



From Immunology PhD to Chief Data Officer:
**The Non-linear Journey I Navigated to
Arrive at the Career I Love**

From Immunology PhD to Chief Data Officer

Education

- Psychology/BA, Biology/BA, Mathematics Minor: Rutgers University (Newark College of Arts and Sciences)
- Immunology/PhD: University of Medicine and Dentistry of New Jersey (Graduate School of Biomedical Sciences)
- Business of Administration/MBA: Rutgers New Brunswick

Employment

- Director of Research Computing: International Center for Public Health | Newark, NJ | 2003
- Director of Research Technology: New Jersey Medical School Office of Research | Newark, NJ | 2005
- Director of IT: Robert Wood Johnson Medical School | Piscataway, NJ | 2006
- Chief Information Officer (CIO): Baylor College of Medicine | Houston, TX | 2012
- CEO | Aprenda Systems | Houston, TX | 2015
- Executive CIO Advisor: Gartner Research | Stamford, CT | 2017
- Chief Data Officer (CDO): New York City Health and Hospitals | 2019
- Chief Data Officer (CDO): Weill Cornell Medical School | 2023

Things to Consider in Your Career

The Product / Market Analogy

- Pretend you are a product or service that is designed with a perceived value proposition that targets a market of consumers that are willing to pay a price for what you offer.
- You (the product or service) are worth only what the market is willing to pay
- Your brand takes years to develop and minutes to destroy

Always Know Your Worth

- What is the market value for my role
- How well am I performing compared to other professionals performing similar work in the industry
- How important is the role I perform to my employer

How To Evaluate An Opportunity

- Consider your total compensation
- Consider your professional development
- Consider expanding your professional networking

A few Pro Tips and CLMs

Pro Tips

- Operate from a position of curiosity
- Do the work required for the job you want next
- Focus on performance improvement (not perfection)
- Surround yourself with people you can trust (competence, benevolence, integrity)
- Raise your hand and offer to help even if its not your responsibilities
- Forge strong relationships with anyone (ignore the power distance)
- Avoid drama

CLMs

- Operate from a position of fear
- Compare yourself to others (beyond benchmarking)
- Try to develop solutions before you define the problem
- Raise barriers and concerns to most issues
- Block access to people or close off information
- Seek the limelight
- Gossip

CCDOO

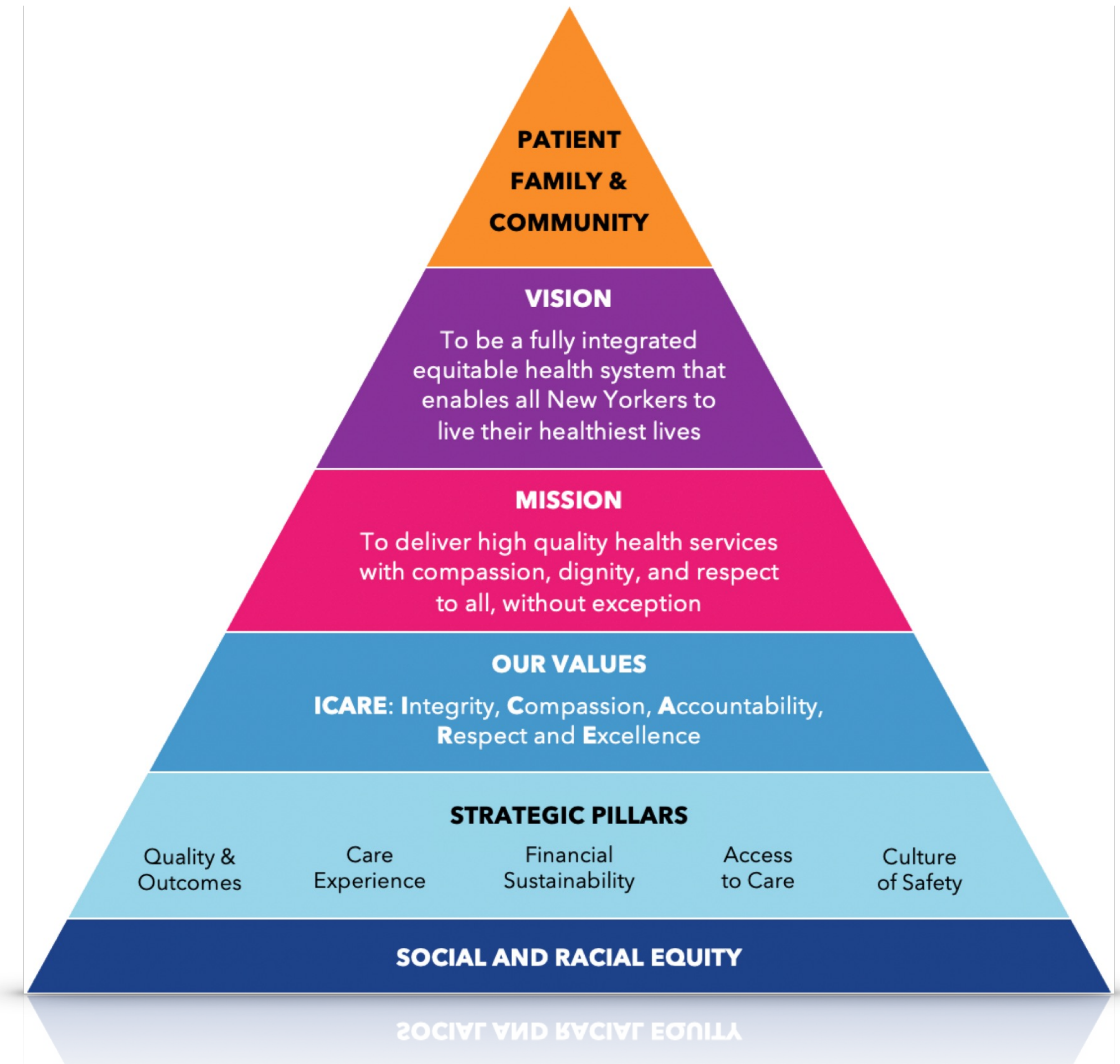
My Role a CDO at New York City Health and Hospitals

About New York City Health and Hospitals

- Largest public health system in the nation (50K Employees)
- Provide essential services to more than one million New Yorkers every year in more than 70 locations across five boroughs.
- 11 acute care hospitals
- Five post-acute/long-term care facilities
- Gotham Health - Federally Qualified Health Center (FQHC)
- MetroPlus Health Plan

My Scope

- Enterprise information management
- Analytics center of excellence (ACE)
- Data and analytics self-service
- Data Academy
- Enterprise data governance
- Enterprise data technology portfolio
- Application development
- Websites (Public/Intranet)



The Role of Information Technology

Information Technology

CAPTURE

IT optimizes business operation processes, orchestration, capture of structured data and overall operational velocity

The Role of Data and Analytics

Information Technology

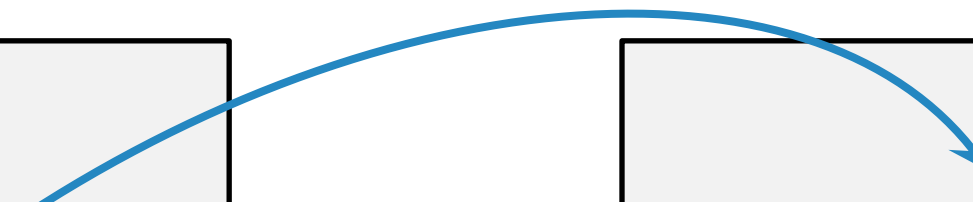
CAPTURE

IT optimizes business operation processes, orchestration, capture of structured data and overall operational velocity

Data & Analytics

ANALYZE

DnA enables data informed decisions, scenario building, predictive modeling via access to data and analytic capacity



Role of Performance Improvement

Information Technology

CAPTURE

IT optimizes business operation processes, orchestration, capture of structured data and overall operational velocity

Data & Analytics

ANALYZE

DnA enables data informed decisions, scenario building, predictive modeling via access to data and analytic capacity

Performance Improvement

IMPROVE

QA and PI enables opportunities that are critical for optimizing mission operations, and advancing strategic objectives

Organizational Transformation

Information Technology

CAPTURE

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Data & Analytics

ANALYZE

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Performance Improvement

IMPROVE

QA and PI enables opportunities that are critical for optimizing mission operations, and advancing strategic objectives



EITS Application Portfolio

Clinical Operations Systems

- Epic (IP/Amb patient care)
- Point Click Care (post acute)
- PeopleSoft (Supply chain, HR, Payroll, ELM, AP, AR etc.)
- Pharmacy POS & Dispensing
- All Scripts
- Provider Credentialing
- More

Revenue Cycle & Financial Systems

- Epic Caboodle (Revenue Cycle)
- Cerner Rev Cycle (Soarian and Unity)
- PeopleSoft (Financials)
- 3M Coding system
- Huron
- More

External Data Sources

- Press Ganey
- Voice
- Premier
- others

The Data Platform Layer

EITS Application Portfolio

DnA Data Platform

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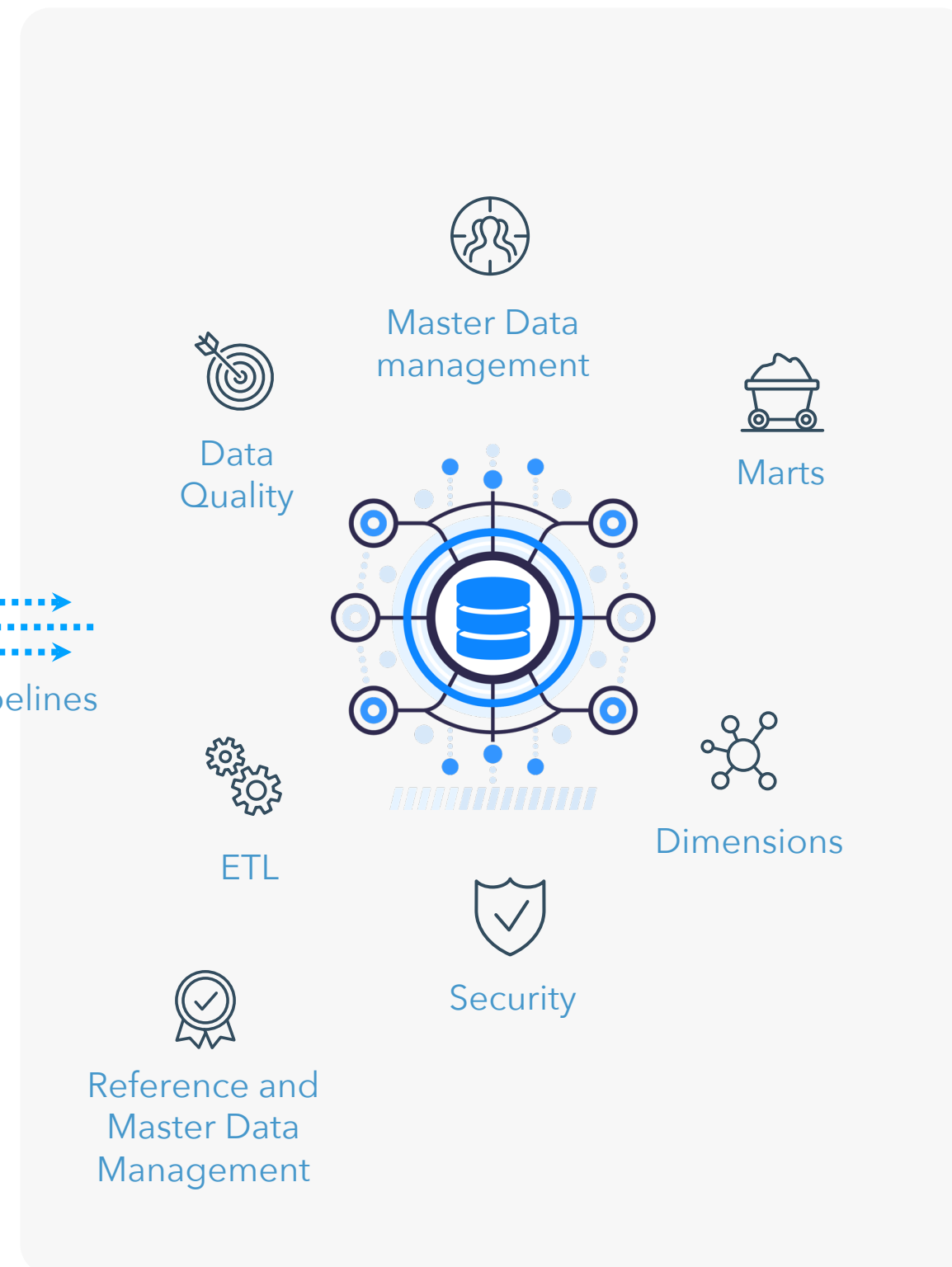
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←→
Data Pipelines



The 5 Types of Bad Data

Bad Data Type	Description	Possible Outcomes
Duplicate Data	2 or more identical records	Misrepresentation of inventory counts/duplication of marketing collaterals, unnecessary billing
Conflicting Data	The same record with differing attributes	A company name with different versions of addresses causing deliveries to the wrong location
Incomplete Data	Missing attributes	Payroll not processed due to missing social security #, unable to identify a donors
Invalid Data	Attributes that do not conform to standards	Customer records where the zip contains 4 digits , instead of 5
Unsynchronized Data	Data that is not appropriately shared among two or more systems	A banking sales system captures a new mortgage, but fails to update the bank's marketing systems leading to confusion

The Service Provider Layer

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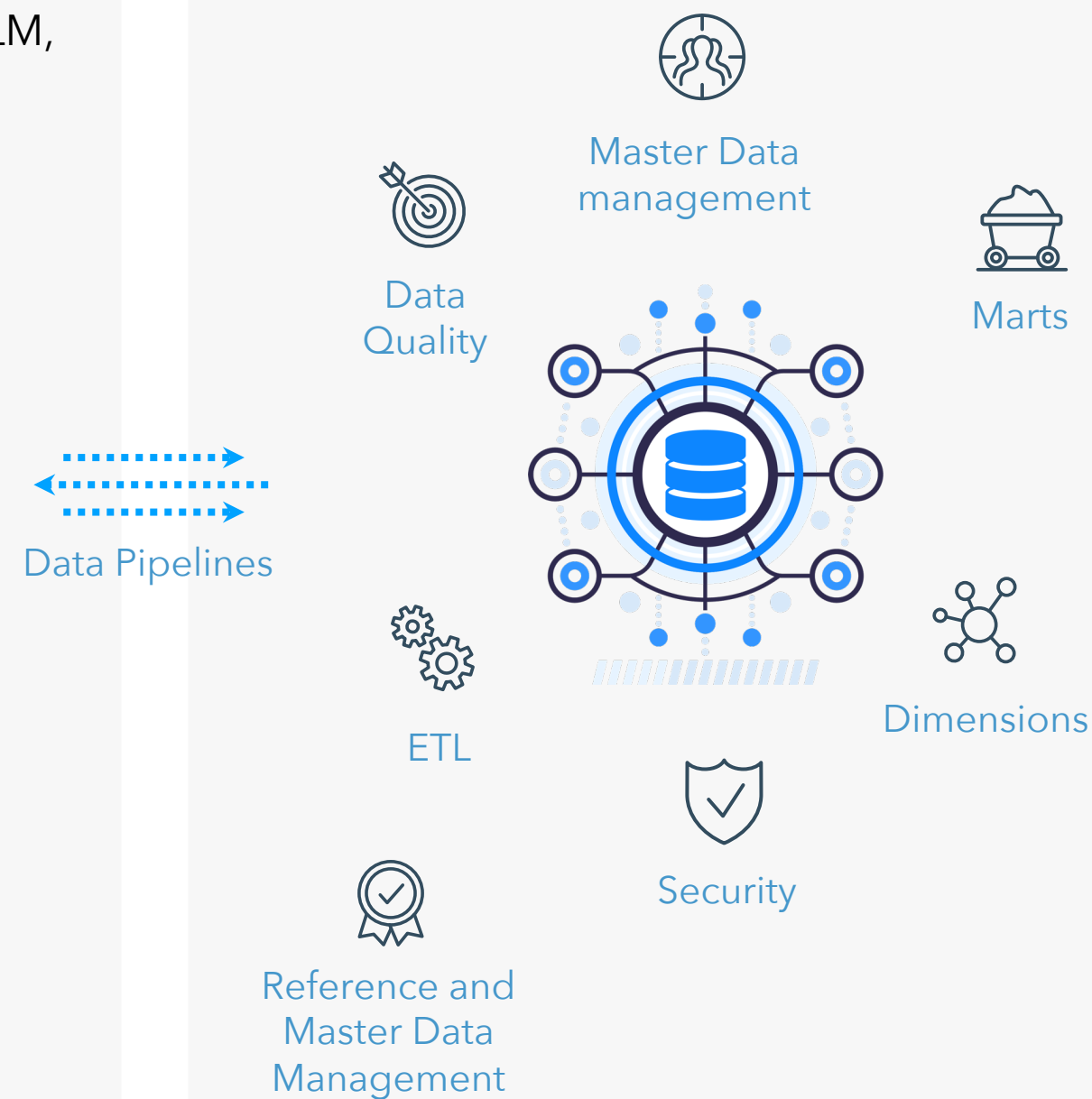
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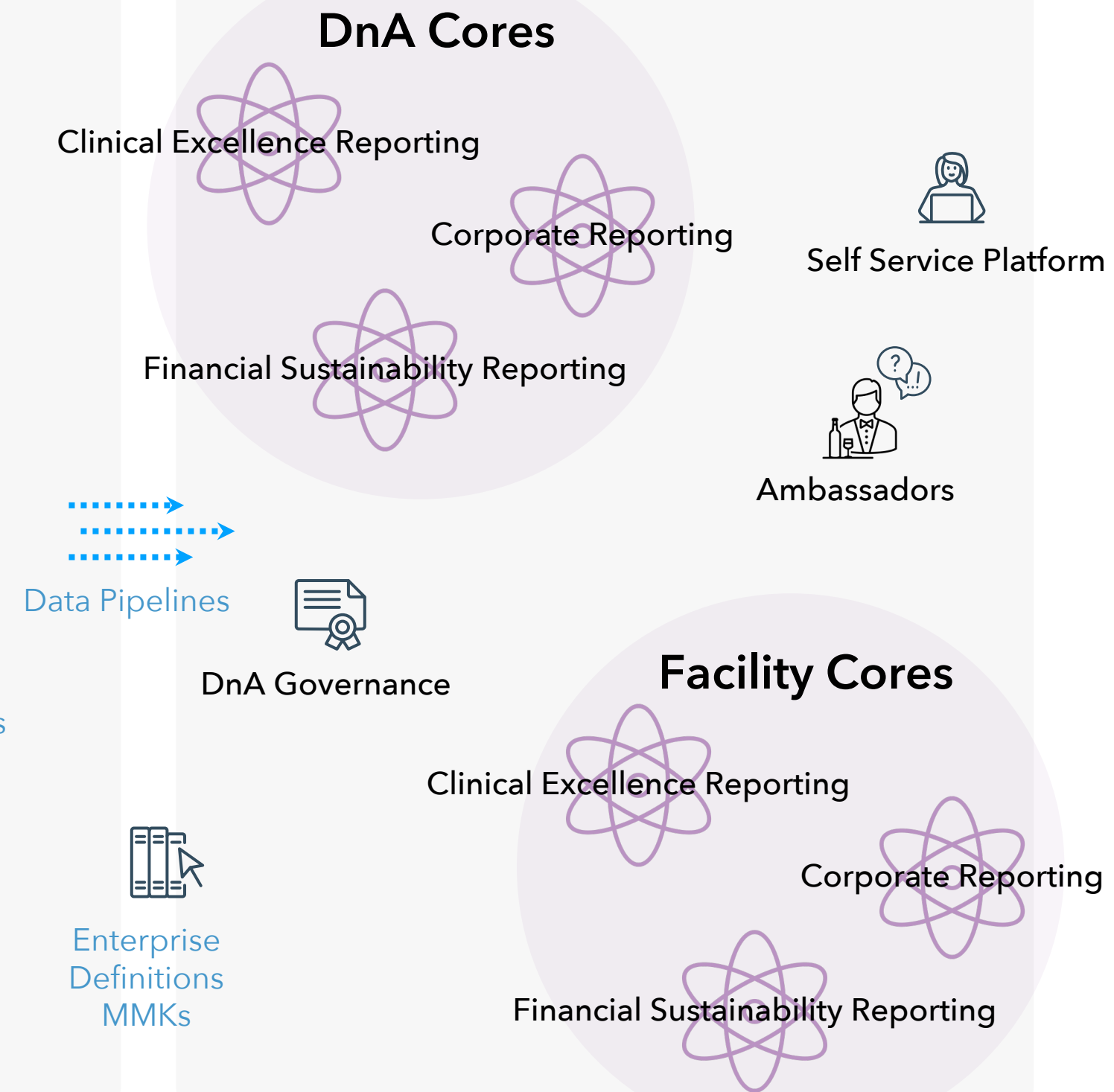
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DnA Data Platform



DnA Service Providers



The Data Solutions Layer

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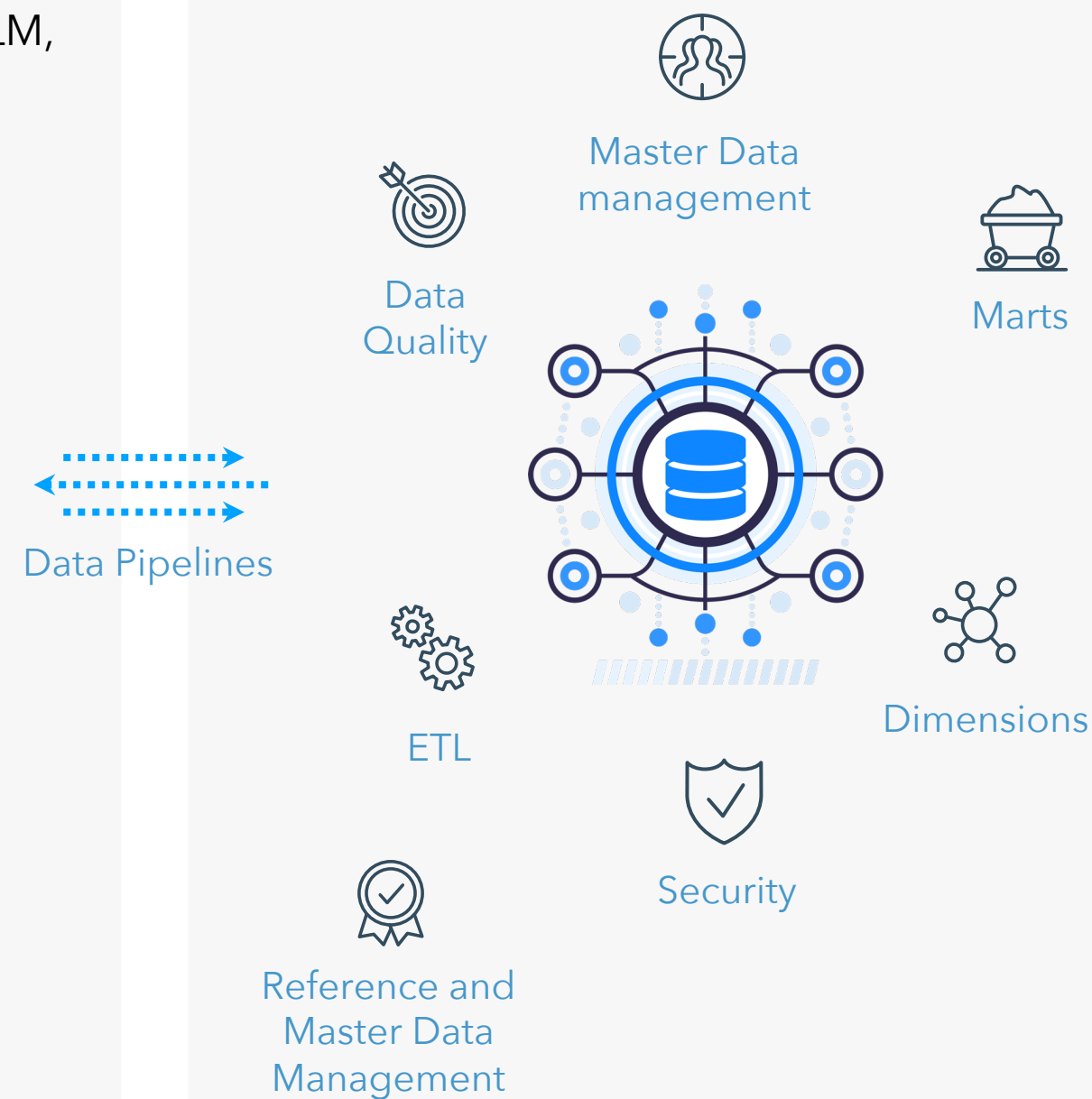
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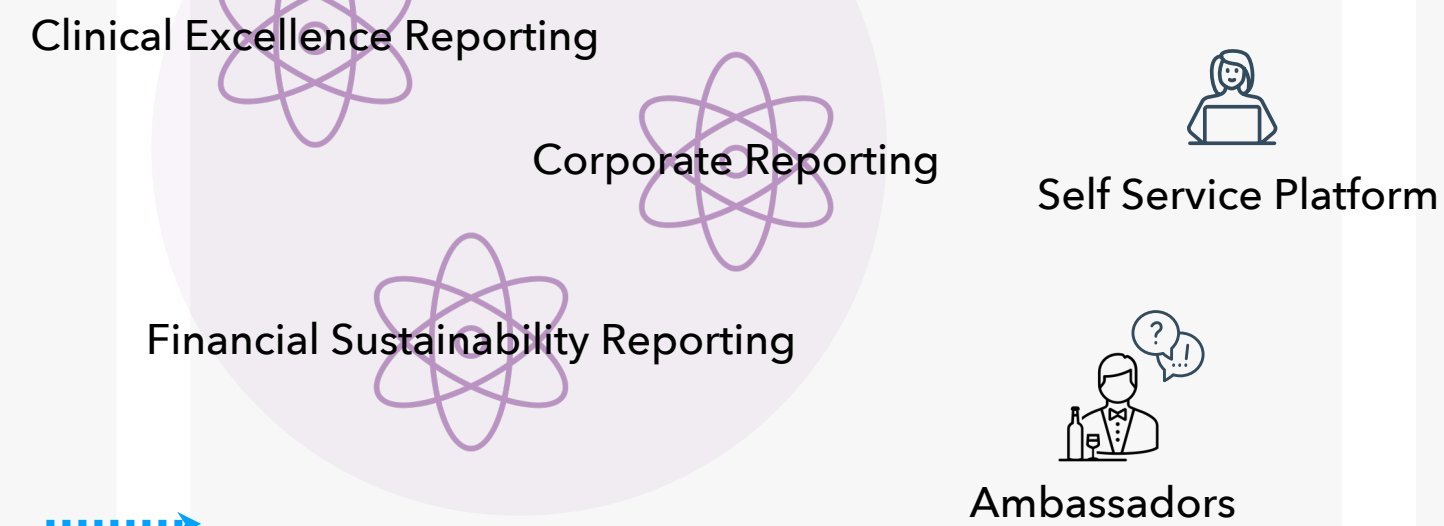
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DnA Data Platform



DnA Service Providers

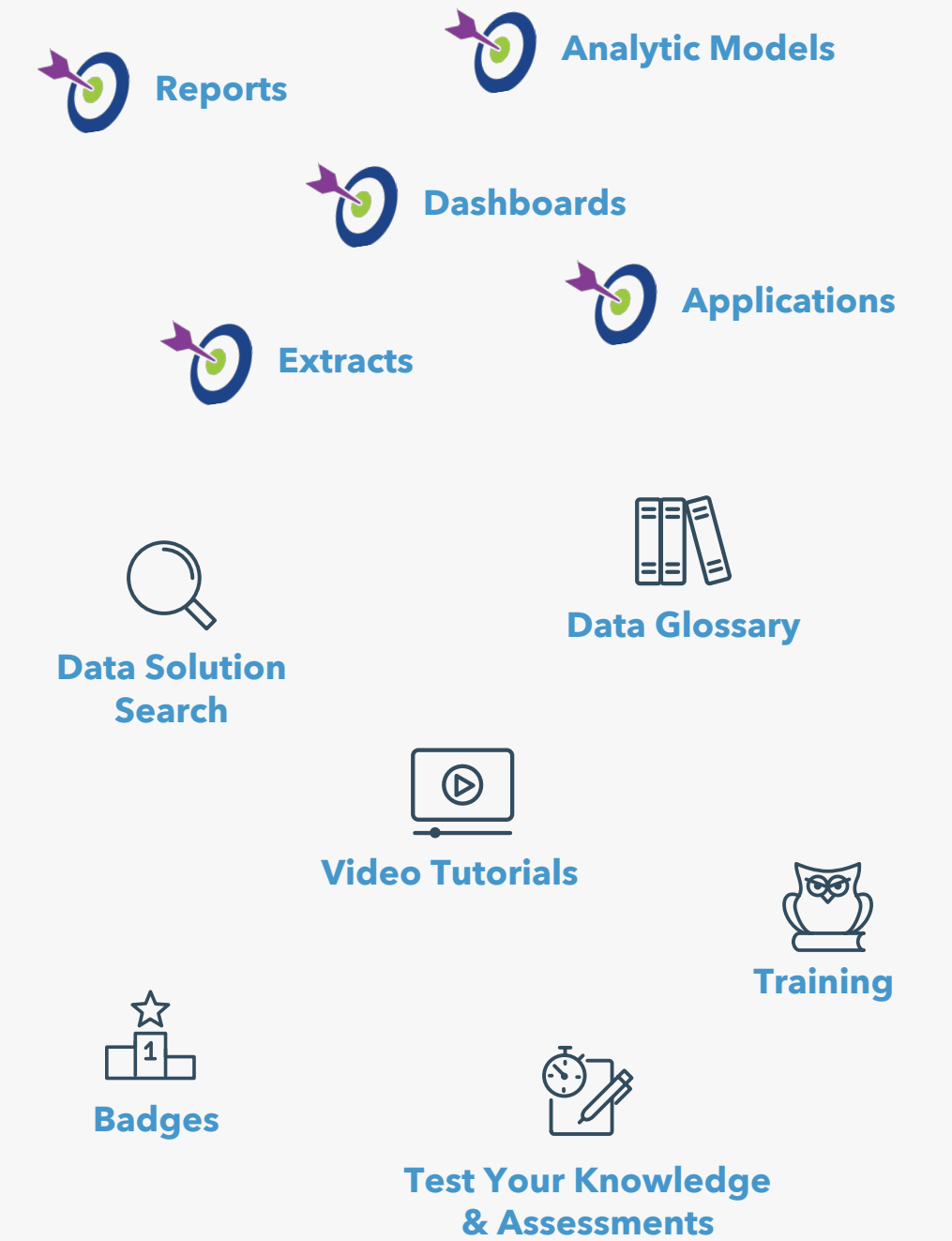
DnA Cores



Facility Cores



Data Services and Solution(s)



Adaptive and Passive Governance

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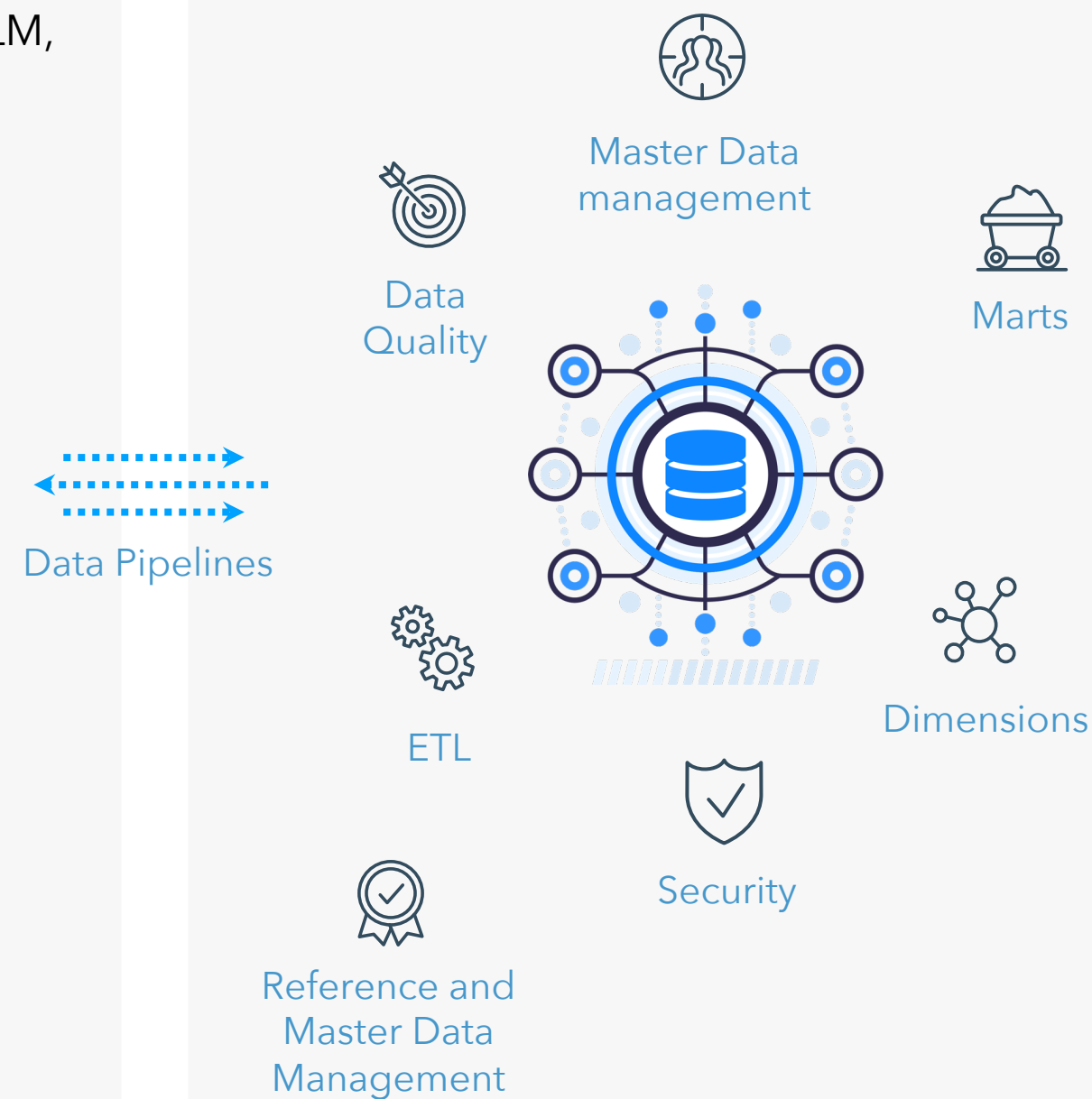
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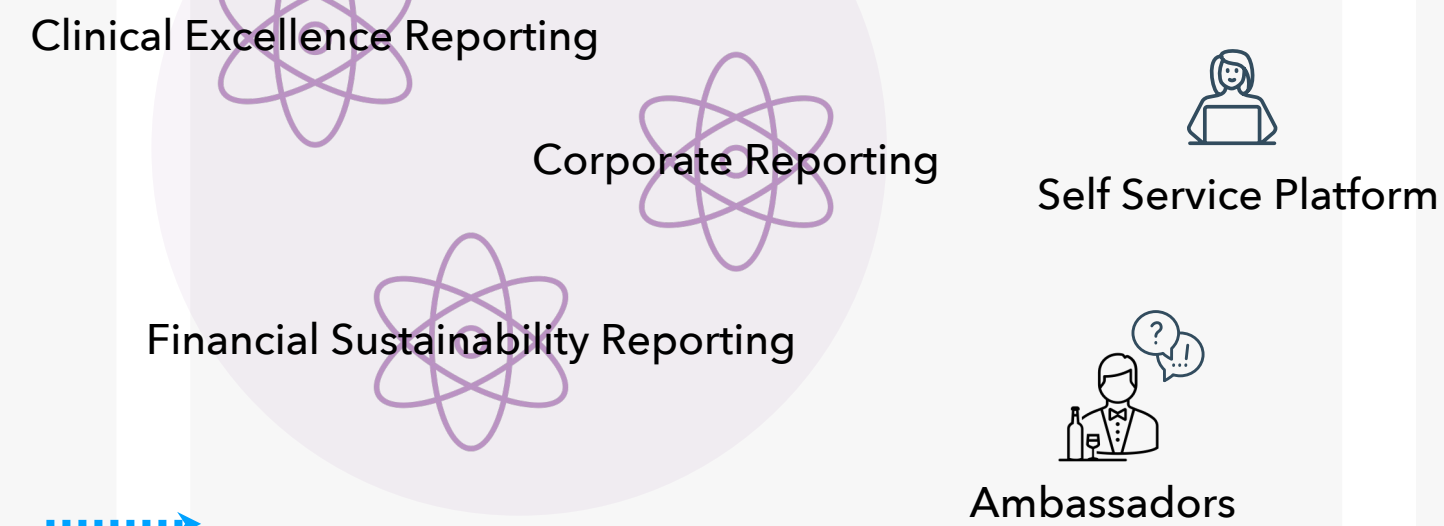
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DnA Data Platform



DnA Service Providers

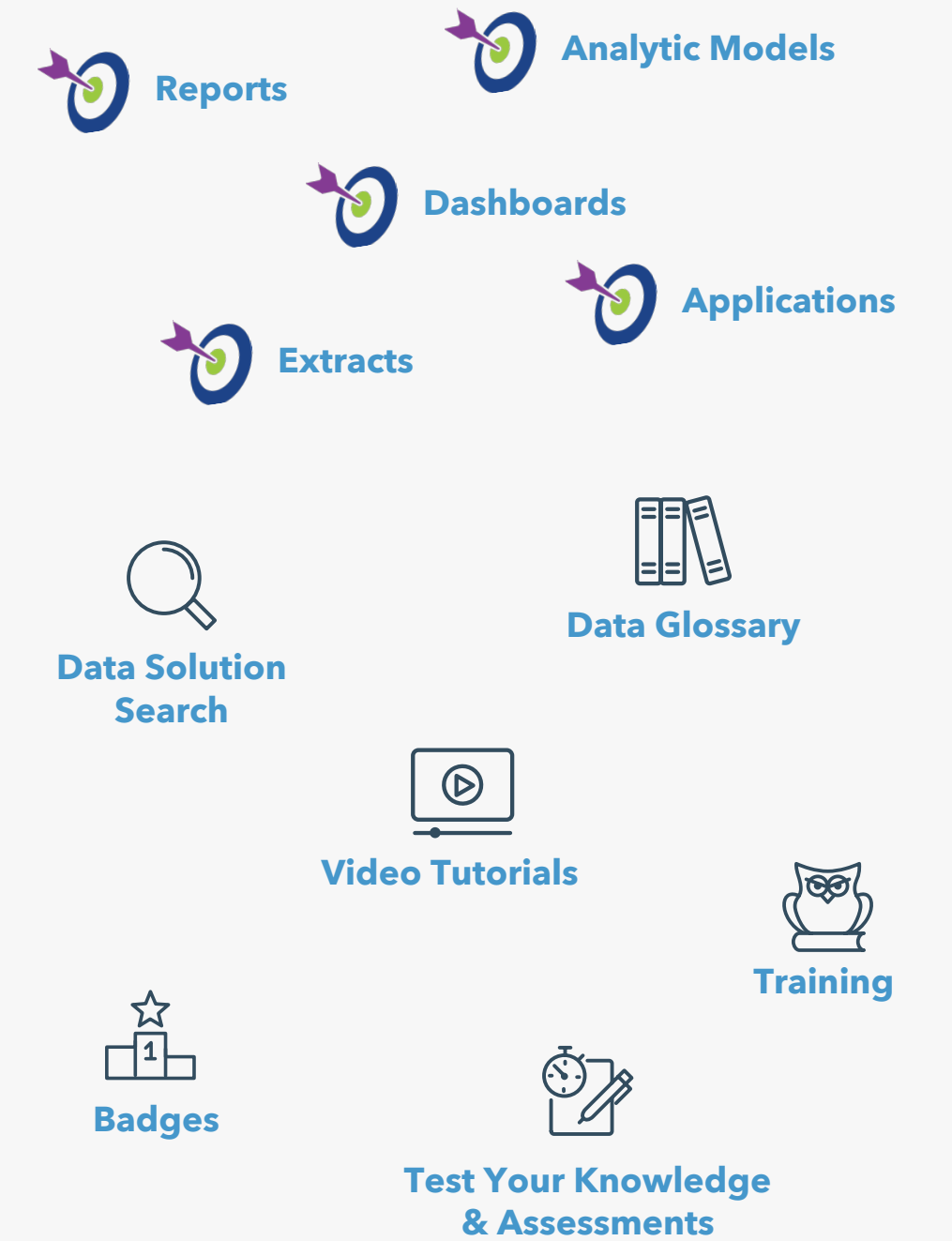
DnA Cores



Facility Cores



Data Services and Solution(s)



Data Governance, Security, Compliance, Quality and Performance Optimization

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Twitter: @controlyourdata

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