An Analytics Roadmap for Modernizing the Data Warehouse

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Sponsor

Speakers

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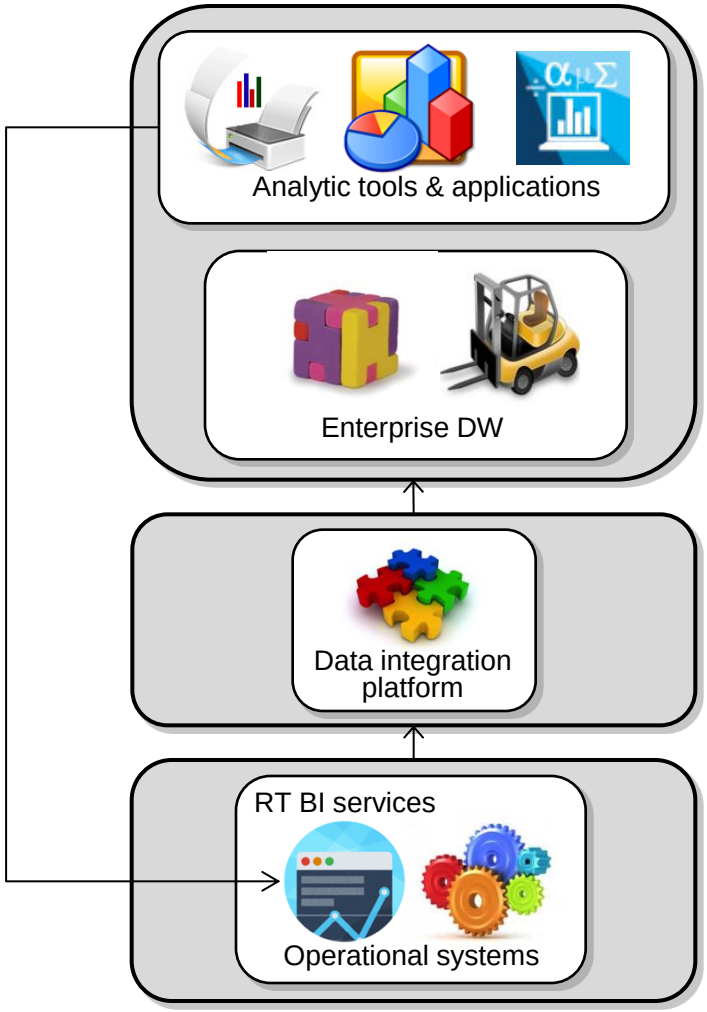
Webinar Overview

The field of business analytics is undergoing massive change as disruptive technologies such as analytic appliances, non-relational systems, cloud computing and big data analytics are introduced by vendors. What is often forgotten in the rush by vendors to market these new technologies is that many organizations are struggling with performance demands, governance issues and satisfying user requirements using their existing data warehouse and analytics environment and may not have the resources to take advantage of new industry developments. Also, new technology may not solve existing problems and may even exacerbate them if implemented incorrectly. This web seminar examines the issues in deploying business analytics today and discusses an analytics roadmap that can help organizations modernize their data warehouses and take advantage of both existing and new analytic technologies. Topics that will be covered include:

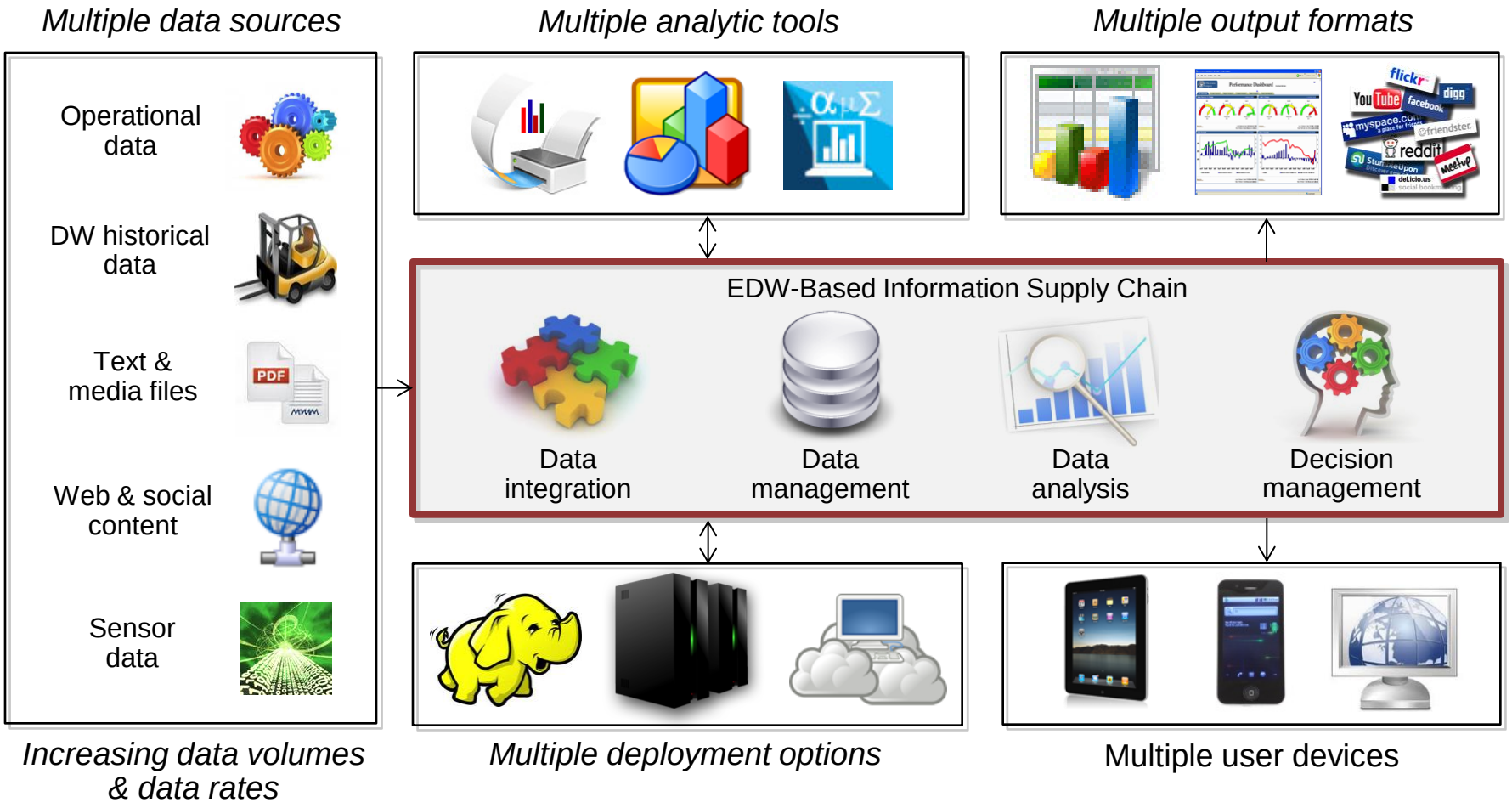
- Modernizing the traditional data warehouse
- Using new technologies to enhance existing analytic approaches and gain business benefit
- Finding the right balance for data governance
- An analytics roadmap for the modern data warehouse

The Traditional EDW Information Supply Chain



1. Data must be integrated into the EDW before it can be analyzed
2. Process can be time consuming and IT can become a bottleneck
3. EDW initiatives are often IT and not business driven
4. Results are often not want users want
5. Leads to short-term LOB initiatives and data silos that reinvent the wheel

Building an EDW is Becoming More Difficult



Solving the Problem

Need to modernize the EDW environment to leverage technology for business value

Continue to use analytics to improve existing operational processes

But also at the same time look for new opportunities to address changes in the business climate and business goals

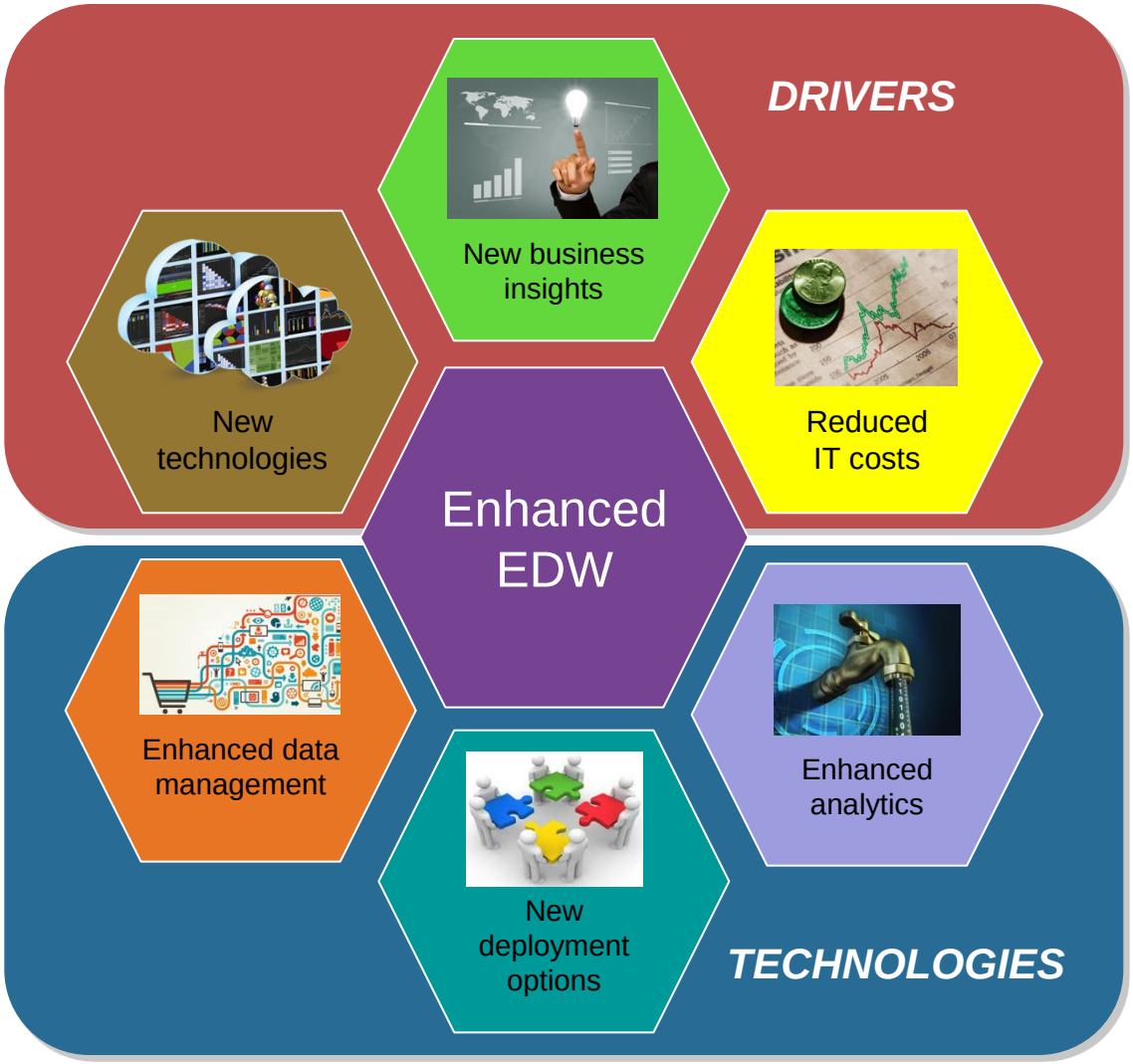
Invest in investigative computing (i.e., data discovery or analytics R&D)

Aim to reuse data and analytic components where possible

Adjust governance policies and procedures to support the enhanced EDW environment

Develop an analytics roadmap based on business needs and goals

Exploiting New Technology for Business Value



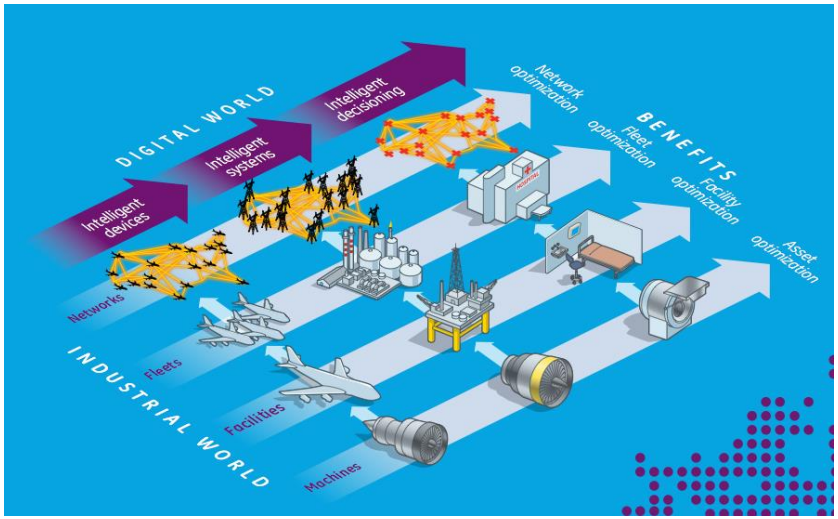
New Insights: Examples

Today

- Situational 1-to-1 marketing: micro-segmentation, cross-channel analysis, analysis of influential factors
- Customer experience and perception management
- Fraud detection, risk management and compliance

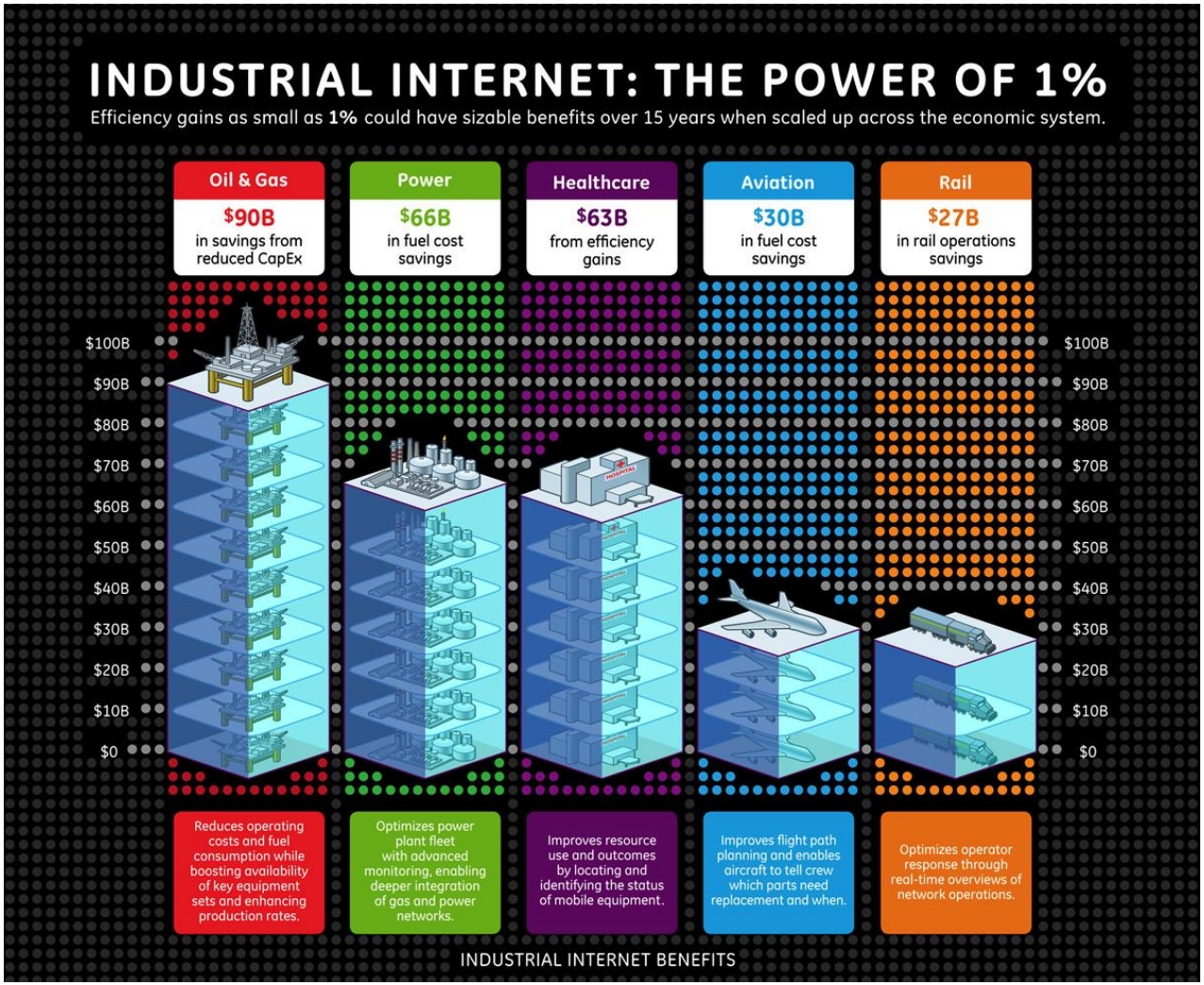
The Trend

- The “Internet of Things:” the processing and analysis of sensor and event data (healthcare, telecommunications, financial services, engineering, etc.)

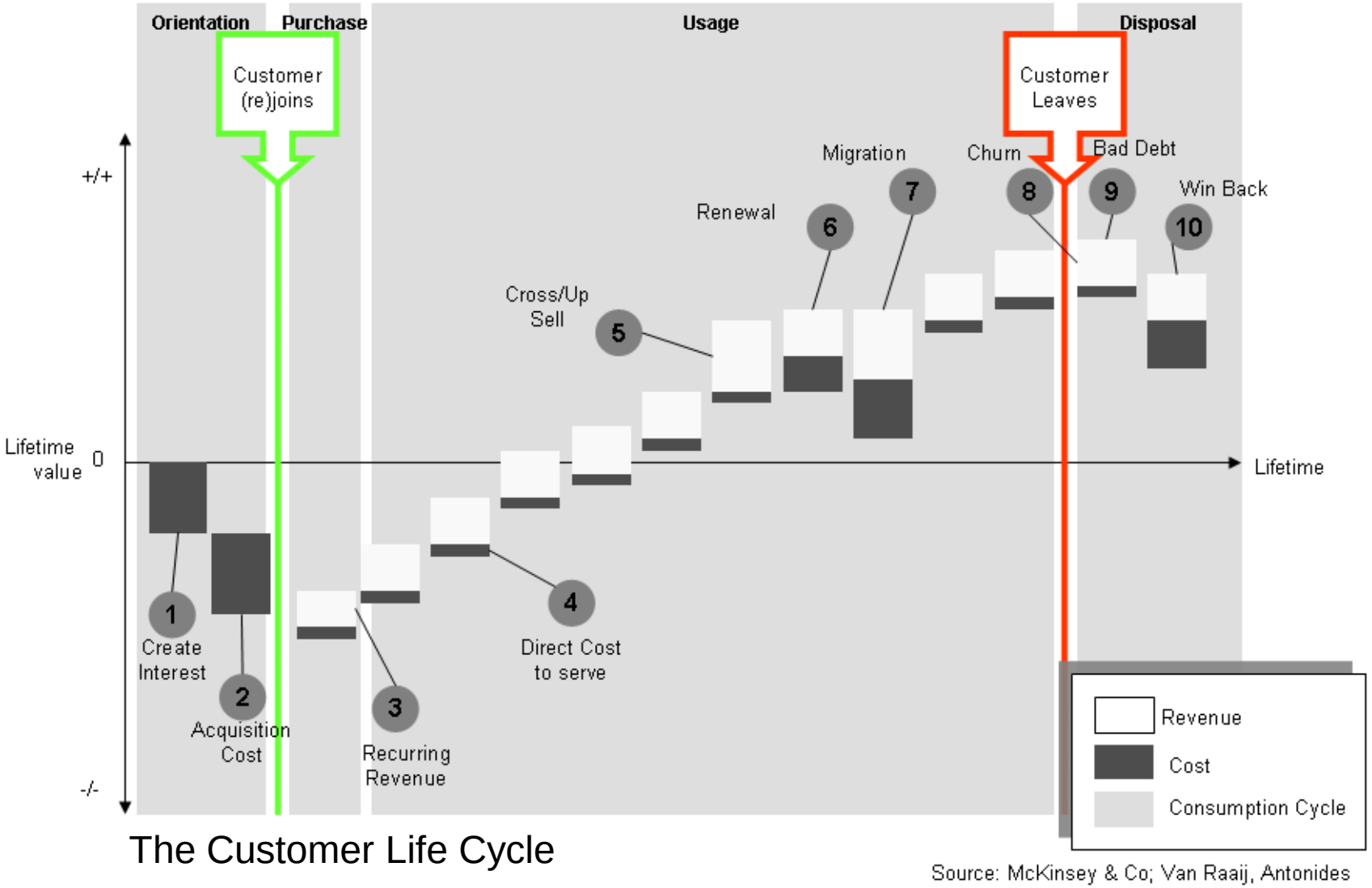


GE: “Industrial Internet: Pushing the Boundaries of Minds and Machines”

New Insights Where Next? GE Example



Quick Wins vs. Strategic Goals: Example



The Customer Life Cycle

Source: McKinsey & Co; Van Raaij, Antonides

Customer Analytics: Quick Win Examples

Quick Wins

- Use social media analytics to evaluate customer perception about products and services
- Analyze web site traffic to explore customer behavior
- Understand how customer buying patterns are affected by season, weather, store location, store layout
- Use a temporary data lab to analyze approaches to market a new product

But …

- How do these short-term gains satisfy the long-term goals of increasing revenue and reducing costs?
- Do business users understand the results and how to use them to gain business benefit?
- Are the results consistent across projects?

New Technologies

Enhanced Data Management

- New data sources (big data)
- Analytic relational DBMSs
- Non-relational systems (e.g., Hadoop, HBase, MongoDB, CouchDB)
- Improved price/performance

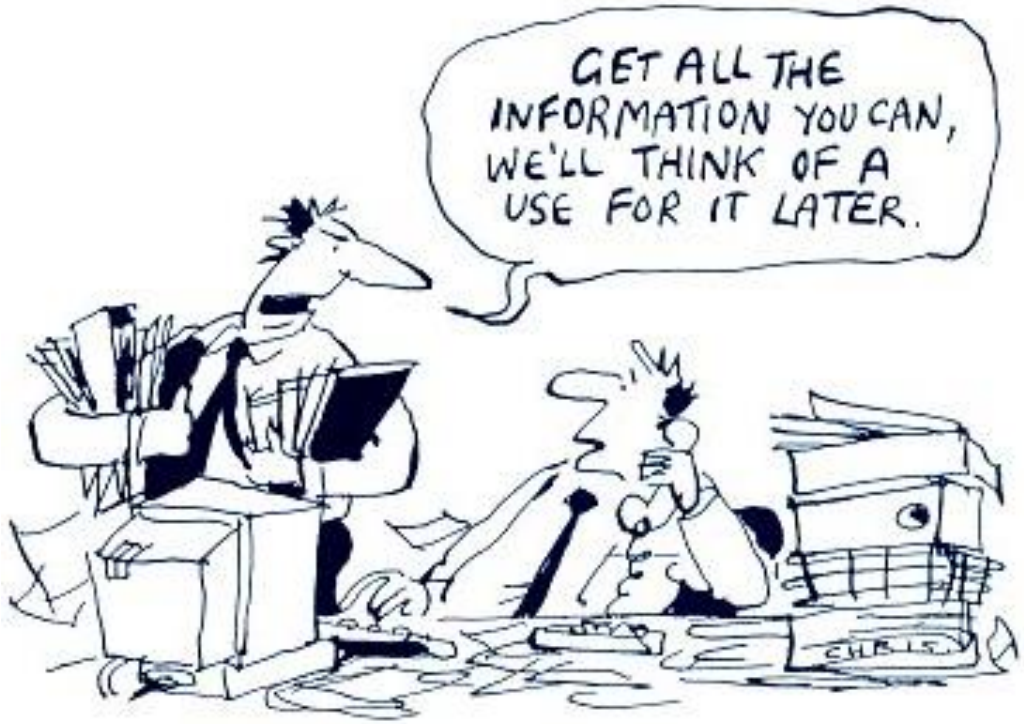
New Deployment Options

- Integrated H/W & S/W appliances
- Cloud computing
- Mobile devices (mobile first strategy)

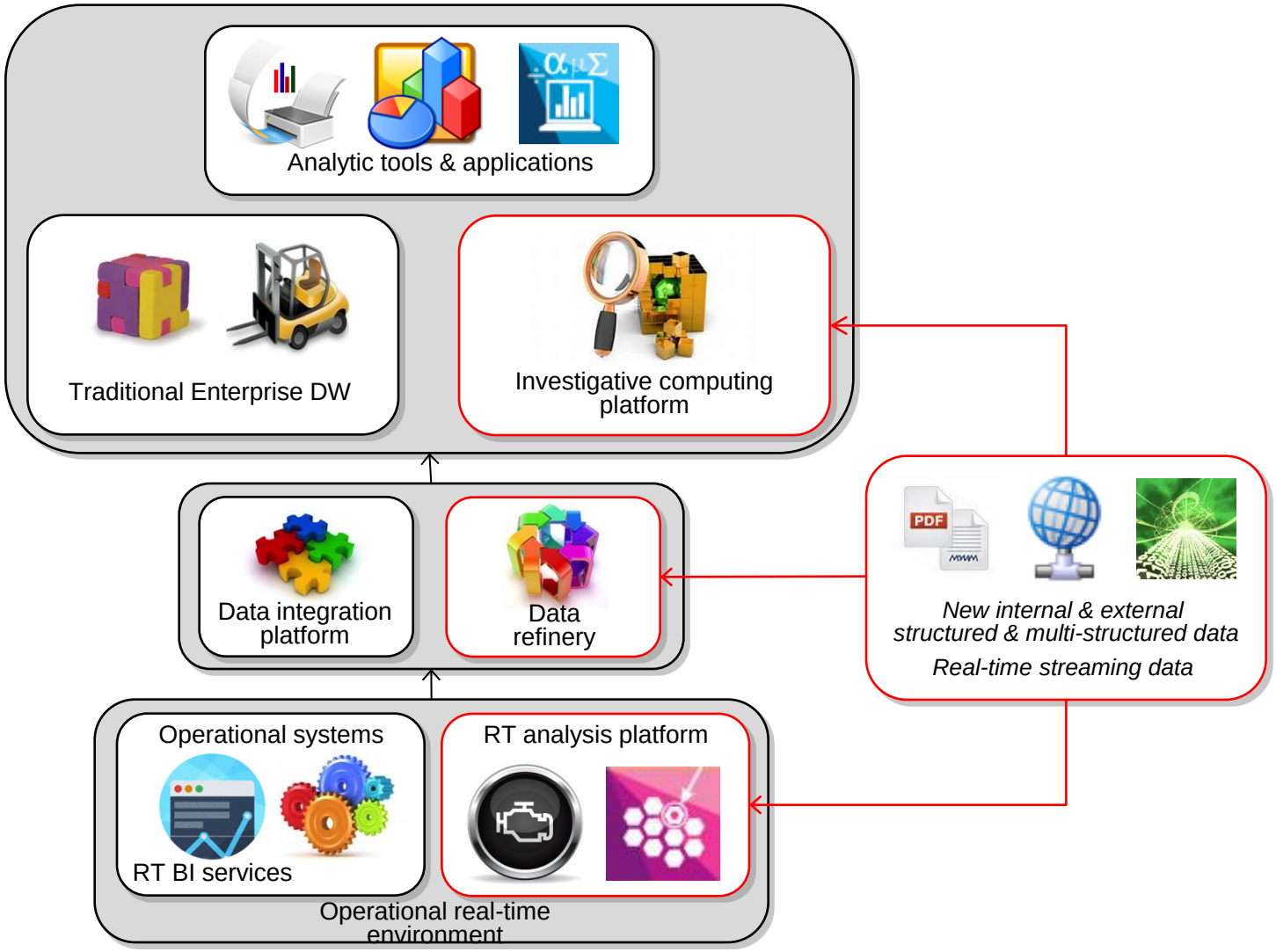
Enhanced Analytics

- Investigative computing
- Predictive & prescriptive analyses
- Enhanced visualization

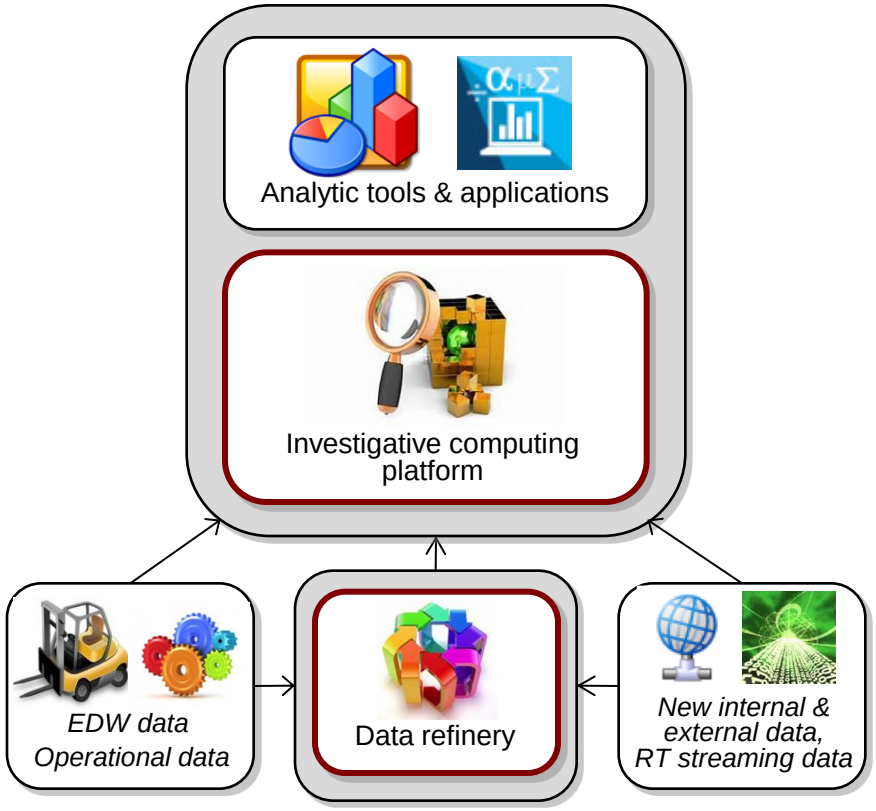
The Risk of New Technologies



Modernizing the EDW



Key New Components



Investigative Computing Platform

- Used for exploring data and developing new analyses and models
- May also be used for prototyping new analytics-driven LOB applications and for temporary analytic solutions
- May employ an RDBMS or non-relational system such as Hadoop

Data Refinery

- Ingests raw detailed data in batch and/or real-time into a managed data store
- Distills the data into useful information and for use by other systems
- May also be used for data archiving and for creating a "queryable" archive
- Key use of non-relational systems today

The Role of Investigative Computing

Enables users to blend new types of data with existing information to discover ways of improving business processes and to look for new business opportunities

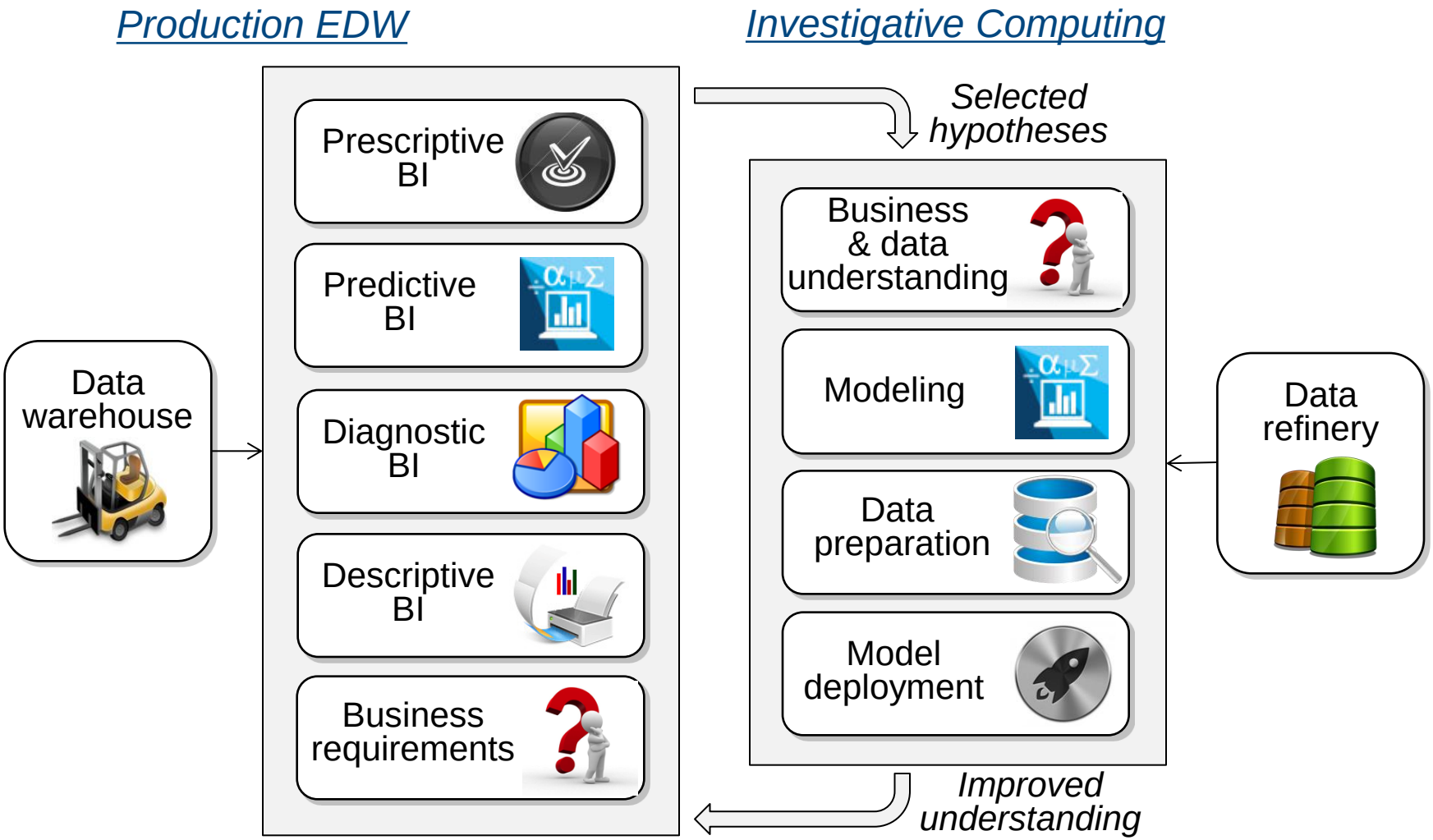
Allows users to experiment with different types of data and analytics before committing to a particular solution

May employ a RDBMS or non-relational solution running on premises or in the cloud

Represents a shift in the way organizations build analytic solutions:

- Increases flexibility and provides faster time to value because data does not have to be modeled or integrated into an EDW before it can be analyzed
- Extends traditional business decision making with solutions that increase the use and business value of analytics throughout the enterprise

Investigative Computing Extends the EDW



Customer Analytics: Production EDW

Descriptive: How many of customers churned in the last month?

Descriptive: How many of these were profitable?

Diagnostic: Why did these profitable customers churn?

Predictive: How many profitable customers are likely to churn next month?

Prescriptive: How can we reduce this profitable customer churn rate?

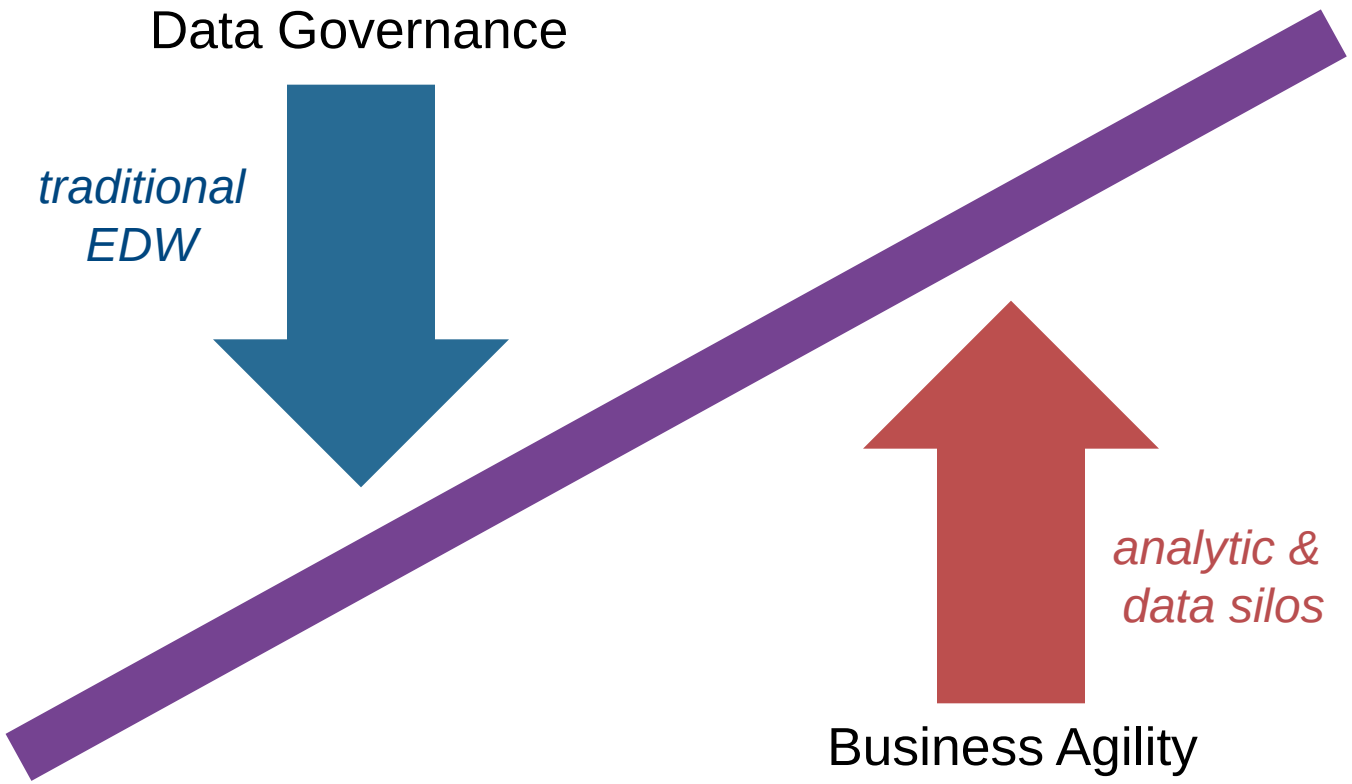
Customer Analytics: Investigative Computing

Business and data understanding: What is the difference between a highly profitable customer and an average customer?

Data preparation and modeling: What are the characteristics of a highly profitable customer?

Deployed predictive model: Will this new customer be profitable? How much revenue is this new customer likely to generate?

Data Governance Considerations



No longer practical to rigidly control and govern all forms of data and analytics – a modernized EDW allows different levels of governance to be applied based on security, compliance, quality and retention needs

Summary: Gaining Value from New Technologies

Managers don't have to be technical experts, but they need to:

- Understand the fundamental principles well enough to appreciate the business opportunities, communicate with technologists and evaluate proposals for projects
- Be willing to invest in data and experimentation and supply the required resources
- Keep the BI and the data science team on track

Understand how to gain competitive advantage (or parity) from new DW technologies in the context of the corporate strategy and that of competitors

Maintain momentum over competitors

Collaborate with, and examine projects in other organizations

Developing an Analytic Roadmap

Combining Proven Practices with Modern Concepts

Kevin Lewis, Teradata Strategy and Governance

The Challenge – Leveraging Technology for Business Value

- Modern data warehouses require the integration of new capabilities and new thinking
- But the key strategic principles still apply and are more important than ever
- *How do you create a roadmap that incorporates proven principles with the latest concepts and technologies?*

Source: "Making the Most of IT"

What We Hear – Symptoms of a Bad Strategy

"The business lead says they're not seeing the return on the investment"

"Data modeling and other project activities take way too long"

"Databases are not optimized for the right workload"

"We have a lot of data issues and needs, but we don't know where to start"

"Big Data changes everything; we can just put the data out there for everyone"

"Business and IT seem to have different priorities."

Strategic Principles
Successful Data Strategies…

- Plan to deploy *only* the data and analysis needed when it is needed (by business initiatives)
- Establish principles so that each each project contributes to shared data resources
- Integrate data planning and implementation into the organizational machinery
- Include discovery and experimentation to find value quickly

Analytic Discovery and Analytic Roadmap

This is not a technology distinction!

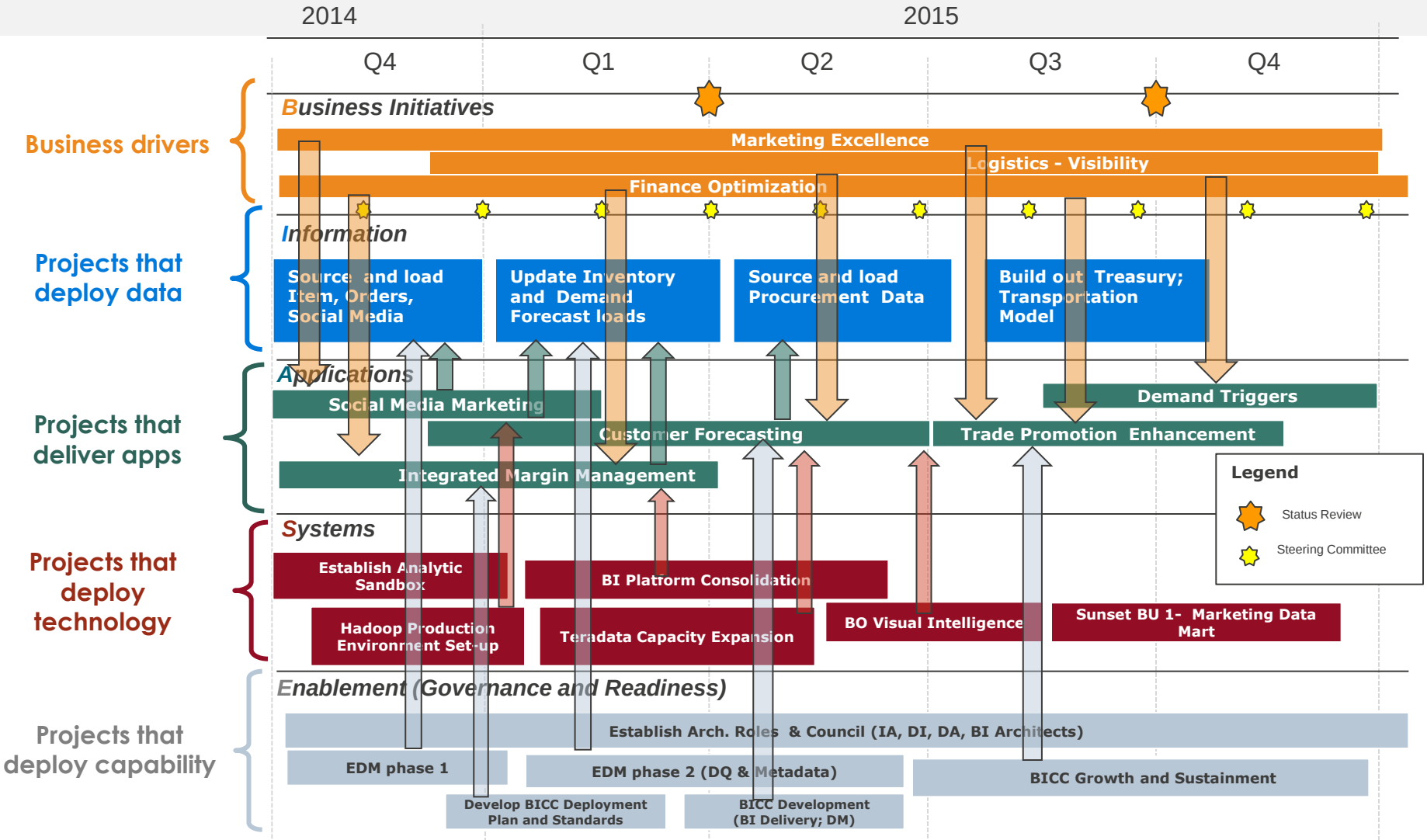
Analytic Discovery (Investigative Computing)

Prospecting – Effort to find the gold

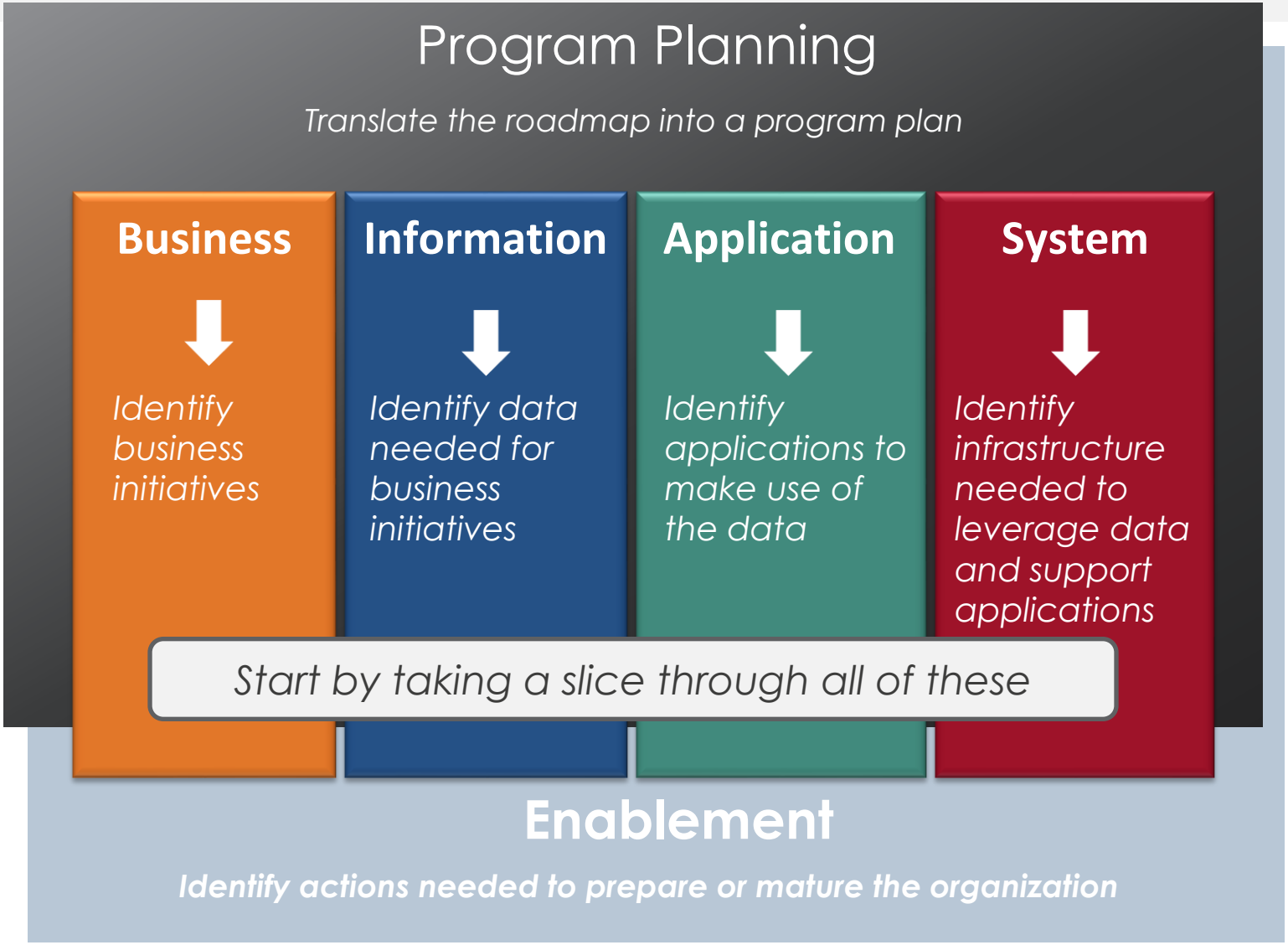
Analytic Roadmap Projects (Solutions for Production)

Mining/Production Projects to mine the gold

The Roadmap in Layers



What You Can Do Tomorrow -

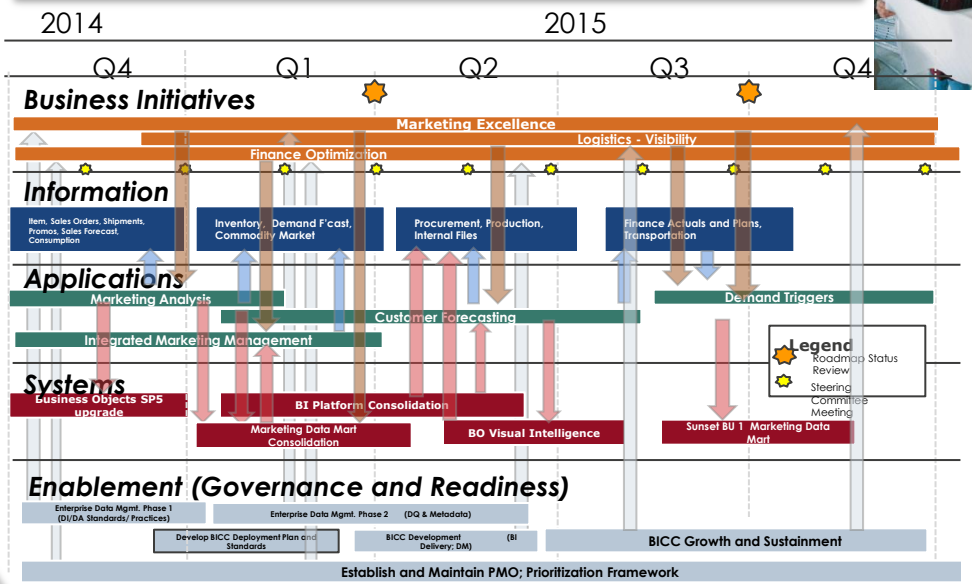


Analytic Discovery and the Roadmap

- Proactively planned
- Linked to strategy
- Role of data asserted in advance
- Includes formal IT projects

- Limited size
- Quick turnaround
- IT support needed but formal IT projects typically not needed

Strategic Analytic Roadmap



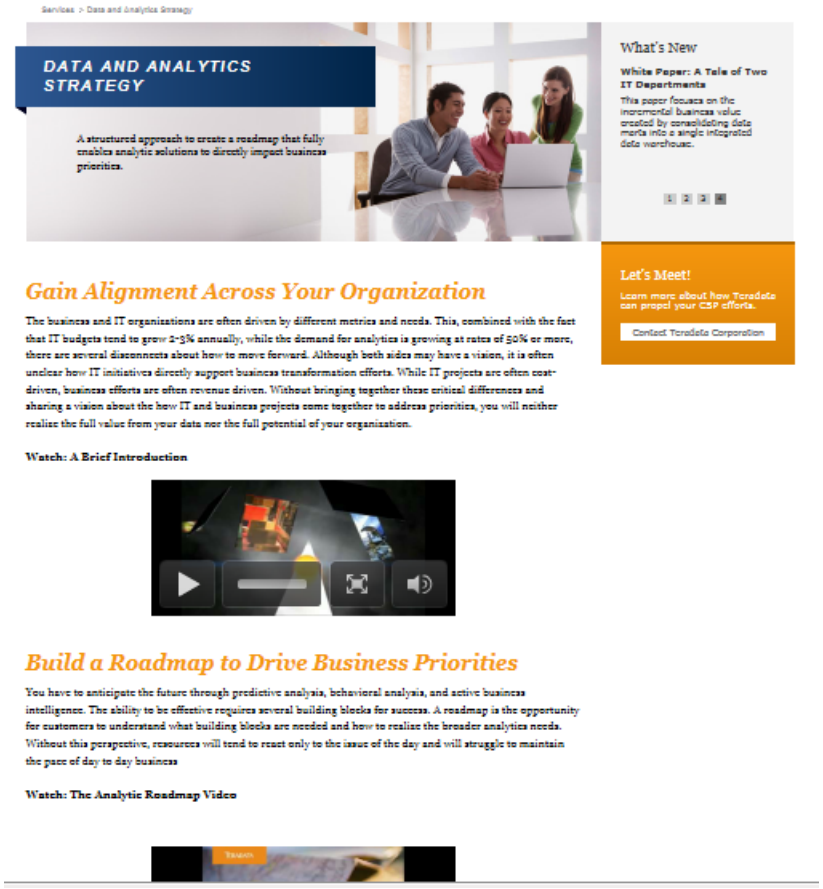
Results of Analytic Discovery can feed strategy, individual projects, or be directly acted upon

Analytic Discovery 

For More Information…

http://www.teradata.com/Data-and-Analytics-Strategy/

Animation Video
White paper – "The 7 Common Data Mistakes"
Analytic Roadmap Overview video
Forbes Blog



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Questions?

Contact Information

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