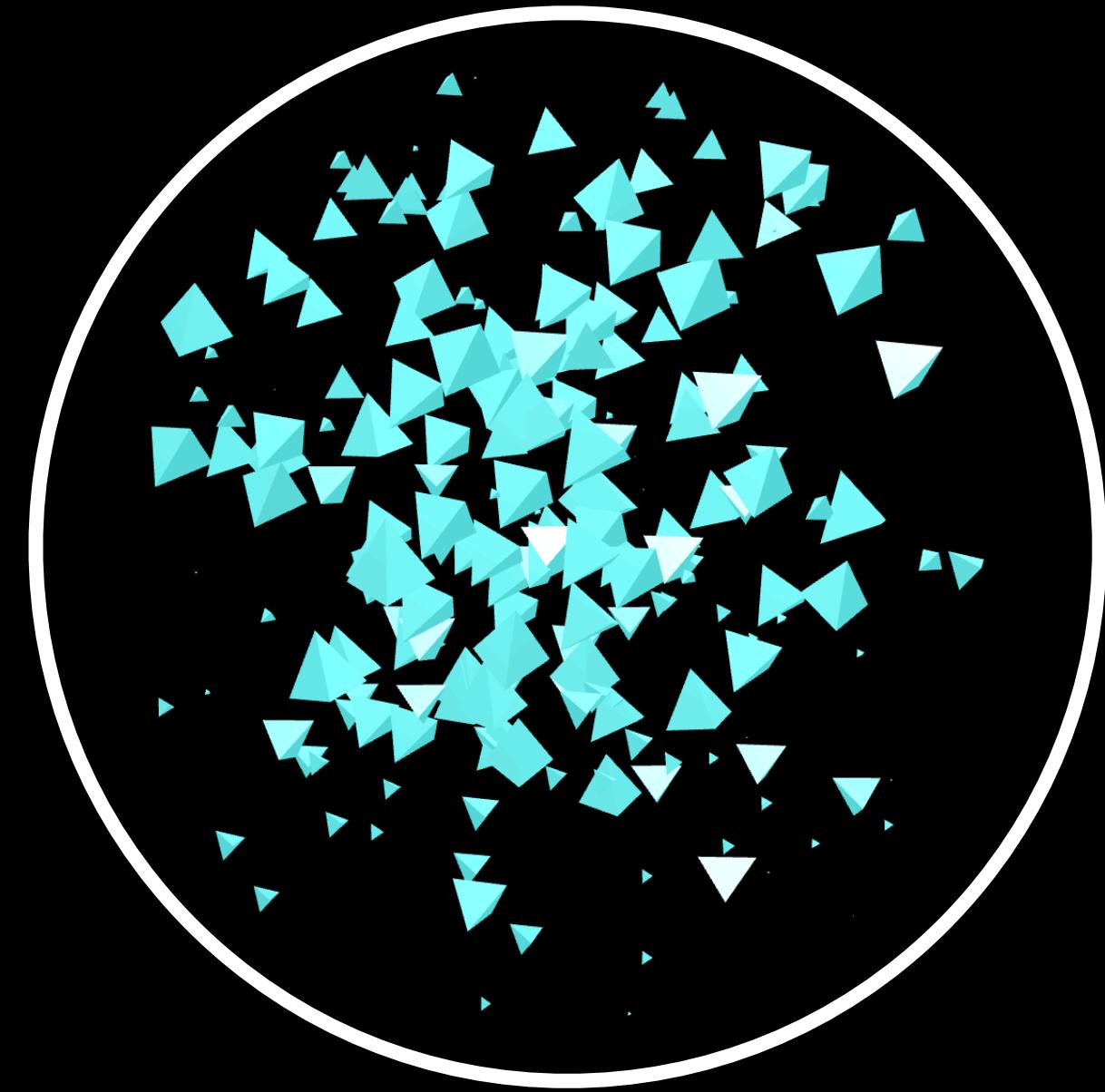
**EVERYTHING
OPTIMIZED
& SOLVED?**



People



AI



Big Data

THE STORY NOW BEGINS ...

SMALL FOOTPRINT

BIG IMPACT

BIG FOOTPRINT

SMALL IMPACT

BIG FOOTPRINT

DATA HOARDING

FANCY AI MODELS

REAL-TIME

SMALL
IMPACT

Want “interesting” insights

Unprepared to effect change

Accuracy != Returns

SMALL FOOTPRINT

DATA GREENERY ~~DATA HOARDING~~

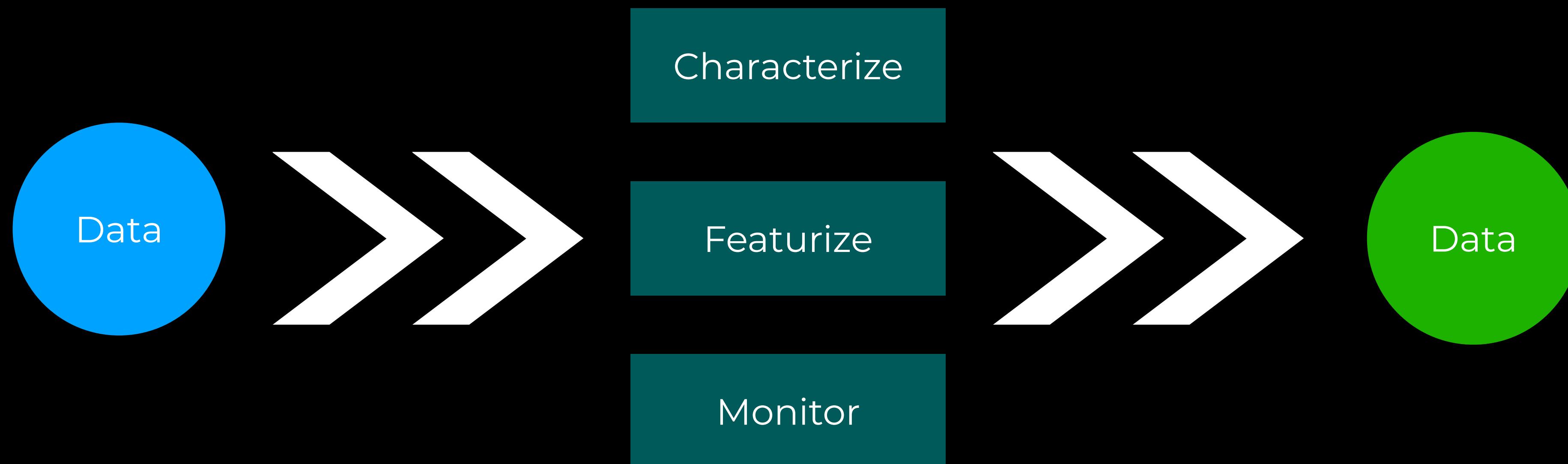
One central source of data that has been thoroughly explored, cultivated and appraised for its usefulness in every dimension

All characteristics of the data must be visible to everyone in the team

All feature engineering of the data should be done in a unified fashion

SMALL FOOTPRINT

DATA GREENERY ~~DATA HOARDING~~



SMALL FOOTPRINT

COST-EFFICIENT AI MODELS

~~FANCY AI MODELS~~

Simple, quick-to-train models come first. Iterate quickly.

Adapt existing AI models as much as you can.

AutoML possible? DO IT.

State-of-the-art AI models in training time? Try them out!

SMALL FOOTPRINT

JUST-IN-TIME

~~REAL TIME~~

Evaluate carefully if the use case requires real-time.

Aim to pace it out as slow as you can go before the insight is required.

If required, the definition of “real-time” needs to be set with the stakeholders.

BIG IMPACT

Customer Journey

~~Want “Interesting” Insights~~

~~Unprepared to effect change~~

~~Accuracy != Returns~~

Spend time or even host a workshop with the customer

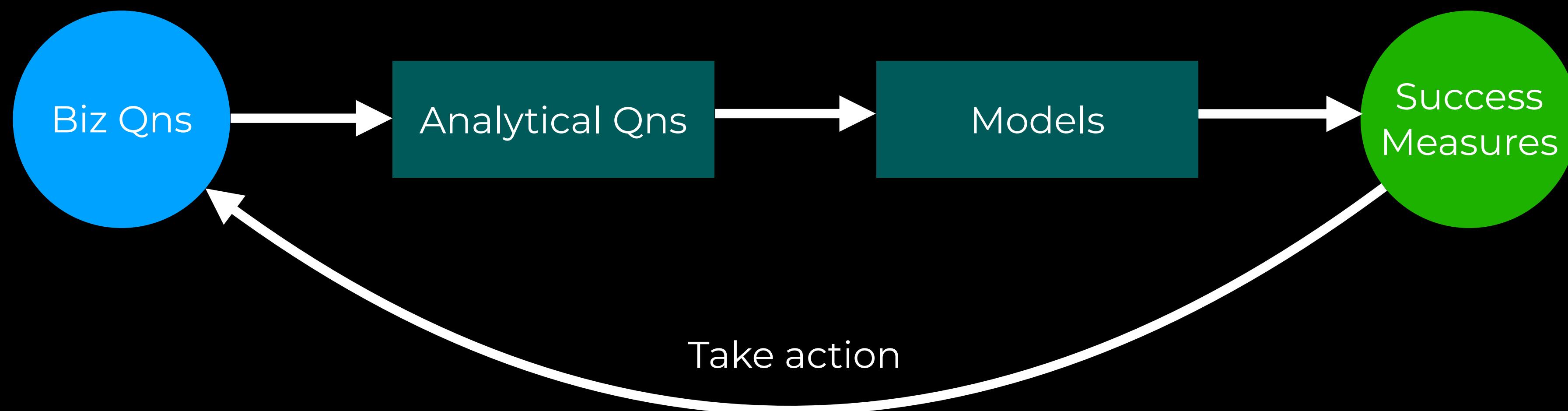
Successful insights are the ones that answer the business question

Behind every business question is a pain point

BIG IMPACT

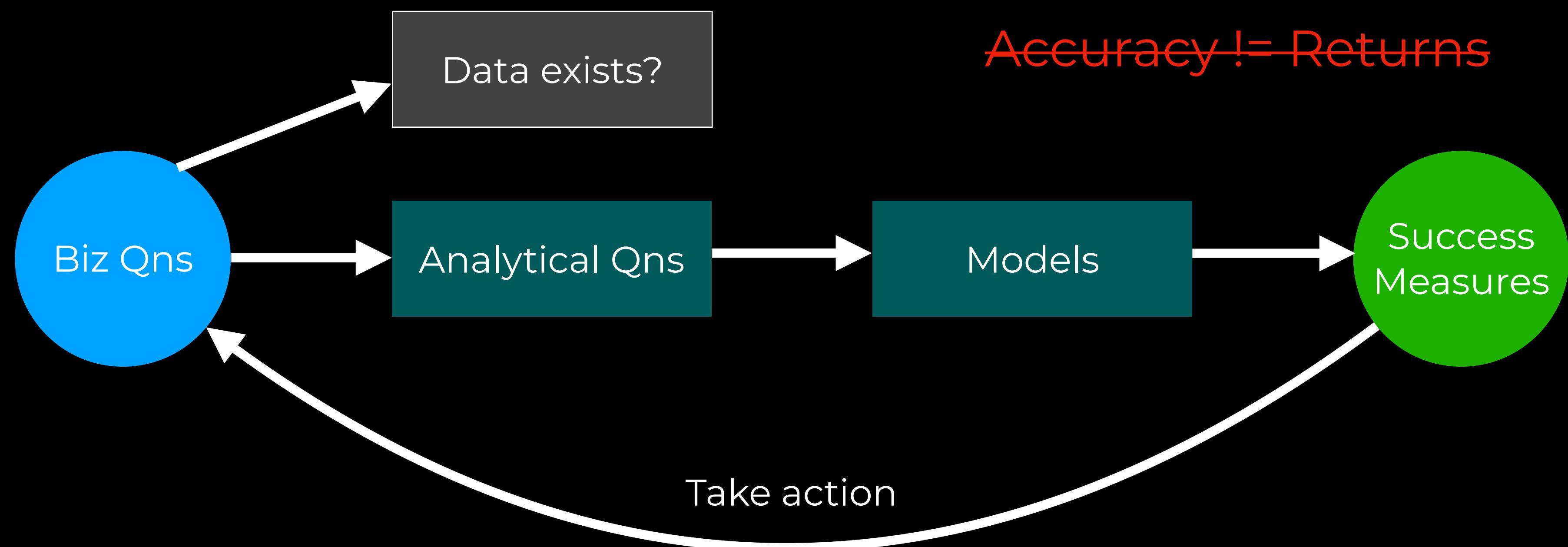
Customer Journey

~~Want “Interesting” Insights~~
~~Unprepared to effect change~~
~~Accuracy != Returns~~



BIG IMPACT

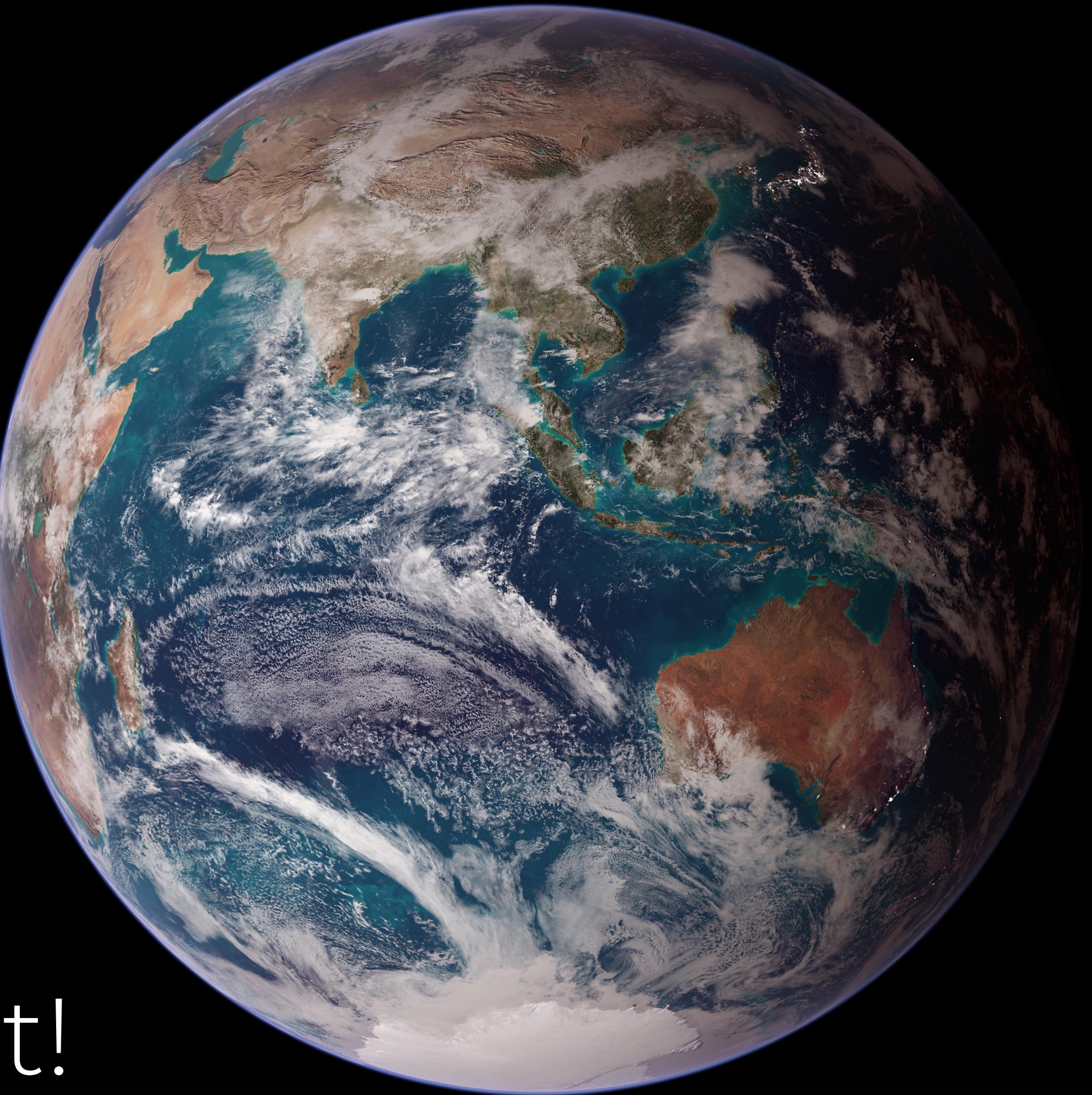
Customer Journey



WHAT DOES
MAKING A BIG IMPACT IN
BIG DATA + AI
WITH A SMALL FOOTPRINT
LOOK LIKE?

Two Overseas Pilots
Two Countries
Two Weeks

Unseen data
Rapid deployment
Commercial interest!



SUMMARY

VALUE OF DATA

BE AI AGILE

THANKS!

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