

# Introduction to Data-Centric Architecture

Ruben Sardaryan  
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# In today's talk

- ▶ What is data-centricity?
- ▶ Differences between data-centric and app-centric organizations
- ▶ Why data-centric organizations have an advantage?
- ▶ Data-centric architecture blueprint
- ▶ Surprise giveaway
- ▶ Q & A

# About



Ruben Sardaryan



Helping organizations unleash endless value from information

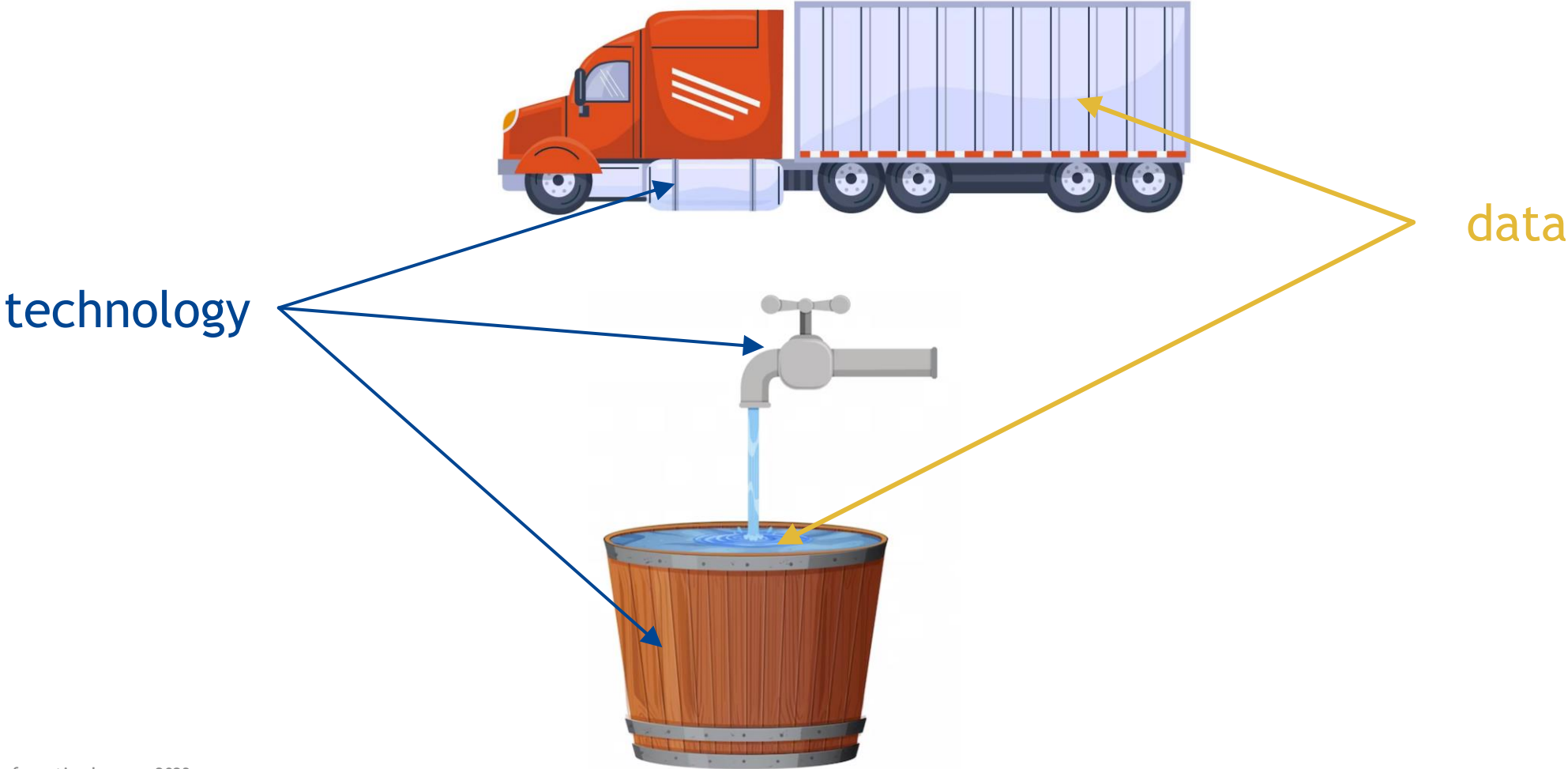
- ▶ CEO & Founder, Infocratic ([infocratic.io](https://infocratic.io))
- ▶ Co-founder, Semantium ([semantium.io](https://semantium.io))
- ▶ Data strategist with 20+ years experience in data & tech leadership
- ▶ Led data & analytics for 10 years at Questrade - growing it to become Canada's top brokerage
- ▶ Author, Data-Centric Executive online course ([datacentricexecutive.com](https://datacentricexecutive.com))

# What is data-centricity?



In 2023  
every business  
is a data business

# What role does technology play?



# Technology comes and goes, but data stays



What matters more - the wallet or the money inside ?



# What matters more - the wallet or the money inside ?

## App-centric



**Your wallet decides** what money it can hold, how much and even how you can spend it

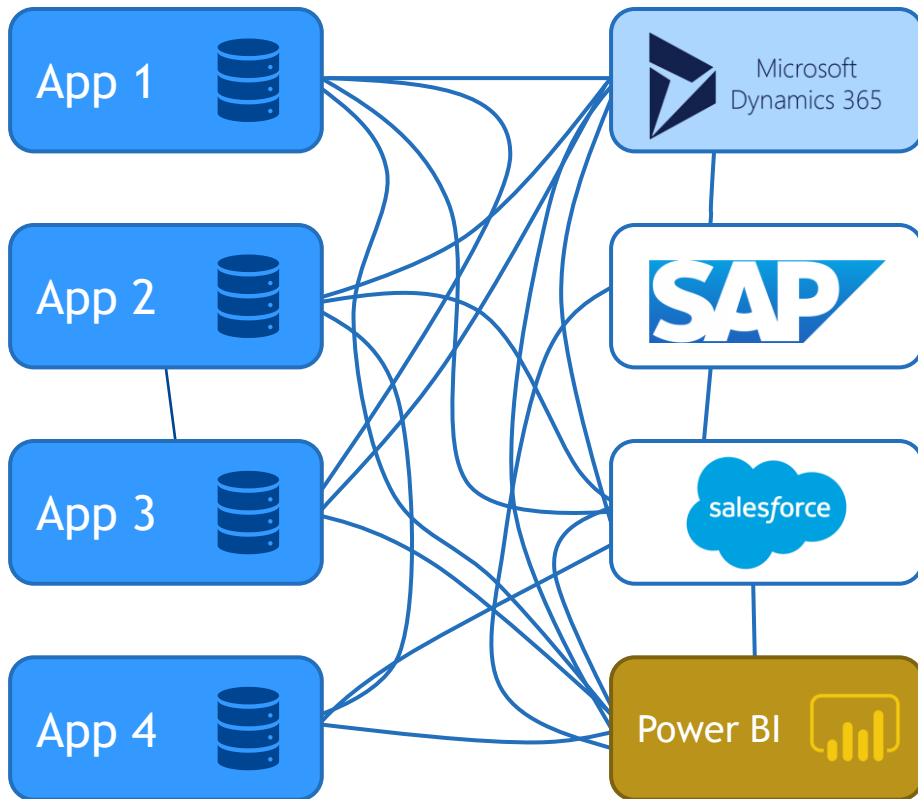
## Data-centric



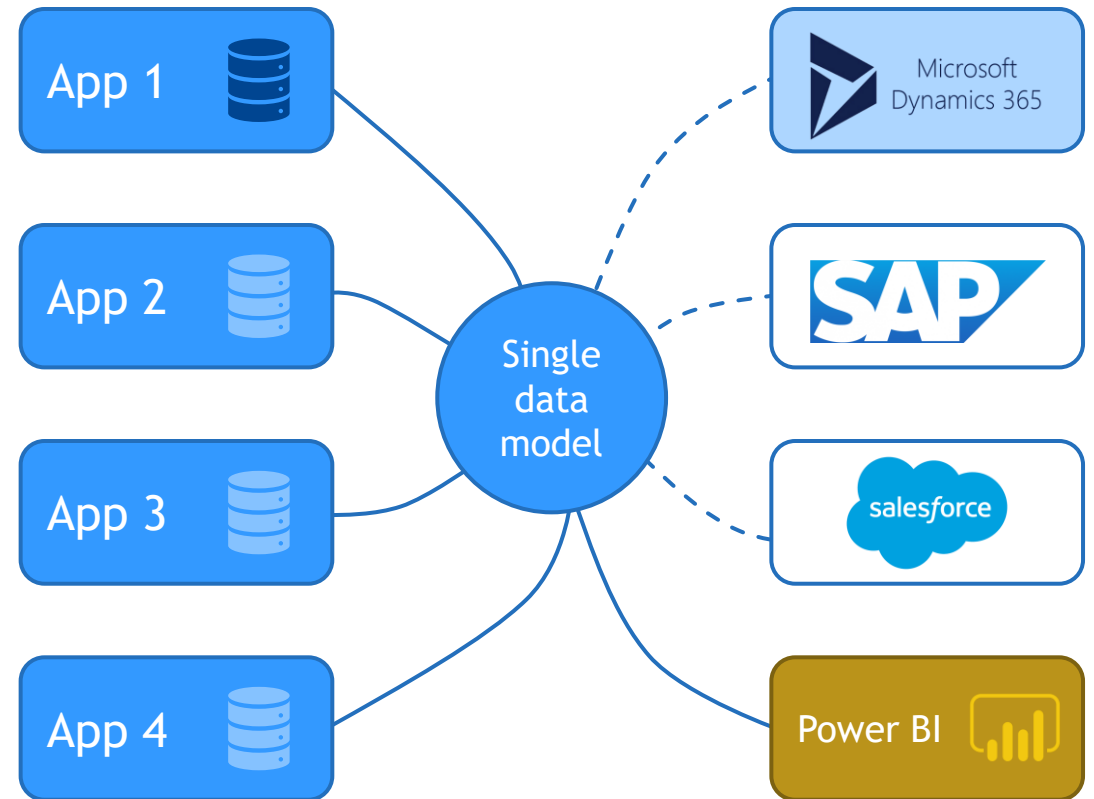
**You decide everything** about your assets

# Data-centric vs. app-centric organizations

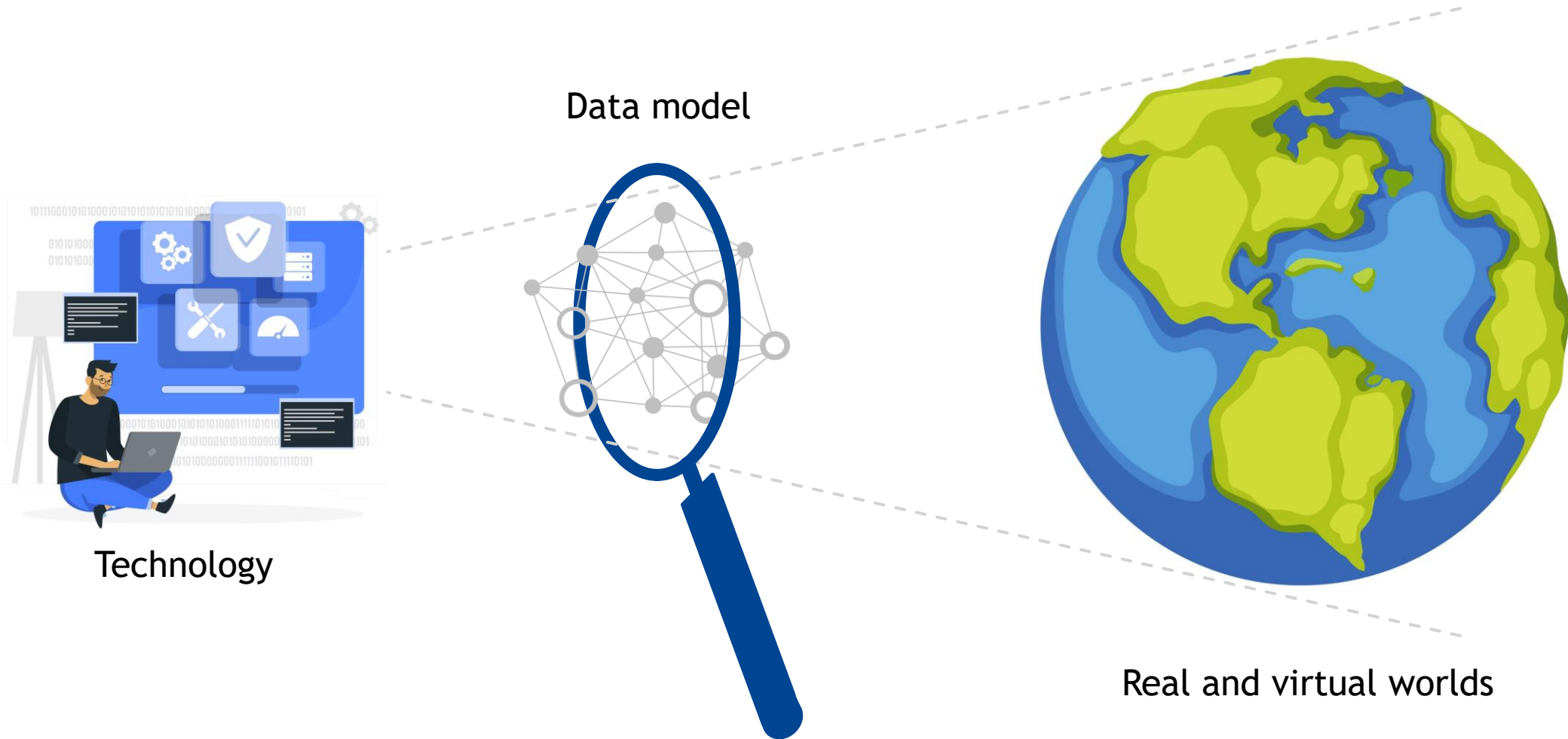
## App-Centric



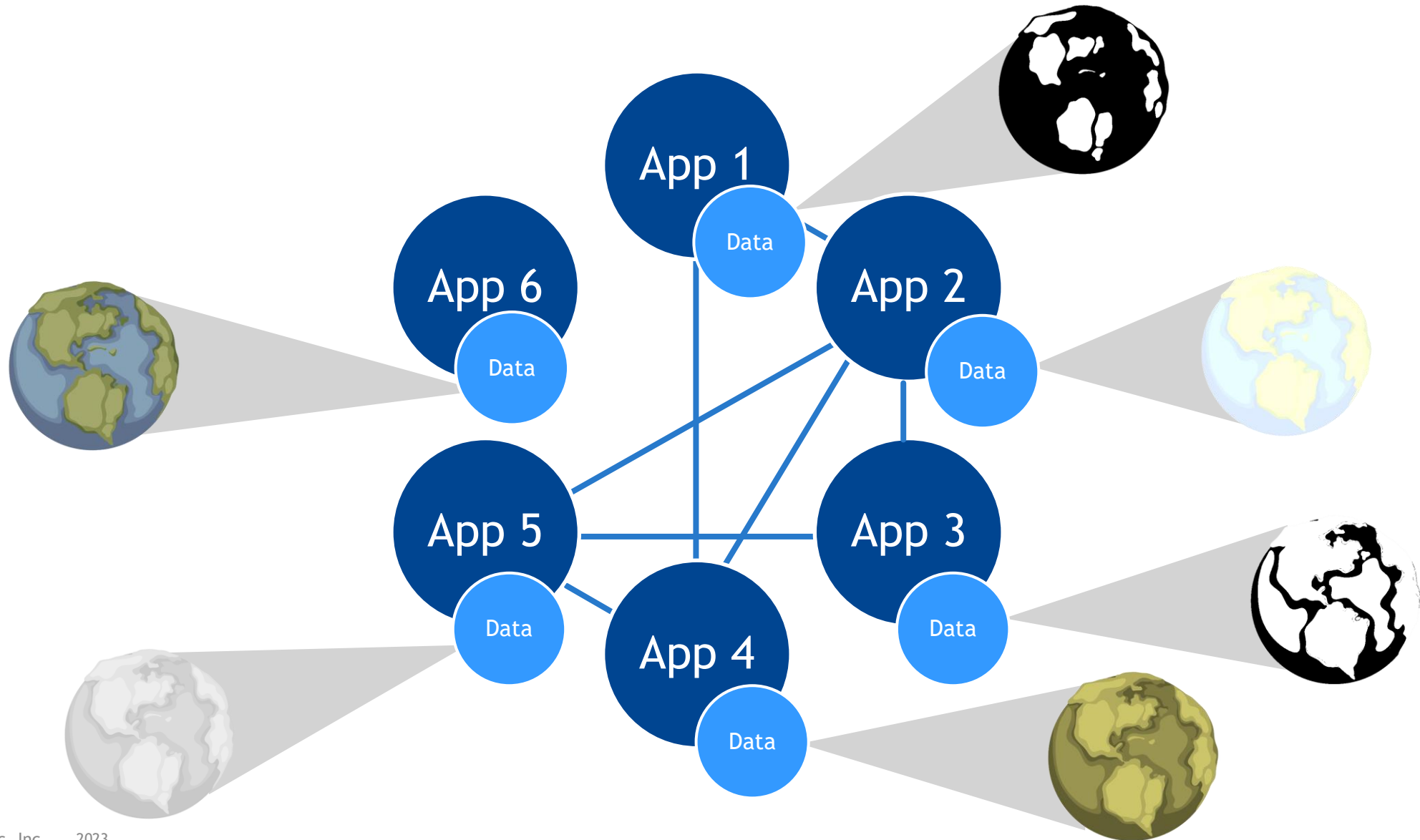
## Data-Centric



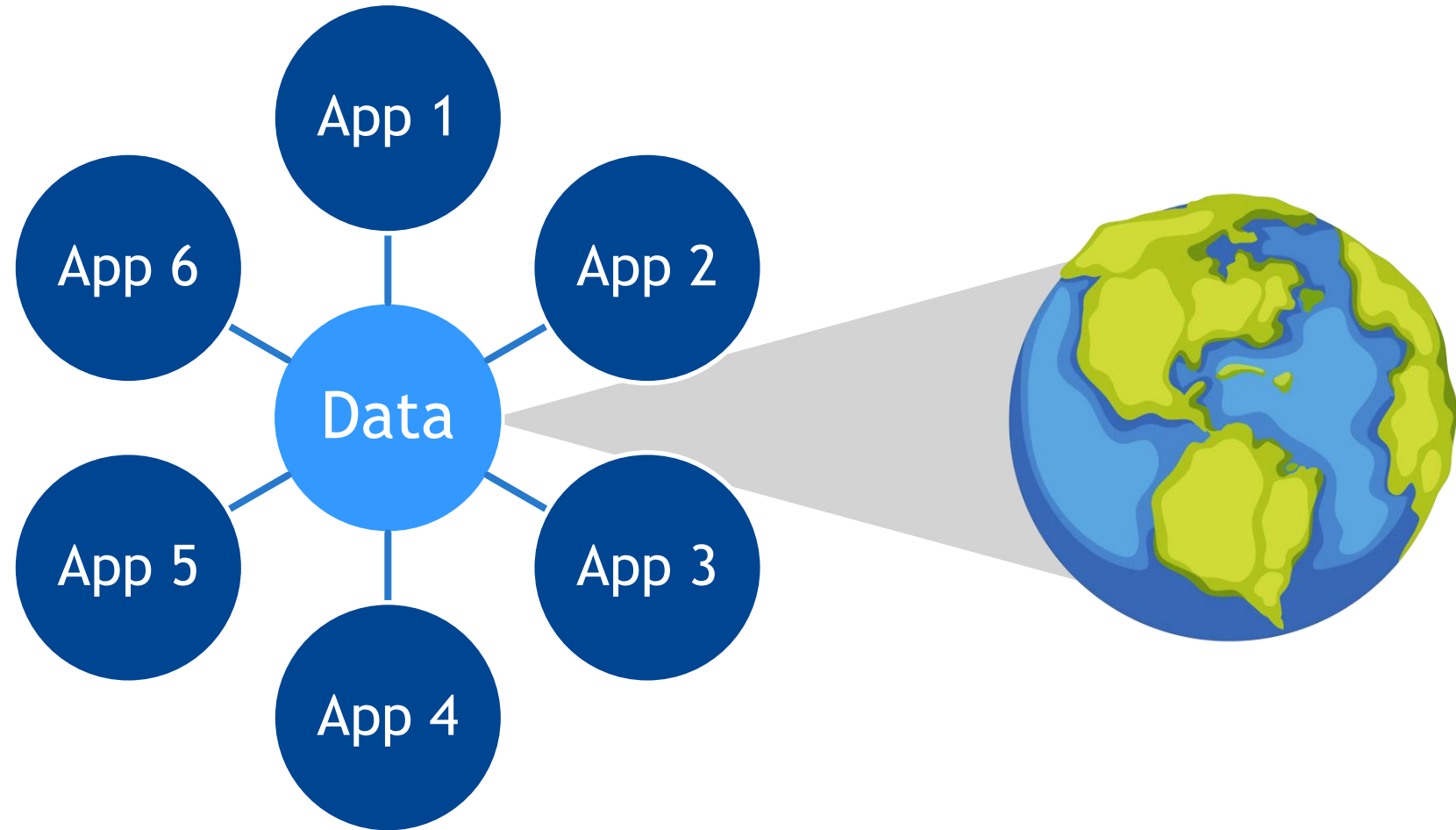
# Technology sees the world through data models



# App-centric = apps dictate the worldview



# Data-centric = you determine the worldview



# What is Data-Centricity?

Ability to efficiently manage data lifecycles  
apart from technology lifecycles.

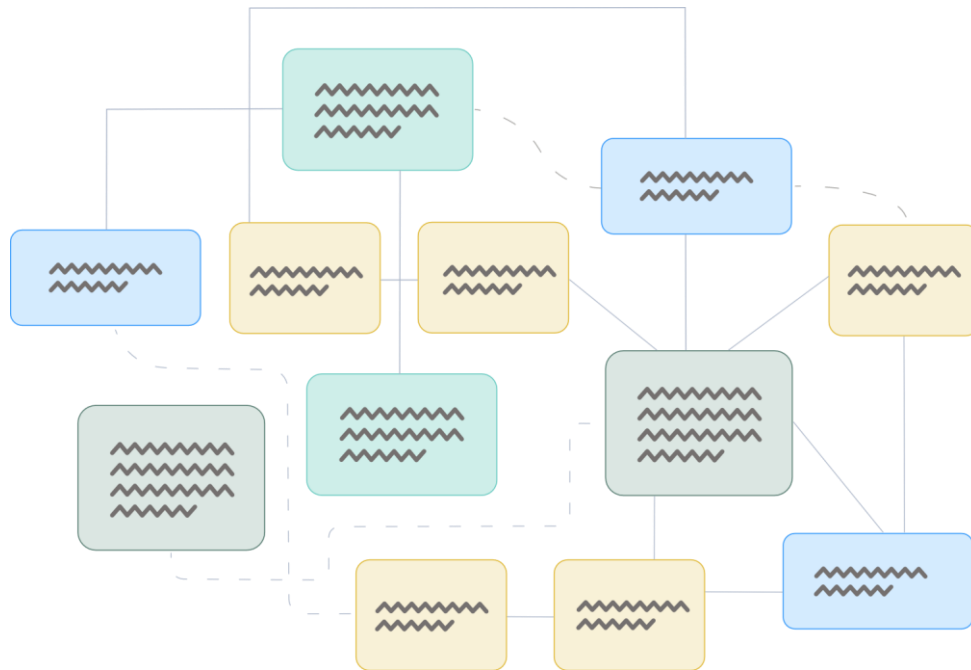
# What is a Data-Centric organization?

## Data-centric organization:

1. **has a single data model;**
2. **prioritizes managing data & information over managing systems & technology.**

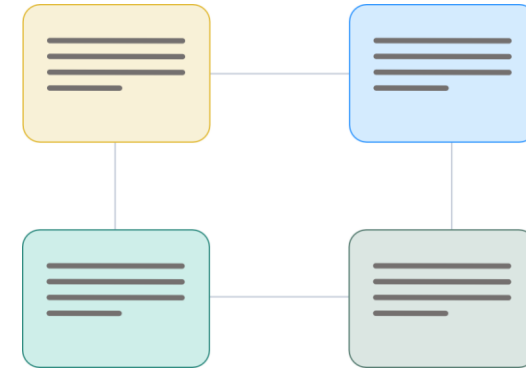
# Looking at an organization as a system

## App-centric



- “Frankenstein system”
- Multiple redundant and even conflicting parts
- Large infrastructure footprint

## Data-centric



- Elegant
- No redundant or conflicting parts
- Small infrastructure footprint

# Why data-centric organizations have an advantage?

# The most important economic properties of data

- ▶ Data is non-rivalrous and non-depletable
- ▶ Data is excludable

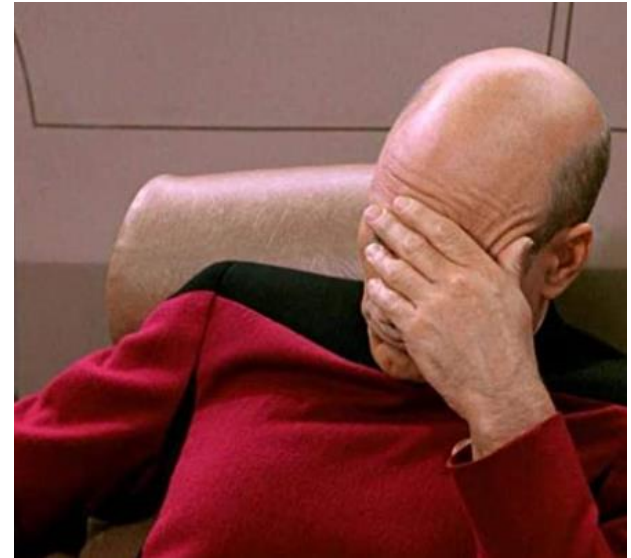
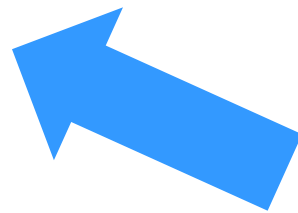
} Cornerstone of digital economy



Data-centricity optimizes an organization for data reuse

# Being app-centric = many extra costs

- ▶ Infrastructure costs
- ▶ Integration costs
- ▶ Complexity costs
- ▶ Agility costs
- ▶ Data quality & trust costs



Results of evolutionary  
app-centric approach

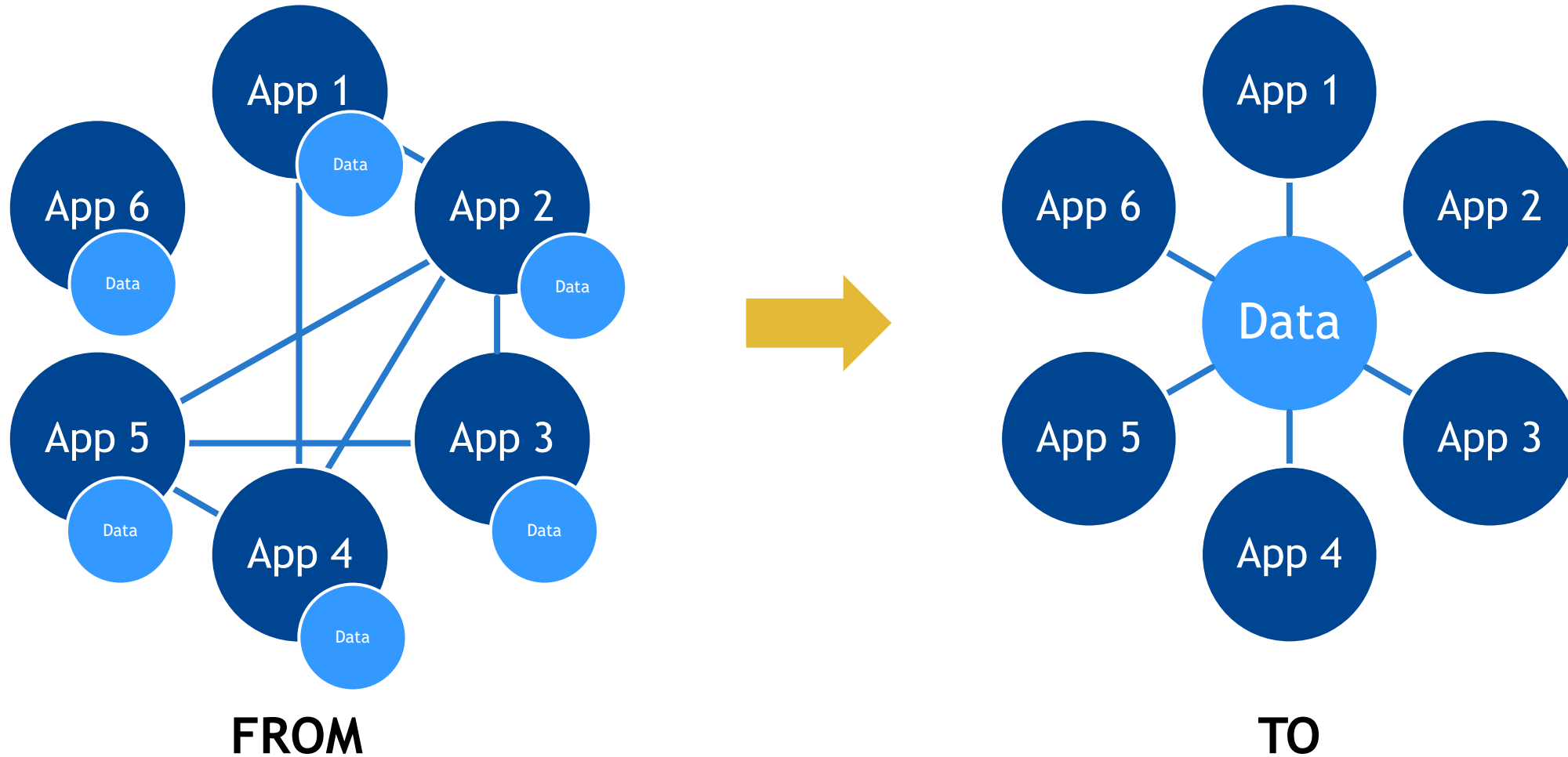
# Data-centric vs. app-centric organization traits

Data-centric	App-centric
Data is shared	Data is hoarded
Technology landscape is elegant and simple	Technology landscape is vast and complex
Company focuses on data & information; technology is a tool	Company focuses on technology & tools; information & data is an afterthought
Little to no data silos	Many data silos
High level of trust in data	Low level of trust in data
High levels of data literacy on average	Low levels of data literacy on average
High degree of agility & innovation	Low degree of agility & innovation

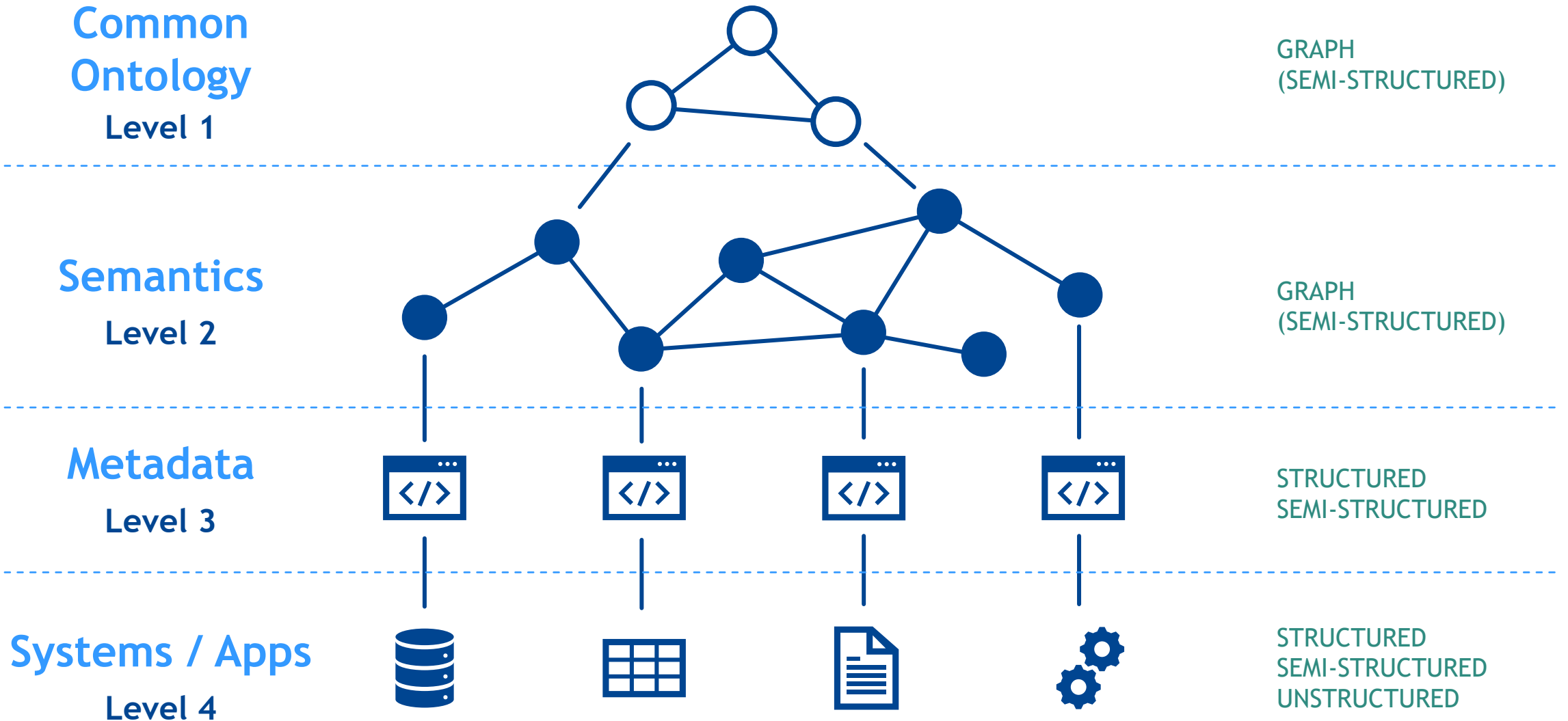
The digital economy will embrace  
only those organizations that  
adopt a **data-centric mindset**

# Data-centric architecture blueprint

# The goal of data-centric architecture



# Data-centric architecture blueprint

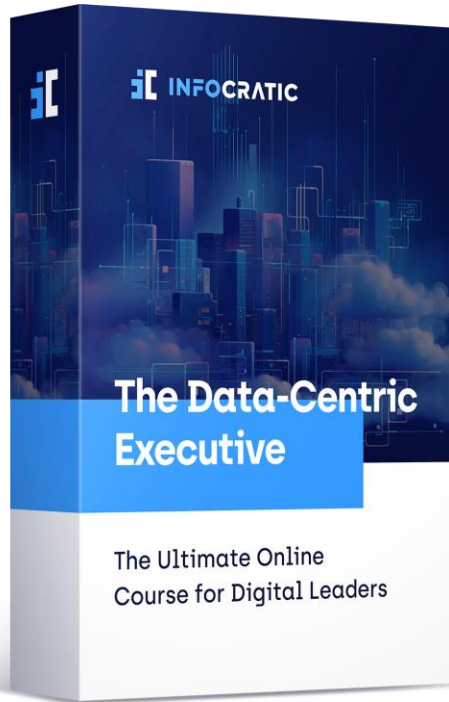


# What successful data-centric companies do

- ▶ Formalized common language
- ▶ Common metadata format & centralized metadata management
- ▶ “Everything is a data product”
- ▶ No multiple data stores of the same type
- ▶ Focus on interoperability
- ▶ Business rules and processes are encoded
- ▶ Preference to use open and/or in-house solutions
- ▶ Governance and security built-in
- ▶ Democratized access and use

# Surprise giveaway

# The Data-Centric Executive online course




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<https://datacentricexecutive.com>

# Thank you! Questions?

How to stay connected:

- Connect with [Ruben Sardaryan](#) & [Infocratic](#) on 
- <https://infocratic.io>
- [contact@infocratic.io](mailto:contact@infocratic.io)