



THE FUTURE OF ANALYTICS IN THE CLOUD

KENT GRAZIANO, CHIEF TECHNICAL EVANGELIST | @KentGraziano



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My Bio



- Chief Technical Evangelist, Snowflake Computing
- Oracle ACE Director, Alumni (DW/BI)
- OakTable Network
- Blogger – [The Data Warrior](#)
- Certified Data Vault Master and DV 2.0 Practitioner
- Former Member: Boulder BI Brain Trust (#BBBT)
- Member: DAMA Houston & DAMA International
- Data Architecture and Data Warehouse Specialist
 - 30+ years in IT
 - 25+ years of Oracle-related work
 - 20+ years of data warehousing experience
- Author & Co-Author of a bunch of books (Amazon)
- Past-President of ODTUG and Rocky Mountain Oracle User Group



THE FUTURE IS NOW!



175 Zettabytes by 2025



Web

.....



3rd party apps

.....



Mobile

.....



Enterprise apps

.....



ERP

.....



IoT

It's not the data itself

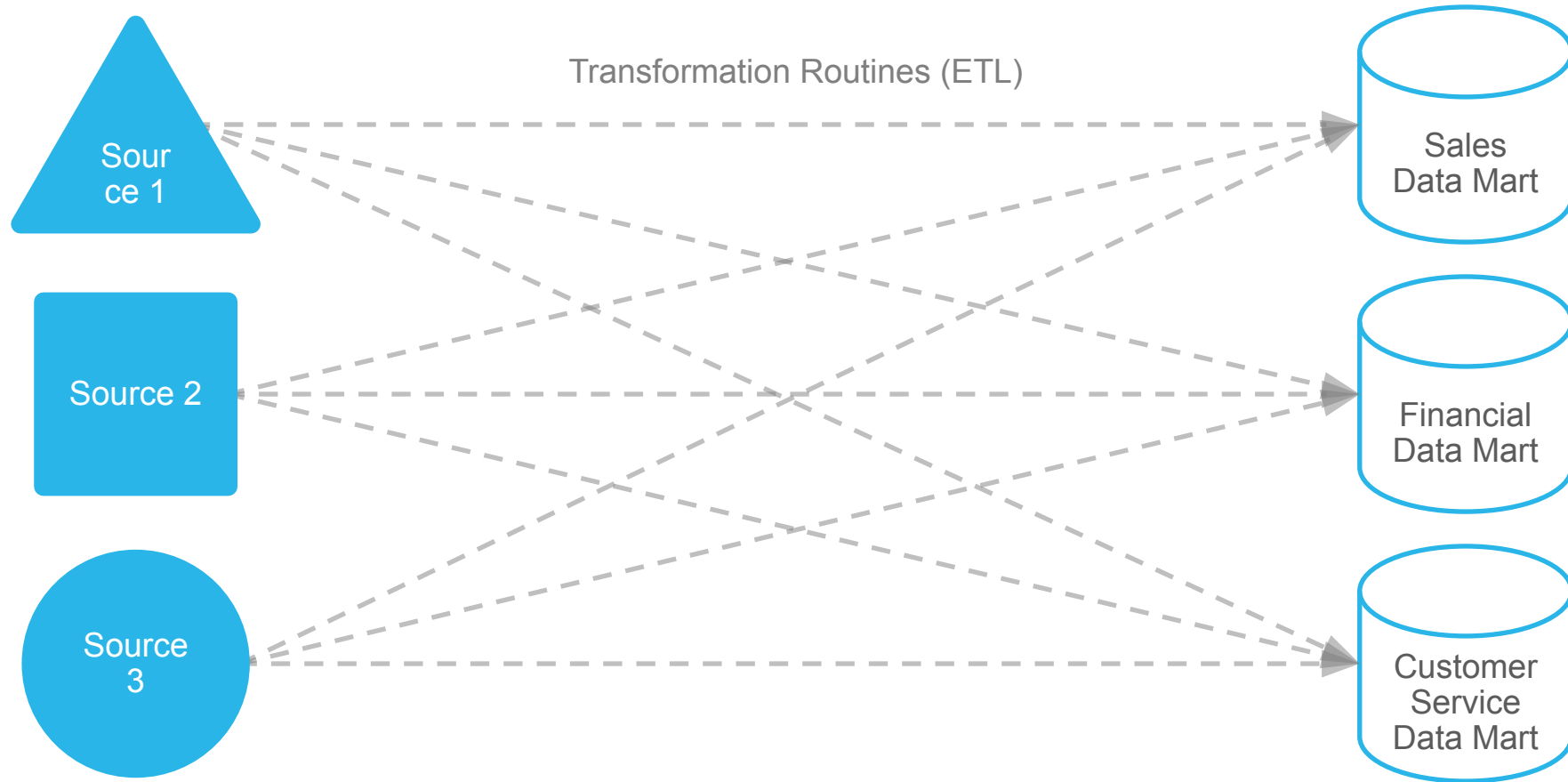


it's how you take full advantage of the insight it provides

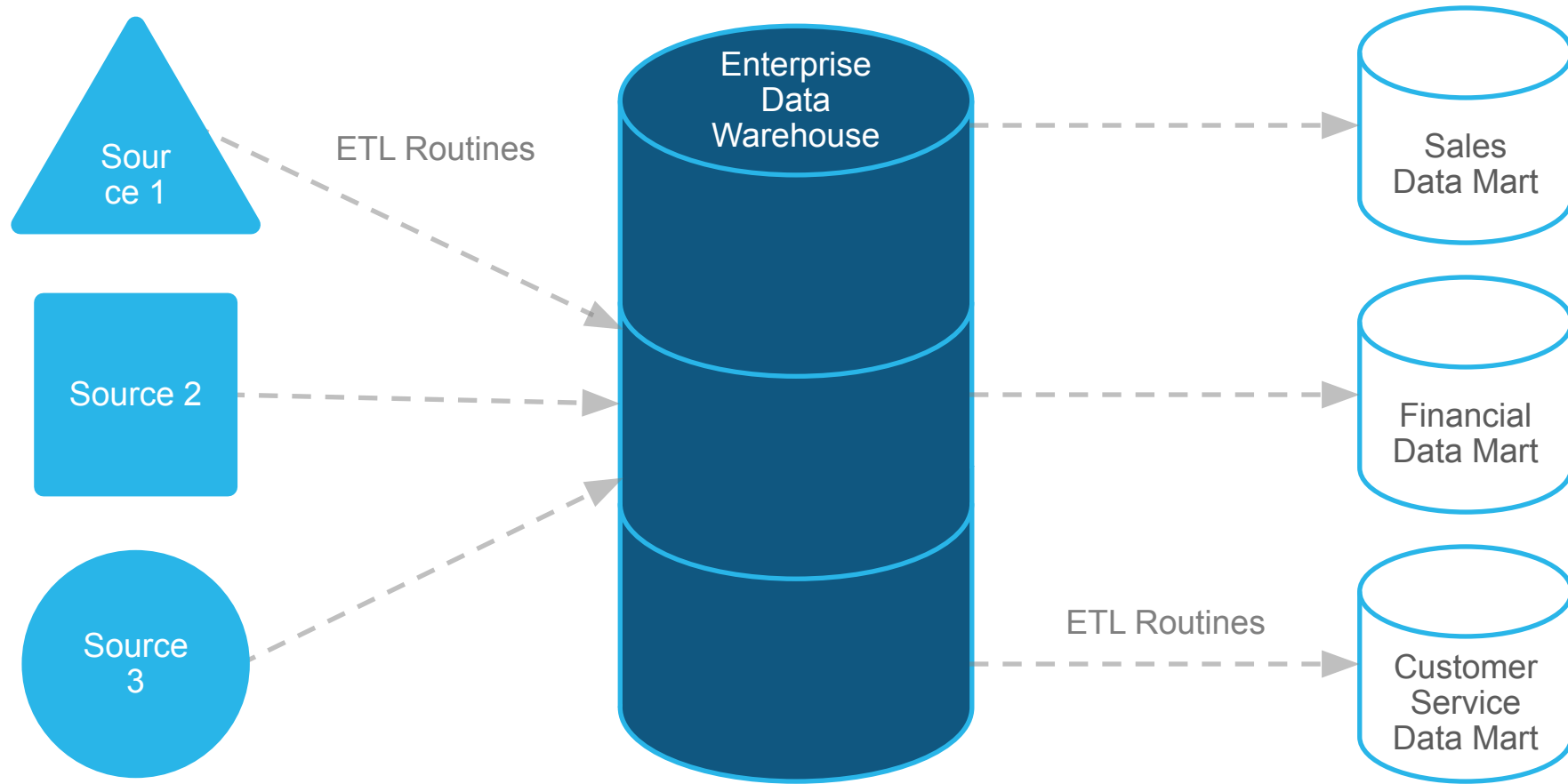
Where are we now?
How did we get there?



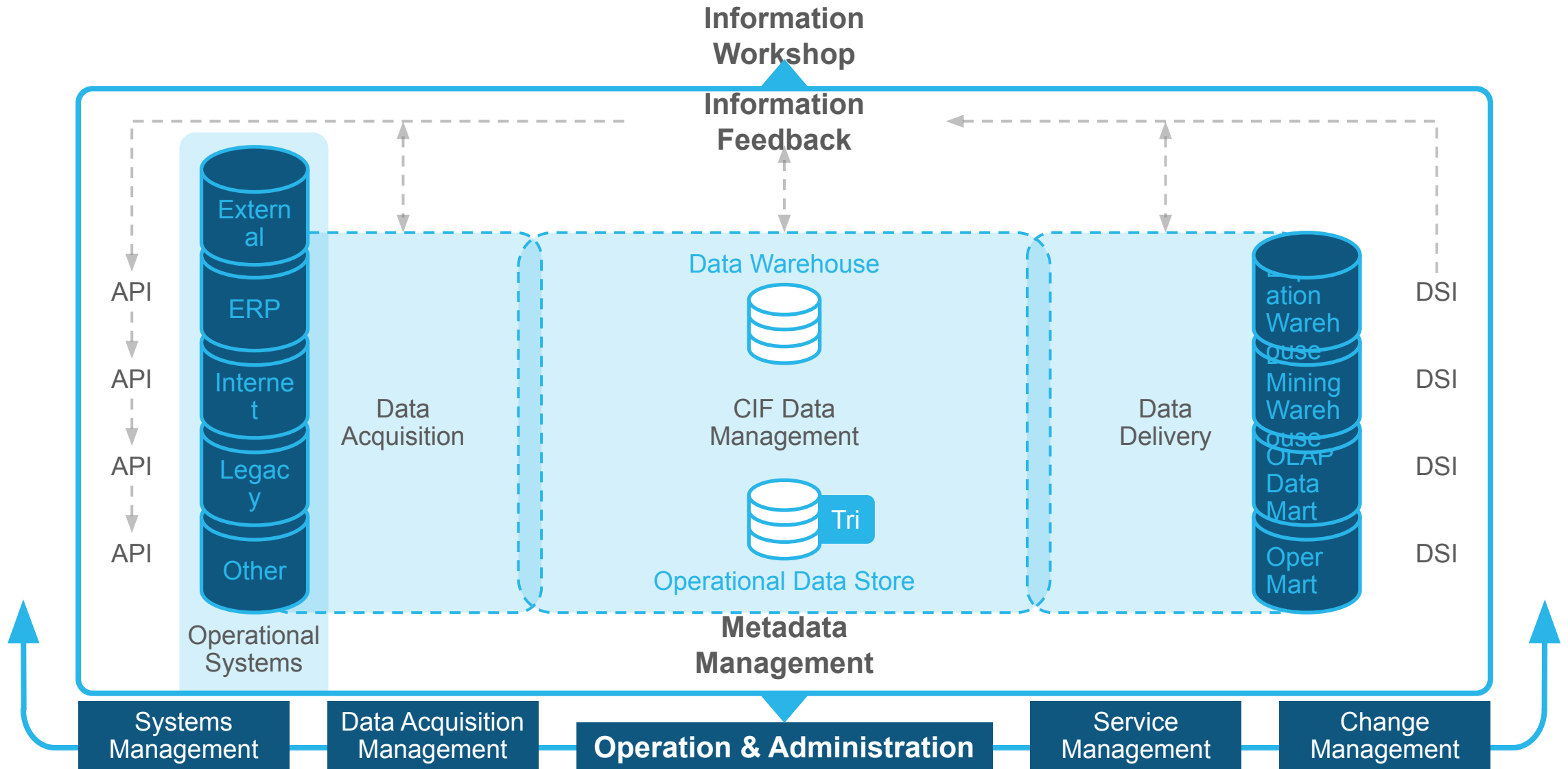
DIRECT DATA MART



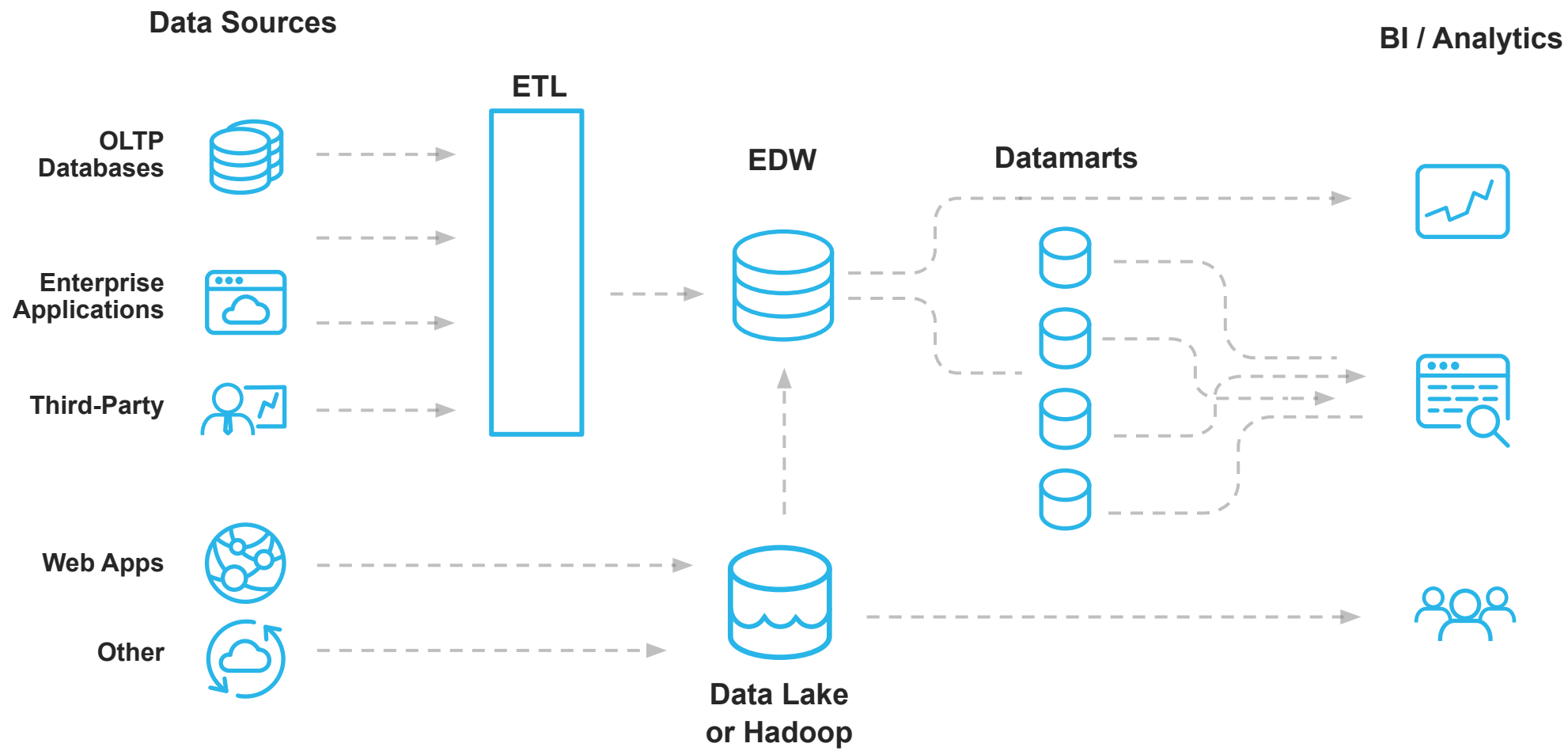
ENTERPRISE DATA WAREHOUSE



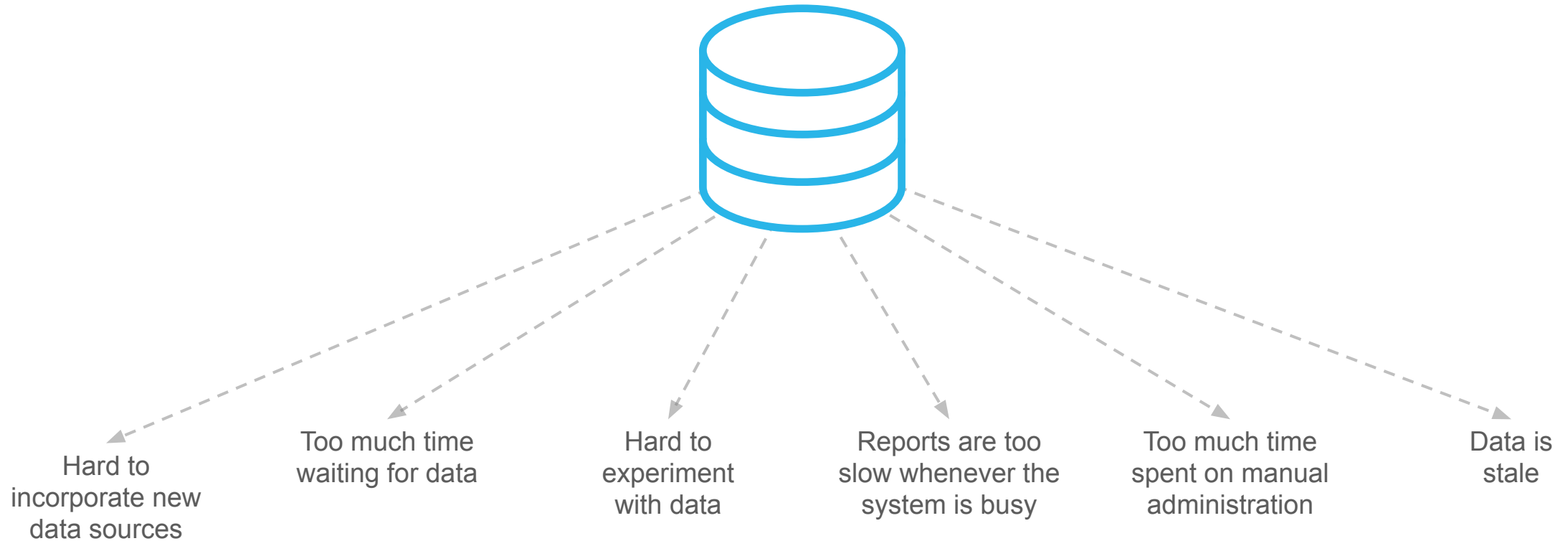
CORPORATE INFORMATION FACTORY



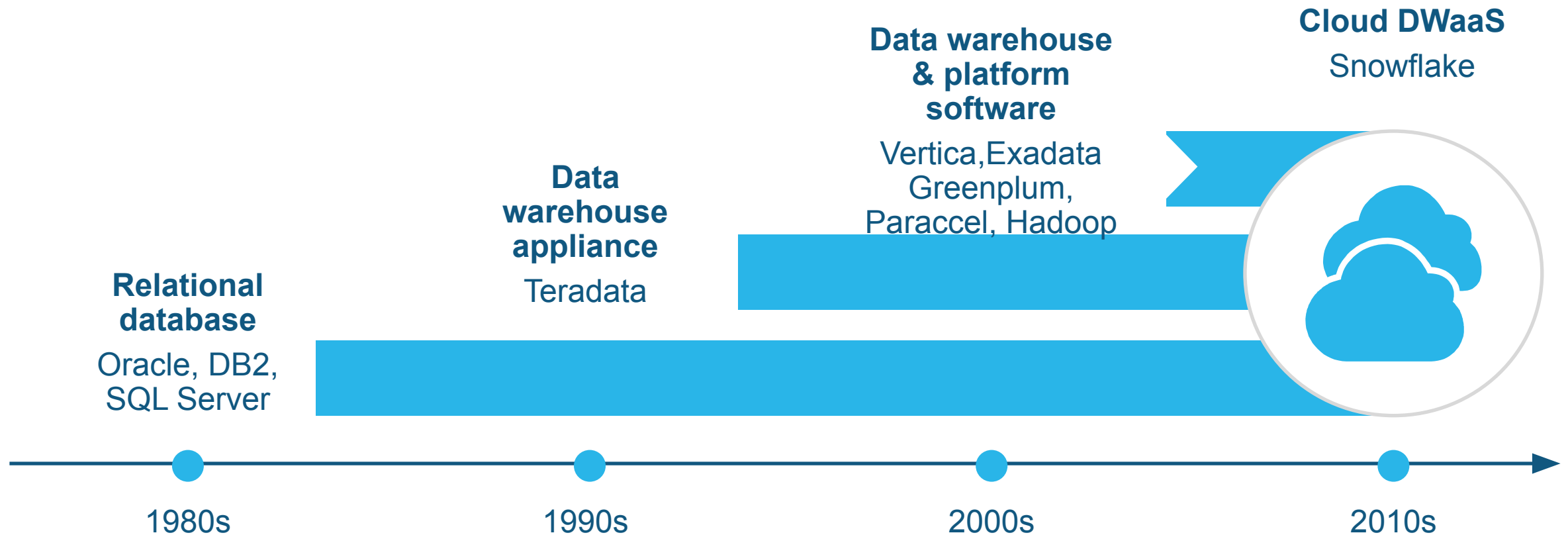
TYPICAL DW/BI ENVIRONMENT



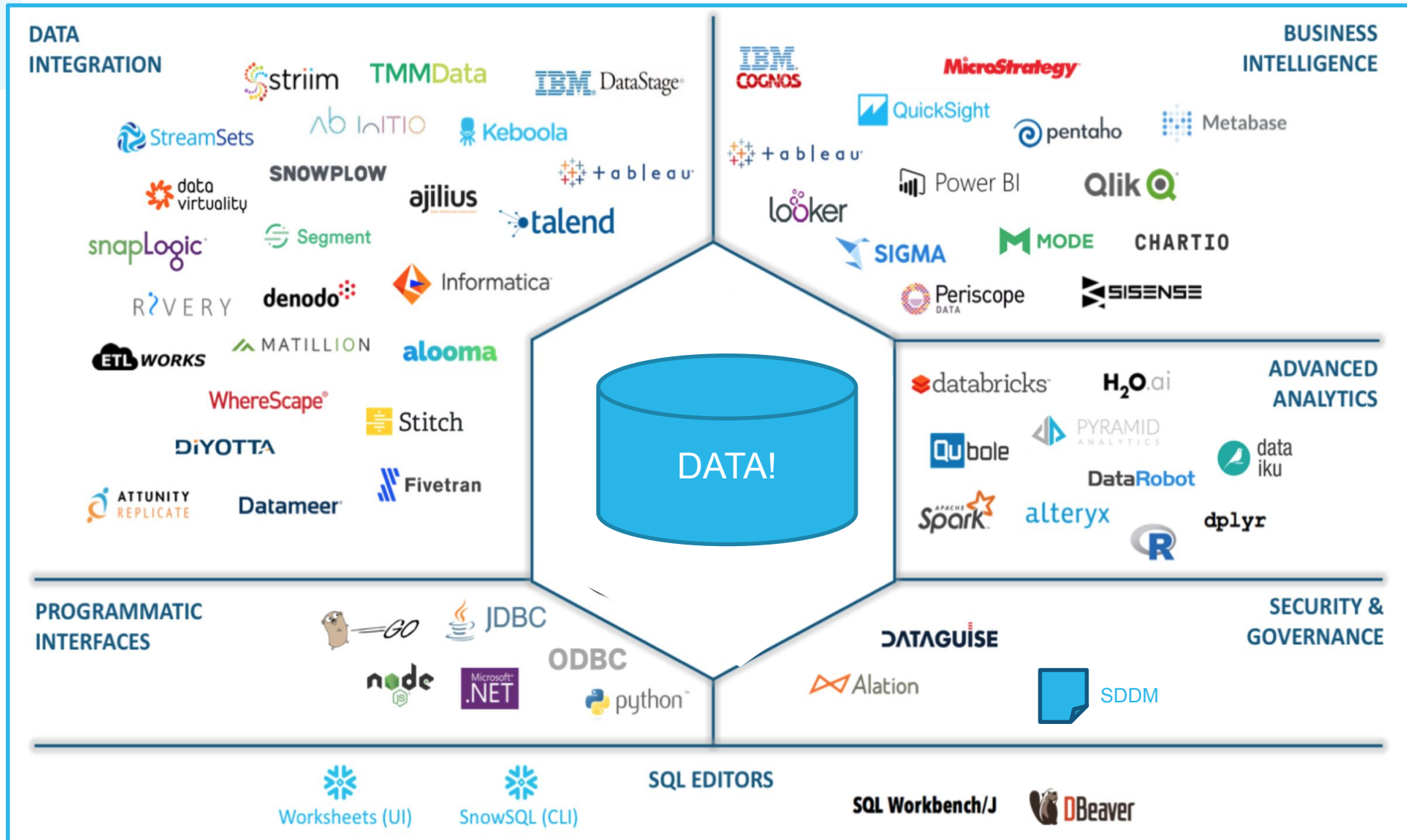
THE DATA STRUGGLE CONTINUES!



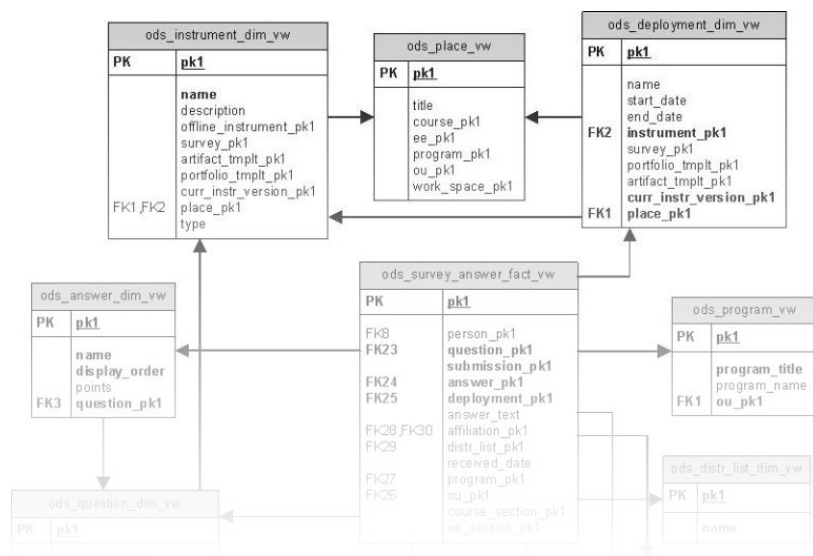
The evolution of data platforms



EVER GROWING ECOYSTEM



THE DATA HAS EVOLVED



STRUCTURED

Transactional data
Relational
Fixed schema
Dominant in traditional environments

```
"web-app": {
  "servlet": [
    {
      "servlet-name": "cofaxCDS",
      "servlet-class": "org.cofax.cds.CDSServlet",
      "init-param": {
        "configGlossary:installationAt": "Philadelphia, PA",
        "configGlossary:adminEmail": "ksm@pobox.com",
        "configGlossary:poweredBy": "Cofax",
        "configGlossary:poweredByIcon": "/images/cofax.gif",
        "configGlossary:staticPath": "/content/static",
        "templateProcessorClass": "org.cofax.WysiwygTemplate",
        "templateLoaderClass": "org.cofax.FilesTemplateLoader",
        "templatePath": "templates",
        "templateOverridePath": "",
        "defaultListTemplate": "listTemplate.htm",
        "defaultFileTemplate": "articleTemplate.htm",
        "cachePagesTrack": 200,
        "cachePagesStore": 100,
        "cachePagesRefresh": 10,
        "cachePagesDirtyRead": 10,
        "searchEngineListTemplate": "forSearchEnginesList.htm",
        "maxUrlLength": 500}},
    {
      "servlet-name": "cofaxEmail",
      "servlet-class": "org.cofax.cds.EmailServlet",
      "init-param": {
        "mailHost": "mail1",
        "mailPort": 25,
        "mailUser": "cofax@cofax.com"
      }
    }
  ]
}
```

SEMI-STRUCTURED

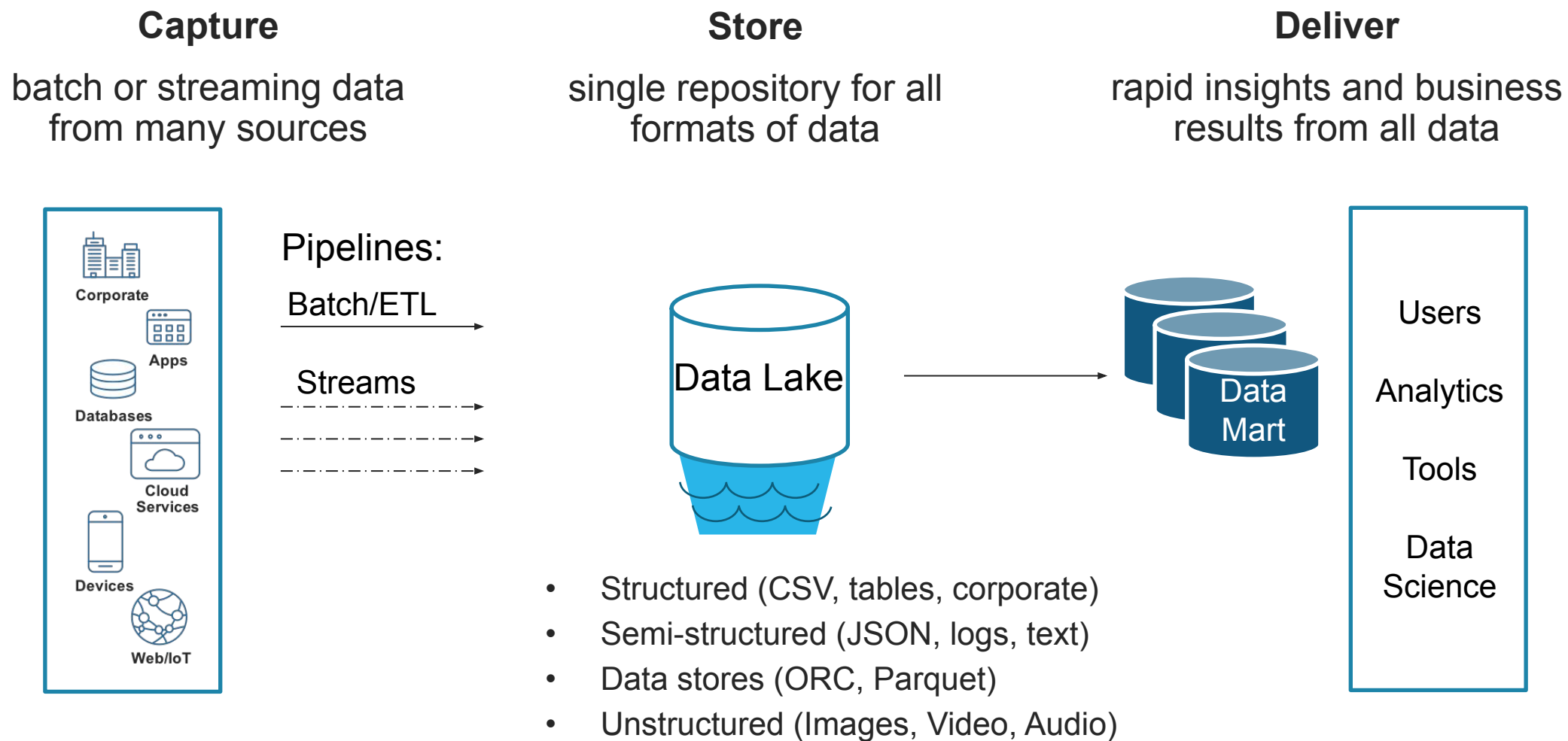
Machine-generated
Non-relational
Flexible schema
Most common in cloud environments



Data Lakes?



DATA LAKES: WHY?



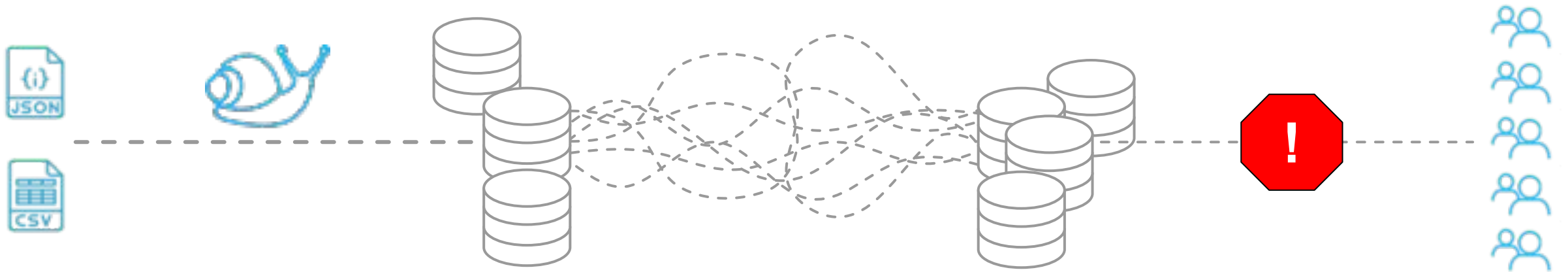
Reality Check:

**“THE REAL FAILURE
RATE OF BIG DATA
PROJECTS IS NOT 60%,
BUT CLOSER TO 85%.”**

Gartner, via TechRepublic.com, 85% of big data projects fail, but your developers can help yours succeed,
November 2017



WHY MOST DATA LAKES FAIL



Slow Performance

Slow queries
Unnecessary data reads
Delays through data teams

High Complexity

Multiple systems, silos, copies
Hard to manage
Expensive skilled labor
(Not SQL!)

Poor Governance

Poor resource & access control
Many formats, poor integration
No audit trail

**“BY 2021, 70% OF MATURE
ORGANIZATIONS WILL HAVE
MORE DATA FLOWING
FROM DATA LAKES TO
DATA WAREHOUSES
THAN VICE VERSA.”**

Gartner: Efficiently Evolving Data From the Data Lake to the Data Warehouse, May 2019



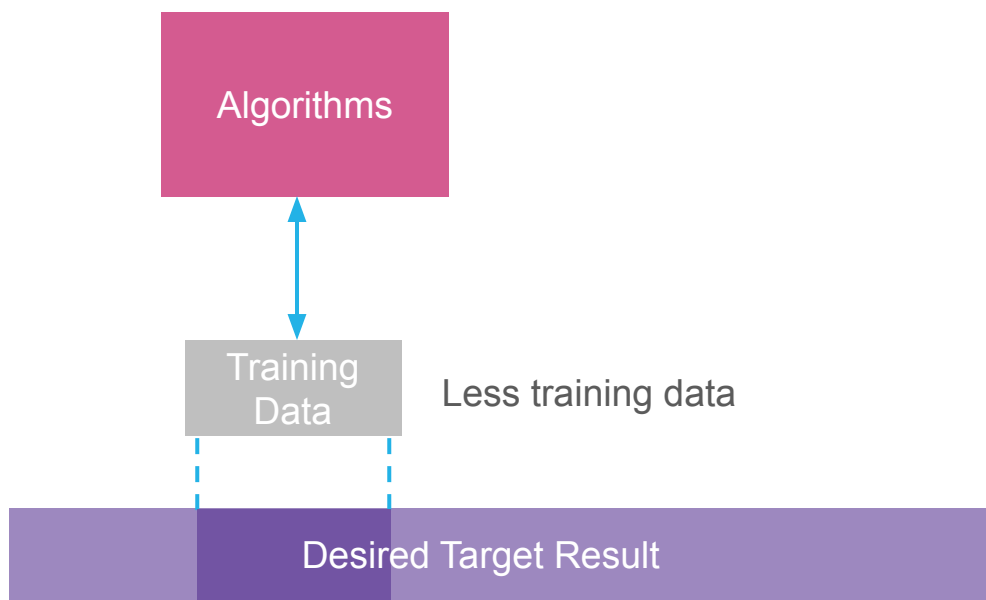
What about Data Science, Machine Learning and AI?



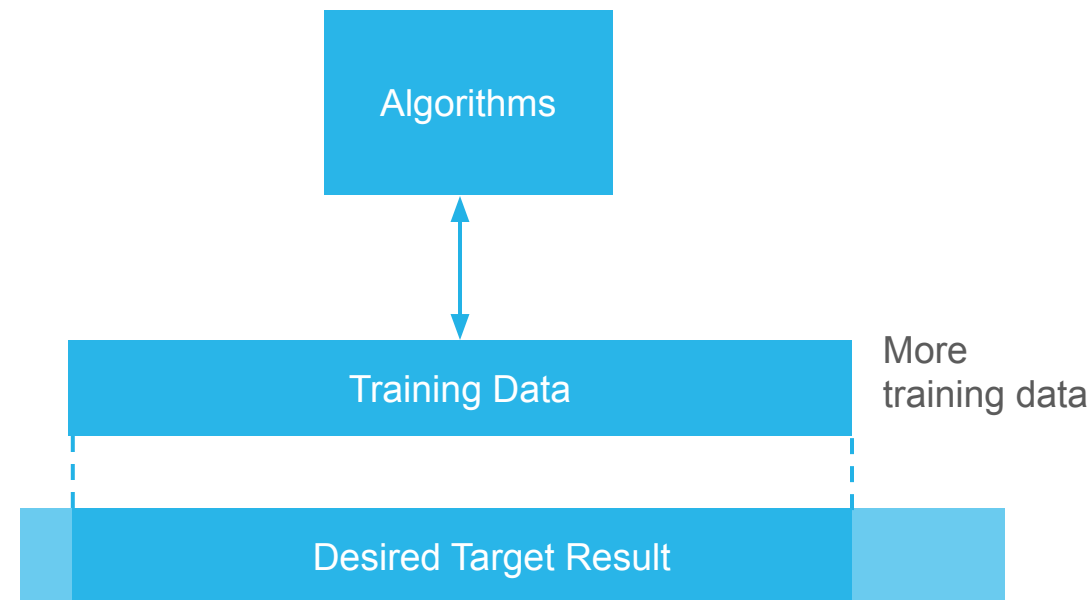
More data is better!



For Better Model Training: More Data Beats Better Algorithms



Less representative results

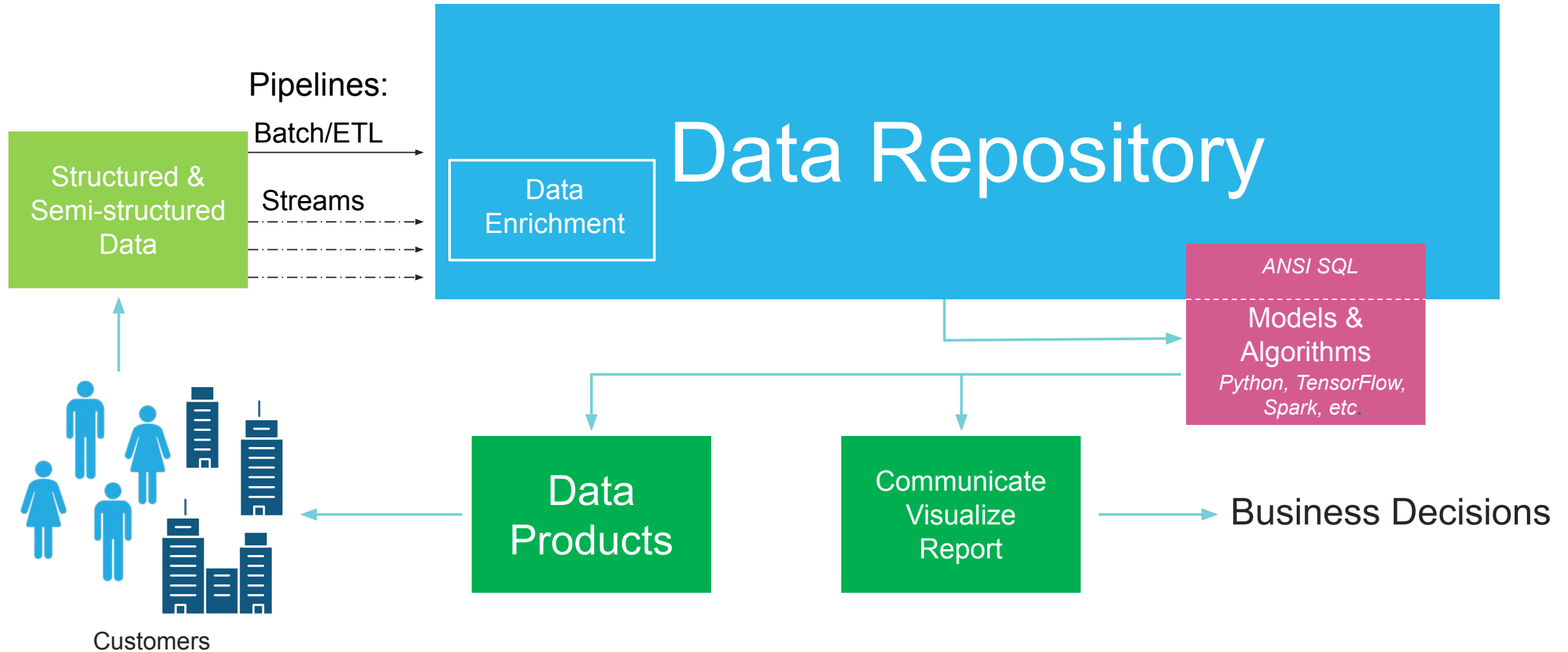


Better representative results

Higher probability of project success



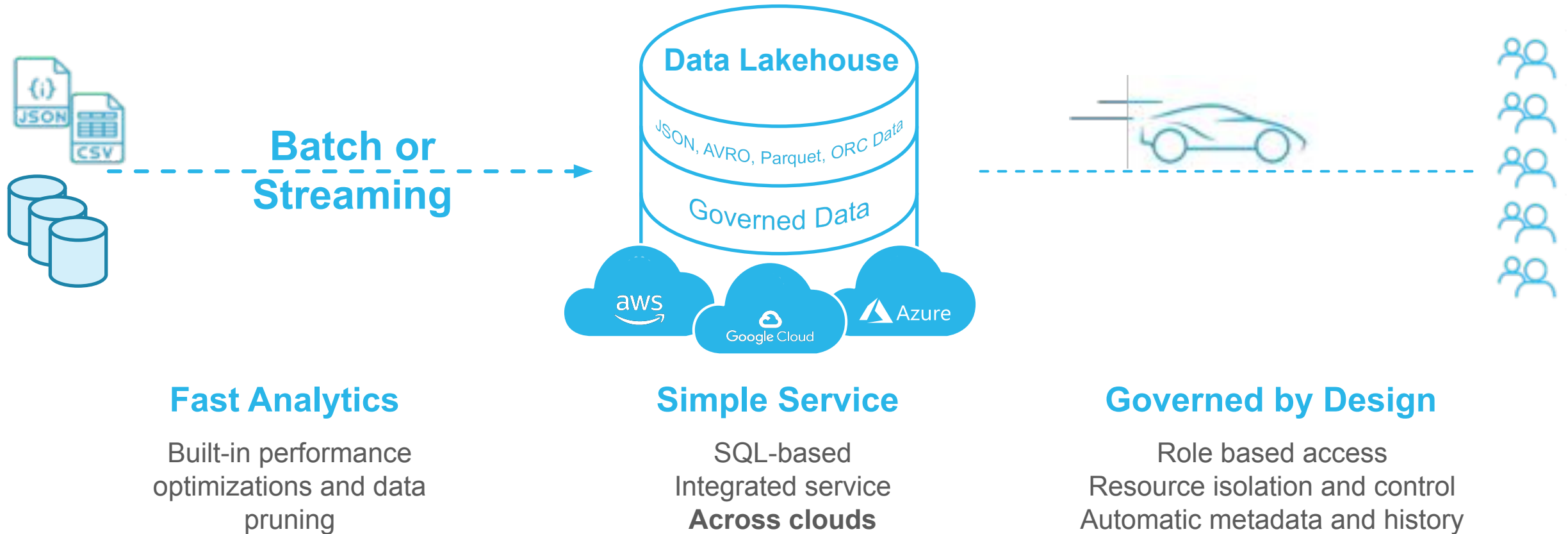
BUSINESS NEED? ACCESS TO DATA!



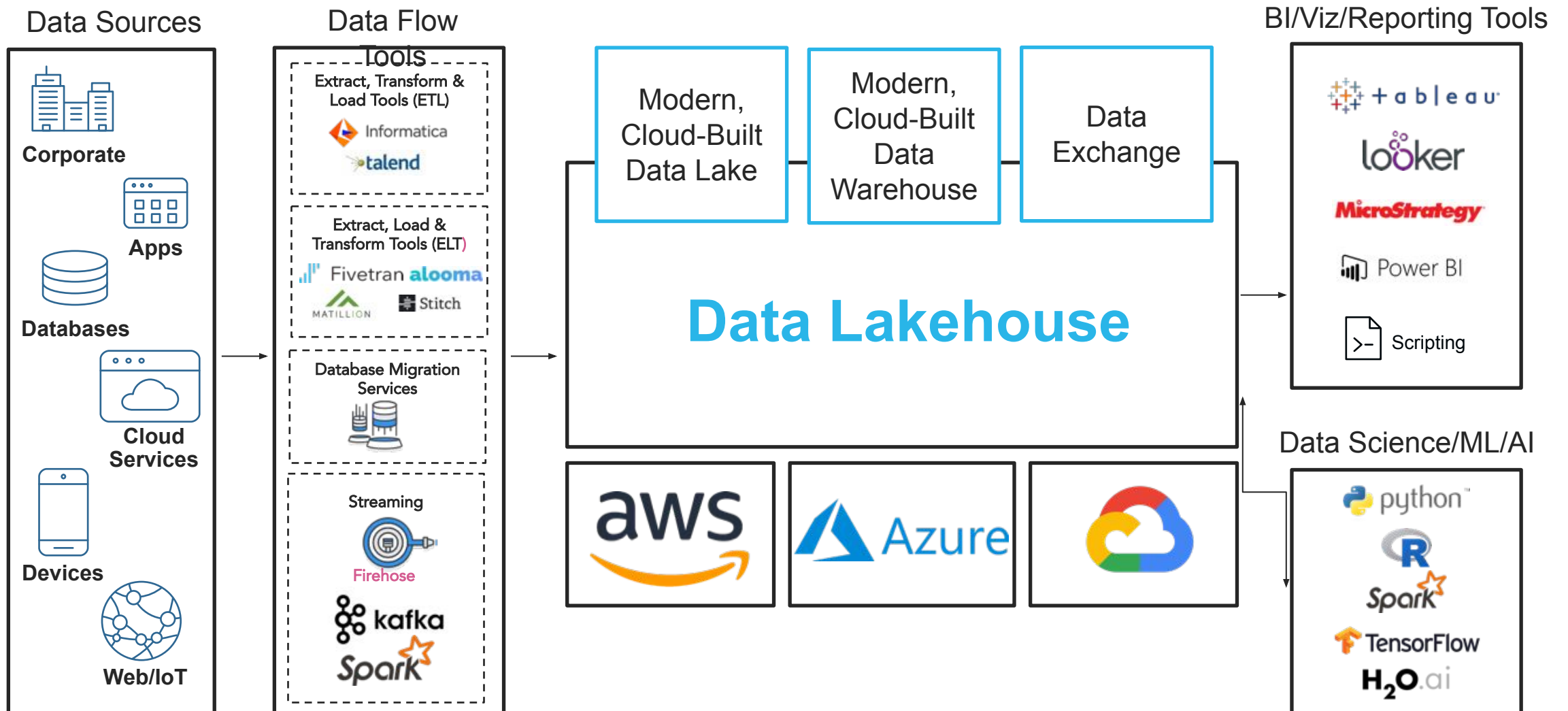
The Future?



THE FUTURE: HYBRID DATA REPO



MODERN CROSS-CLOUD DATA PLATFORM



Questions? Discussion?



Contact Info

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More info at
<http://snowflake.com>

Visit my blog at
<http://kentgraziano.com>



The Data Warrior

Changing the world, one data model at a time. How can I help you?





THANK YOU

