ATSCALE

How to Create & Foster a Data-Driven Culture

Today's Speakers

Chris Ling

Director of Data Platform and Analytics
Kolibri Games GmbH

Chris currently works as the Director of Data Platform and Analytics at Kolibri Games GmbH. He brings his expertise of Data Analytics, Business Intelligence, Statistics and Game Development to his professional work, allowing teams to make quick, insightful and effective decisions.

In his prior role as Head of Game Data, he built his team from the ground up, including hiring and management of new hires, as well as training stakeholders how to use their data, and transformed Kolibri Games to a data driven gaming company.

Gokula Mishra

VP of Data Science
Direct Supply

Gokula is a senior executive with experience in designing and implementing business-driven IT strategy, Enterprise Information Management (EIM) strategy, big data and business analytics architectures and solutions with an equal depth and breadth of insight in business as well as in IT.

He has designed, managed and delivered IT solutions for large global companies including implementation, custom software development, Enterprise Application Integration, Big Data/Business Analytics and enterprise application maintenance & support.

Mark Stern

VP of Business Intelligence & Analytics
BetMGM

Mark has 16 years experience within the online gaming industry, and 20+ years background in Analytics, Business Intelligence, IT, CRM, project portfolio management, programme/project management, post-merger integration, and Big Data.

He specializes in analytics and Data driven insights to disrupt and transform decision making across various business domains to deliver profit or mitigate risk.

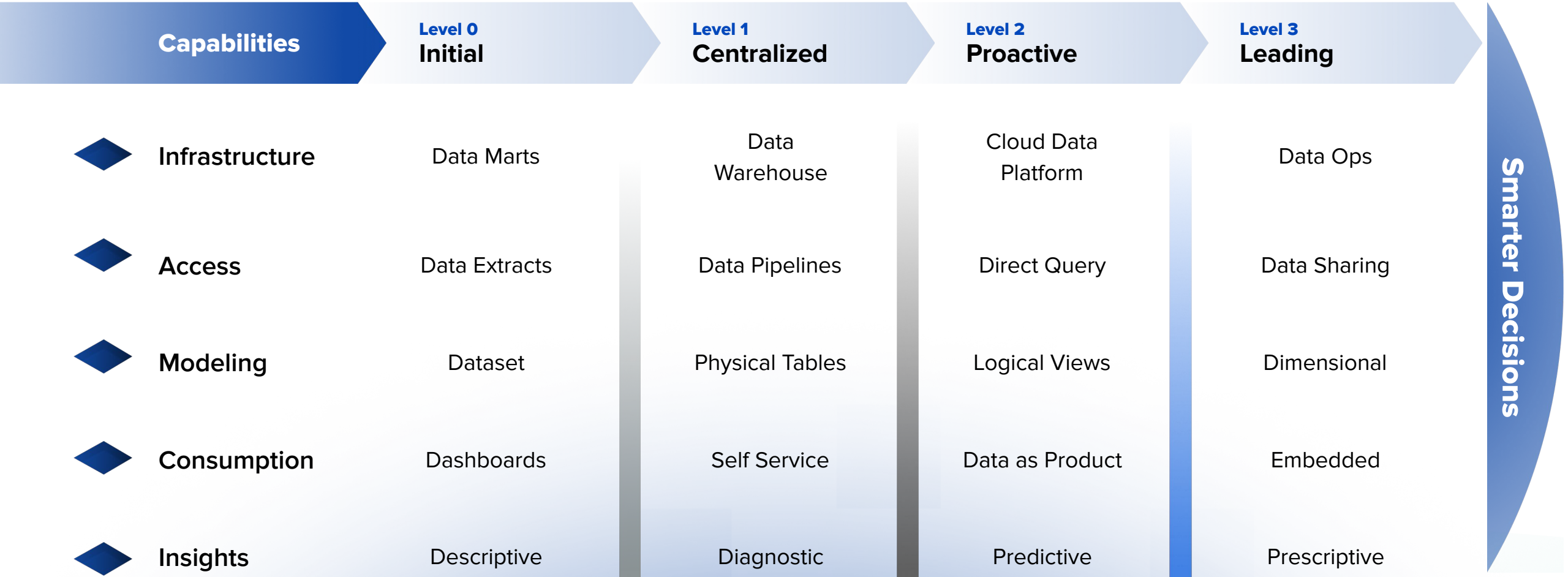
Jon Francis

Chief Data & Analytics Officer
PayPal

Jon currently works as the CDAO of PayPal. He is a seasoned analytic executive with over 25 years of experience across a variety of verticals, as a practitioner, thought leader, and a leader of people.

In his past role as the Chief Analytics Officer at Starbucks, he led their analytic and data strategy, data science, and market research for the enterprise – with specific support for customer, marketing, digital, pricing, product, partner, ops services, and store.

Data & Analytics Maturity Model



Data can unlock Our Games' unused potential

In the past, we used data for ~10% of our product decisions

- We used a "gut feeling" what could work and what not
- We were observing the competition and adapted accordingly
- We used community feedback to adjust the game and produce new ideas

We wanted to use data for ~90% of our product decisions at the end of 2020

- Use data to explore possibilities of new features and prioritize them
- Back up our decisions with data points
- Use data to verify our decisions

We still need to use our gut feeling and community feedback to come up with ideas but this needs to be backed with data then

Kolibri Games and Data 2020

30+ Dashboards built

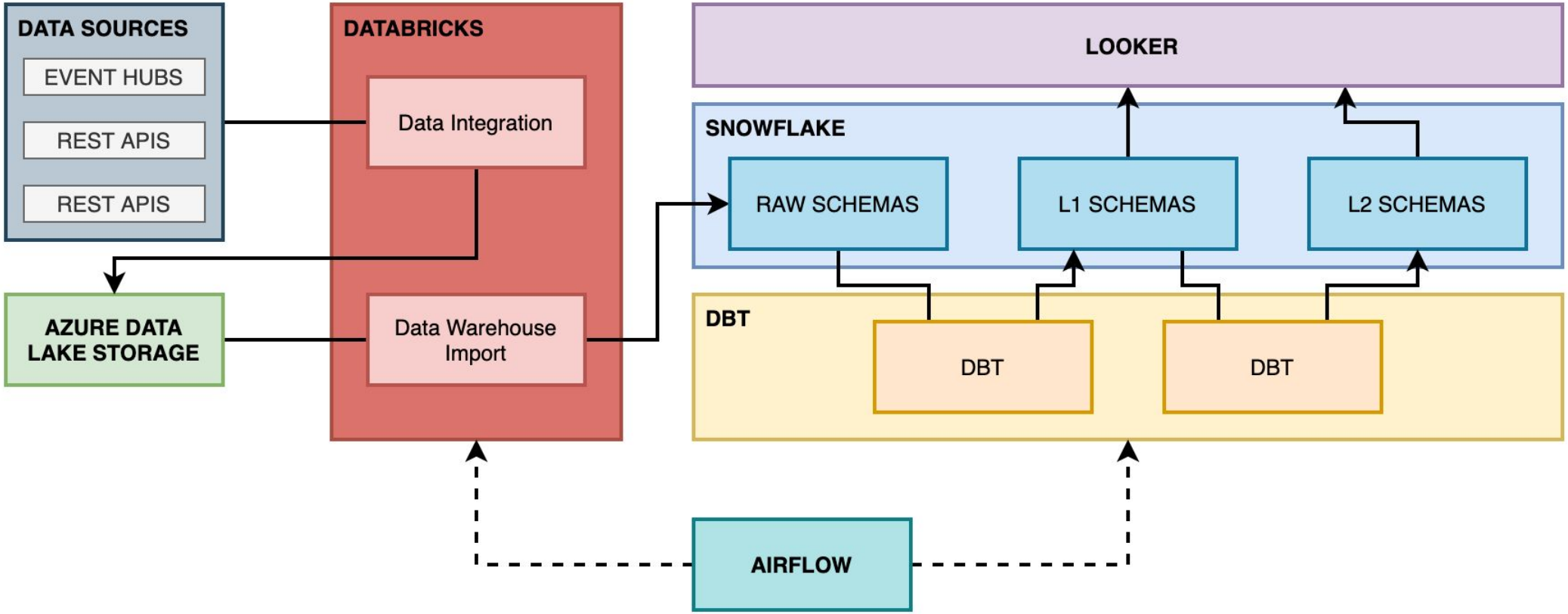
3 AI Models trained and live

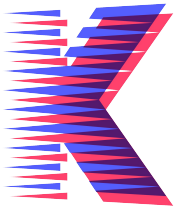
23 A/B tests conducted

81% of our decisions are backed with data

30+ customizations to personalize game experience

Our High-Level Architecture



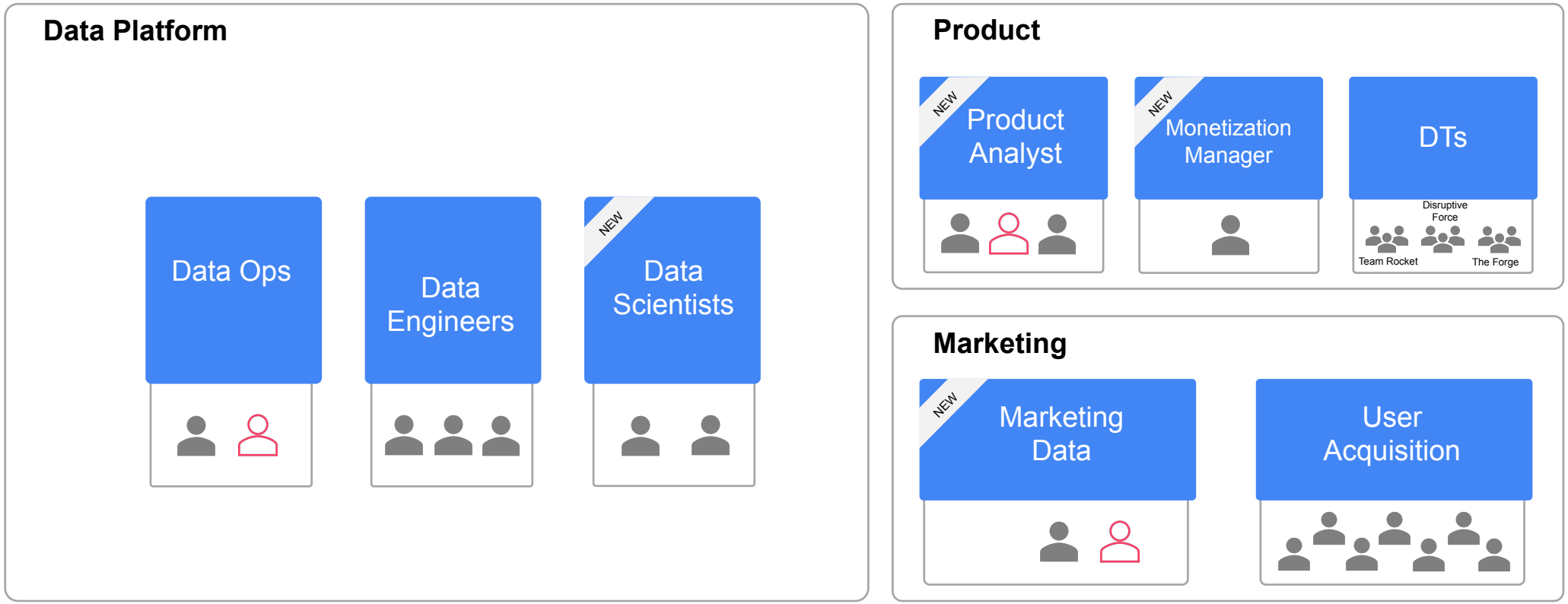


STATUS QUO

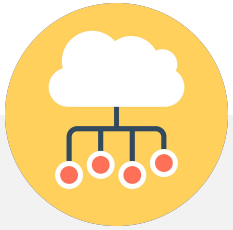
DATA TEAM STRUCTURE

Positions we already staffed

Positions we still need to staff



RESPONSIBILITIES



Data Platform

- Enabling
- Coaching
- Guiding
- Consolidating

Product

Product Analyst

- Analyze
- Recommend
- Process

Product Manager

- Interpret
- Decide
- Process

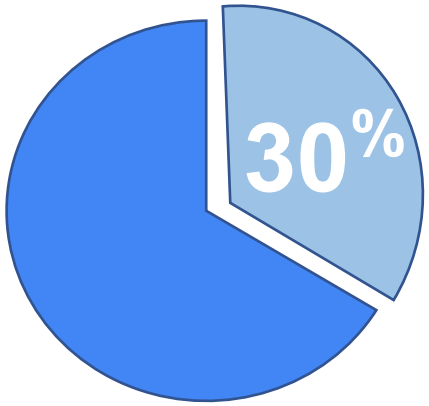
A/B Testing

Insights

CRM

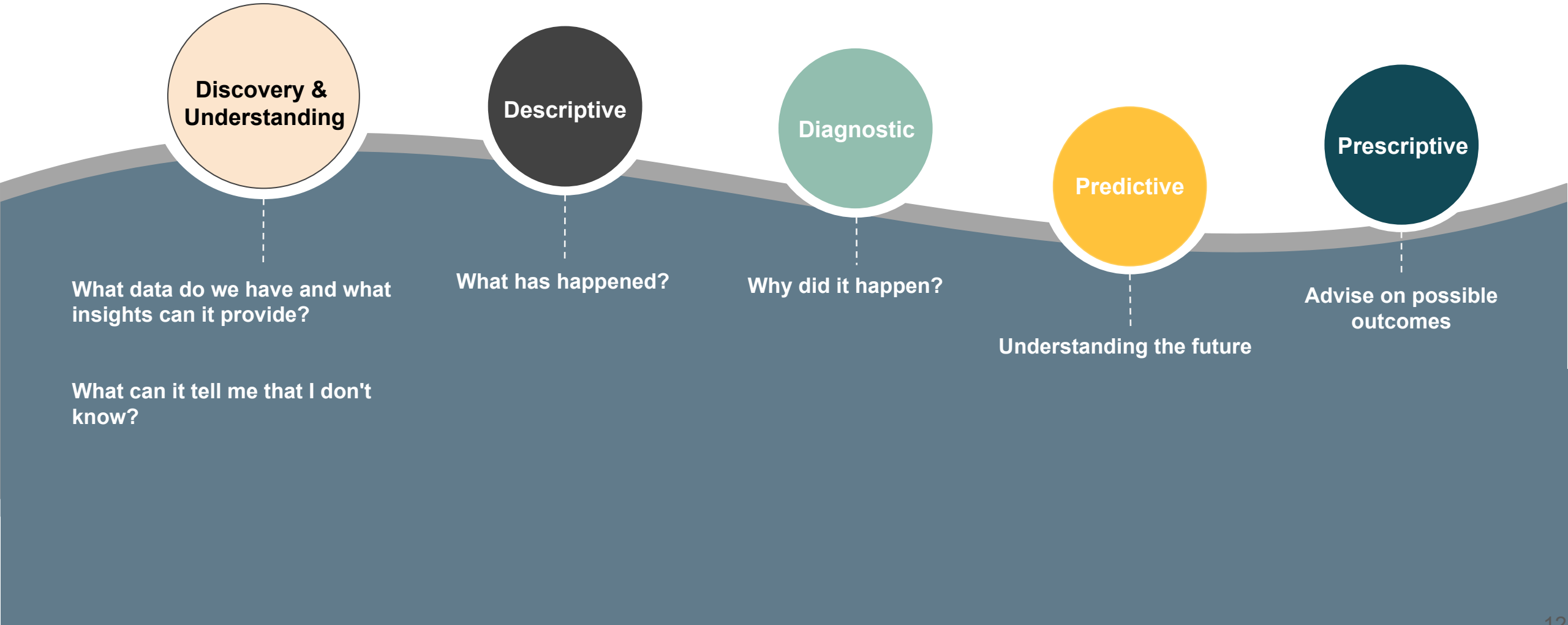
Predictive Analytics

We need to leverage all our data...

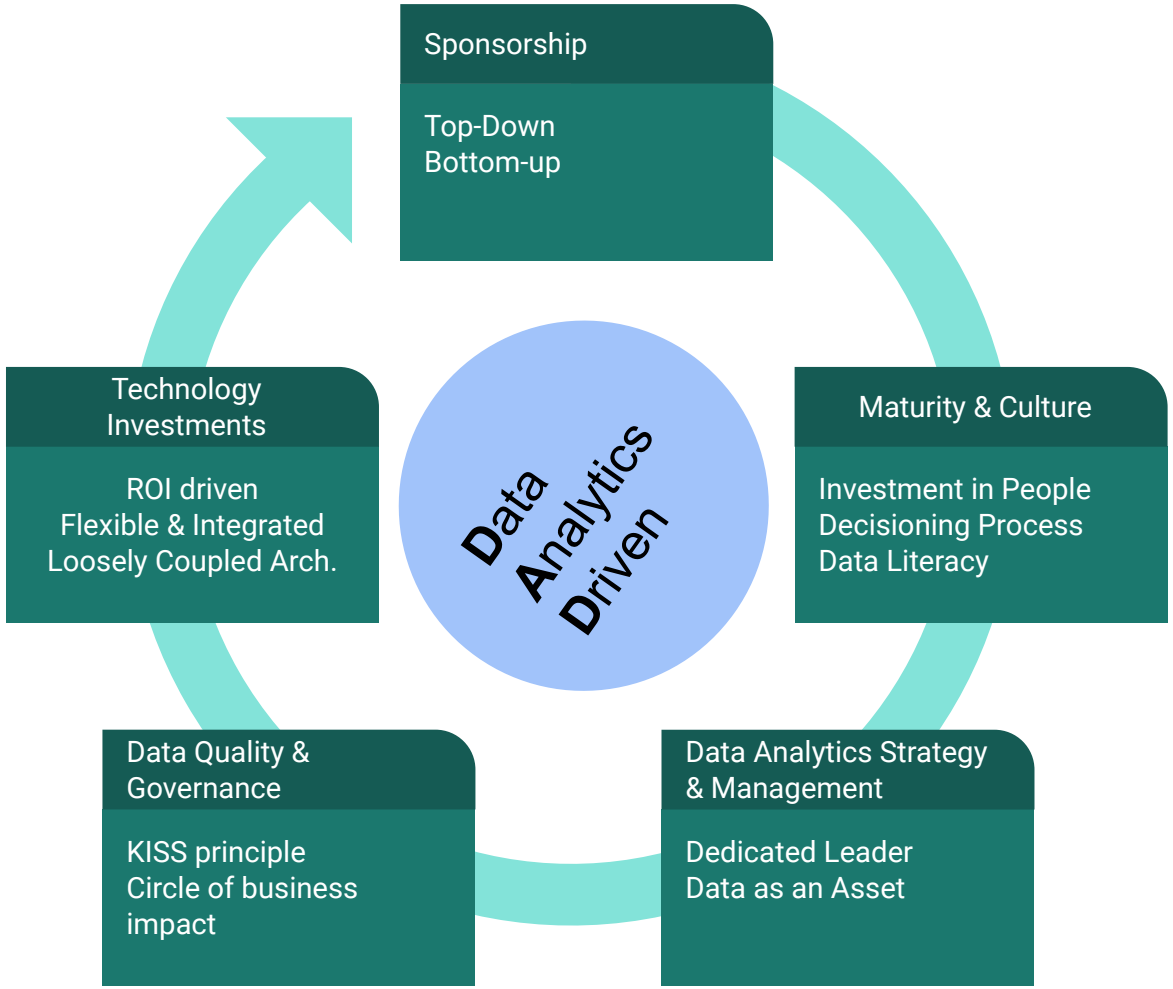


In 2019, 30% Executives who feel they understand the impact data will have on their organizations (up from 12% in 2012)

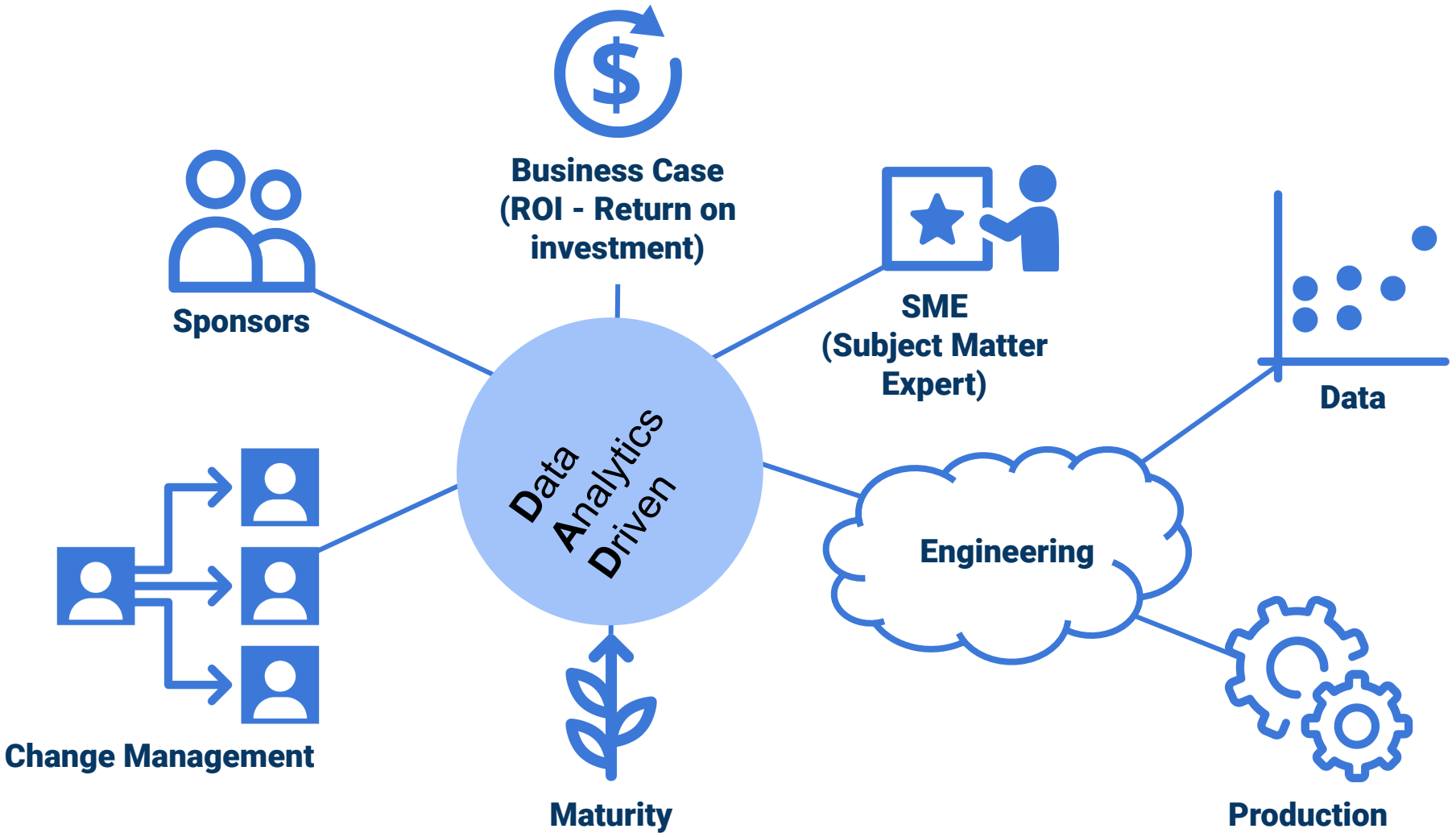
We need to drive value in many ways…



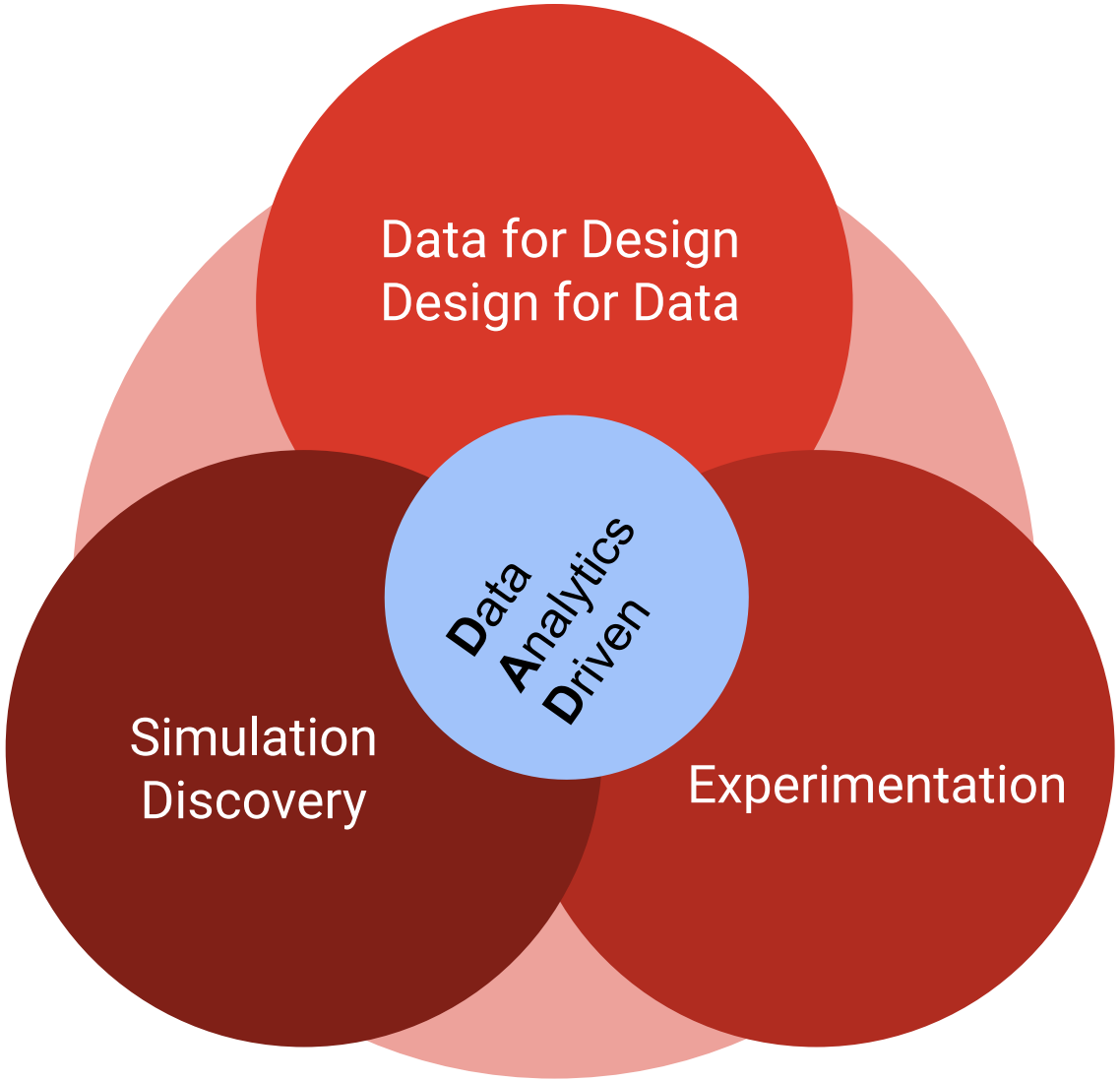
Key Factors...


Sponsorship
Top-Down
Bottom-up
Maturity & Culture
Investment in People
Decisioning Process
Data Literacy
Data Analytics Strategy & Management
Dedicated Leader
Data as an Asset
Data Quality & Governance
KISS principle
Circle of business impact
Technology Investments
ROI driven
Flexible & Integrated
Loosely Coupled Arch.
Data Analytics Driven

Achieving Success is a team sport…



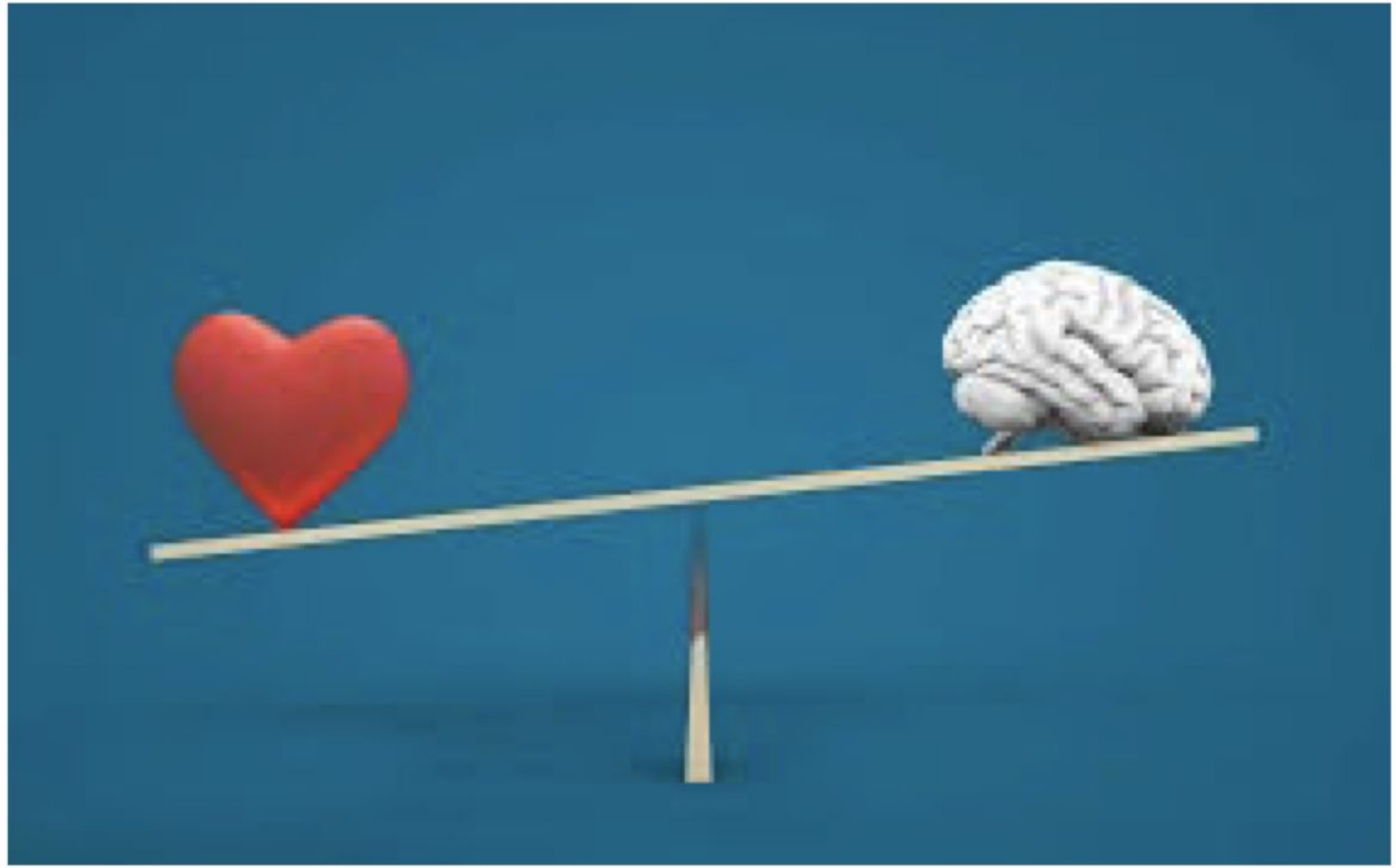
Maturity enablers...



Agenda

- ❑About Me and My Teams
- ❑Data and Analytics vs Gut feel
- ❑Data is Dumb, so where's the value
- ❑We now have an amazing data product & data sharing capability, why is there is a problem!
- ❑A Message to leave you with

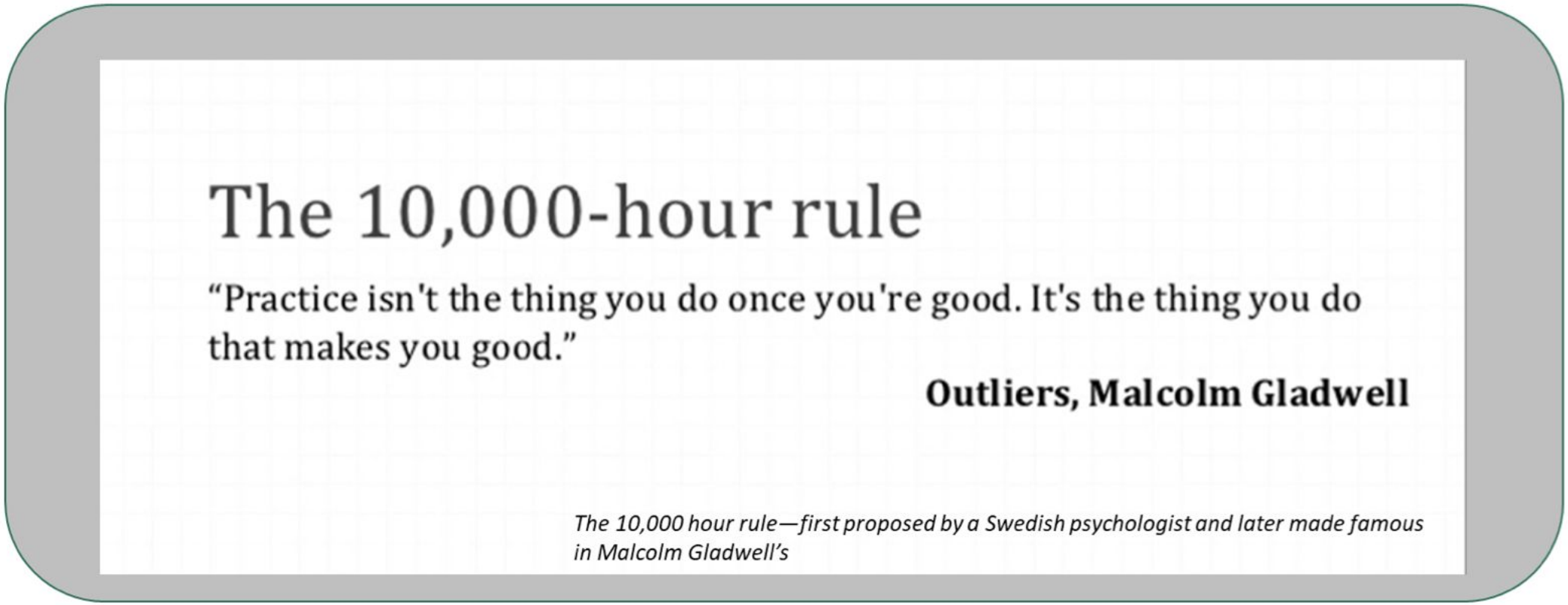
Data and Analytics vs Gut feel



Why does Analytics trump “Gut feel” decision making

10,000-Hour Rule

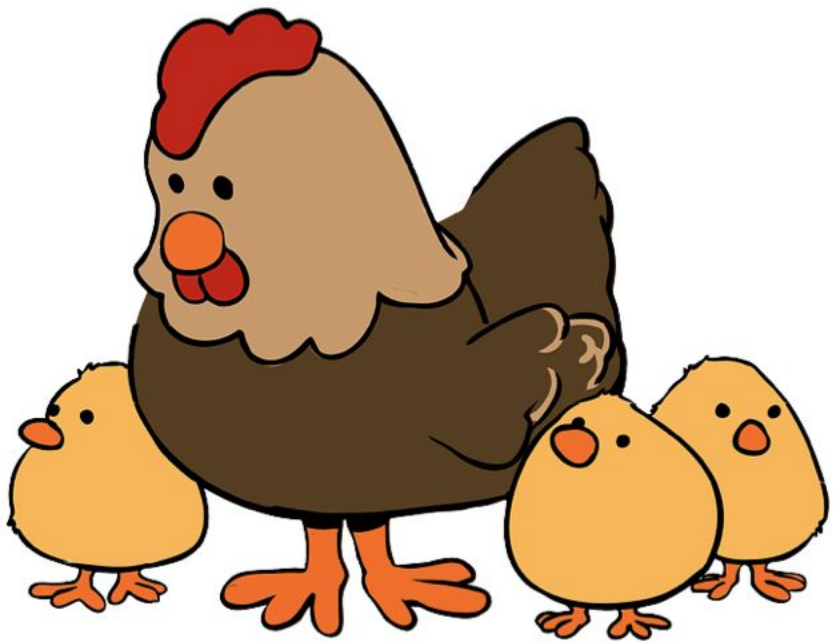
- **The key to success and expertise, is simply a matter of practicing a specific task, skill or decision**
  - **This can be accomplished by repeatedly doing it for 20 hours of work a week for 10 years.**



There are some good examples of where Human's can or have performed better than Formal Analytical decision making

- Dr. John Gottman as "the guy that can predict divorce with over 90% accuracy." after just observing a couple interact for 15 min.
- John has been a marriage counsellor practicing this observation and decision-making process since the 1980s
- He has his 10,000+ hours under his belt!
- He has thousands of cases where he has built up experience from: this is a form of inductive reasoning.

A Chicken Sexer is another good example where the human Intuition can do something the Analyst cannot.



It's scientifically impossible to tell the difference between male and female chickens until they are 4 to 6 weeks old.

- But their are people who can do it. But they cannot describe how they do it. Its inexplicable!
- It takes the 10,000+ hour to become a chicken sexer; and only about 5% of all people who start out to become one, end up one.
- They earn around £500 a day and have a success rate of 98%
- The best Chicken Sexers in the world can double clutch the chicks; two at a time! at a rate of 1,700 per hour, at £1 per successful judgment.

Data is dumb: So Where's the value? Analytics

ALERT

HISTORY

WAIT BUT WHY

Dimension	Future	Present	Past	Why?
Description	What if I can predict if someone is going to Churn, Die, Harm of be high value?	What if I can Alert you to what is happening right now?	What if I tell you what happened. And describe it in many different ways and use of technique – creating insight	What if I can explain why something happened or is happening and what will Happened IF you intervene Cause and effect
Value	Tactical	Operational	Strategic to Operational	**A Strategic weapon: Insight!**

DataTech Enablers (examples)

ATSCALE DataRobot Power BI Google BigQuery

The Data Artist Team Needed to Monetise the Data

The "Rock Star" Analyst

For example: Brian may of Queen studied ***Mathematics and Physics*** *(not music) at Imperial College London. Thomas Bayeys was a Theologist*

The "Engineer" Focused on Data Prep and Storage to enable Analytics

The "Violinist" classically trained Data Scientist

Data & Business Leadership

Managing data Volumes

- The foundations on statistics and Analytics is being able to mange, understand and control your data.
- At times it can be a bit like trying to take a sip of water from an exploding fire hydrant
- **Harnessing it and making it easily and read to consume. It is key to having an excellent Analytics Department, team, brand and product.**

Key Requirements of IT & DataTech

Access to all the Data though one Portal

- When need to have easy access to “all data” though one System (either virtual or Physical) as and when needed.
- We don’t know what questions will be asked tomorrow, If we have to go back to extract the data from Source each time we will be to slow and decision makers will fall back on gut feel.

Incredibly Fast & Consistent Analyst Query Performance

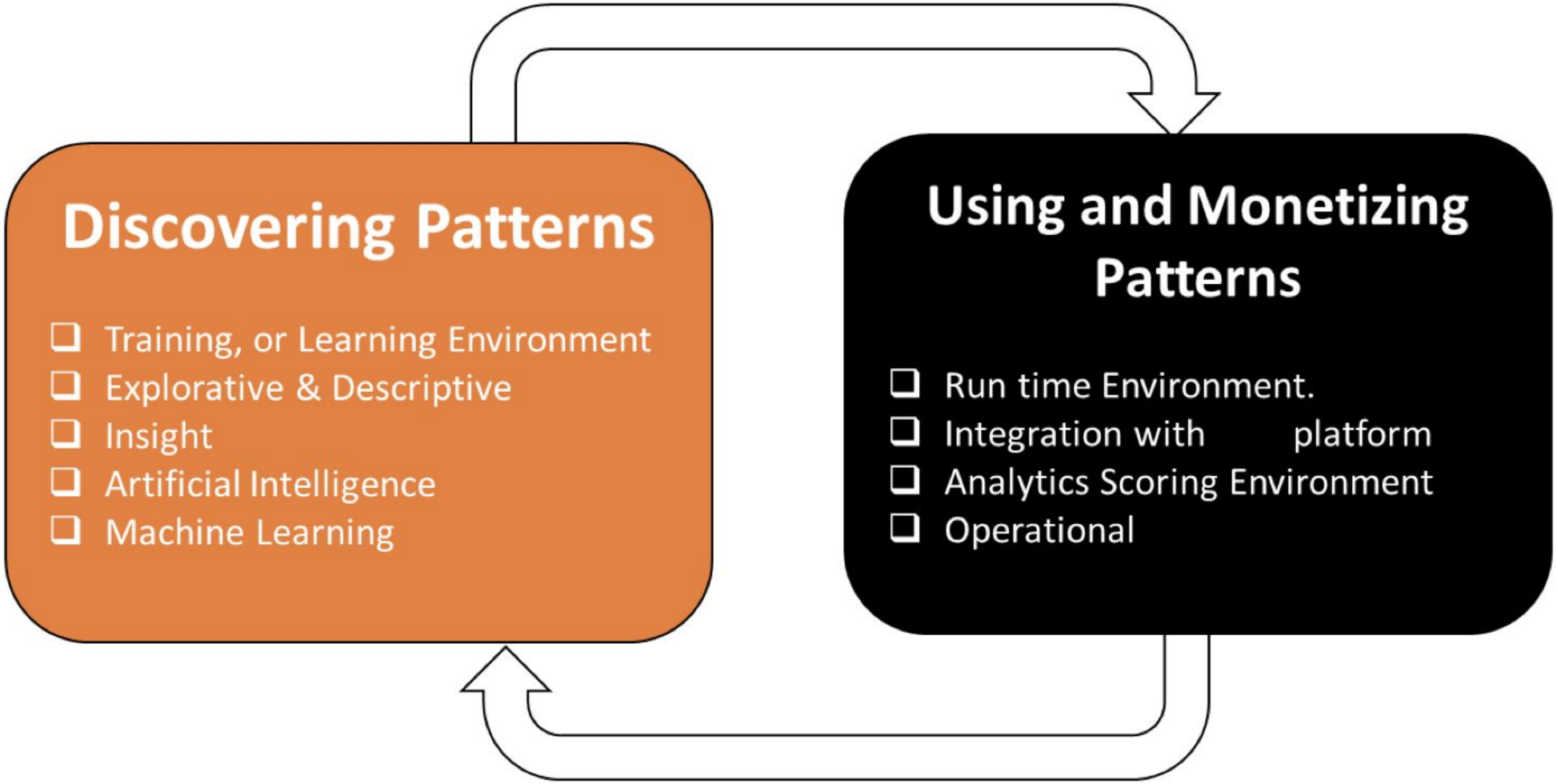
- Analyst must be able to run any query on the data environment without constraint and it be consistently fast (Query speed needs to be world class)

Consistent & Timely Data Refresh and lag time

- We need the data available to analyse in the single logical Analytics data store as soon a possible as the real life event has happened

Zero Data Corruption Culture

- Data issues caused for example by releasing new landing pages, bad labelling, product releases, tags missing from pages This has profound impact on speed of analytics and decision making.



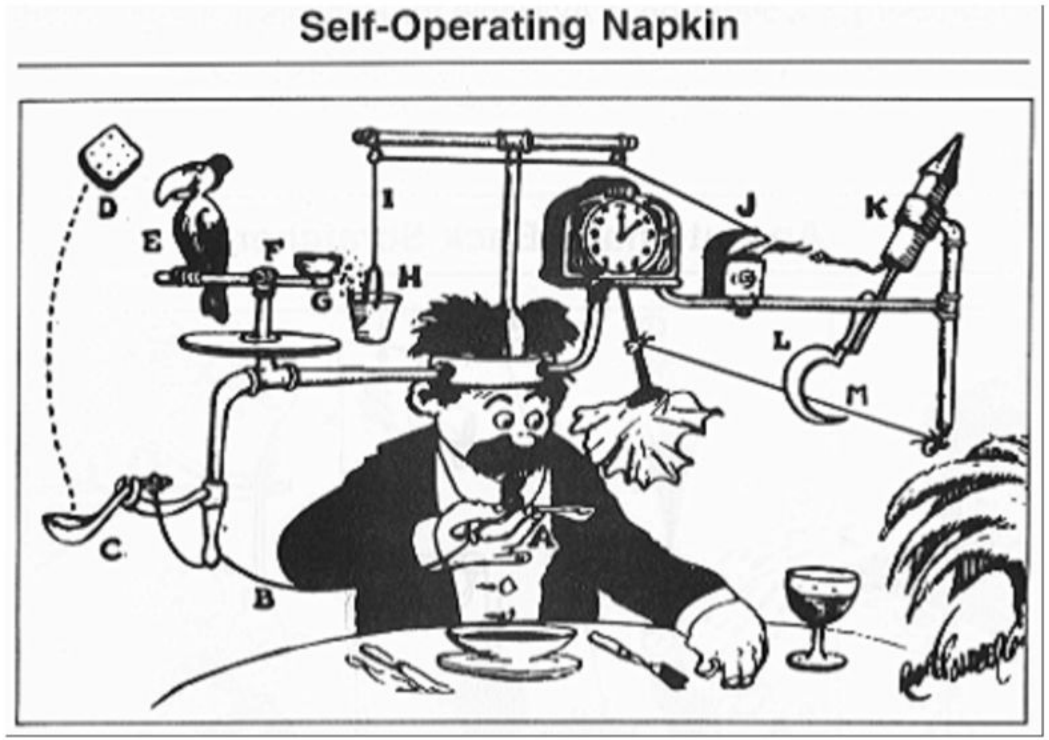
Two main Aspects and Environments for Analytics

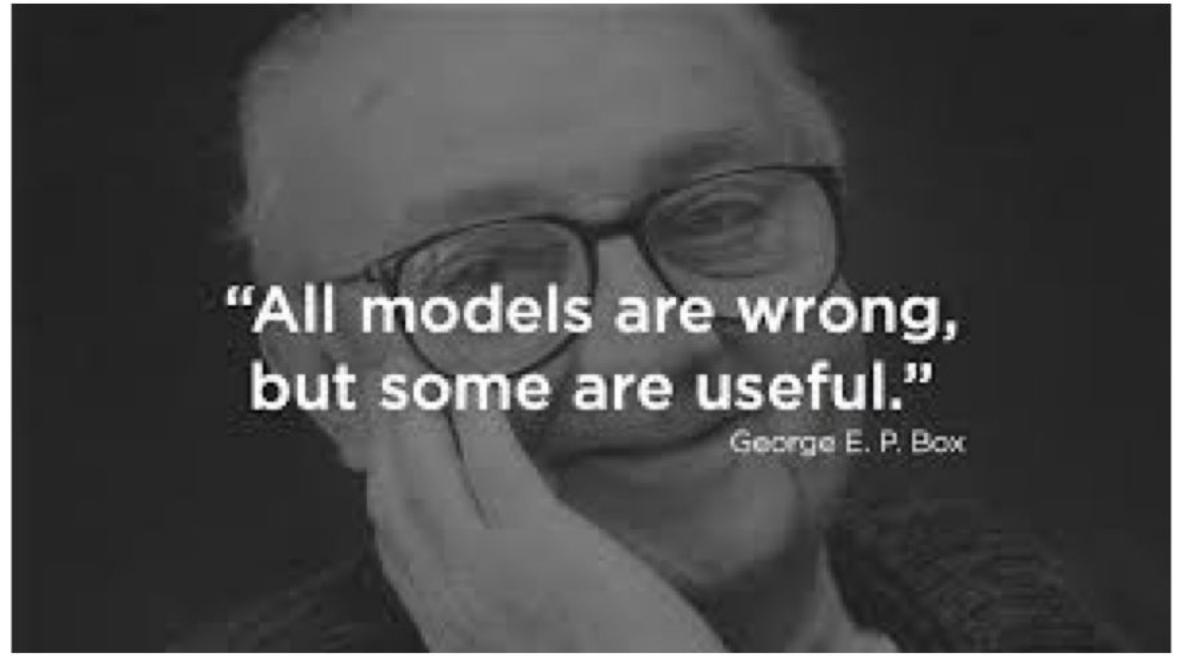
If we now have an Amazing Data Product & Data Sharing Capability, why is there still a problem!

Challenges from within your own team

Its easy for A Data Analyst/Scientist/Engineer to **Overcomplicate** Solutions – they will make it almost impossible to Adopt.

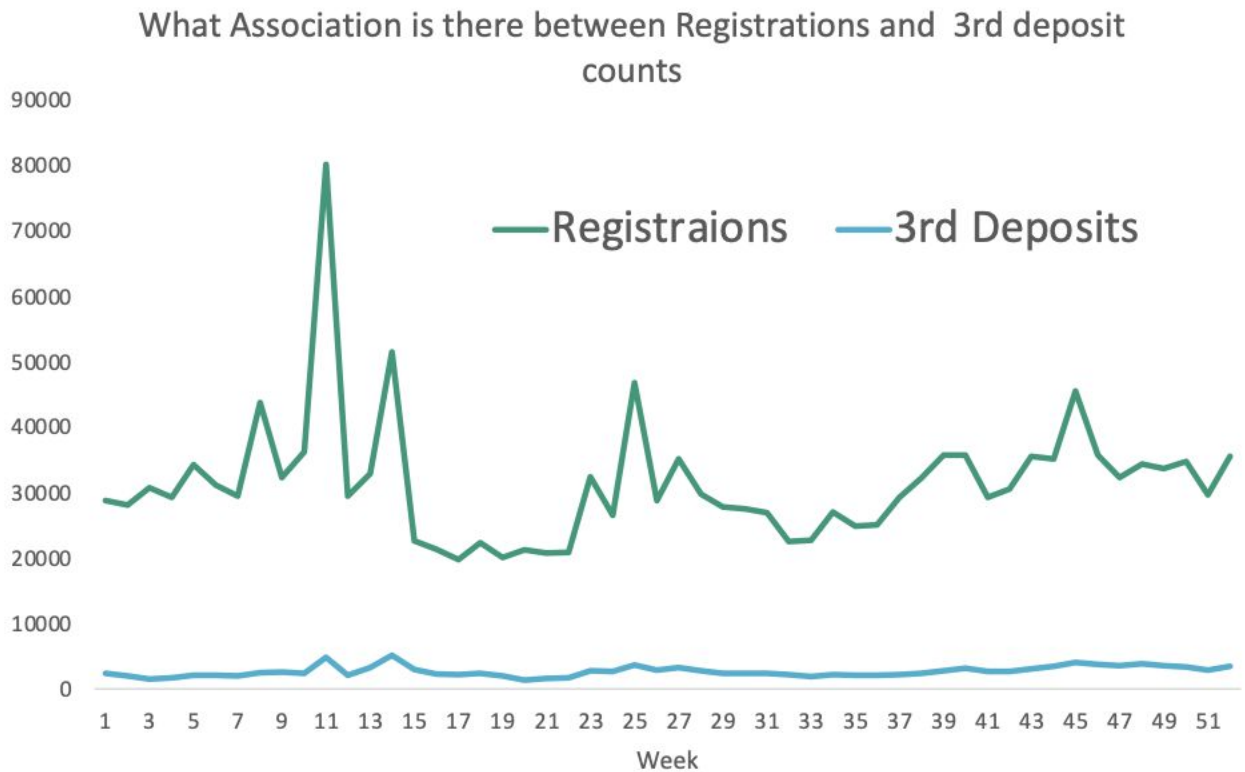
- **Occam's razor** is the principle that, of two explanations that account for all the facts, the simpler one is more likely to be correct, or the best.
- **Data Artists** work with Occam's razor and George box's Quote





Challenges with the consumers of your data and Analysis

Why does The count of 3rd deposit not correlate with Registrations?



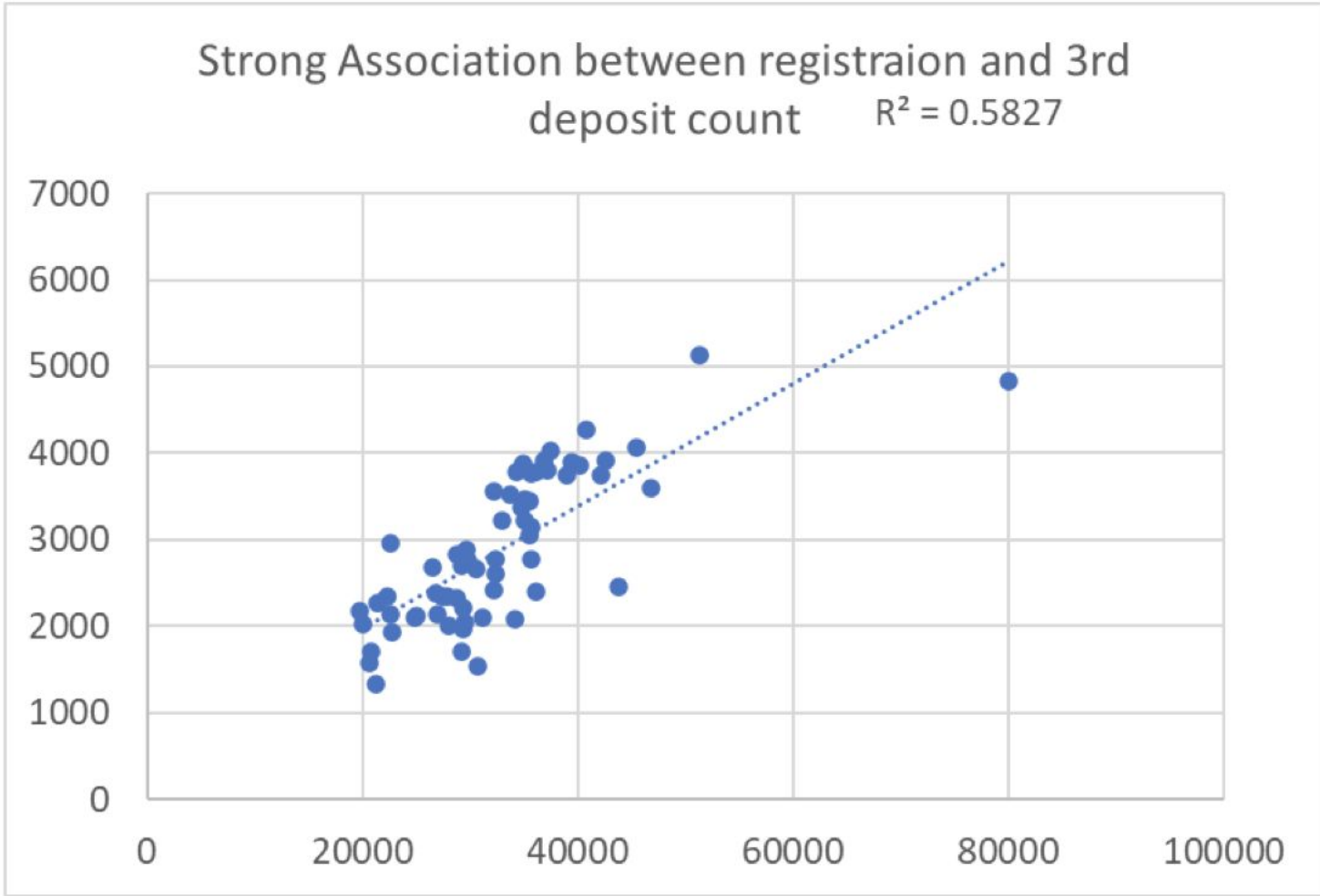
How would you describe the relationship between Registrations and 3rd Despots?

- ❑ None?
- ❑ Little?
- ❑ Average?
- ❑ Strong?

But by simply flipping the data a relationship becomes apparent immediately

- The count of registrations can explain 58% of the weekly variation in 3rd deposits!

- We could use registration counts to infer the 3rd deposit count with a fair level of accuracy.



There are plenty of examples out in the general Domain in how data has been misinterpreted and communicated

- An example of Casual impact of the data being Misunderstood.
- Waitrose Place Store in areas with higher house prices; House prices do not rise when a Waitrose store is placed in a neighbourhood.

- Using Relative numbers out of context is a common mistake for misleading, or to make sensational!
- IARC reported that 50g of processed meet a day is associated with increased risk of bowel cancer of 18% - equivalent to two slices of bacon a day, fo every day of their life.
- **6 out of 100** would expect to get bowel cancer on their life. If all 100 of them ate a bacon sandwich each day for their whole life that figure would **7 out of 100.**

Message to leave you with

“The Numbers have no way of speaking for themselves. We speak for them. We imbue them with meaning”

- Nate Silver

A Practical Guide to Analytic Transformation

Jon Francis, Global Analytics @ Paypal

Practical Keys to Success

Lead with empathy

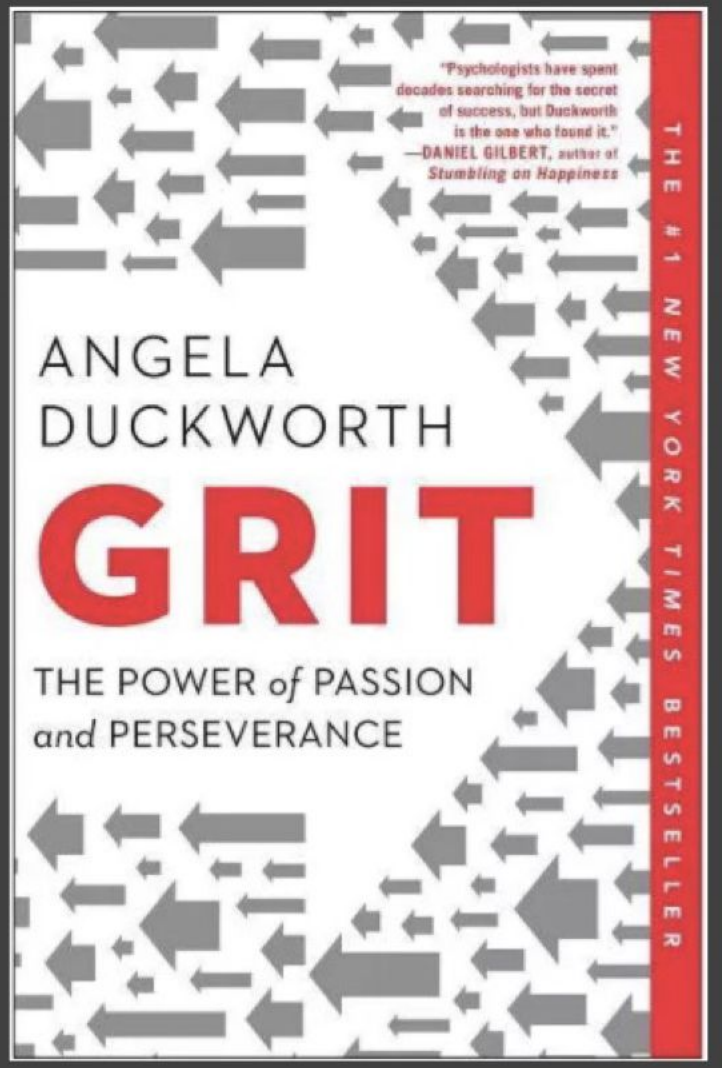
Avoid shiny objects

Think like a business owner

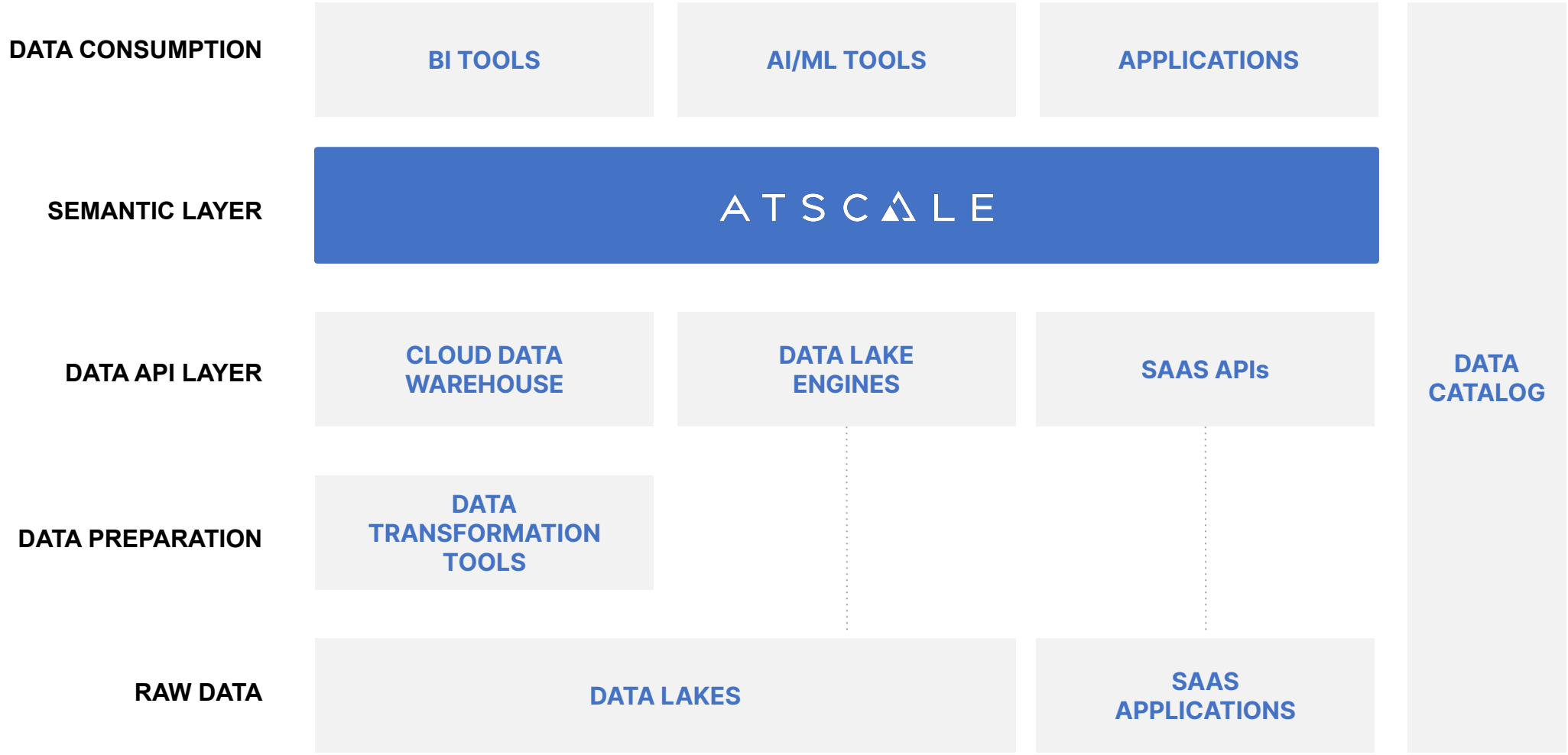
Proof of concepts are good, but always think about scale

Set expectations for test and learn, continuous evolution

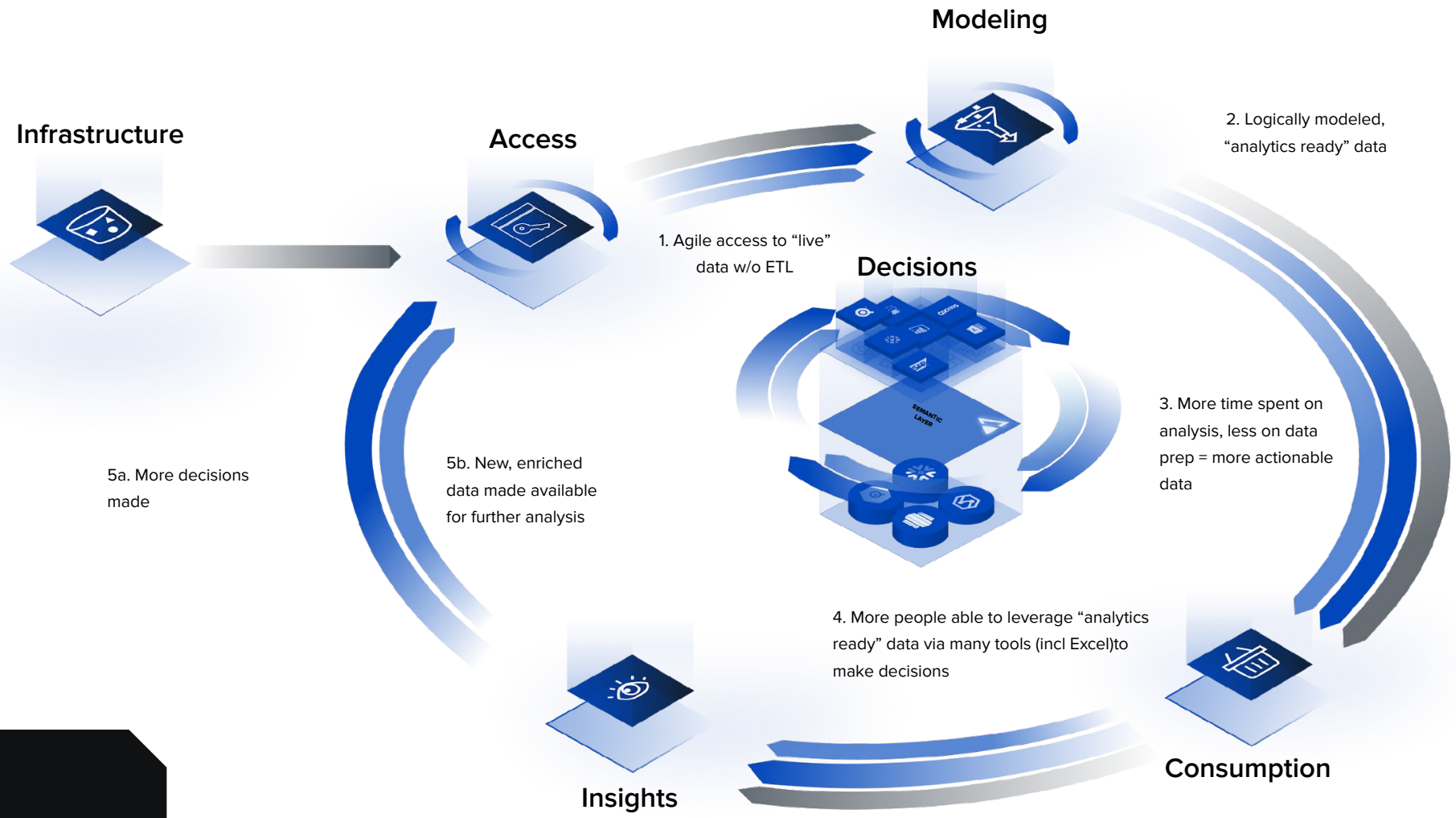
Mindset


"Psychologists have spent decades searching for the secret of success, but Duckworth is the one who found it."
—DANIEL GILBERT, author of Stumbling on Happiness
THE #1 NEW YORK TIMES BESTSELLER
ANGELA DUCKWORTH
GRIT
THE POWER of PASSION and PERSEVERANCE

Where does a Semantic Layer fit in the data stack?



Flywheel Effect of a Semantic Layer



Legend

- Traditional
- w/ Semantic Layer

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