Business Intelligence

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June, Day 2010

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Agenda

Business Intelligence (BI)

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Risk Management

BI for Financial Risk

Building BI for Intellectual Property (IP)

    IP Risk Factors

    IP Risk Model

    Conceptual Model

BI for IP Protection

Business Intelligence

What is business intelligence (BI)?

- BI enables fact-based decision making on demand
- Solutions typically encompass technologies and processes to extract, transform, and load data
- BI is usually defined as the extraction of insights from structured data
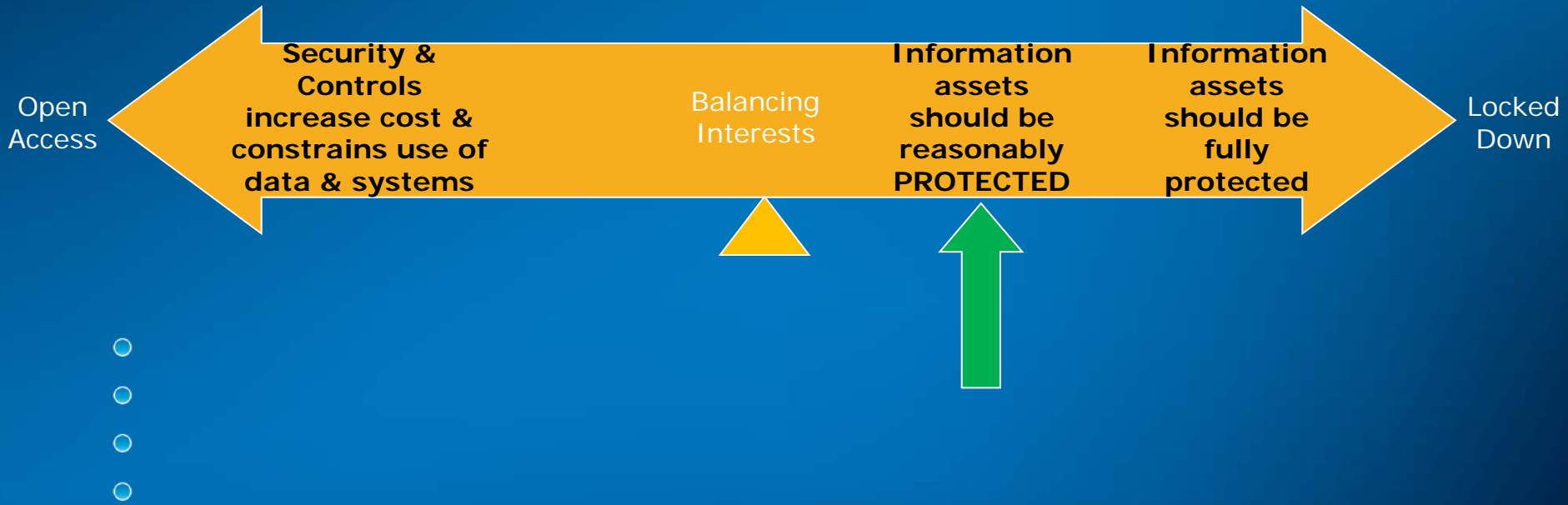- Allows flexibility for users to answer questions

Security BI enables dynamic fact-based decision making and predictive analytics.

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The World's Largest Semiconductor Manufacturer

- Manufacturer of Computer, Networking & Communications Products
- 300 Facilities in 50 Countries
- Over $35B in Annual Revenues from Customers in Over 120 Countries
- 23 Consecutive Years of Positive Net Income
- Approximately 80,000 Employees
- 43,000 technical degrees, 12,000 Masters in Science, 4,000 PhD's, 4,000 MBA's
- One of the Top Ten Most Valuable Brands in the World for 10 Consecutive Years
- Invests $100 Million Each Year in Education Across More than 50 Countries
- The Single-Largest Corporate Purchaser of Green Power in the United States
- One Million Hours of Volunteer Service in Our Communities in 2008

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Risk Management @Intel

Open Access ⟵ **Security & Controls increase cost & constrains use of data & systems** | **Balancing Interests** | **Information assets should be reasonably PROTECTED** | **Information assets should be fully protected** ⟶ **Locked Down**

A reasonably protected digital environment is necessary for a strong digital future

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The Risk Management Process

Steps in Risk Management	
Step	Goal
Identify Risk	Build a list of what could probably go wrong
Assess Risk	Assign values to items in the list based on how likely they are to happen and how bad things will be if they do happen
Rank Risk	Put the list of items in order of "how bad"
Mitigate Risk	Take an action or spend some money; the goal is to make the risk less likely to happen or decrease how bad things will be if it does happen
Accept Risk	When the risk improvement is smaller than the cost of making the improvement, monitor and rely on other protections instead

Business need: put risks into a consistent language that management can use to make decisions

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The Risk Management Process

$$L * I = R$$

LIKELIHOOD

How likely is it something bad will happen?

Usually a subjective probability based on recent experience. Might be a number or High/Medium/Low

IMPACT

The fallout if something bad happens. Could be tied to revenue lost, reputation hit, litigation costs, or fines. Might be a number or High/Medium/Low

RISK

The relative level of "bad". This is stated as a number or some logical output of High, Medium, and Low combinations

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BI for Financial Risk

What a credit card risk model might look like:

- User purchase history
  - Merchants
  - Spending value
  - Location
  - Past transactions
- Balancing Interest
  - Dollar loss or exposure
  - Customer tolerance
- Reduce Risk
  - Hold transaction
  - Validate card holder

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Building BI for IP

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IP Risk Factors

- CERT "Common Sense Guide … 3rd Edition" found in business advantage IP incidents
  - 71% held technical jobs
  - 25% former employees 75% current employees
  - 70% took place within 3 weeks of resignation
  - 80% had access to the information
- Business Environment Factors
  - Document access tolerance
  - Regulatory requirements
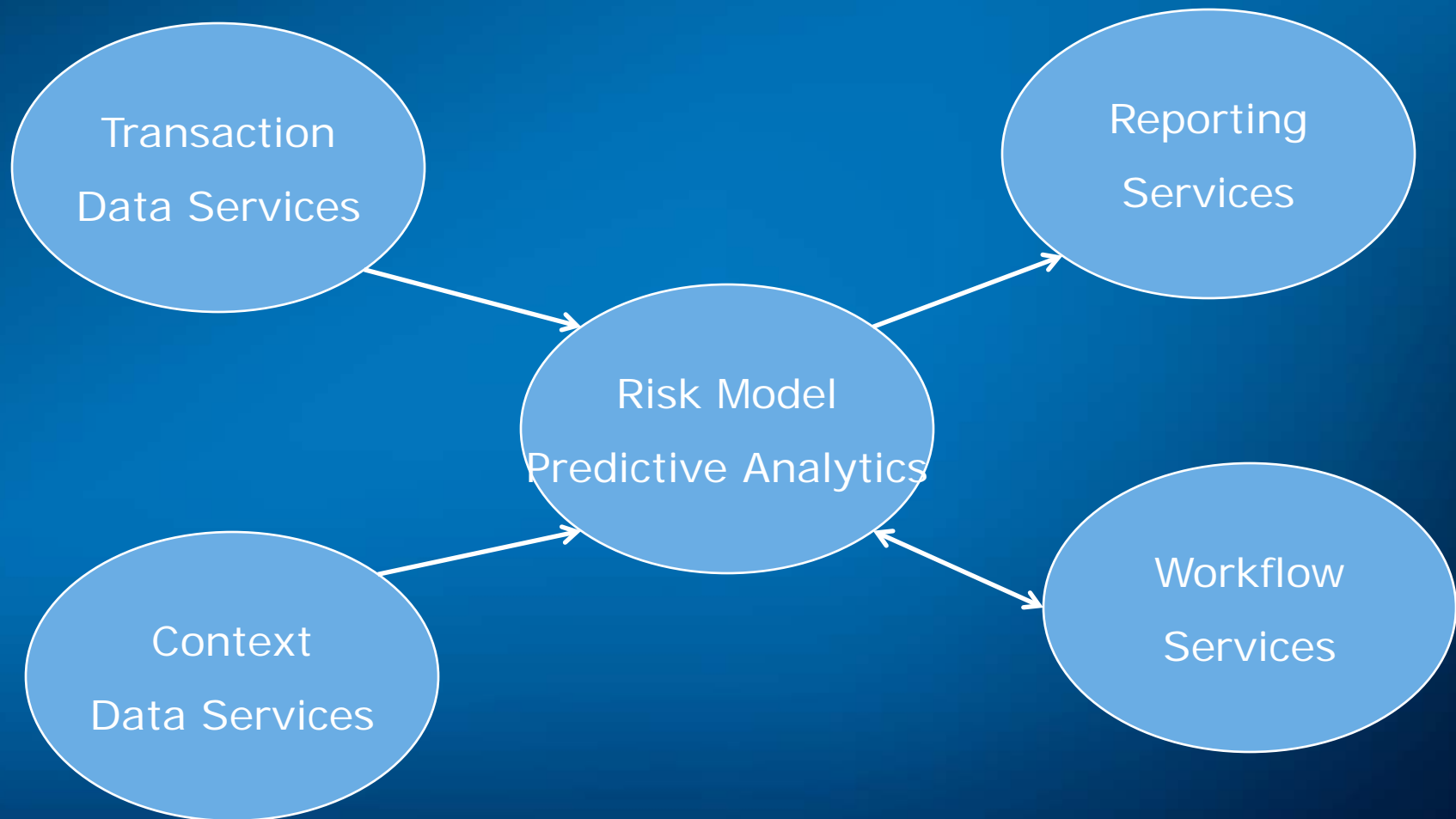 - Hours of access
  - Denied access

Context and transaction data exist in the Enterprise to measure risk.

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IP Risk Model

- Transaction sources
  - High value sources
  - Critical infrastructure sources
- Context sources
  - Job role
  - Location
- Assess and Determine – Take action?
  - Likelihood
  - Impact
  - Risk

Identify sources, assess their measure of likelihood or impact, and determine reasonable security.

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Conceptual Model

Transaction Data Services → Risk Model Predictive Analytics

Context Data Services → Risk Model Predictive Analytics

Risk Model Predictive Analytics → Reporting Services

Risk Model Predictive Analytics ↔ Workflow Services

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BI for IP Protection

Jun 13 8:00 AM   **June 14 2:00 AM**

IP Risk Factors

- High value information access
- Concurrent connections
- Remote access from non-traveled location
- Unusual hours of access
- Denied attempts
- Information not accessed by job role

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Summary

Steps in Security BI
Know your organization
Know your risk management philosophy
Identify Risk Indicators
Identify transaction and context sources
Assess and determine actions

Security BI enables dynamic fact-based decision making and predictive analytics.

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