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What Big Data Means to You?

March 21, 2013



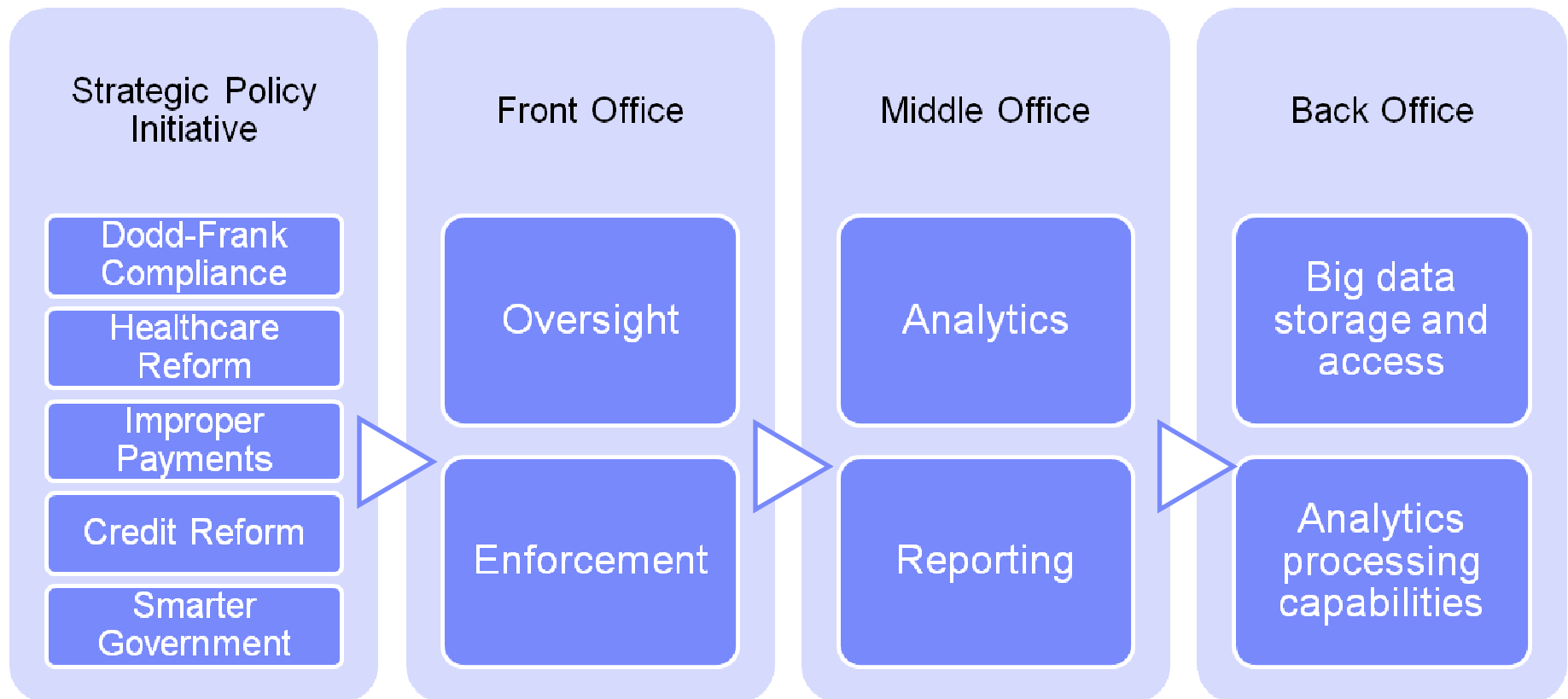
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Objective: Big Data -- Let's do a deep dive

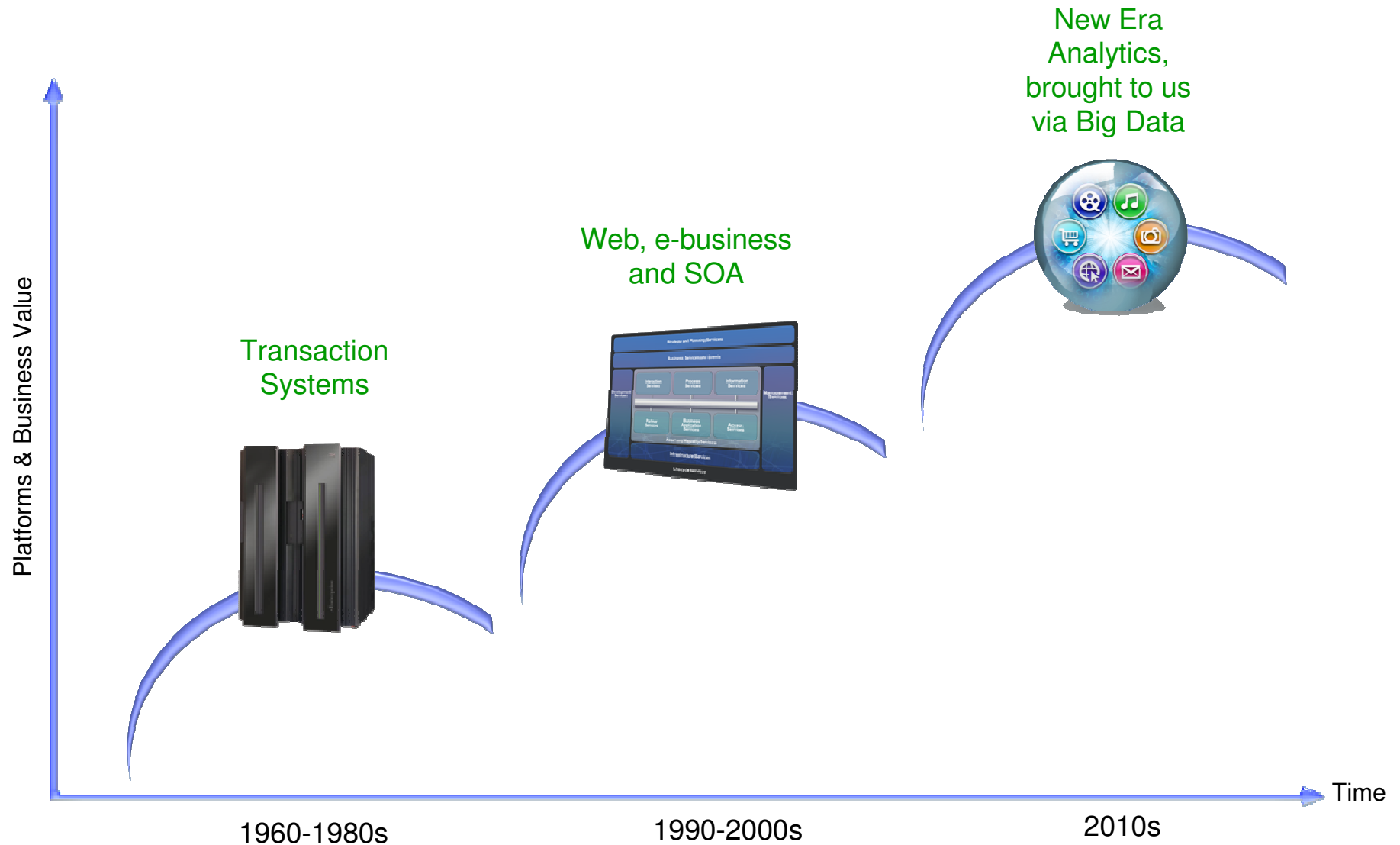
- Challenges & opportunities facing federal organizations
- Conceptual Framework
 - Big data
 - Advanced analytics
 - Reporting and operational insights
- Component Framework
- 6 ways we can make a difference today



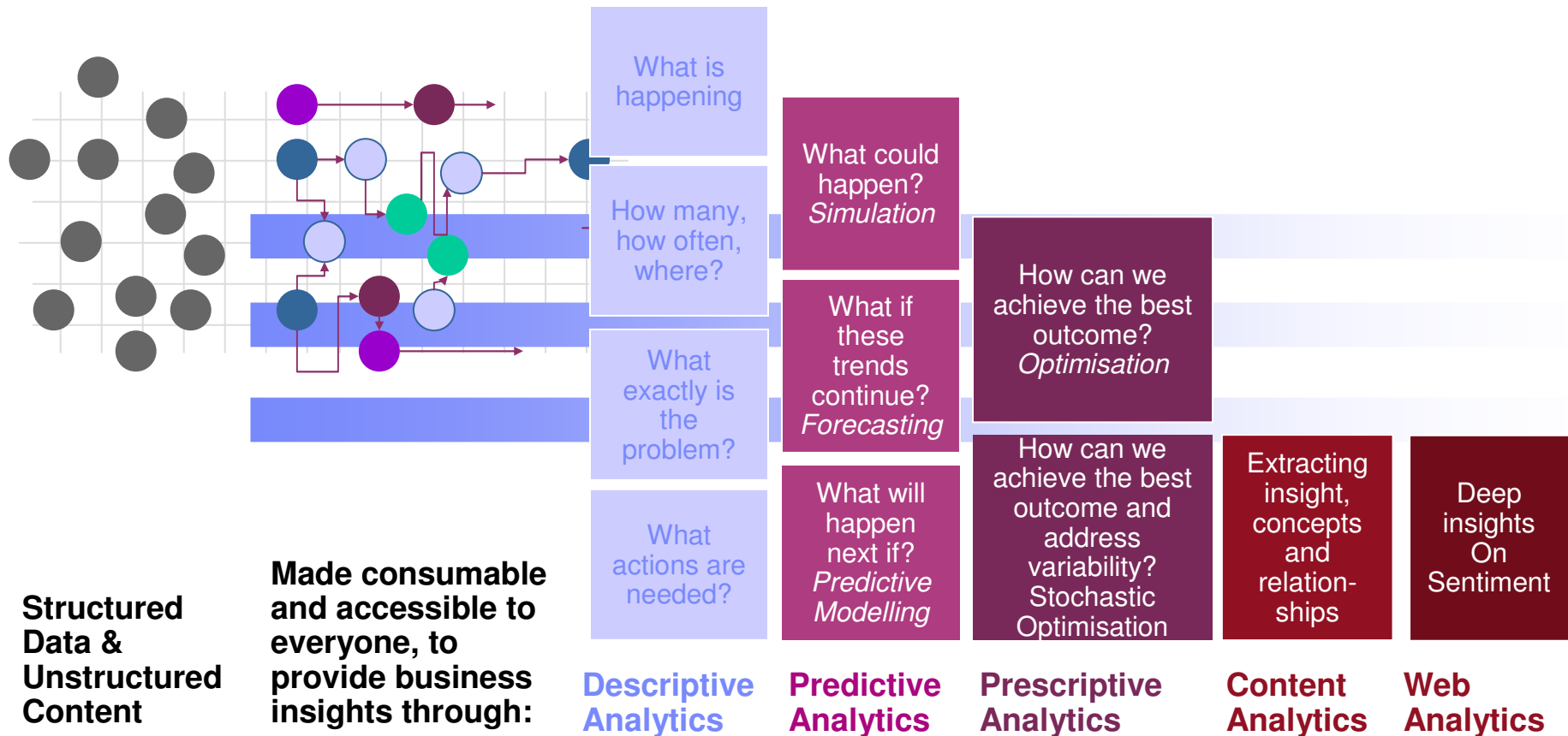
Challenges and opportunities facing federal organizations



We've seen changes like this before



What is Big Data and Advanced Analytics?

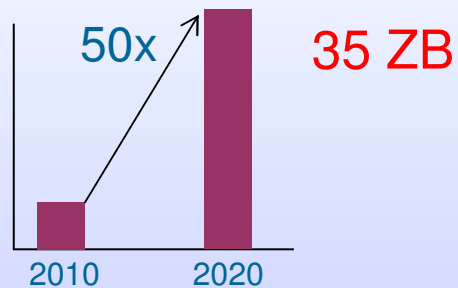


Big Data → Advanced Analytics → Business Insights

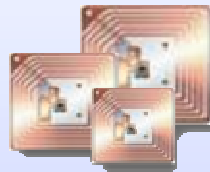


The Characteristics of Big Data include:

Cost efficiently
processing the
growing **Volume**

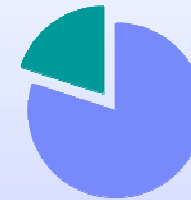


Responding to the
increasing **Velocity**



30 Billion
RFID sensors
and counting

Collectively analyzing the
broadening **Variety**



80% of the
world's data is
unstructured

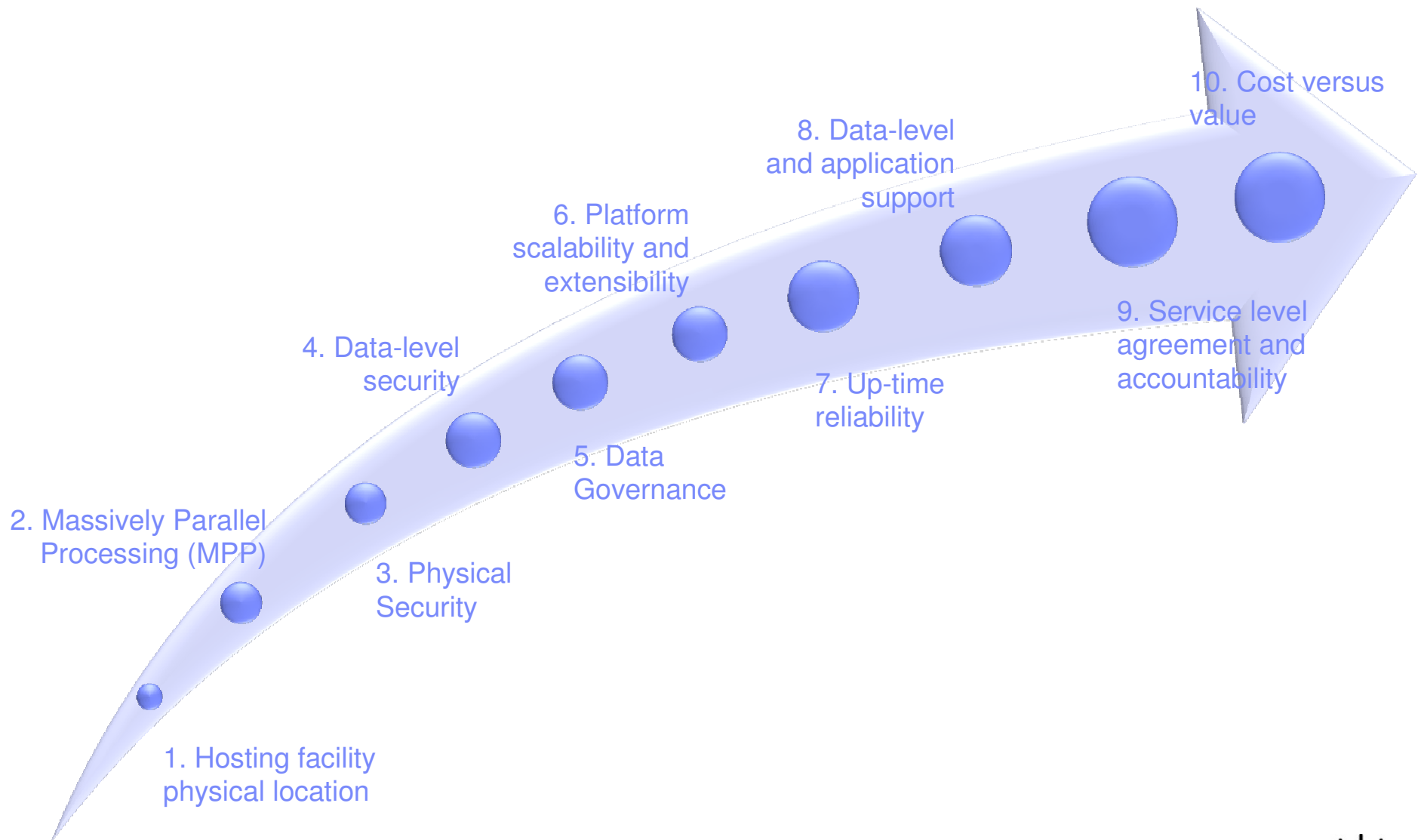


Establishing the
Veracity of big
data sources

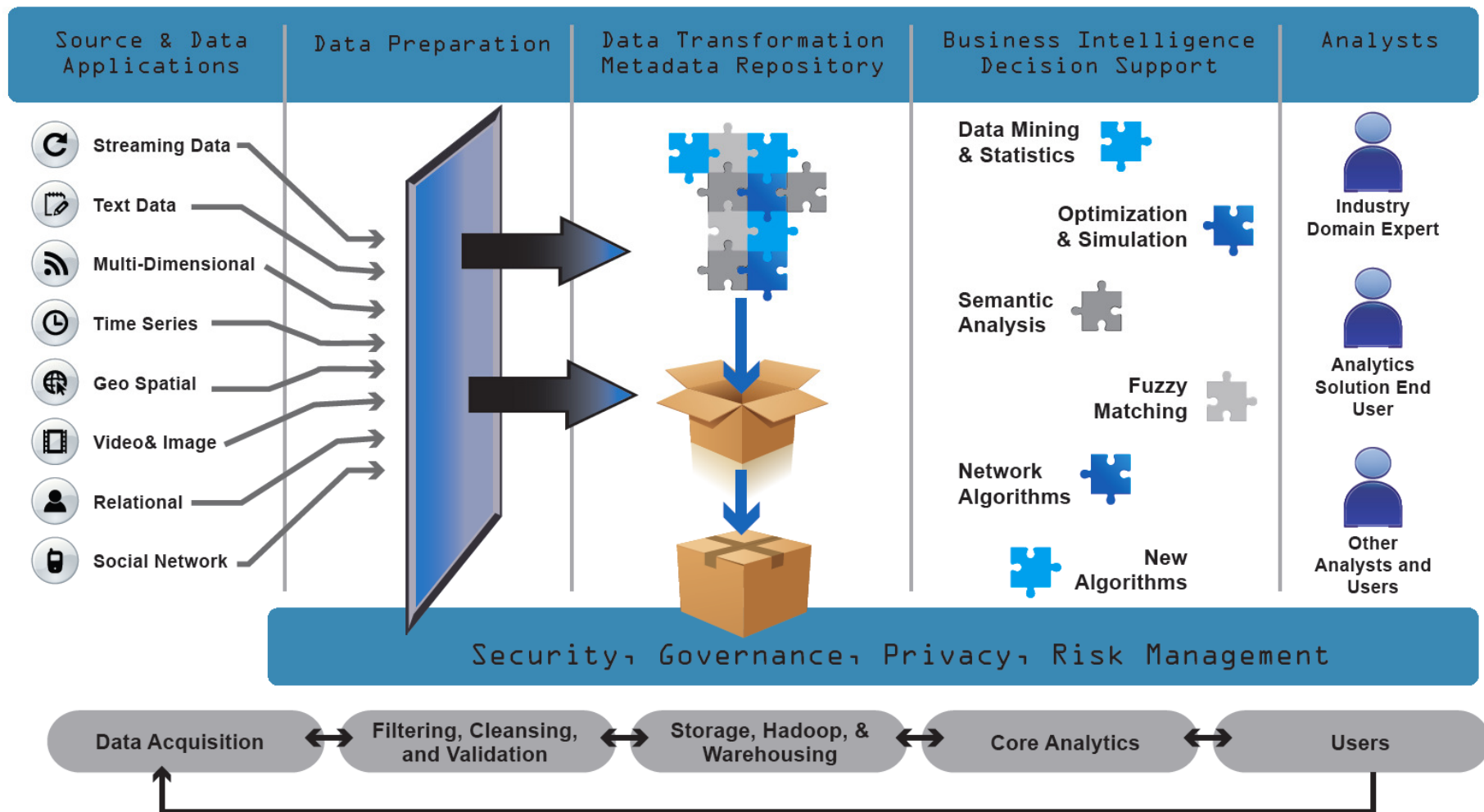
1 in 3 business leaders don't trust the
information they use to make decisions



Operational considerations as it related to supporting big data.



Advanced analytics solutions requires several interacting design steps. Notional Information Flow – The Information Supply Chain.



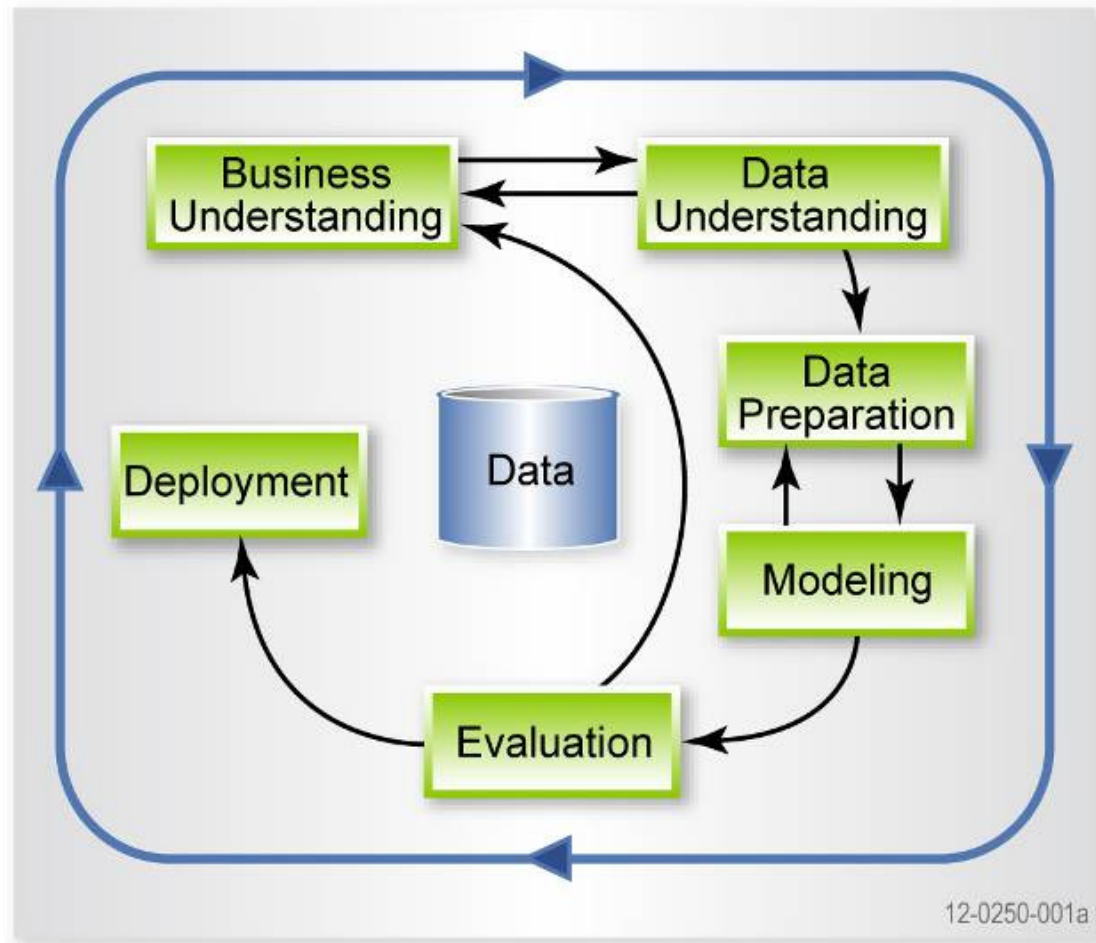
→ Operationalizing Analytics →



The use of advanced analytics provides a great degree of business value when combined with big data capabilities.



Considerations as it related to analytics:



CRISP-DM Process

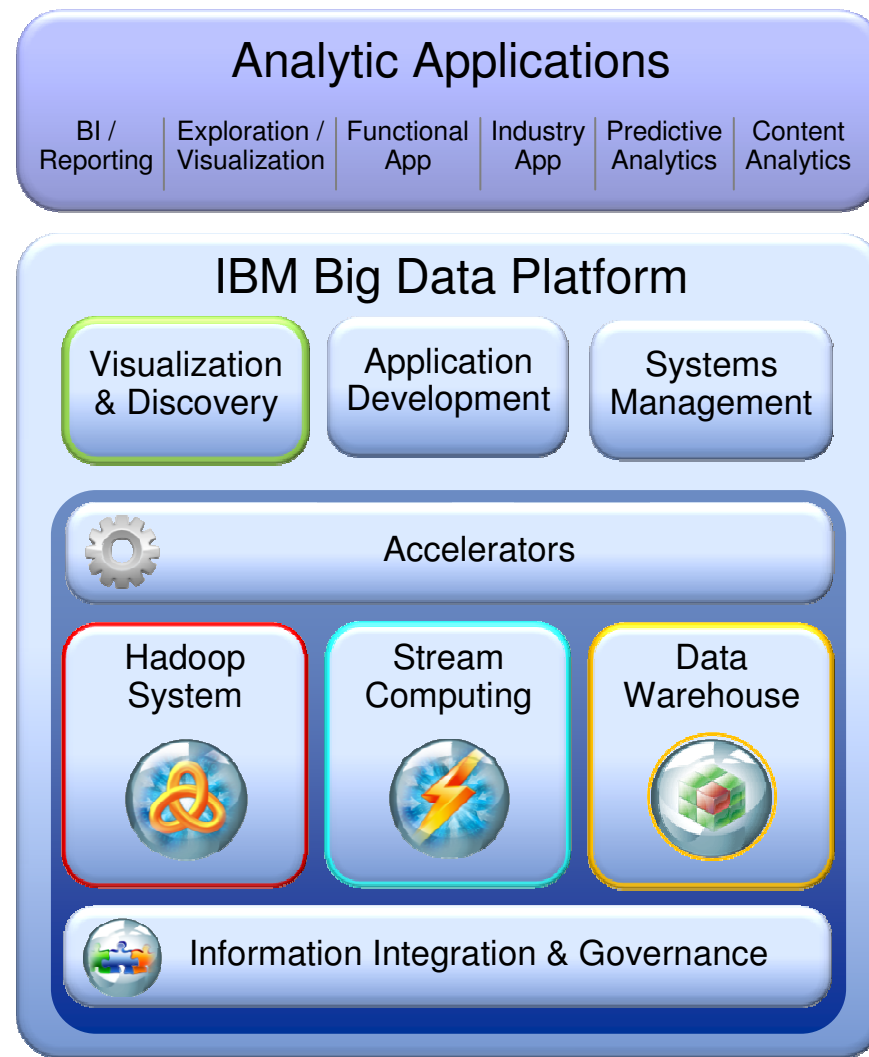


6 ways government employees can make a difference today.

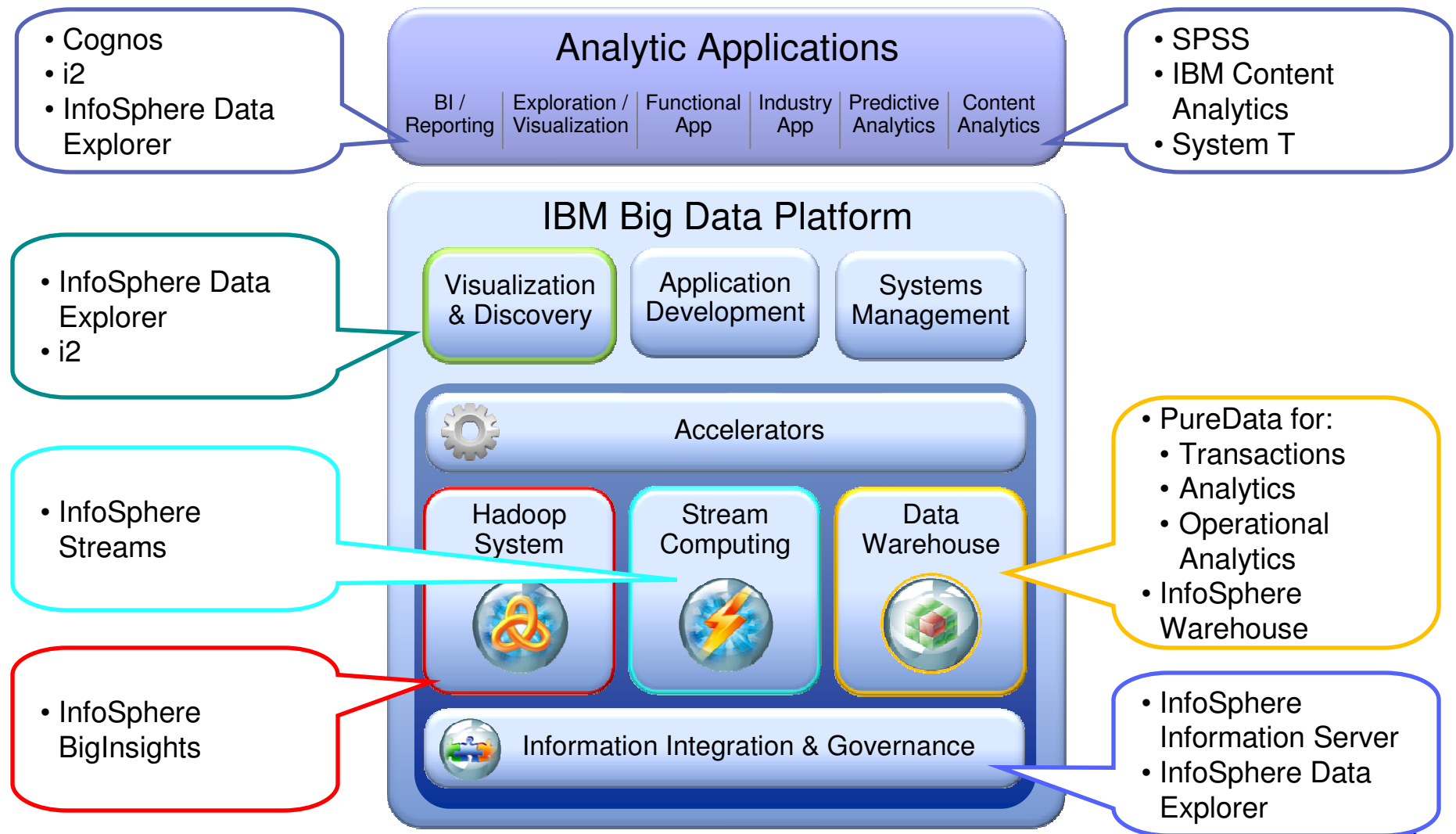
1. Improper Payments
2. Regulatory Oversight
3. Domestic Security
4. Operational Efficiency
5. Prescriptive Policy Analysis
6. Anyone Can Make A Difference



The IBM Big Data Platform



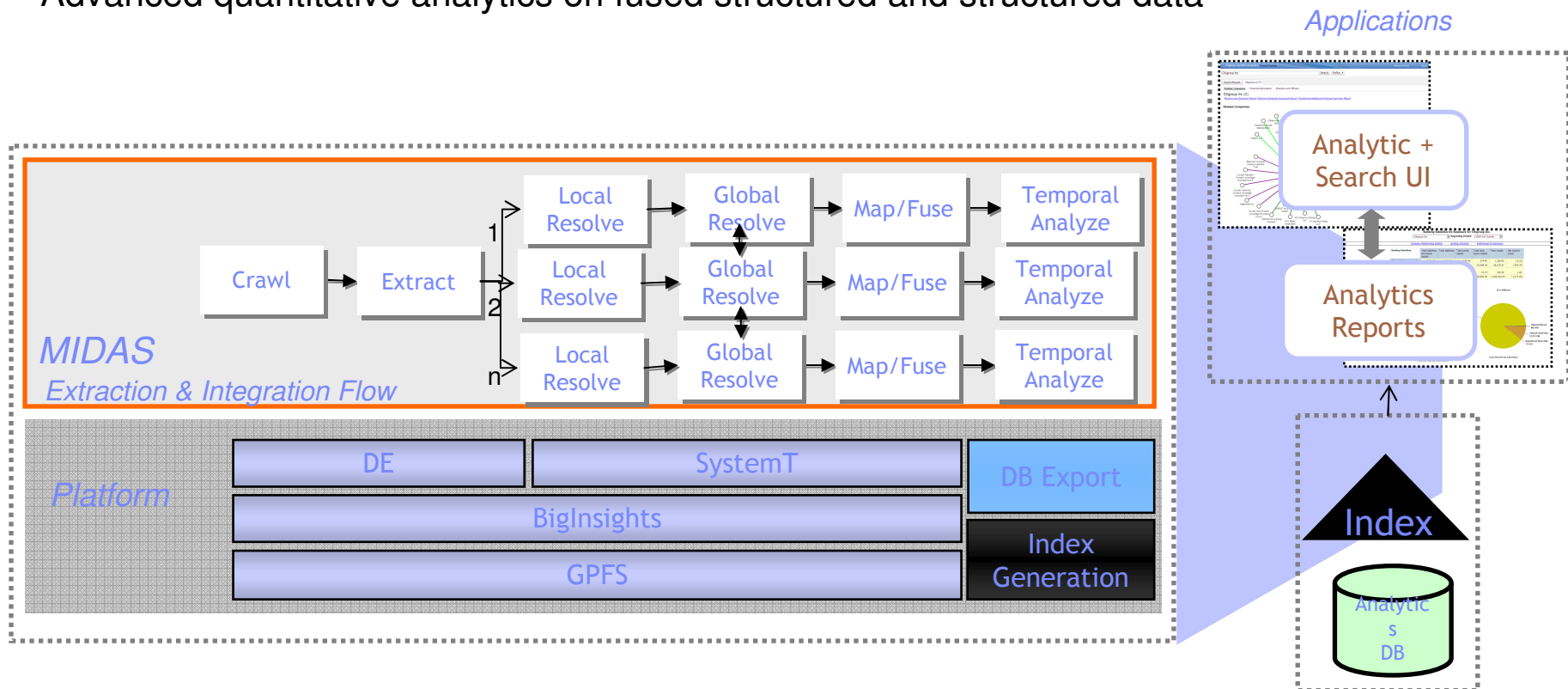
The IBM Big Data Platform



MIDAS Architecture: A detailed view from IBM research

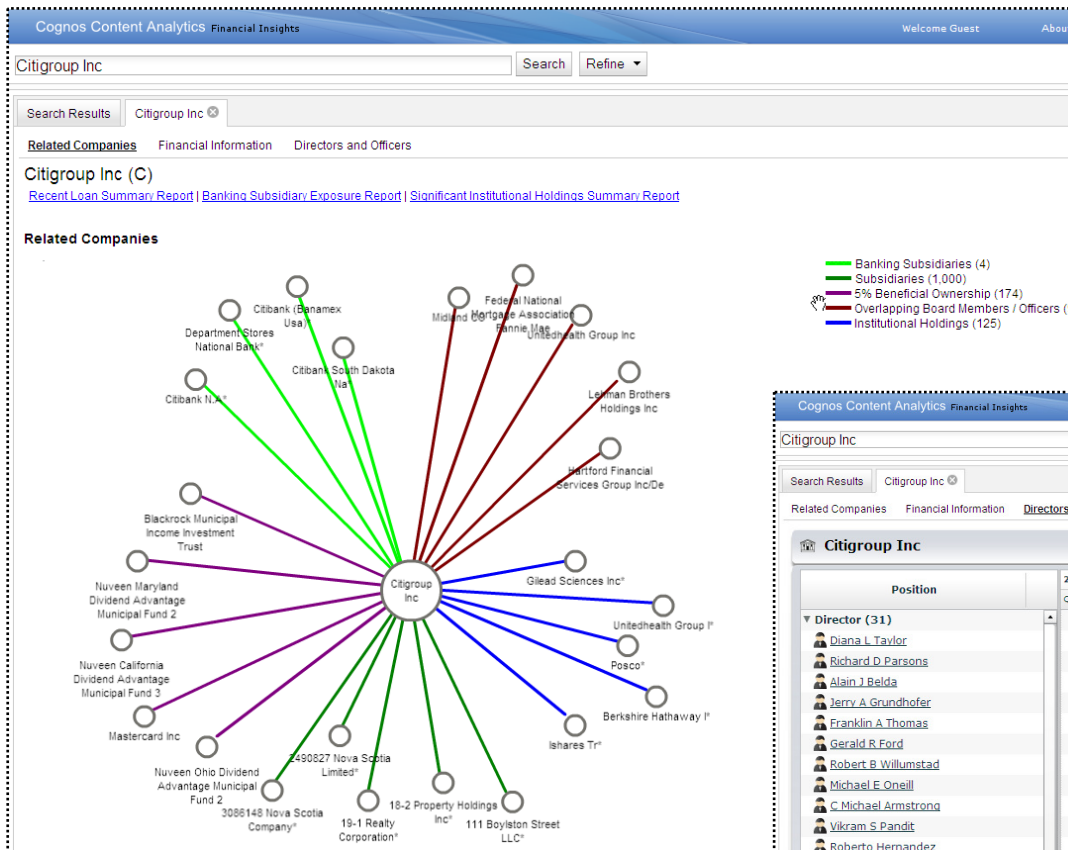
MIDAS offers analytical insights into public financial filings by exposing information concepts and relationships within extracted concepts, enabling:

- Extraction, mapping, temporal analysis, and fusion, creating person and organization entities
- Analysis of person-level data and person-to-organization relationships
- Analysis of organization counter-party relationships
- Advanced quantitative analytics on fused structured and structured data



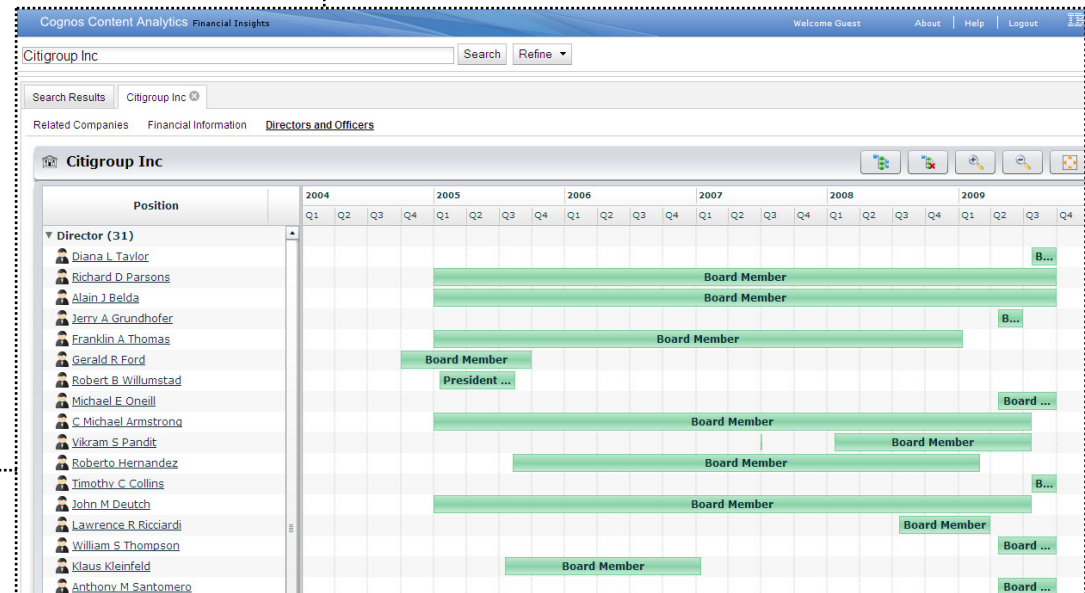
MIDAS: Explore counterparty relationships with other companies

e.g. observe shared director of Citigroup with Federal National Mortgage Association, Diana Taylor



Relationships aggregated from multiple forms (10-K, SC 13G, SC 13D, 13F, 3, 4, 5, FDIC Call Reports)

e.g. employment overview of insiders of Citigroup



MIDAS Analytics: Analyze and aggregate recent loans issued by counterparty

e.g. Loans issued by Citigroup

