![Grant Thornton]

"Bite-sized" Business Intelligence (BI) for Enterprise Risk Management (ERM)

Institute of Internal Auditors - Dallas Chapter
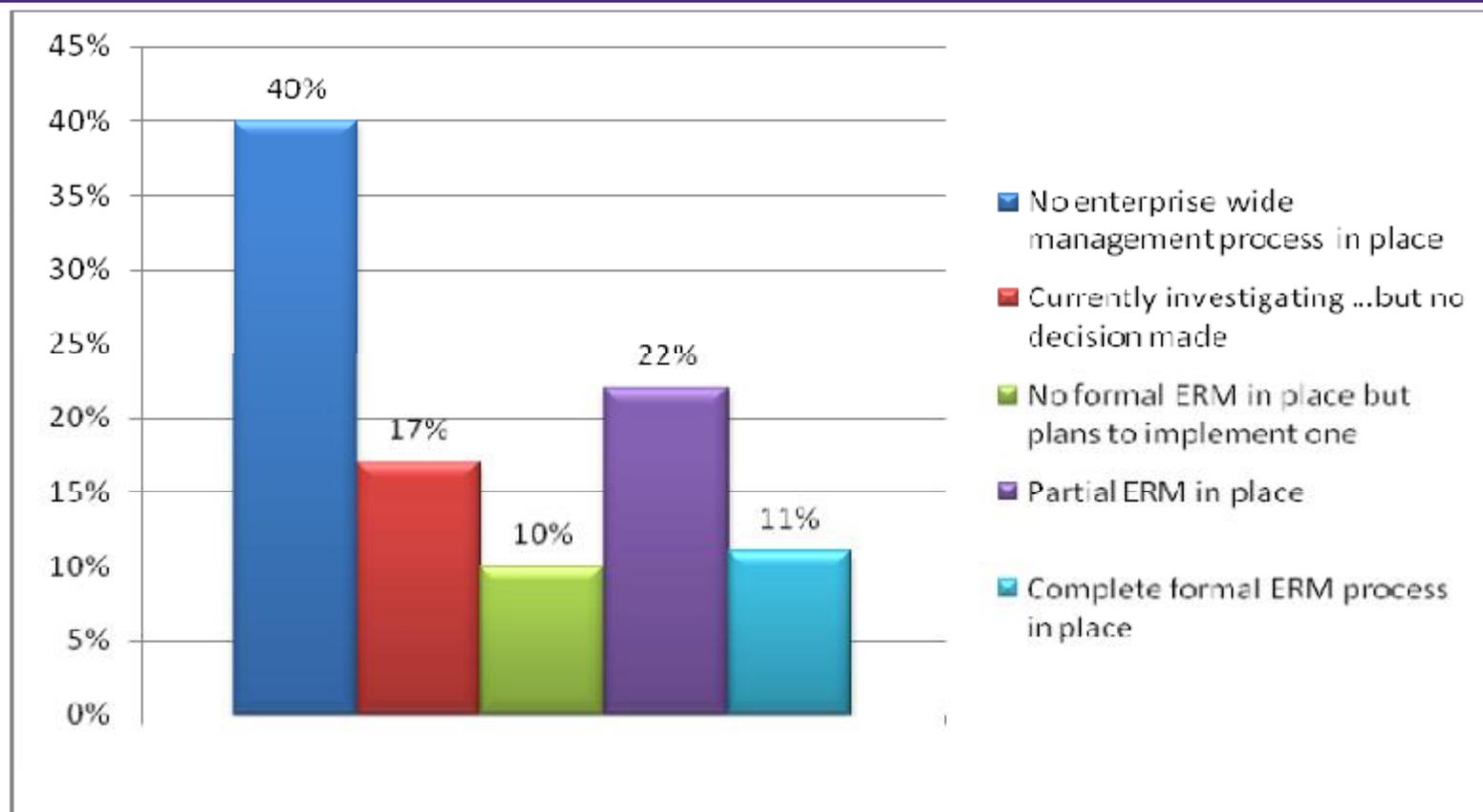
August 5, 2010

Highlights

- State of ERM Adoption

- Enhancing ERM with Business Intelligence (BI)

- What Is Business Intelligence?

  - The Business Case

  - The Solution

  - Implementation Considerations

- Applying BI to ERM

- Q & A
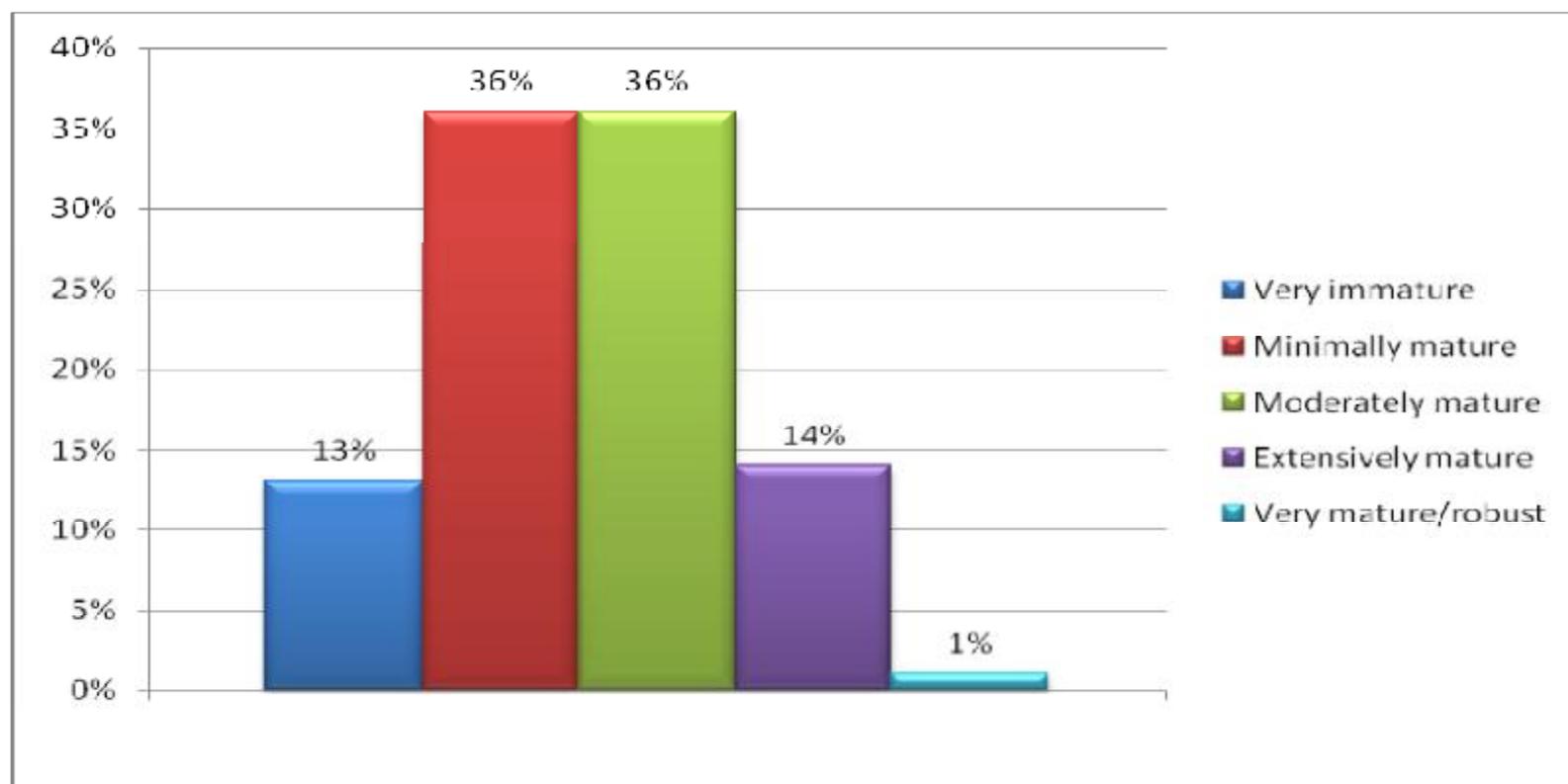
Adoption of ERM – Survey View
67% – Partial/No ERM Adoption

February 2010 North Carolina State University and American Institute of Certified Public Accountants
Report on the Current State of Enterprise Risk Oversight, 2nd Edition
approximately 300 companies in varying industries
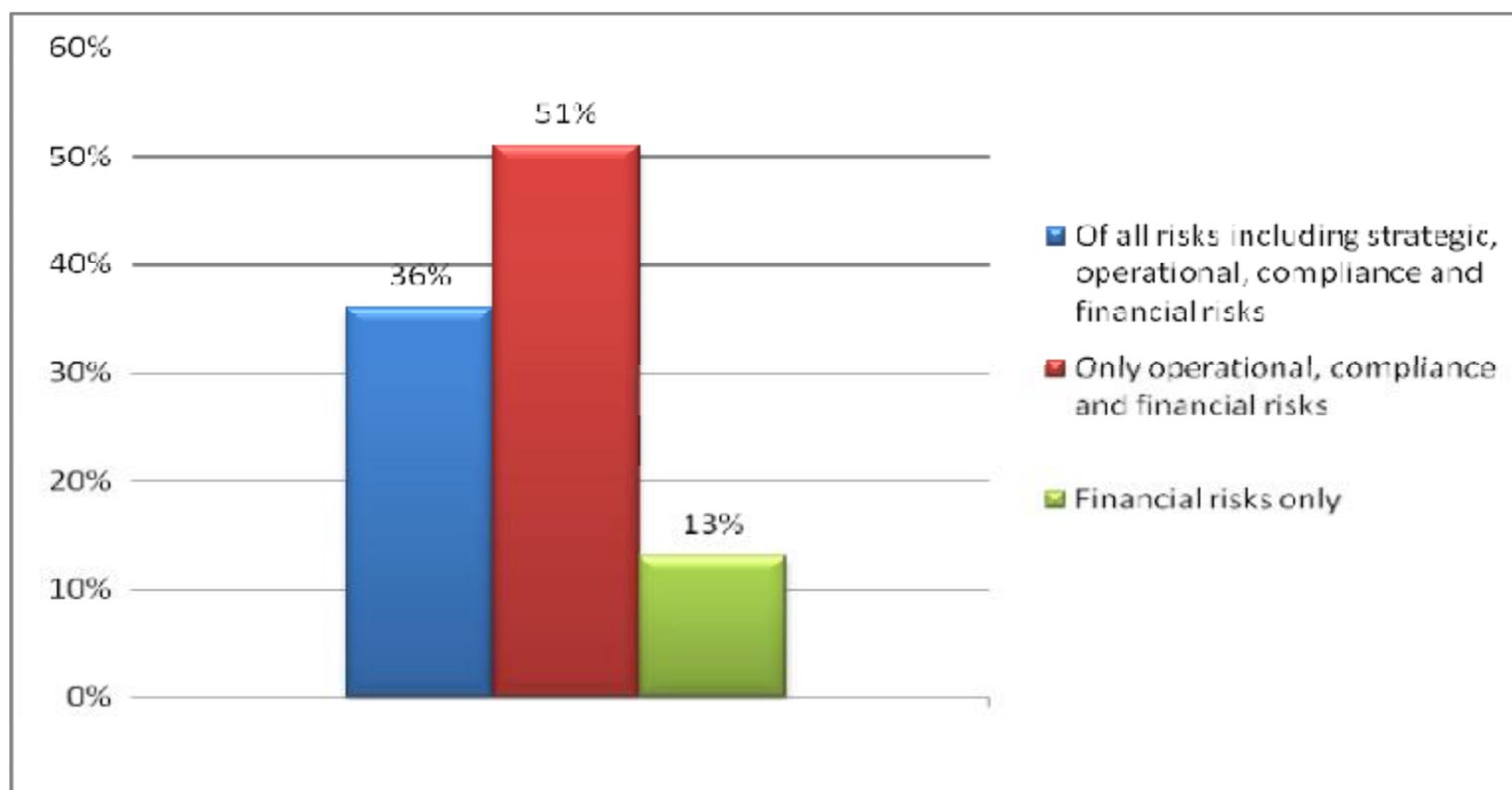
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Current State of ERM – Survey View
15% – Mature Process

February 2010 North Carolina State University and American Institute of Certified Public Accountants
Report on the Current State of Enterprise Risk Oversight, 2nd Edition
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4

Current State of ERM – Survey View
51% – Focus on Operational, Compliance and Financial Risks

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Progression in ERM Maturity
Requires Accurate and Timely Interpretation of Disparate Data

Overall, the results indicated the following:

- ERM processes are still evolving
- Will require stronger focus on operational and strategic risks
- Boards recognizing risk oversight responsibilities
  - Level of oversight still greatly varies

> Business Intelligence (BI) will play an important role in ERM – organizations need "*one version of the truth*"
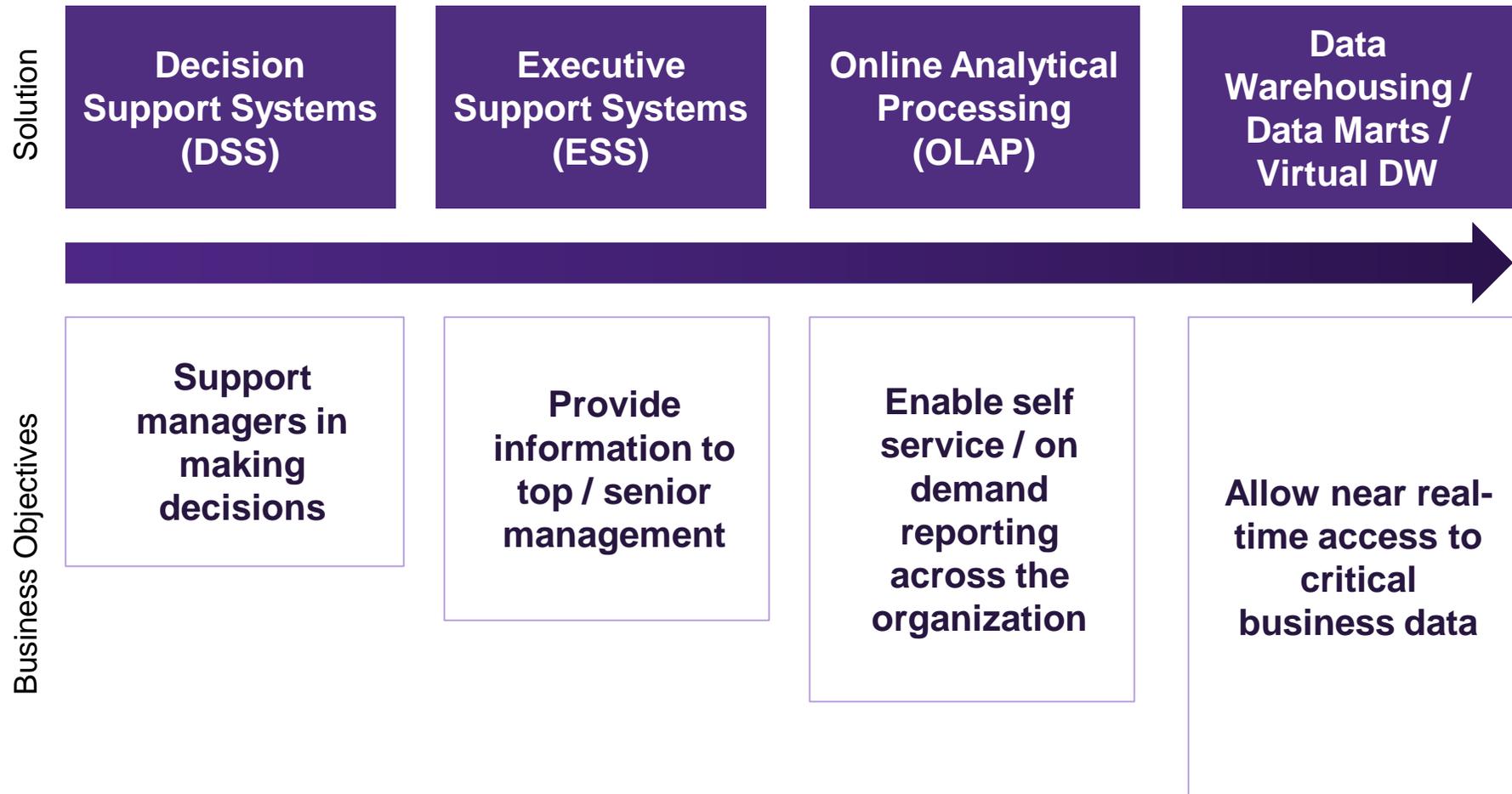
What is Business Intelligence (BI)?

Business intelligence is a broad set of processes and technologies that turn raw data into actionable information.

Traditional features of BI include:

- Reporting

- Dashboards

- Performance Management

  - Metrics / KPIs

  - Scorecards

- Analytics

7

The Evolution of BI

	Decision Support Systems (DSS)	Executive Support Systems (ESS)	Online Analytical Processing (OLAP)	Data Warehousing / Data Marts / Virtual DW
Solution				

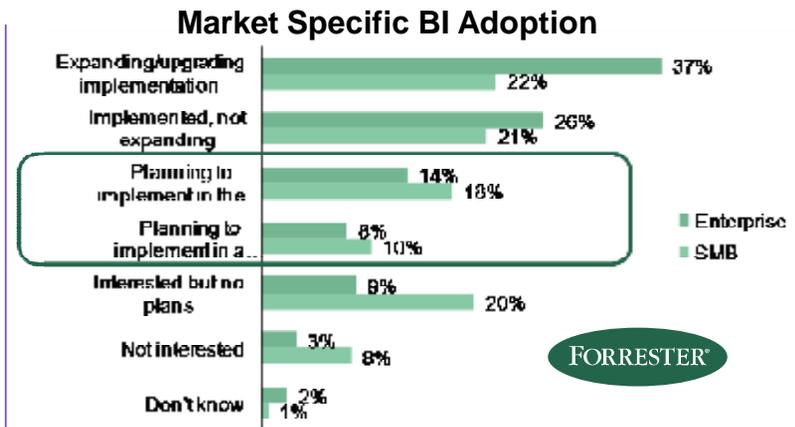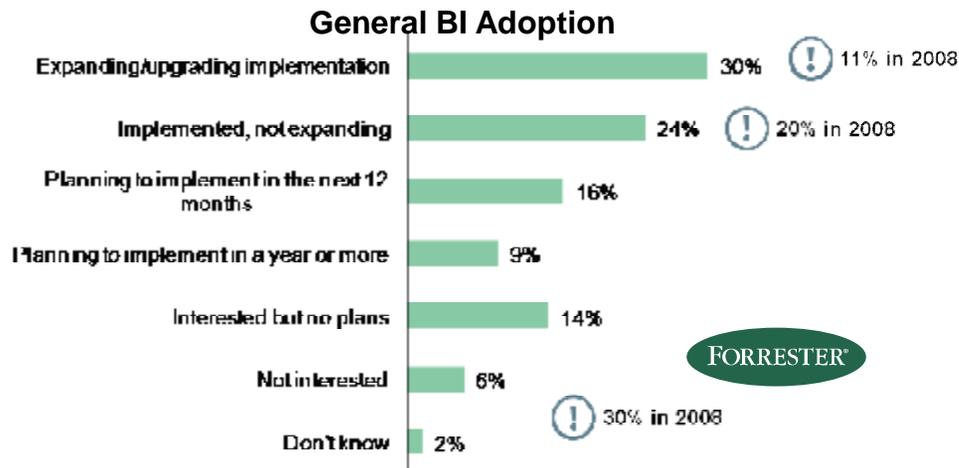|				
Business Objectives	Support managers in making decisions	Provide information to top / senior management	Enable self service / on demand reporting across the organization	Allow near real-time access to critical business data

8

Enterprise BI – Only a Few Paces Ahead of ERM
Analysts Predict Continued Strong BI Market Adoption

- An annual survey of CIOs conducted by Gartner Research consistently identifies BI as a top priority **Gartner.**

- Recent Forrester Research "*Latest BI Adoption Trends — Still Strong And Going Ballistic*"

General BI Adoption

Expanding/upgrading implementation	30% (!) 11% in 2008
Implemented, not expanding	24% (!) 20% in 2008
Planning to implement in the next 12 months	16%
Planning to implement in a year or more	9%
Interested but no plans	14%
Not interested	6%
Don't know	2% (!) 30% in 2008

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Market Specific BI Adoption

	Enterprise	SMB
Expanding/upgrading implementation	37%	22%
Implemented, not expanding	26%	21%
Planning to implement in the ...	14%	18%
Planning to implement in a ...	8%	10%
Interested but no plans	8%	20%
Not interested	3%	8%
Don't know	1%	2%

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Gaining an Understanding of the BI Business Case

- Billions invested to implement ERP and "second wave" technologies
  - Accumulation of transactional data in disparate source systems
- Organizations had grown rapidly prior to 2007
  - Organically and through acquisitions
- "Siloed" reporting processes with no "enterprise" view of the business
  - Most organizations and systems not fully integrated
- Recent recession forced companies to re-focused their BI efforts
  - "Survival" has dictated market position maintenance
  - Growth strategy oriented changed to cost efficiency optimization
  - Emergence of "performance management" moniker
- ***Businesses must be able to capitalize on all this rich data***
  - Transactional systems do not adequately facilitate data analysis
  - Typical reporting solutions are manual and time intensive

Gaining an Understanding of the BI Business Case
(continued)

- Mature BI solutions "changes the game"
  - Software enables intuitive, real-time access to the disparate data sources
    o Easily accessed by users at all levels of the organization
  - Technology infrastructure is cheaper than ever before
  - Processing power, memory and storage is exponentially faster
- BI can provide companies a competitive advantage in today's market place
  - Perform real-time operational analysis
  - Better manage KPIs to make accurate / actionable decisions
  - Streamline reporting processes
  - Effectively facilitate the strategic planning process

- ***These same components also support the ERM***
- ***However, BI is not your typical IT systems initiative***

Common Business Challenges to be Solved thru BI
Similar Challenges to ERM – Stakes are high with both

The Problem	The Imperative	The Solution
Data is Inaccurate or Inconsistent	Provide Data Quality	• Data is reliable and can be used to support decision making • Data stewards own key data elements
Information is Siloed	Establish an Enterprise Perspective	• Standardized metrics by business process across departments, apps, etc • Single version of the truth
High Amount of Manual Effort	Automate	• Data extraction / processing is automatic • Solution is scalable to provide for increased data volume
Reports Are Passive / Rigid	Enable Consumers to Become Producers	• Analysis is placed into users hands • Users are self sufficient for day to day needs

Defining What the BI Solution Looks Like
Successful Solutions – Not Just About Technology

User Community	Information Workers	Power Users	Report Consumers				

BI Technologies	Presentation / Delivery	Office Suites	Portals	Mobile Devices	Enterprise Strategy	Governance	Methodology and Approach	Center of Excellence
		Reporting	Dashboards	Visualizations				
	Performance Management	Metrics / KPIs	Planning	Scorecards				
	Data Mart / Analytics	OLAP	Data Mining	Predictive Analytics				
	Data	Data Warehouse	Data Marts	Operational Data Store				
	Integration / Transform	Adapters / Toolkits	Extract Transform Load (ETL)	Service Oriented Architecture (SOA)				

Operations / Source Applications	ERP	Operations	Third-Party

Managing the BI Maturity Model
Close Correlations Can be Drawn to ERM

Business Value

Information → **Action**

Paradigm Change

L e a r n
§ Reflect
§ Improve

A c t
§ Prescribe
§ Anticipate

E x p l o r e
§ Model
§ Analyze

I n f o r m
§ Distribute
§ React

Business Effort

14
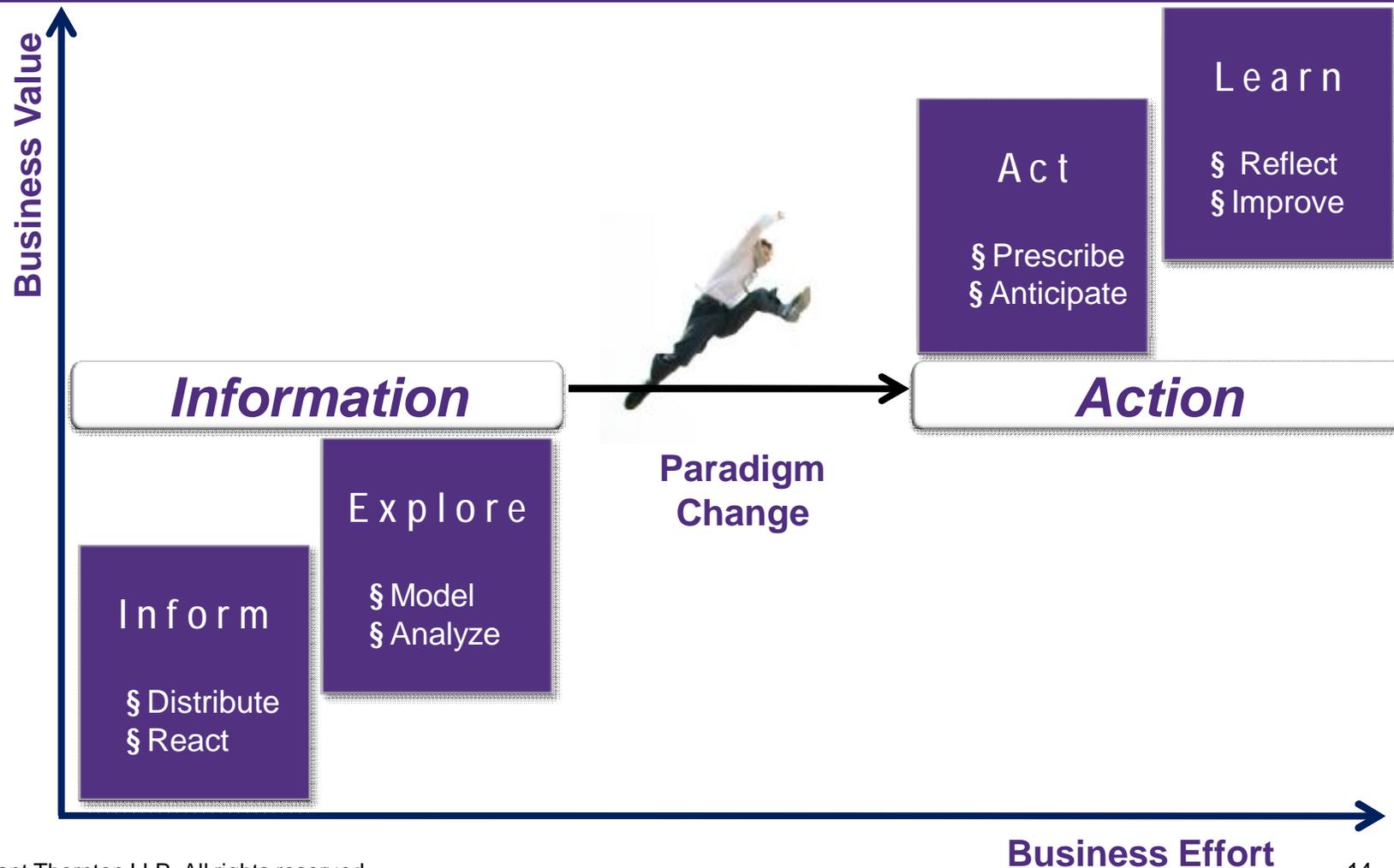
What to Consider During Implementation of BI
Putting the Parts Together

The Kitchen	The Dining Room
§ Raw materials transformed into delicious meals § Must be highly organized / efficient § Delivering consistent quality is key § Requires talented chefs § For safety reasons, patrons are not allowed in the kitchen	§ Food (quality, taste, presentation) § Décor (appealing surroundings) § Service (prompt delivery, received as ordered) § Cost

Source System → Extract → **Transformation** → Load → **Dimensional DWH** (Atomic & Summary Data) ← Access ← **BI Apps**

Source System → Extract → **Transformation**

"Data Warehouse Dining Experience" – The Kimball Group

Understanding BI Vendors/Solutions
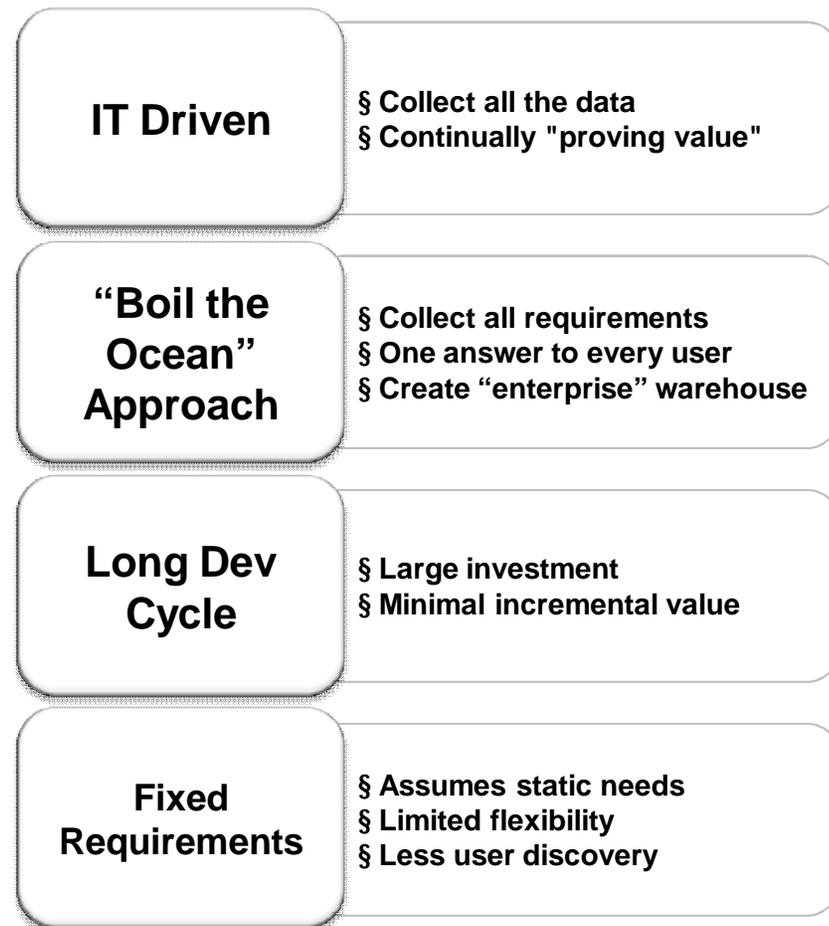## *Choosing the Right Technical Foundation*

- "Full-stack" vendors
  - Microsoft
  - IBM (Cognos)

- Enterprise Applications
  - SAP (Business Objects)
  - Oracle

- "Pure-play" niche vendors
  - Information Builders
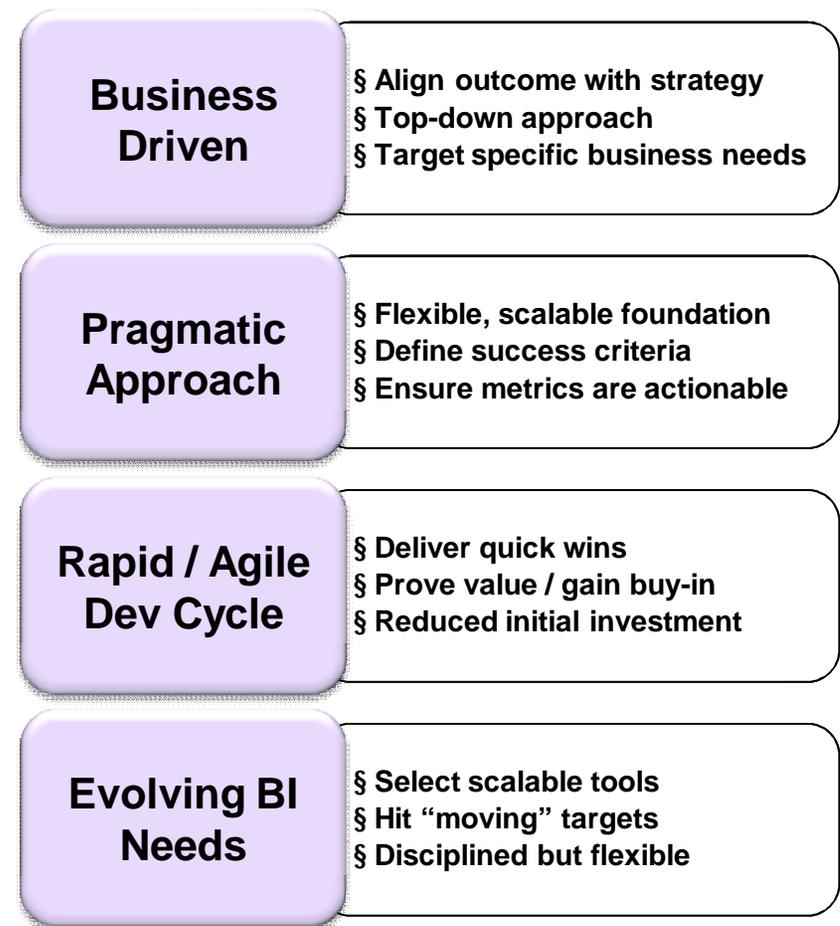 - MicroStrategy
  - SAS
  - Others

Holistic BI Perspective is Critical to Success
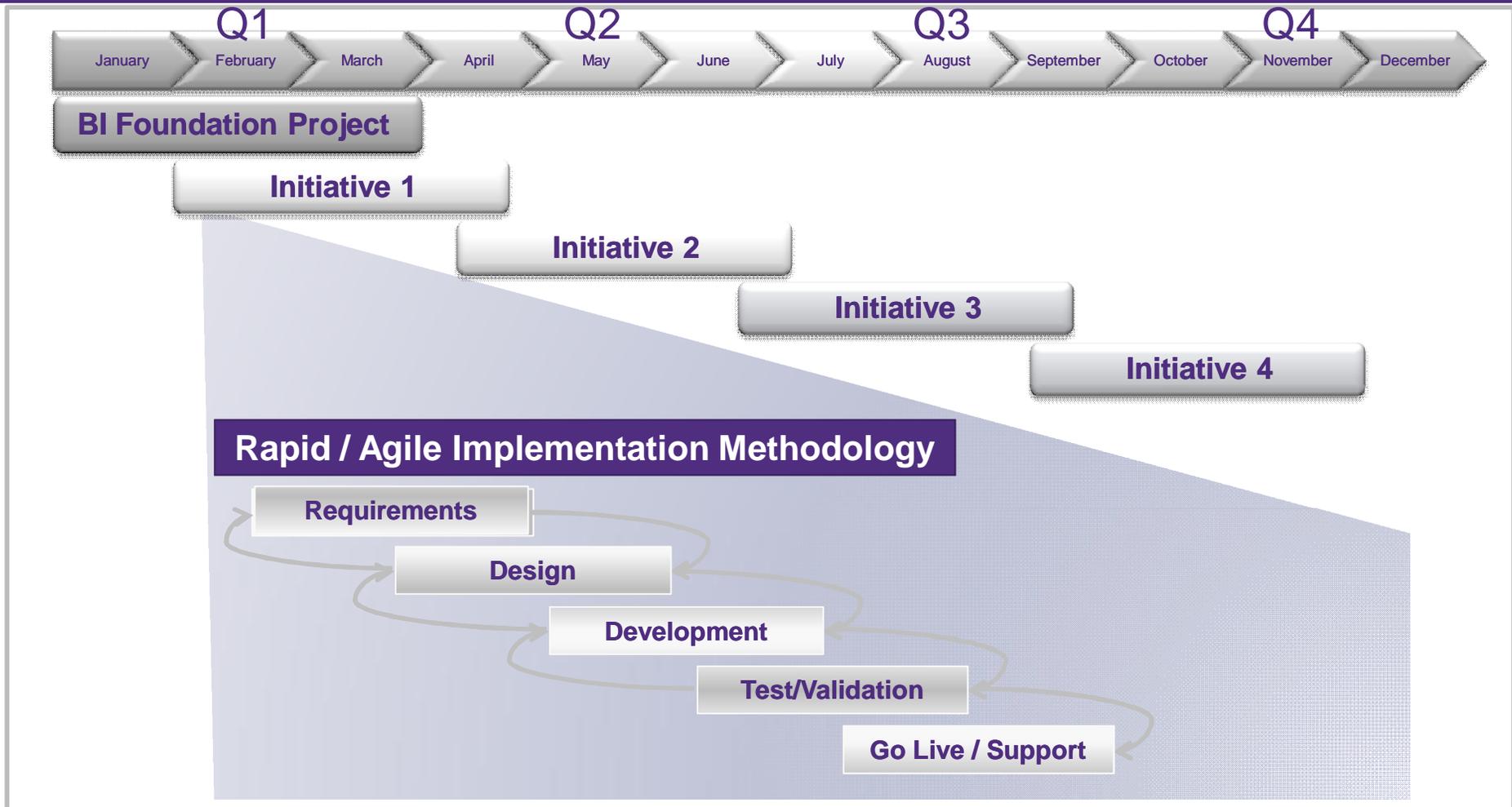## *Fundamental Considerations*

Typical BI Perspective

IT Driven	§ Collect all the data § Continually "proving value"
"Boil the Ocean" Approach	§ Collect all requirements § One answer to every user § Create "enterprise" warehouse
Long Dev Cycle	§ Large investment § Minimal incremental value
Fixed Requirements	§ Assumes static needs § Limited flexibility § Less user discovery

Our Perspective

Business Driven	§ Align outcome with strategy § Top-down approach § Target specific business needs
Pragmatic Approach	§ Flexible, scalable foundation § Define success criteria § Ensure metrics are actionable
Rapid / Agile Dev Cycle	§ Deliver quick wins § Prove value / gain buy-in § Reduced initial investment
Evolving BI Needs	§ Select scalable tools § Hit "moving" targets § Disciplined but flexible

Approach and Methodology Attributes
Success with Rapid, Pragmatic yet Agile Methodology

Q1　　　　　Q2　　　　　Q3　　　　　Q4

| January | February | March | April | May | June | July | August | September | October | November | December |

BI Foundation Project

Initiative 1

Initiative 2

Initiative 3

Initiative 4

Rapid / Agile Implementation Methodology

Requirements

Design

Development

Test/Validation

Go Live / Support

The BI Enabled ERM Framework

- Establish a solid foundation

  – Operations, Reporting and Compliance oriented

  – Leverages world-class technology

  – Creates "one version" of the truth

  – Enables better decision making

  – Reduce inherent risks associated with data

- Increased emphasis on Strategic and Operational

  – Indentify, monitor and manage "fuzzy data"

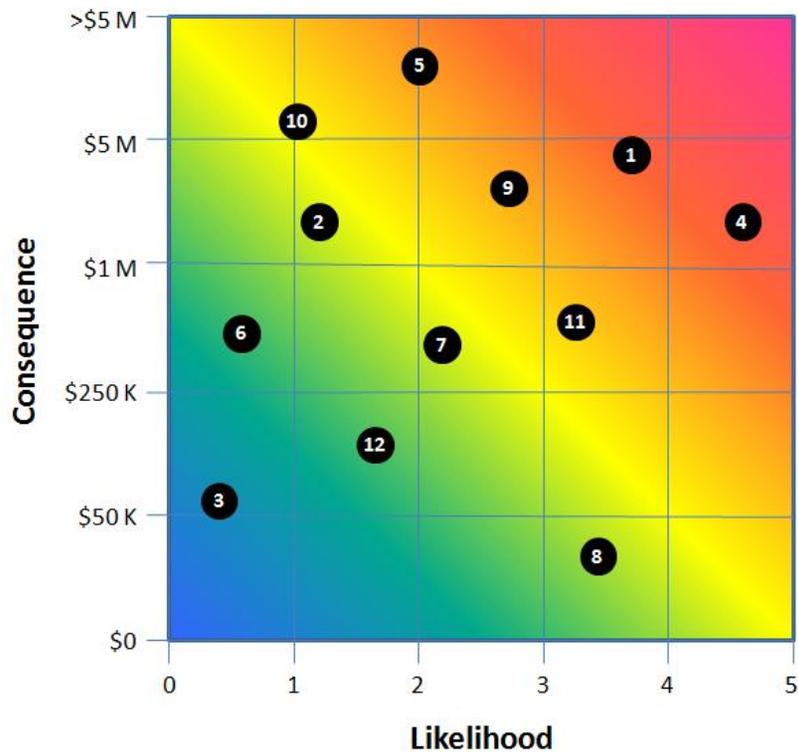 – Better align reality to strategy
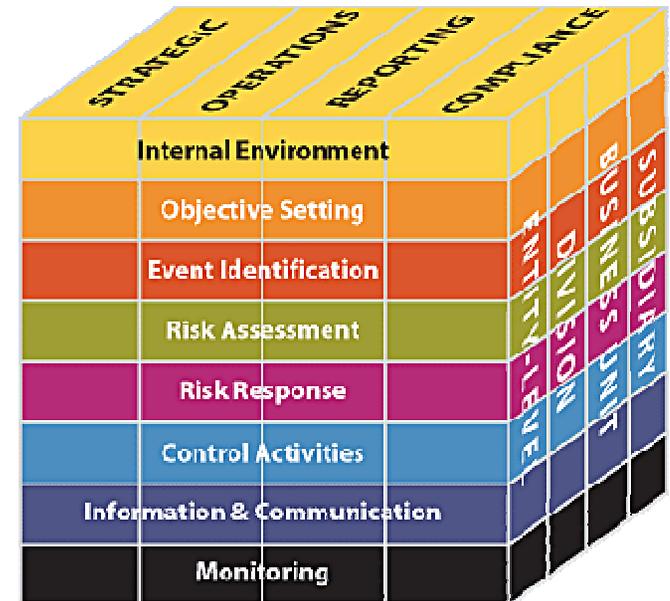
Enabling ERM With BI – Some Considerations

- Identifying enterprise level risks – bring it all together

    - "You can't manage it if you can't measure it"

    - Implement "drill-through to detail" ability from the top

- Enable risk mitigation and continuous monitoring across the enterprise

    - Facilitate the ERM process with strong and timely governance

- Track / trend ERM over time

    - Trending analysis will allow you to track direction and progress

- Enable predictive analysis to make proactive risk management decisions

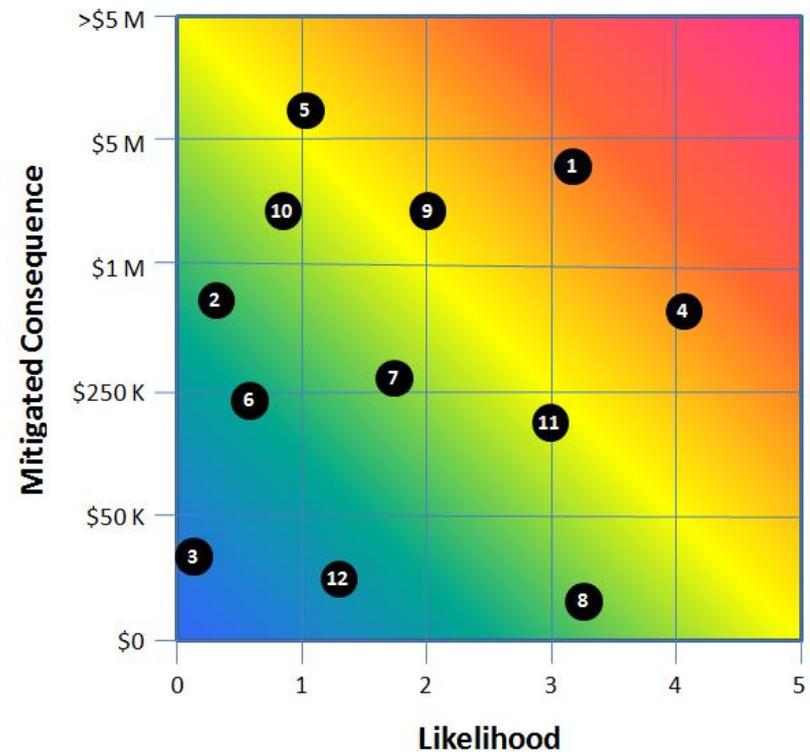   - Begin to understand the potential "velocity" of your risks

Basic Heat Maps with "Drill-through" to Details
Significant Value Delivered Using Basic BI Techniques

Q & A

22