

# How to deliver actionable insights at scale

ATSCALE

# Today's Speakers



## Barry Devlin

Business Intelligence, Author and Speaker

Dr. Barry Devlin is a founder of the data warehousing industry, defining its first architecture in 1985. A foremost authority on business intelligence (BI), big data, and beyond, he is respected worldwide as a visionary and thought-leader in the evolving industry.

Barry has authored two ground-breaking books: the classic “Data Warehouse—from Architecture to Implementation” and “Business unIntelligence—Insight and Innovation Beyond Analytics and Big Data” in 2013.



## Larry Clark

Distinguished Solution Engineer at Tableau

Larry Clark is a Distinguished Solution Engineer and member of the Strategic Solution Engineering team at Tableau Software, a Salesforce Company. He joined Tableau in late 2018 after several years as a BI consultant with Catapult, a Microsoft partner.

Prior to that, Larry worked for Microsoft for over two decades, primarily as a SQL Server and BI technical seller. He recently earned a Master's Degree in Software Engineering from the University of Texas.



## Brian Allen

Big Data Engineer at Allstate

Brian started his big data experience as a Hadoop platform engineer and has since leveraged that knowledge at Encompass Insurance (an Allstate Company) to build out the data lake and extend the integrated data sets.

He also led the implementation of the business intelligence strategy to democratize the data with a semantic layer and familiar productivity tools. Brian earned a degree in Computer Science and certificates in Information Security and Business Administration from The University of Texas at Austin.



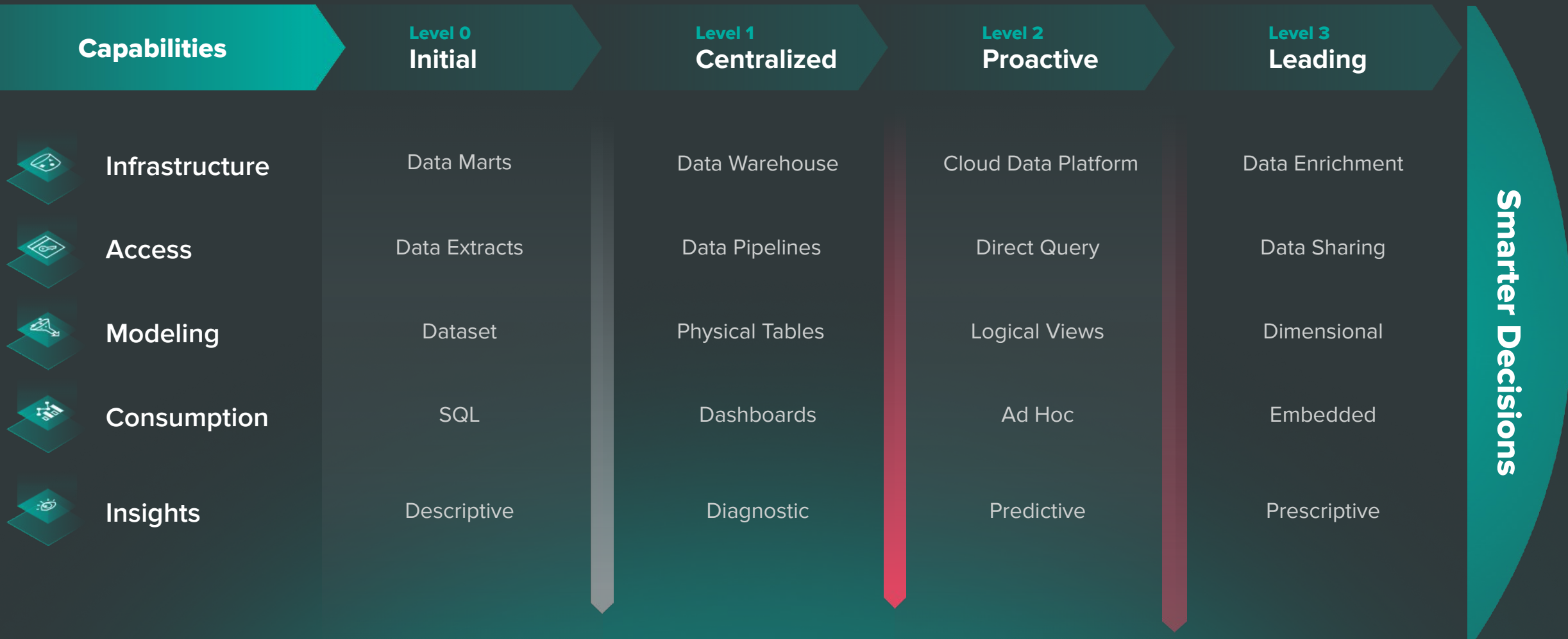
## Heather Fitzgerald

Head of Data & Business Intelligence at Jackson

Heather Fitzgerald is the Head of Data & Business Intelligence at Jackson National Life. She is a data visionary and analytics leader with 20+ years in driving innovative global solutions and data-driven insights that create operational efficiencies, growth, and success.

She leads world-class data-centric teams through full transformation by way of the usage of agile, SCRUM, and SAFE methodologies.

# Data & Analytics Maturity Model



# BUSINESS <sup>un</sup> INTELLIGENCE

## HOW TO DELIVER ACTIONABLE INSIGHTS AT SCALE

### FROM INFORMATION TO ACTION VIA MEANING

*28 October 2021*

*AtScale Panel*

**Dr Barry Devlin**

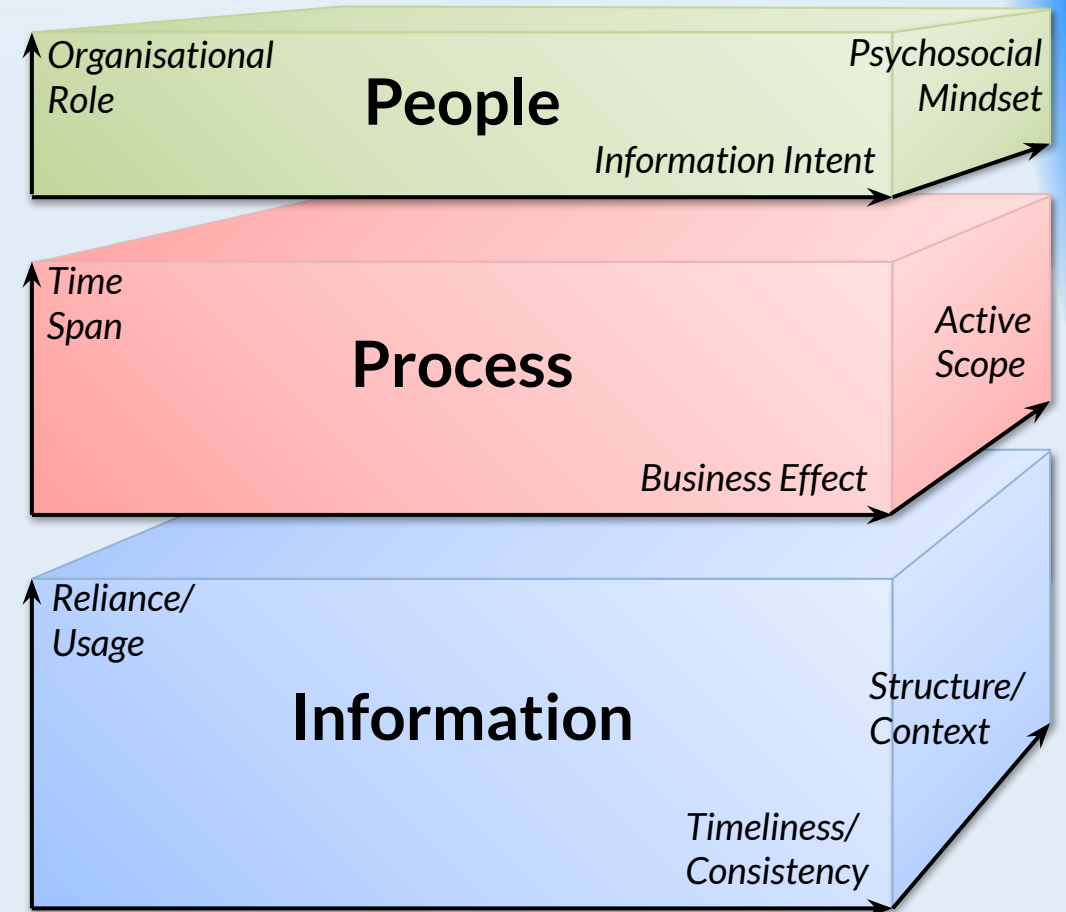
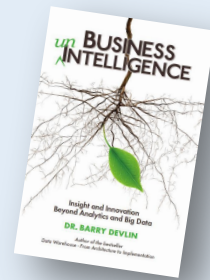
Founder & Principal  
9sight Consulting



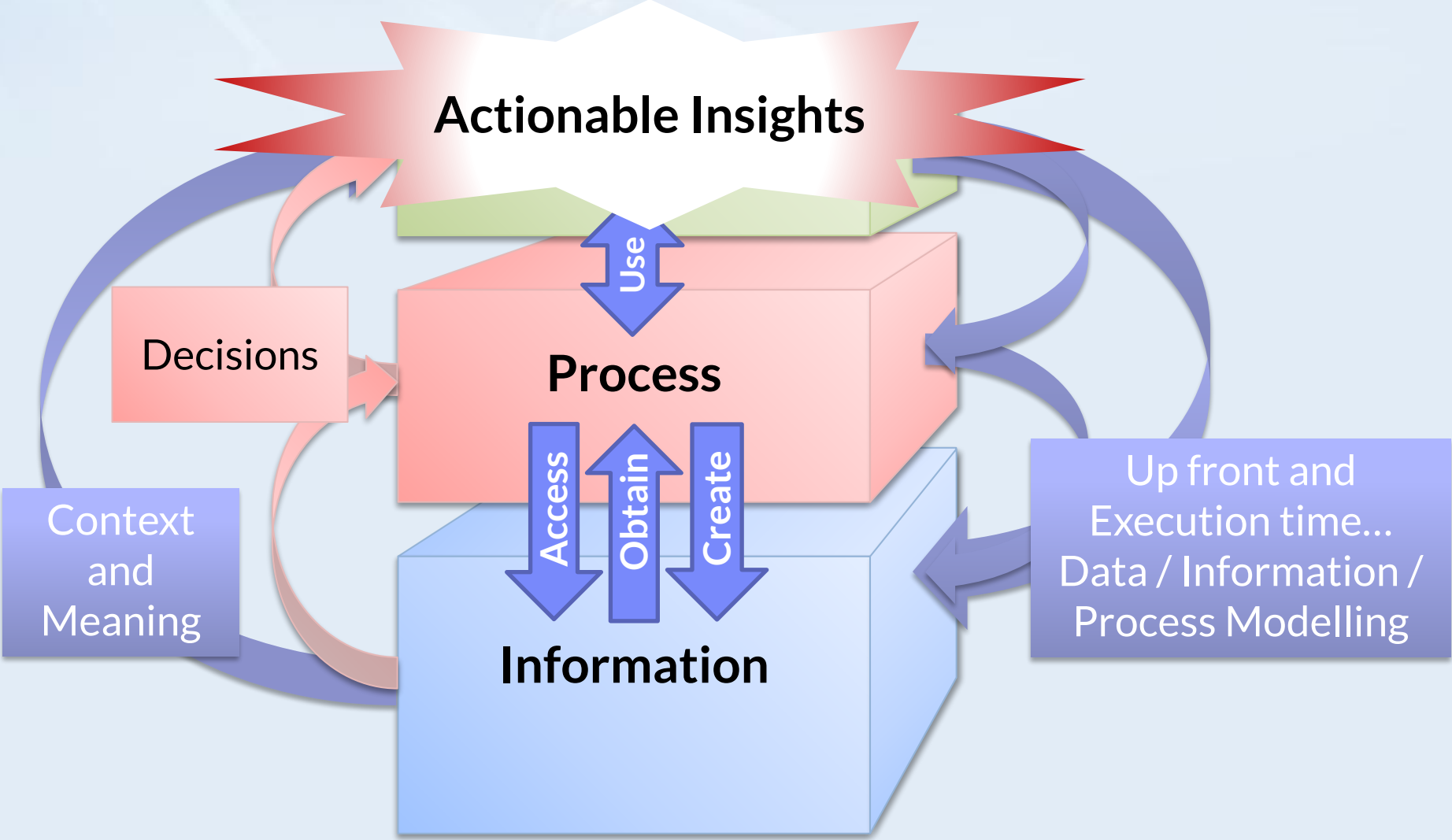


# DIGITAL INFORMATION SYSTEMS ARCHITECTURE (DISA) CONCEPTUAL ARCHITECTURE: 3 “THINKING SPACES”

- Conceptual architecture: the basis for conversation between business and IT
- Design foundation for digital business
  - Initial translation of business needs into architectural options & constraints
- Can also be read as a story:
  - **People process information**
- For further details:
  - [bit.ly/BunI-TP2](http://bit.ly/BunI-TP2)



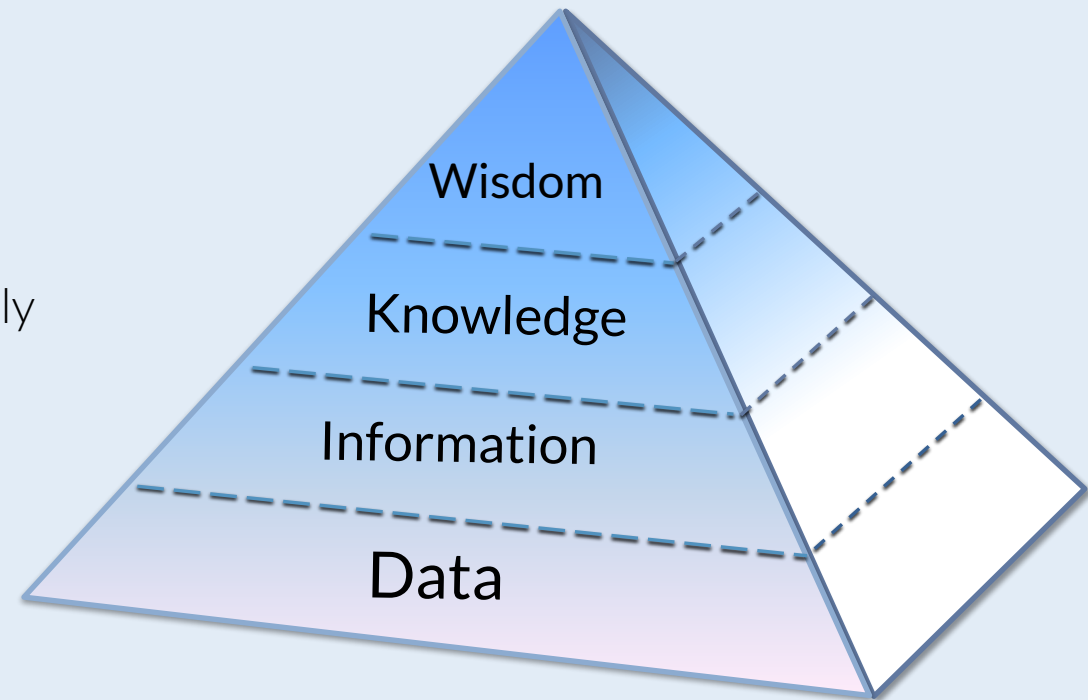
# EXTRACTING ACTIONABLE INSIGHTS FROM INFORMATION



# AT SCALE ACTIONABLE INSIGHTS ...

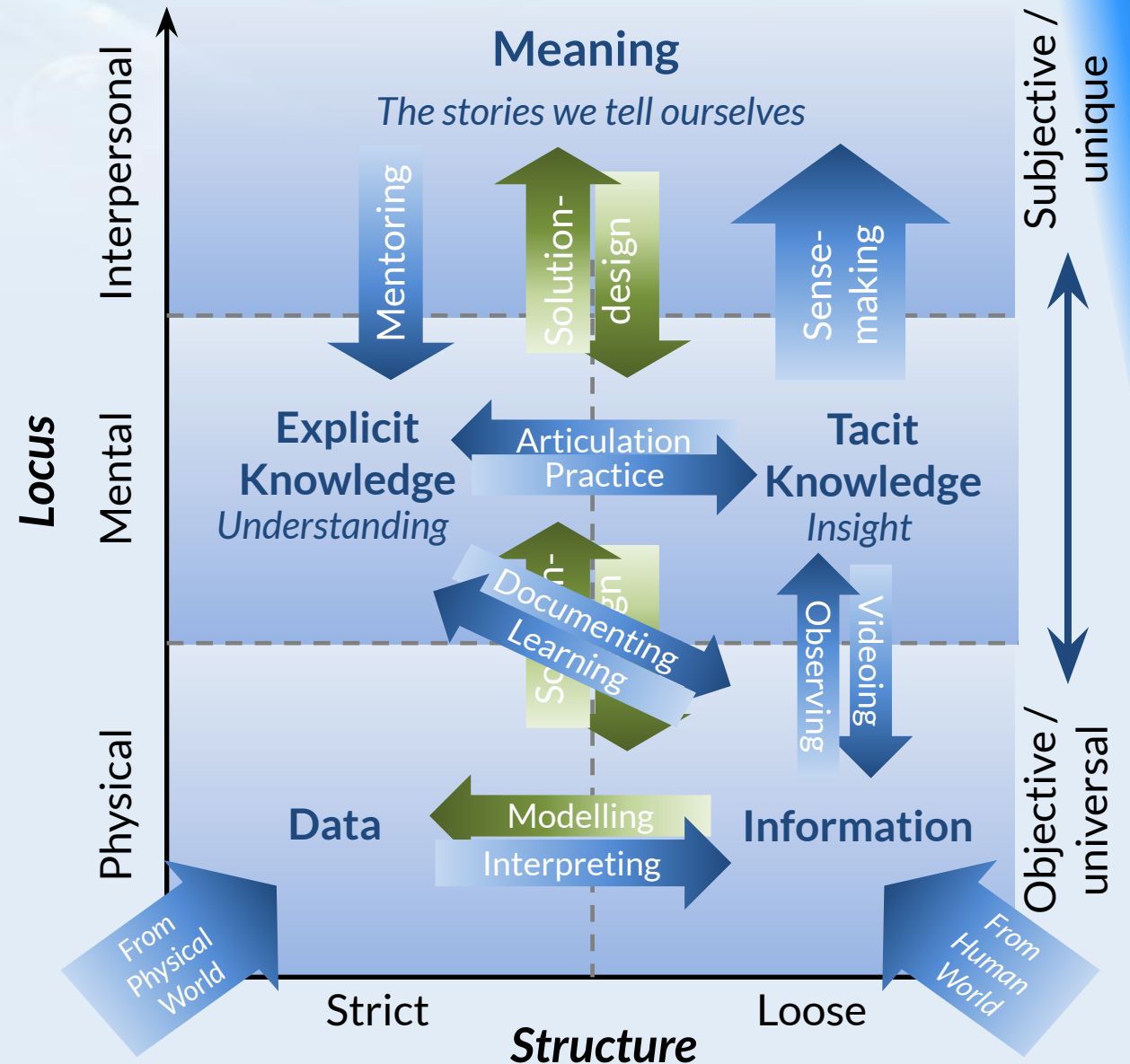
## THE DIKW MODEL IS TOO SIMPLISTIC

- Russel Ackoff's Data – Information – Knowledge – Wisdom (DIKW) pyramid (1989) is based on a simple assertion:
  - *“on average about forty percent of the human mind consists of data, thirty percent information, twenty percent knowledge, ten percent understanding, and virtually no wisdom”*
- No longer sufficient as a basis for modelling today's information world
- Issues with DIKW model:
  - Information precedes data (Data is actually information optimized for computers)
  - Knowledge is not derived directly from information
  - Wisdom is undefined
- The Web and social media have fully devalued “facts”



# M<sup>3</sup> OFFERS A NEW BASIS OF UNDERSTANDING

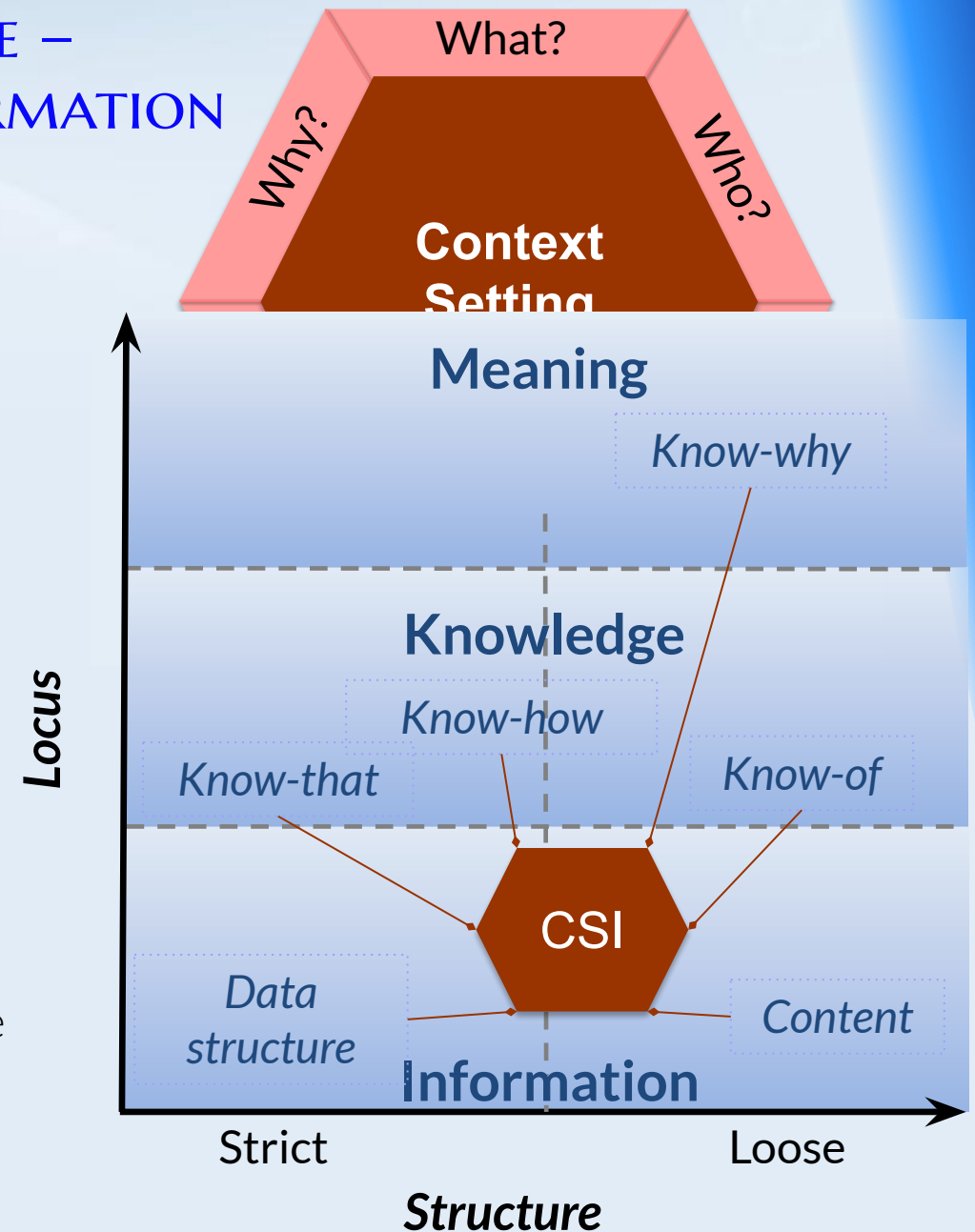
- m<sup>3</sup> = manifest meaning model
- Distinguish three levels of comprehension (loci)
  - **Information - physical:**  
on a computer
  - **Knowledge - mental:**  
in a person's mind
  - **Meaning - interpersonal:**  
in the social "mind"
- From the objective world to a subjective view
  - Meaning is a totally personal interpretation
  - Including gut-feel and motivation
  - Almost always in the context of a social situation





# METADATA IN THE INFORMATION SPACE – INTRODUCING CONTEXT-SETTING INFORMATION

- Metadata is two four-letter words!
  - Information (not data)
  - Describes all “stuff” (not just data)
  - Indistinguishable from “business information” by non-IT people (and some IT people)
  - Many (or most) metadata projects fail
- Context-setting information (CSI)
  - Describes what everything is and does
  - Provides the background to each piece of information, to every process component & to all the people that constitute the business
  - Every piece of information adds context to something else; it is **all** context setting
  - Stored as part of the larger information resource
- Key to semantic layer implementation



# CONCLUSIONS

## 1. Actionable insights depend on context and meaning

- ✓ Information (not data) is the base material...
- ✓ But, on its own, is insufficient
- ✓ Information – knowledge – meaning (m3) is the foundation

## 2. For us humans, meaning is highly subjective

- ✓ Actions are driven by (social, subjective, contextual) factors
- ✓ Meaning is beyond rational

## 3. Context-setting information (CSI) is what you need

- ✓ Links information to meaning
- ✓ Enables decisions and actions to be contextualised
- ✓ Increasingly needs to be decentralised and active
- ✓ Key to semantic layer implementation



# BECOMING DATA DRIVEN

“... the person who I think said it best was the CEO of Cisco, John Chambers...he said:

‘you know, if I can get each of the people on my team consulting data... say, I don’t know, twice per day before making a decision, and they do the same thing with their people, and their people and so on...

**that’s a million decisions a month if you do the math, better made than my competition.’”**

Christian Chabot  
Co-founder and former CEO of Tableau



# Tableau: Insight at the Speed of Thought

The screenshot displays the Tableau Desktop interface with a dark theme. On the left is a navigation pane with sections: Connect, To a File, To a Server, and Saved Data Sources. The main workspace is titled 'Open' and contains a grid of 24 thumbnail visualizations. On the right is a 'Discover' sidebar with links for Training, Resources, and a 'More Samples' section. At the bottom right, there is a promotional banner for 'Einstein Discovery in Tableau' and a footer for 'Updates to 2021.1 Now'.

**Connect**

- Search for Data
- Tableau Server
- To a File
  - Microsoft Excel
  - Text file
  - JSON file
  - Microsoft Access
  - PDF file
  - Spatial file
  - Statistical file
  - More...
- To a Server
  - Azure Synapse Analytics
  - Microsoft Analysis Services
  - Google BigQuery
  - Microsoft SQL Server
  - More...
- Saved Data Sources
  - Hurricane Data+ (hurricane)
  - Sample - Superstore
  - Who Data Source
  - World Indicators

**Open**

Grid of visualizations (row by row):

- Snowflake TableauSE Instance Usage
- Snowflake TableauSE Instance Usa...
- Relationships Simple Veterinarian D...
- Relationships Simple Veterinarian D...
- Superstore
- Synapse Dedicated SQL (SQL DW)
- Data Driven
- AAS AW
- dimension calcs in cubes\_v2018.1
- Two Measure Sorting
- Book3
- Small Business Loan Dtl Analysis (1)
- Multi-Dimensional Automobile Comparison
- Synapse Dedicated - Profitable Big Co...
- Small Business Loan Dtl Analysis
- Snowflake SE Usage
- Relationships Simple Veterinarian D...
- Relationships Simple Veterinarian D...

**Sample Workbooks**

- Superstore
- Regional
- World Indicators

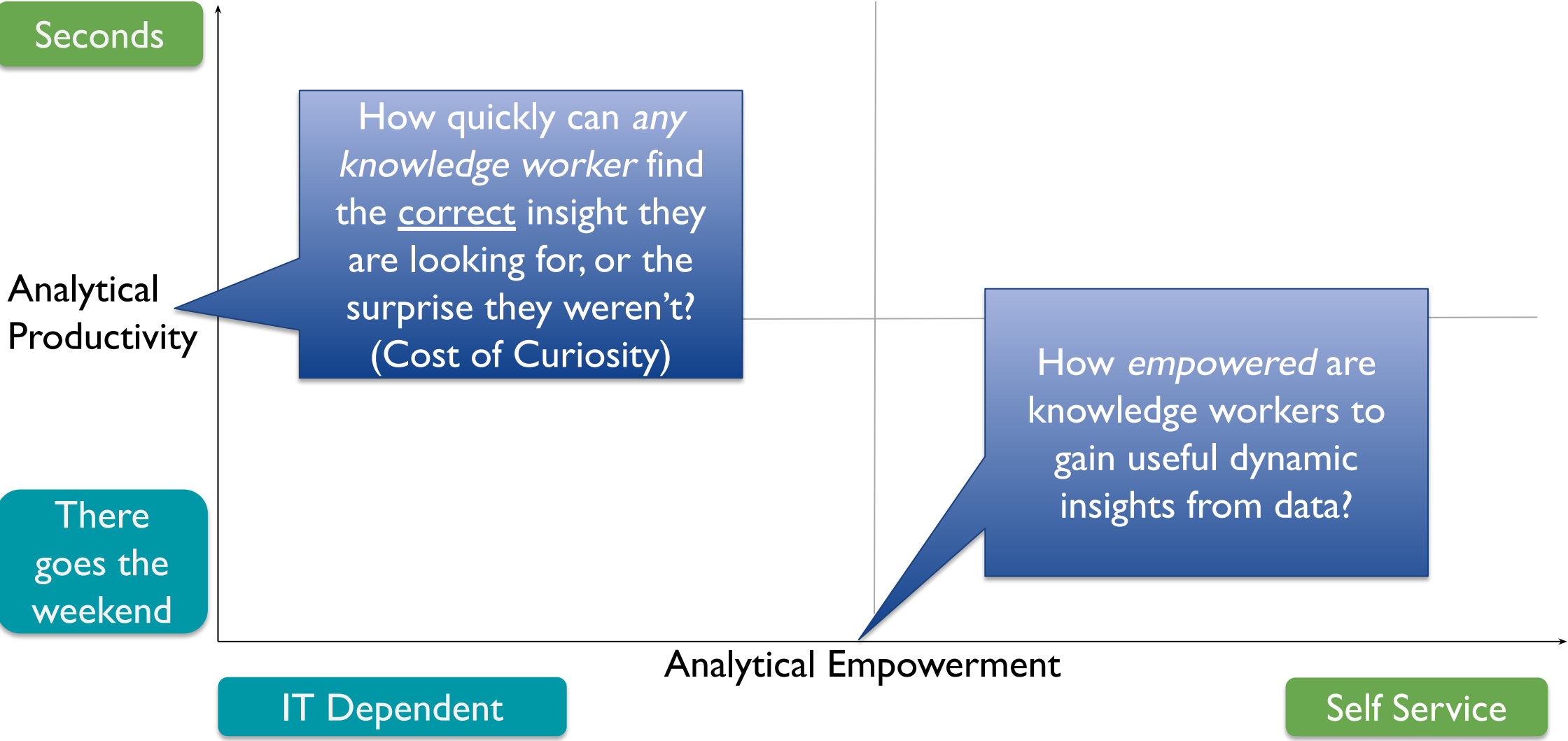
**Discover**

- Training
  - Getting Started
  - Connecting to Data
  - Visual Analytics
  - Understanding Tableau
  - More training videos...
- Resources
  - Get Tableau Prep
  - Blog - Read latest post
  - The NEW Community Forums
  - Sample data for Relationships
- More Samples

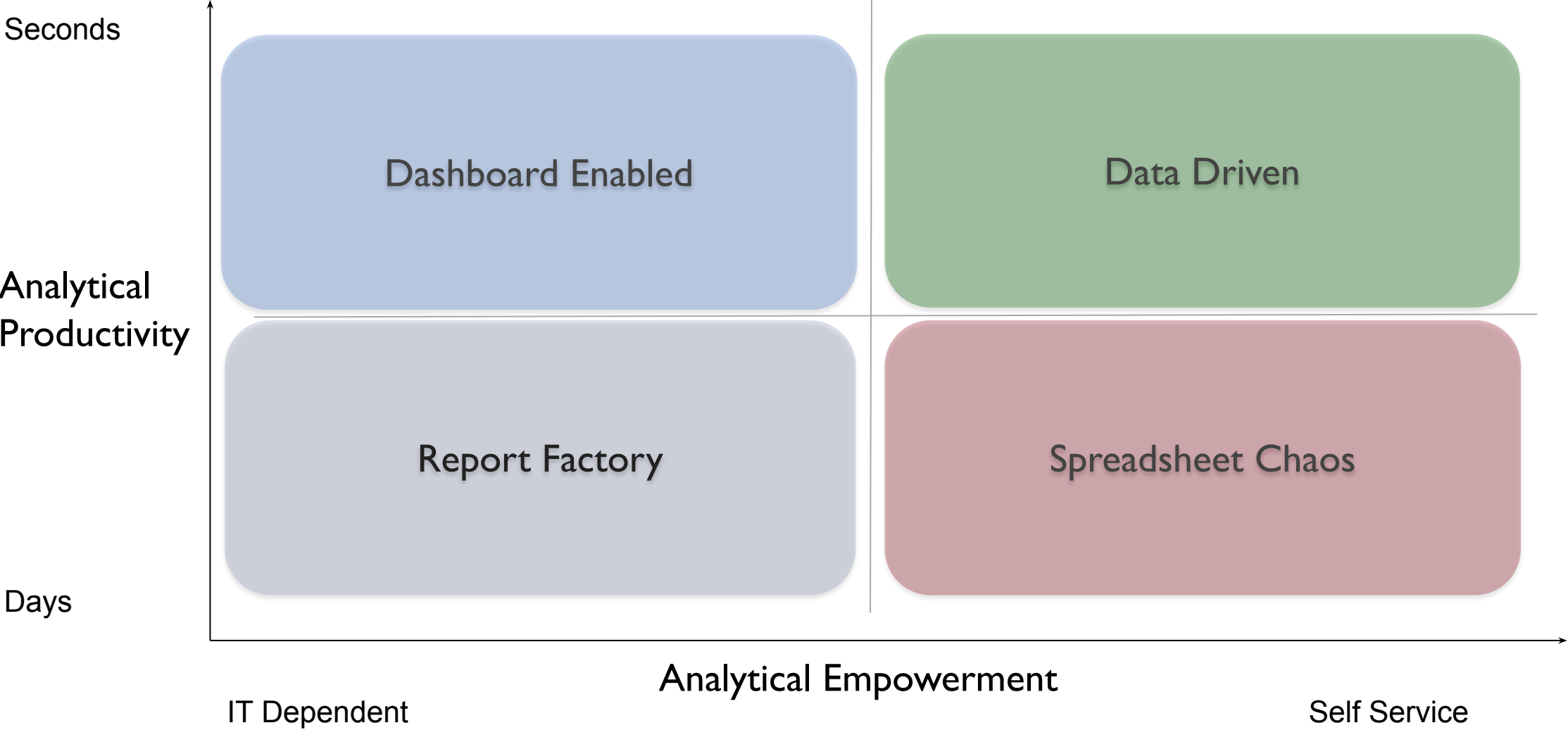
**Einstein Discovery in Tableau**  
Get trusted and intuitive predictions and recommendations from Einstein Discovery. → Learn more

Updates to 2021.1 Now

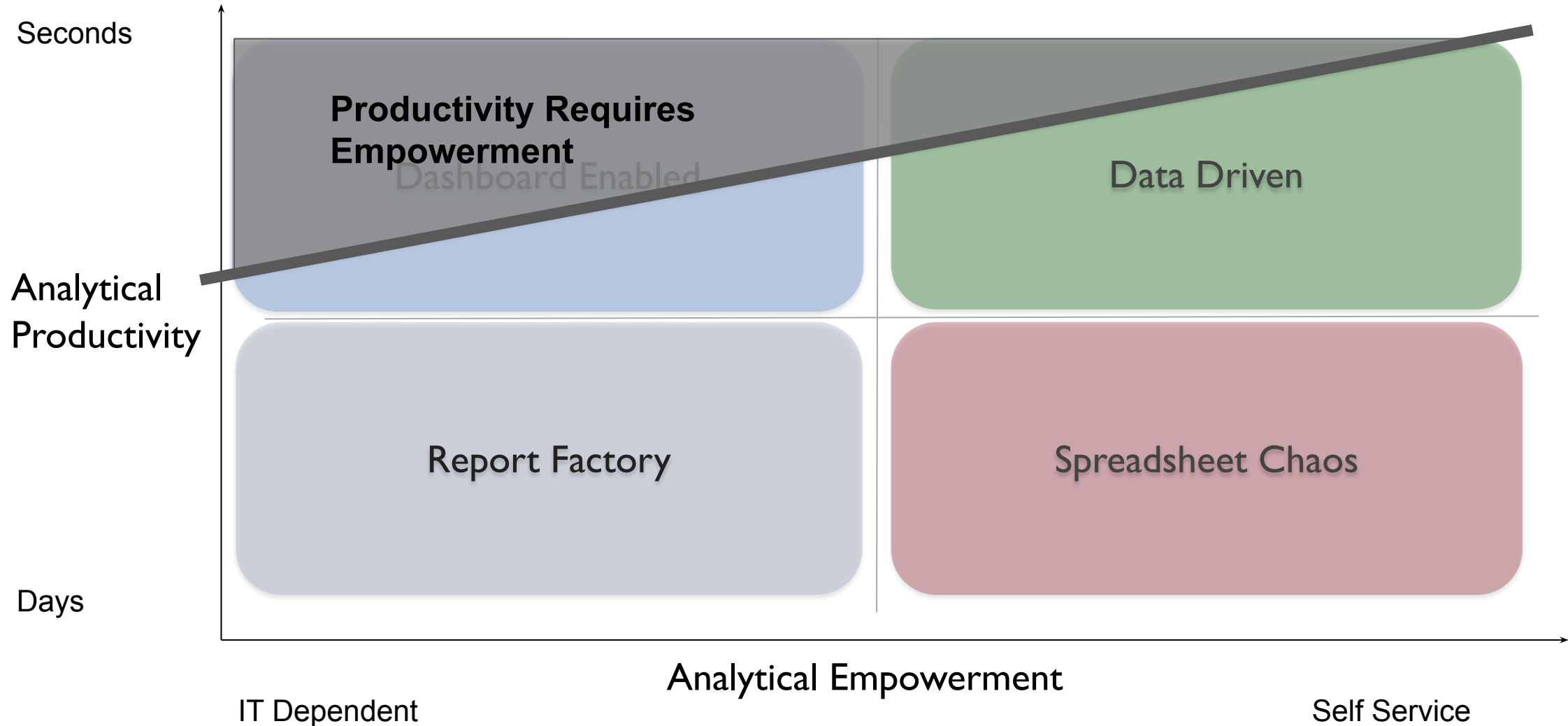
# BECOMING DATA DRIVEN: Productivity vs Empowerment



# BECOMING DATA DRIVEN: Productivity vs Empowerment

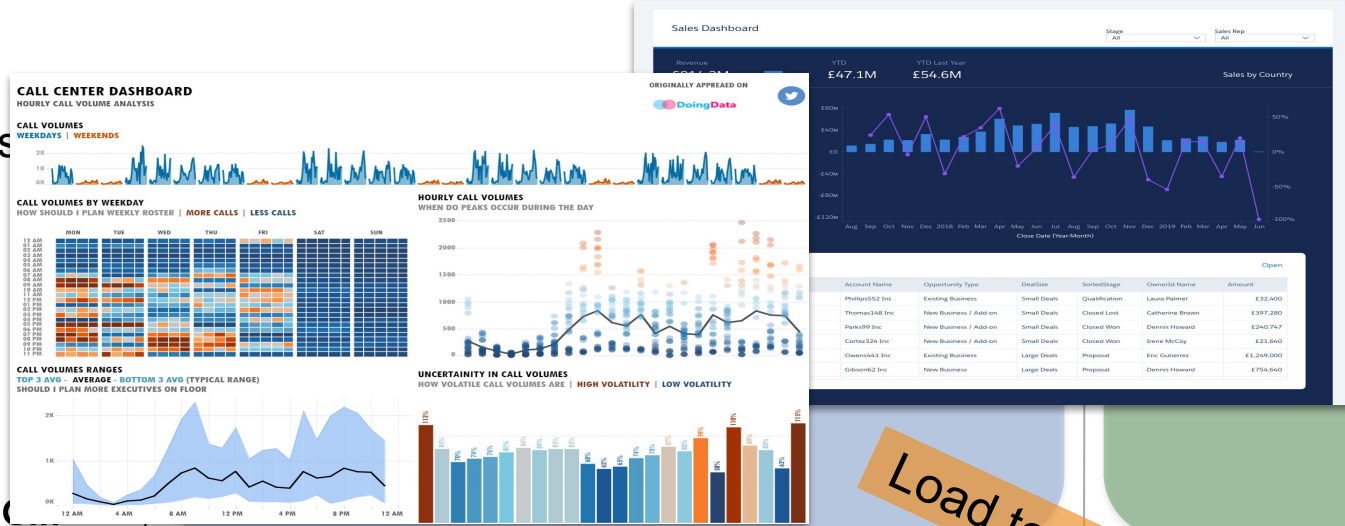


# BECOMING DATA DRIVEN: Productivity vs Empowerment



# BECOMING DATA DRIVEN: Spreadsheet Analytics

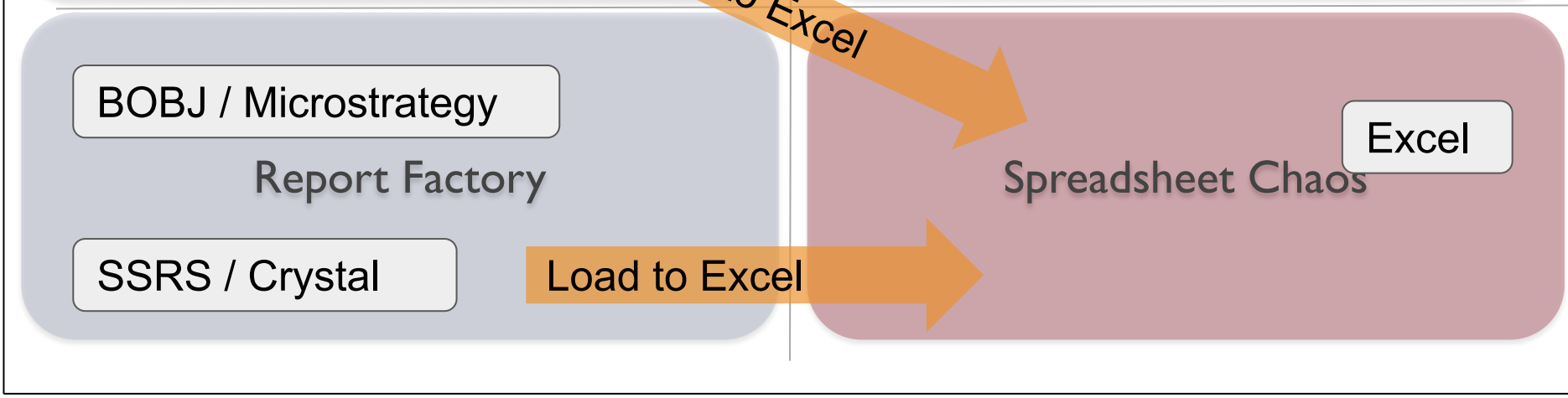
Seconds



Data Driven

Analytic  
Productivity

Days



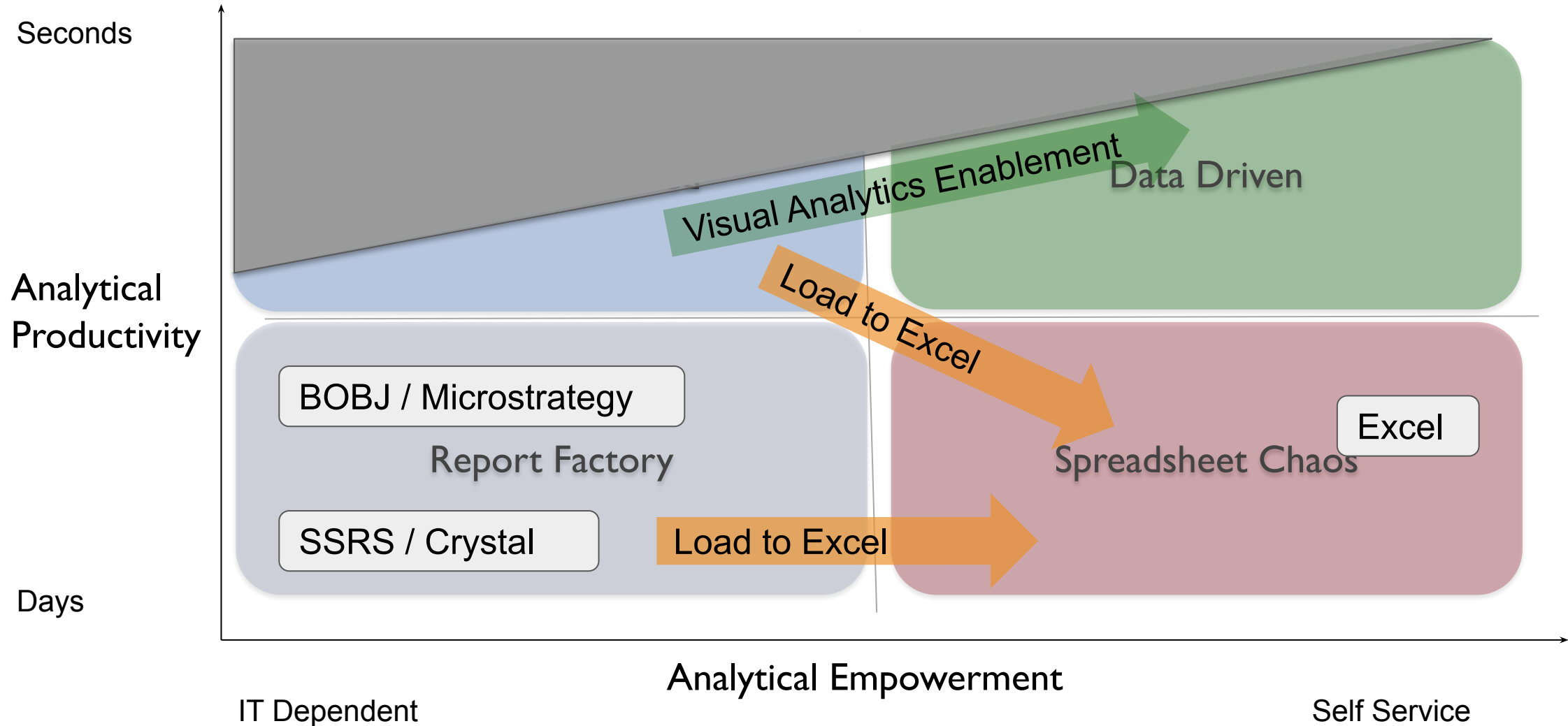
IT Dependent

Analytical Empowerment

Self Service



# Visual Analytics Enablement

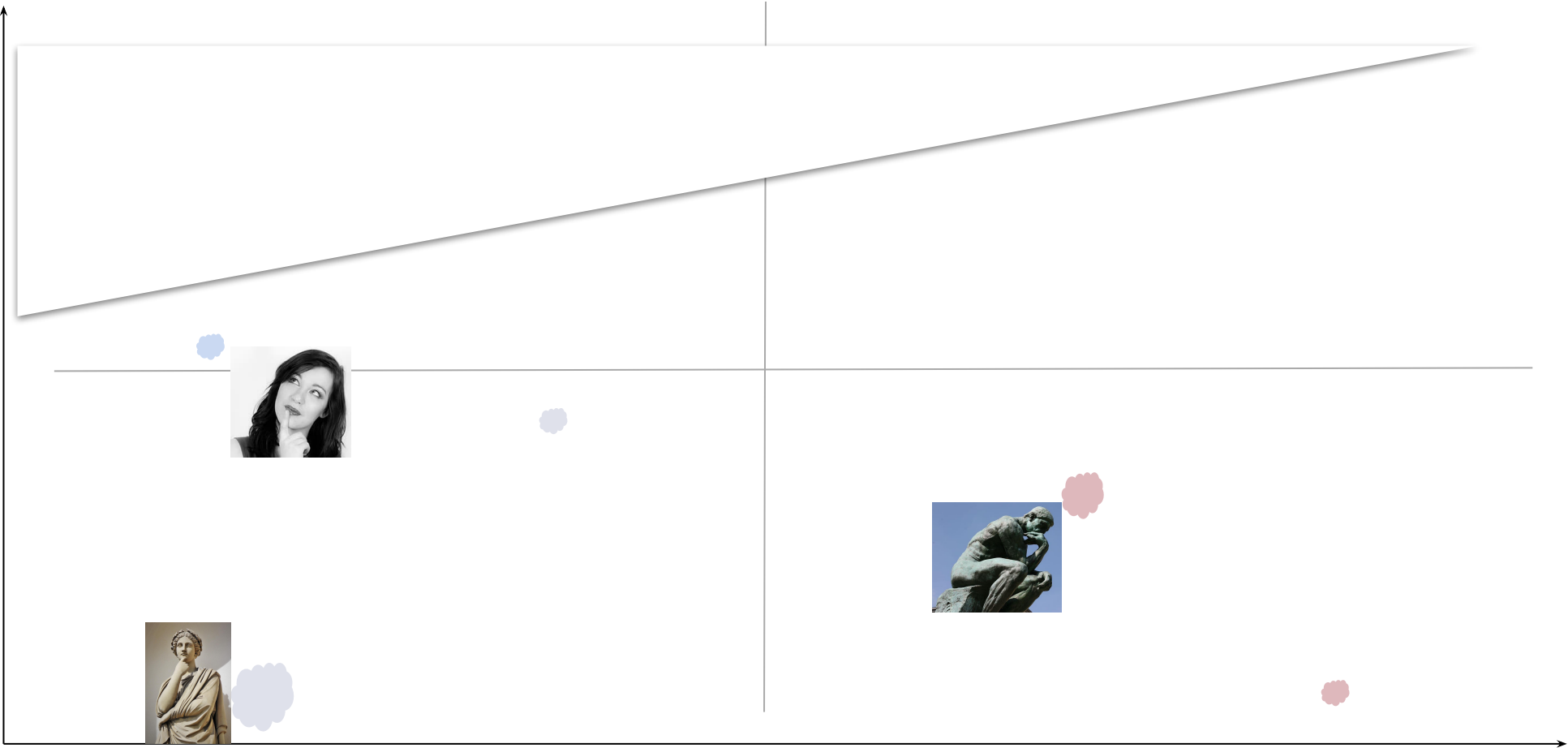


# Every Decision Matters

Seconds

Analytical  
Productivity

Days

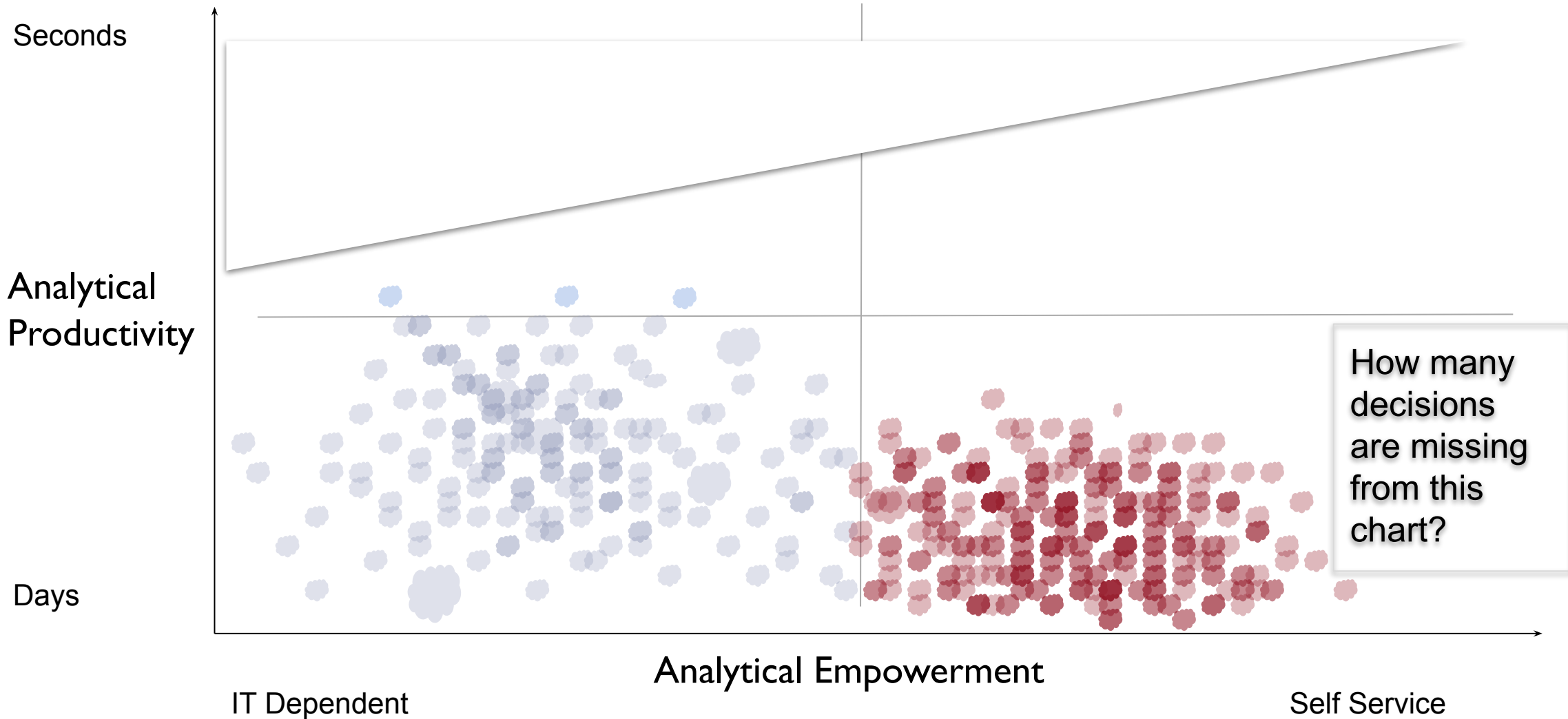


IT Dependent

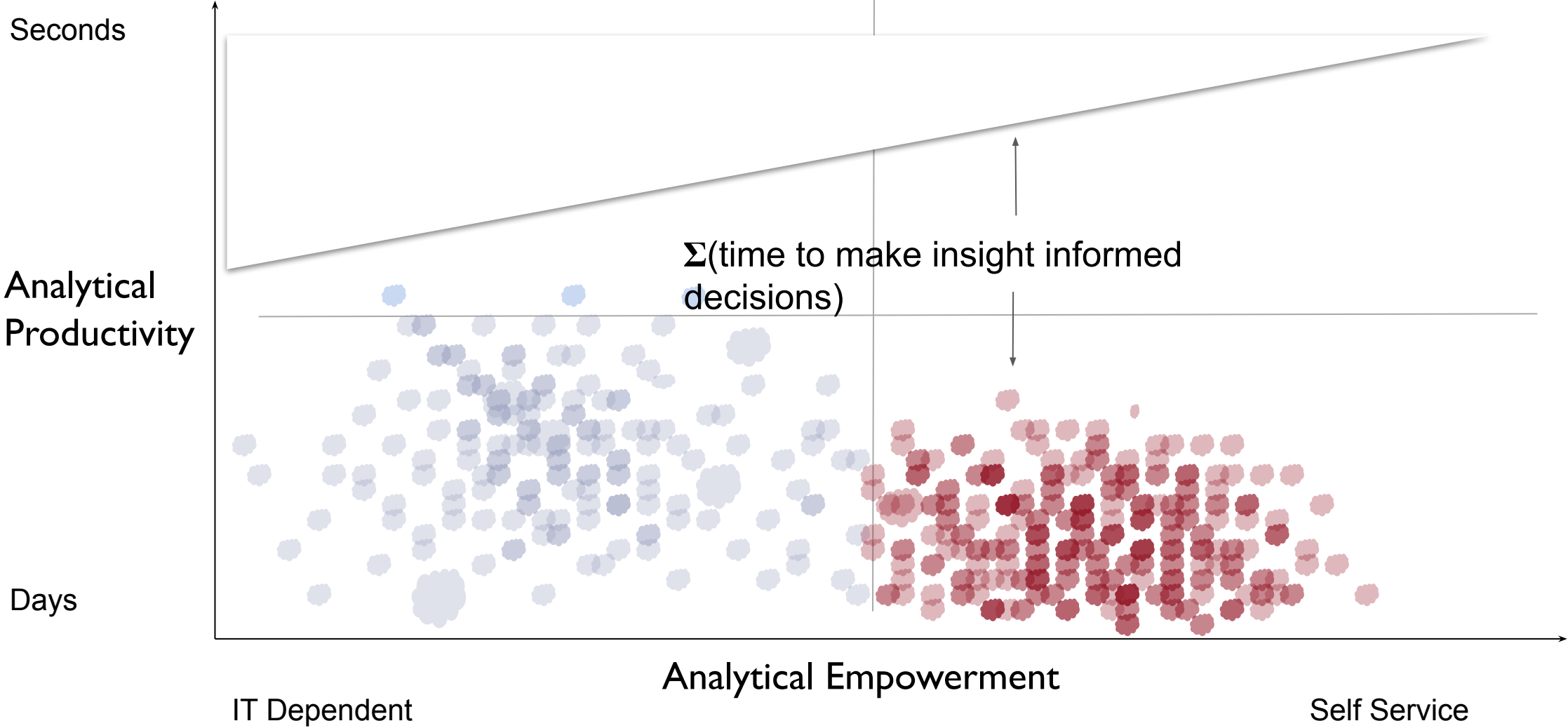
Analytical Empowerment

Self Service

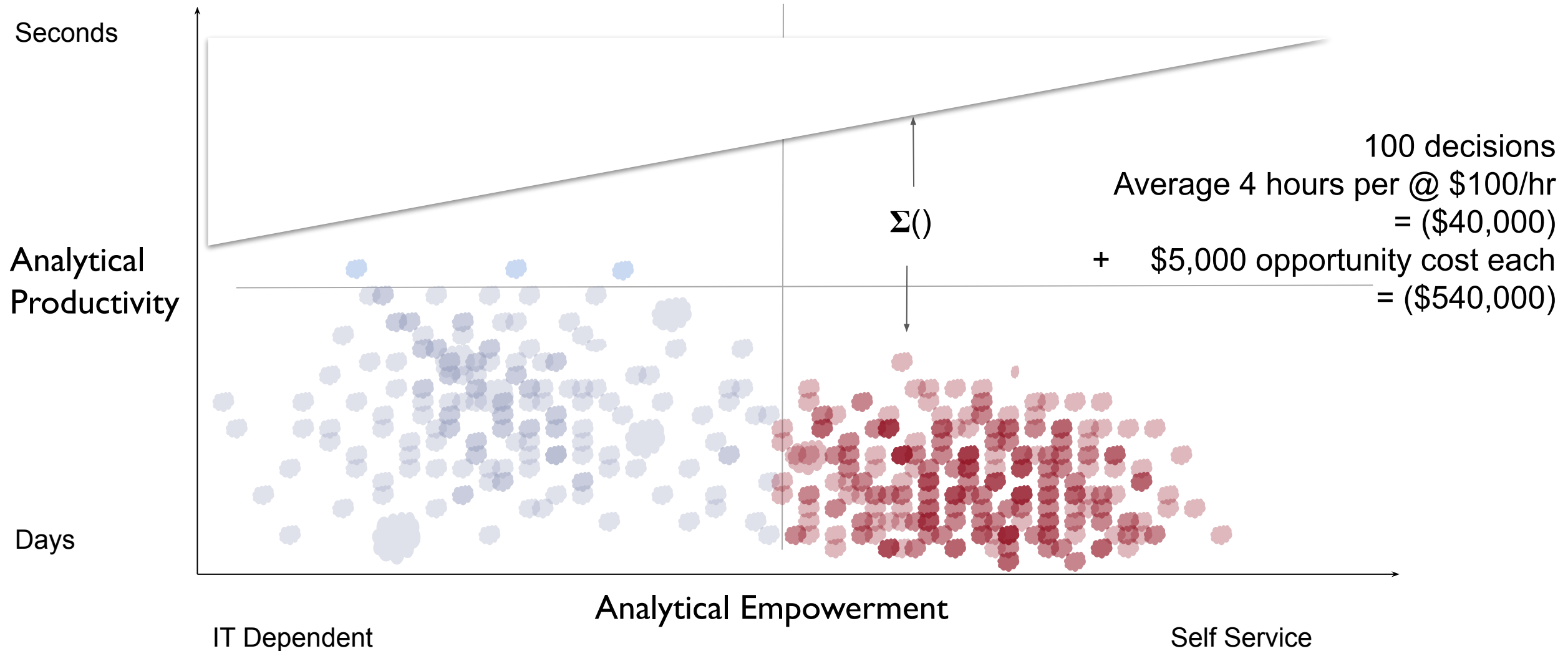
# Every Decision Matters: Current State



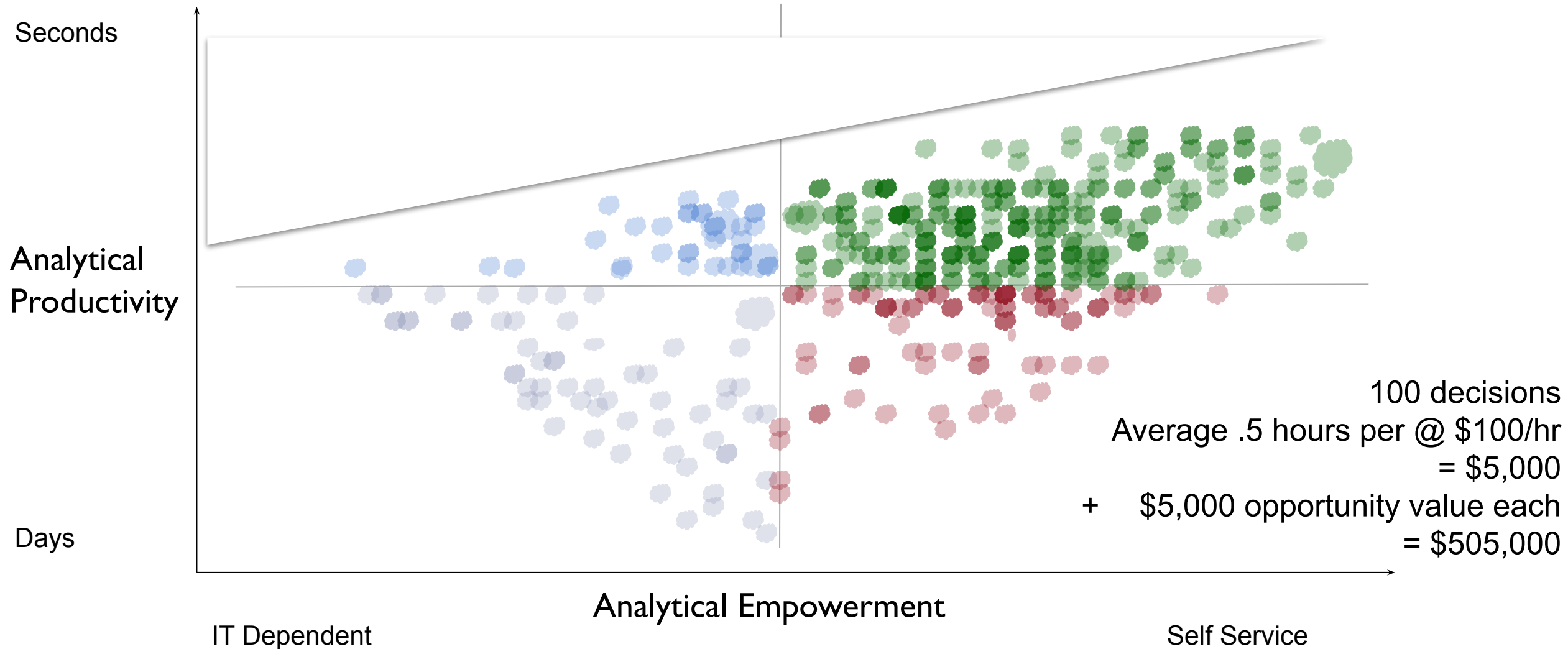
# Every Decision Matters: What can we gain?



# Every Decision Matters: What can we gain?



# Every Decision Matters: The Potential of “Data Driven”





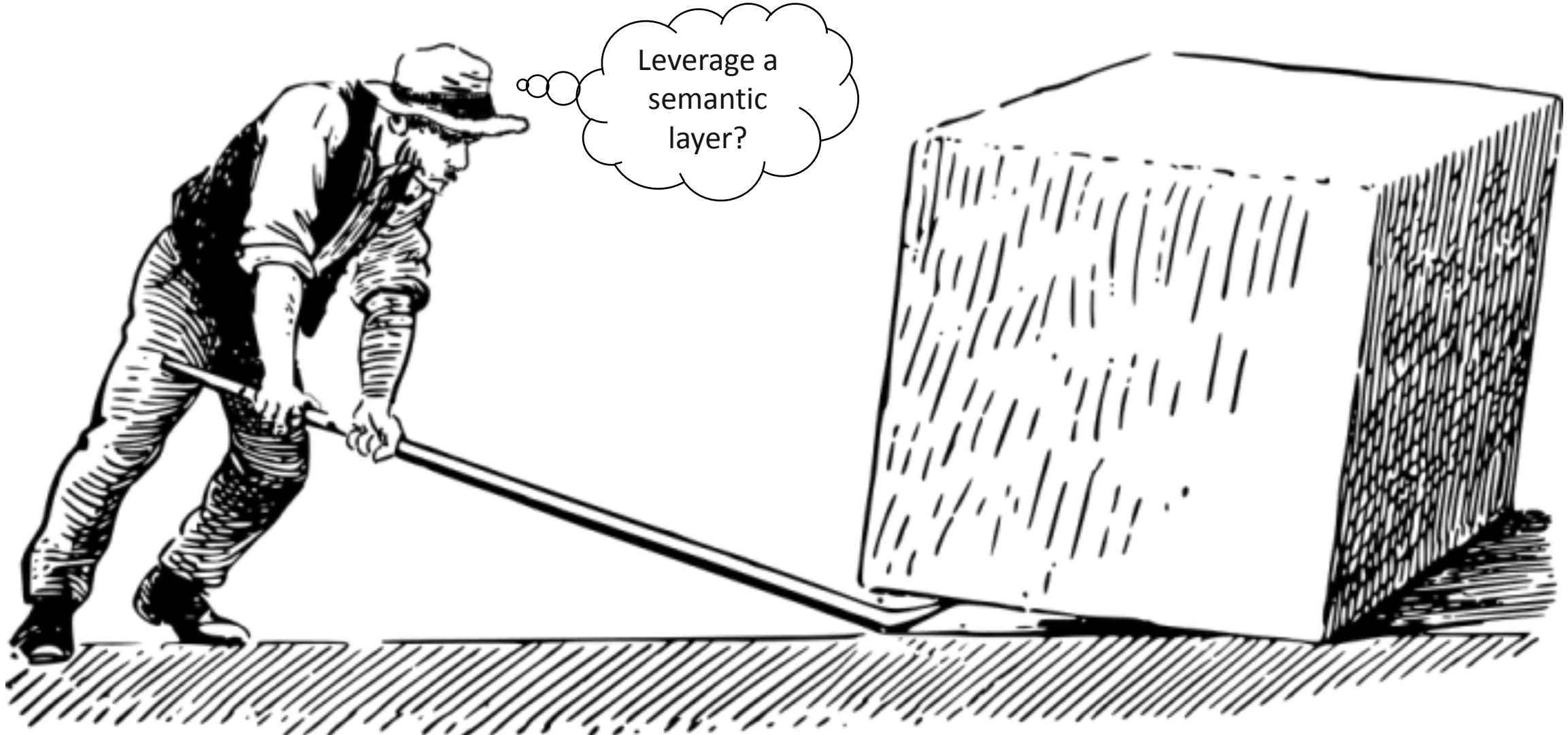
People who know the data  
should ask the questions

**Creating a semantic layer  
is a lot of work.**

**Make sure it is portable!**

Brian Allen, Allstate






Leverage a  
semantic  
layer?

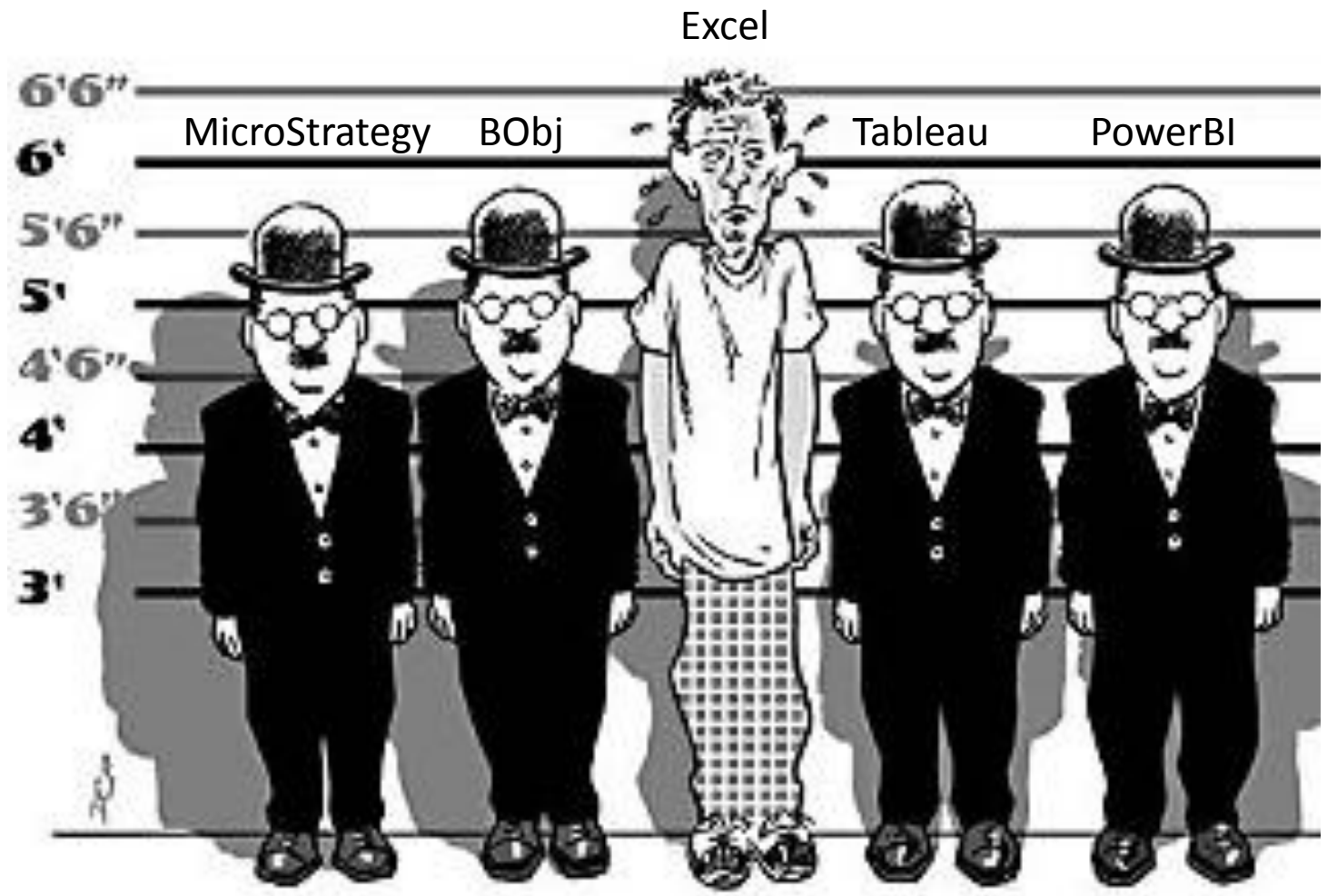






What do I  
do with  
this?

















SEMANTIC  
LAYER

CLOUDERA

AZURE

AWS

GCP



TABLEAU

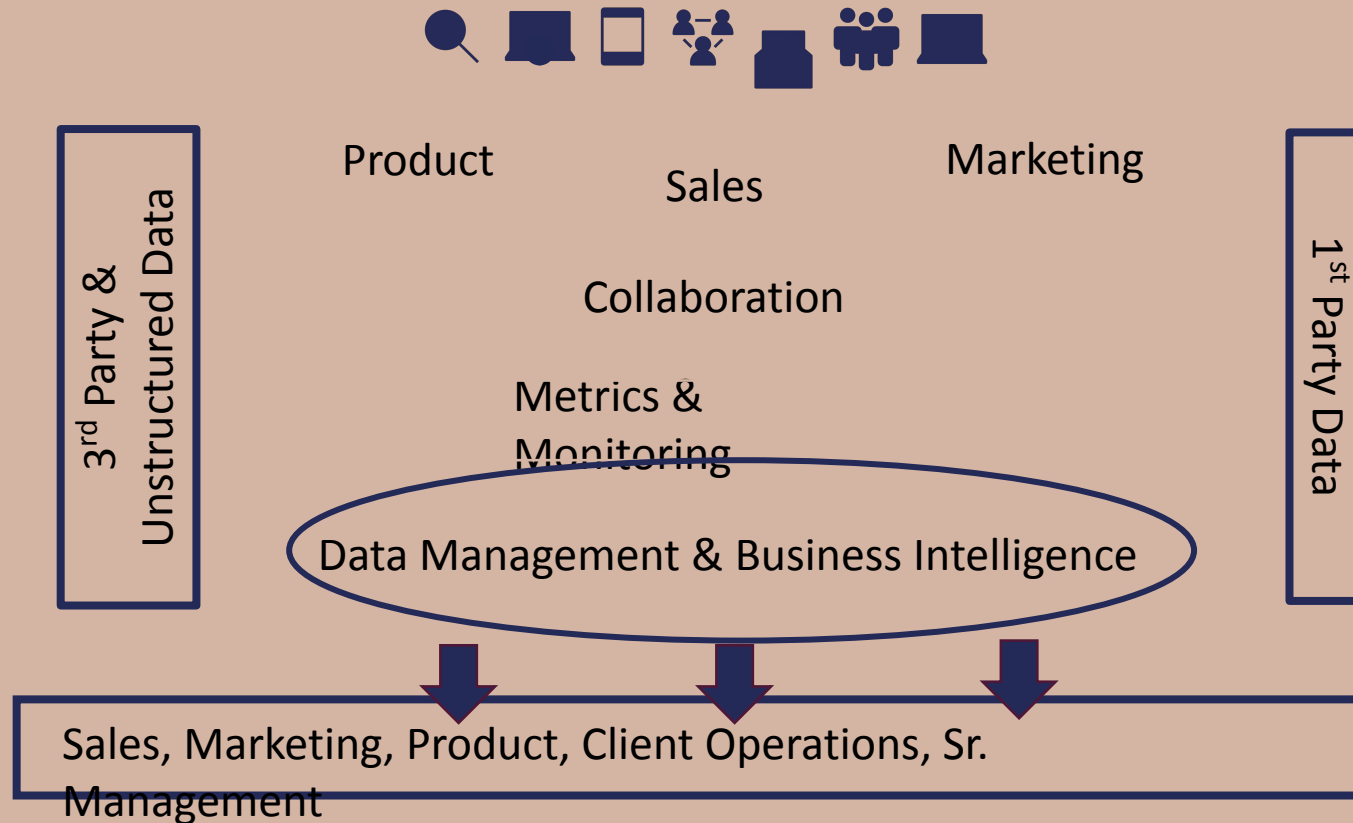
# **Data Maturity & The Impact On Business ROI**

**Heather Fitzgerald**

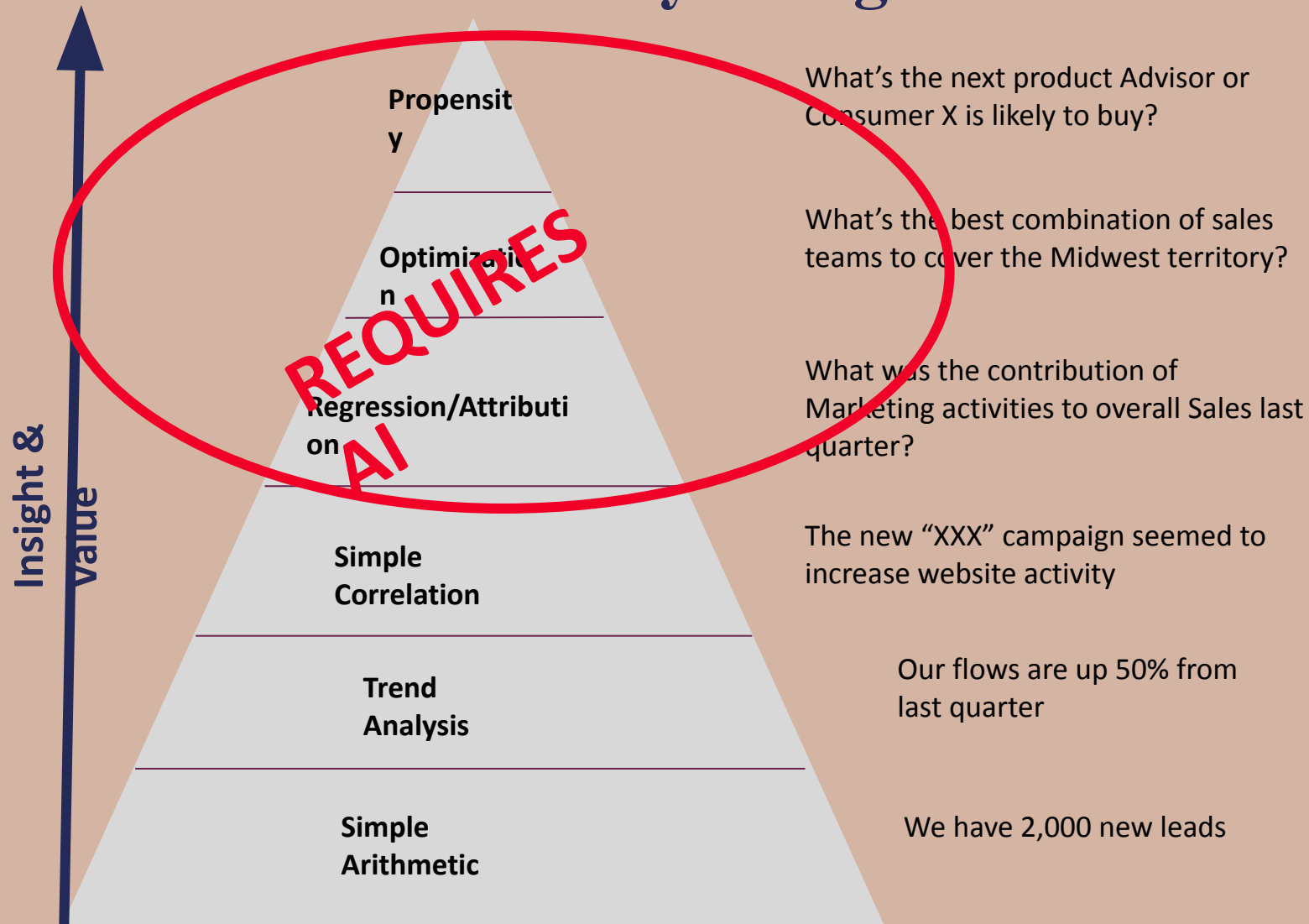
**VP – Head of Distribution Data & Business  
Intelligence**

**Jackson National Life**

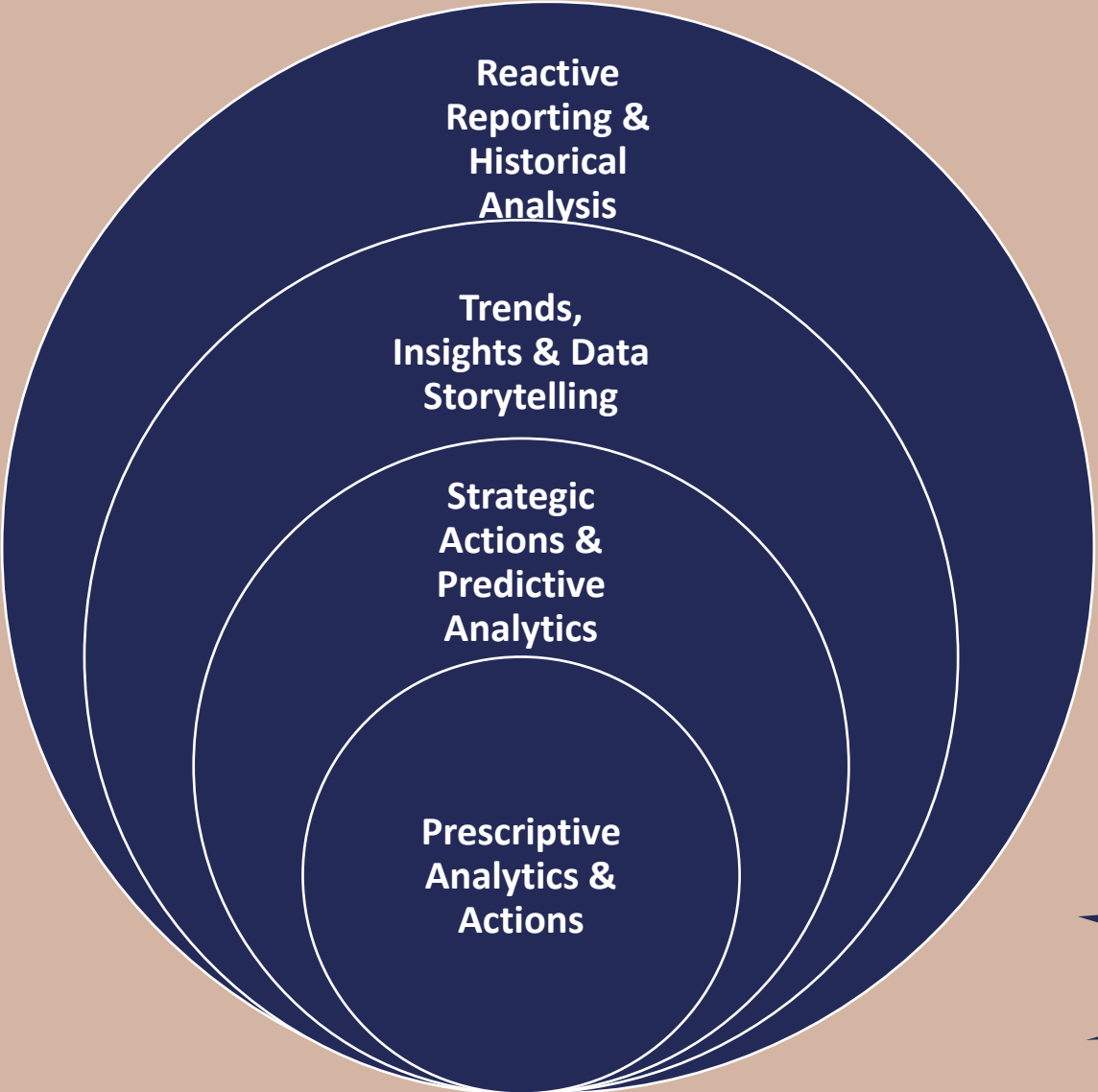
# View of Distribution Intelligence Best Practice Ecosystem



# Driving Value Through Innovation, Technology, Modeling & Data Storytelling



# Business-Driven Intelligence & Strategic Decisioning



Information - What Happened



Insight – What Will Happen



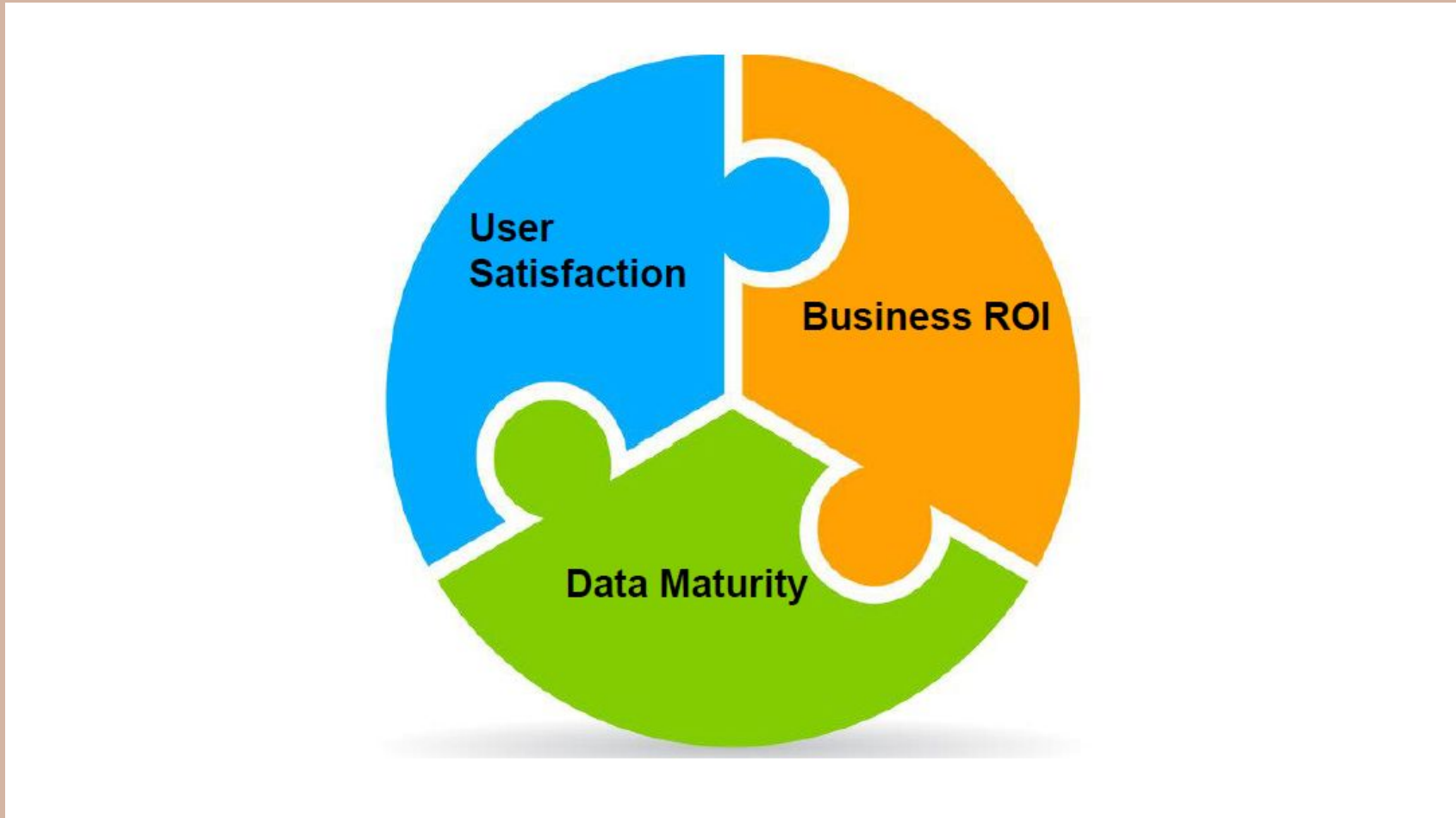


# 86% of Companies Struggle to Turn 'Big Data' Into Valuable & Actionable Insights

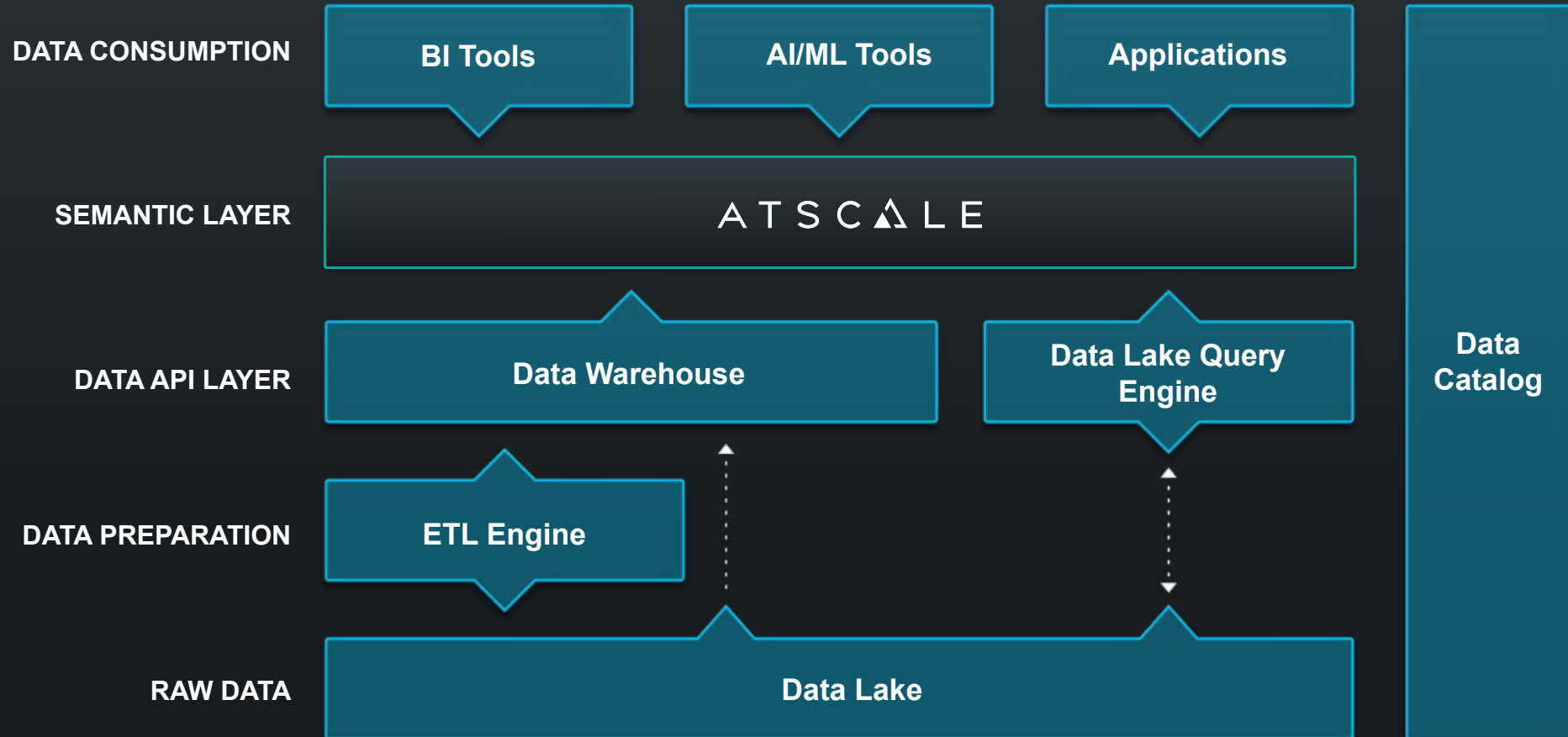
44



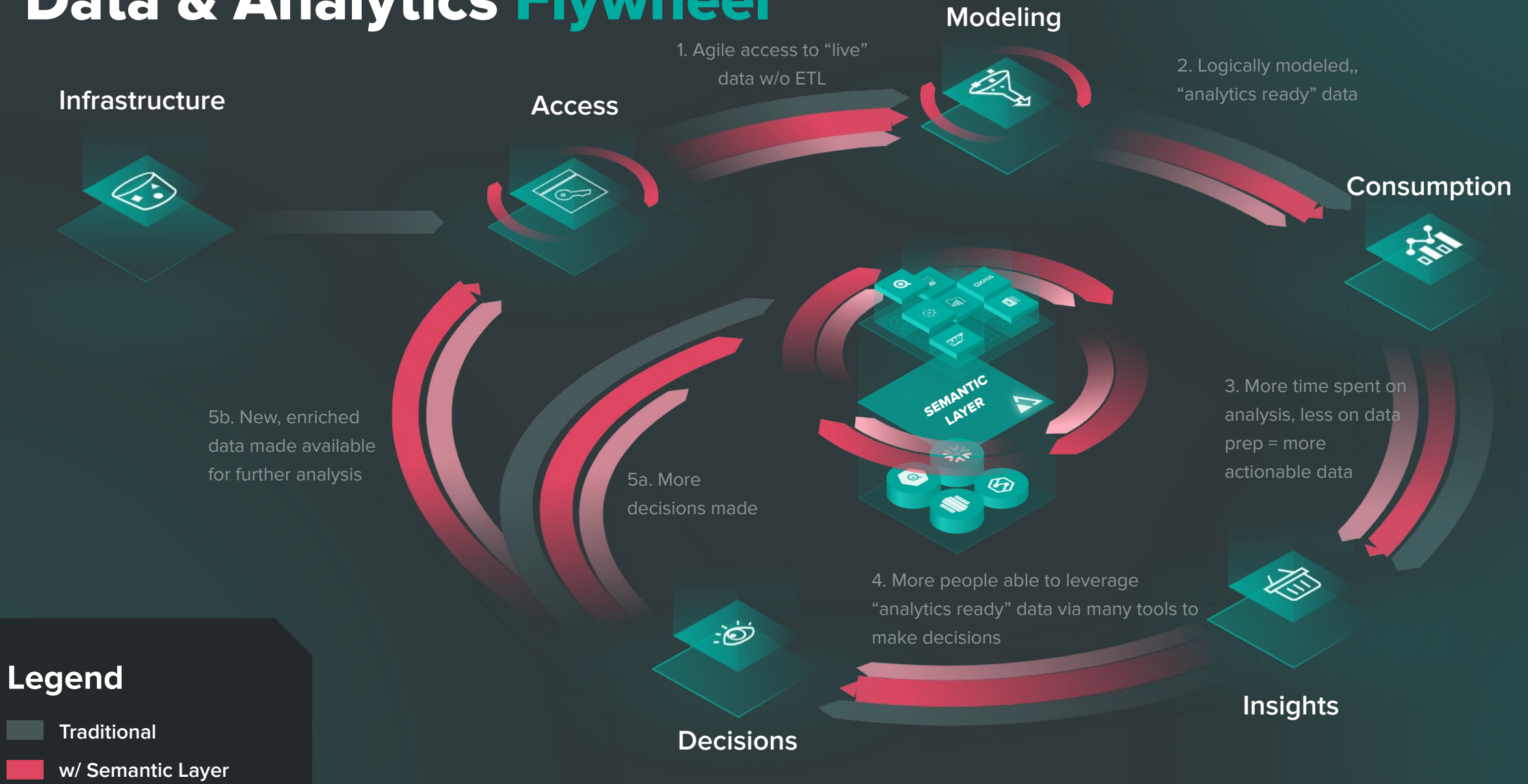
# Data Maturity, Data Strategy & A Data-Driven Culture Ignite Business ROI



# AtScale: *Where we fit.*



# Data & Analytics Flywheel





ATSCALE

[www.atscale.com](http://www.atscale.com)

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