Business Reporting

- Learning Objectives
    - List multiple types of business reports and describe their shared building blocks
    - Summarize different questions business reports grapple with and the options for displaying the answers.
    - Learn the components and structure of the business reporting systems
    - Create various reports using MicroStrategy BI platform

Business Report

- Report?
  - Any communication artifact prepared to convey specific information
- A report can fulfill many functions
  - To ensure proper departmental functioning
  - To provide information
  - To provide the results of an analysis
  - To persuade others to act
  - To create an organizational memory…

Business School
UNIVERSITY OF COLORADO **DENVER**

Information Systems Program

Business Report

- Business report is A written document that contains information regarding business matters.
  - *Purpose:* to improve managerial decisions
  - *Source:* data from inside and outside the organization (via the use of ETL)
  - *Format*: text + tables + graphs/charts
  - *Distribution:* in-print, email, portal/intranet
  - *Types* (in terms of content and format)
    - *Informal* – a single letter or a memo
    - *Formal* – 10-100 pages; cover + summary + text
    - *Short report* – periodic, informative, investigative

Business School
UNIVERSITY OF COLORADO **DENVER**

Information Systems Program

Business Reports Building Blocks

Attributes

Descriptive information providing business context and defining summarization levels for calculations

Metrics

Quantitative business measures

Category	Subcategory	Metrics	Units Sold	Profit	Profit Margin	Revenue
Books	Art & Architecture		37	$180	24.97%	$720
	Business		37	$137	24.54%	$558
	Literature		53	$87	20.61%	$423
	Books – Miscellaneous		54	$84	19.06%	$439
	Science & Technology		43	$302	24.70%	$1,222
	Sports & Health		35	$107	24.13%	$444
Electronics	Audio Equipment		21	$1,349	19.40%	$6,950
	Cameras		14	$1,337	21.32%	$6,270
	Computers		28	$560	18.89%	$2,967
	Electronics – Miscellaneous		14	$1,205	20.58%	$5,854
	TV's		31	$1,430	19.90%	$7,184
	Video Equipment		18	$1,773	20.27%	$8,750
Movies	Action		87	$101	8.99%	$1,124
	Comedy		88	$87	7.69%	$1,133
	Drama		74	$104	9.05%	$1,146
	Horror		92	$118	9.94%	$1,192
	Kids / Family		73	$100	8.93%	$1,122
	Special Interests		44	$84	9.92%	$843

Business Reports Building Blocks

Report Grid or Table

Basic building block for every business analytic application

Category	Subcategory Metrics	Units Sold	Profit	Profit Margin	Revenue
Books	Art & Architecture	37	$180	24.97%	$720
	Business	37	$137	24.54%	$558
	Literature	53	$87	20.61%	$423
	Books - Miscellaneous	54	$84	19.06%	$439
	Science & Technology	43	$302	24.70%	$1,222
	Sports & Health	35	$107	24.13%	$444
Electronics	Audio Equipment	21	$1,349	19.40%	$6,950
	Cameras	14	$1,337	21.32%	$6,270
	Computers	28	$560	18.89%	$2,967
	Electronics - Miscellaneous	14	$1,205	20.58%	$5,854
	TV's	31	$1,430	19.90%	$7,184
	Video Equipment	18	$1,773	20.27%	$8,750
Movies	Action	87	$101	8.99%	$1,124
	Comedy	88	$87	7.69%	$1,133
	Drama	74	$104	9.05%	$1,146
	Horror	92	$118	9.94%	$1,192
	Kids / Family	73	$100	8.93%	$1,122
	Special Interests	44	$84	9.92%	$843

Business Reports Building Blocks

Prompts

Allow users to dynamically select the information to be displayed in the report

Category	Subcategory	Metrics	Units Sold	Profit	Profit Margin	Revenue
Books	Art & Architecture		37	$180	24.97%	$720
	Business		37	$137	24.54%	$558
	Literature		53	$87	20.61%	$423
	Books – Miscellaneous		54	$84	19.06%	$439
	Science & Technology		43	$302	24.70%	$1,222
	Sports & Health		35	$107	24.13%	$444
Electronics	Audio Equipment		21	$1,349	19.40%	$6,950
	Cameras		14	$1,337	21.32%	$6,270
	Computers		28	$560	18.89%	$2,967
	Electronics – Miscellaneous		14	$1,205	20.58%	$5,854
	TV's		31	$1,430	19.90%	$7,184
	Video Equipment		18	$1,773	20.27%	$8,750
Movies	Action		87	$101	8.99%	$1,124
	Comedy		88	$87	7.69%	$1,133
	Drama		74	$104	9.05%	$1,146
	Horror		92	$118	9.94%	$1,192
	Kids / Family		73	$100	8.93%	$1,122
	Special Interests		44	$84	9.92%	$843

Filters

Specify conditions the data must meet to be included on the report

Purchased in the last 6 months

My Store Items

CU Business School
UNIVERSITY OF COLORADO DENVER

Types of Business Reports

- *Standard reports*
  - Answer the questions: What happened? When did it happen? Example: Monthly or quarterly financial reports. We all know about these.

- *Ad hoc Reports*
  - Answer the questions: How many? How often? Where? Example: Custom reports that describe the number of hospital patients for every diagnosis code for each day of the week.

- *Query drilldown (or OLAP)*
  - Answers the questions: Where exactly is the problem? How do I find the answers? Example: Sort and explore data about different types of cell phone users and their calling behaviors.

Business School
UNIVERSITY OF COLORADO **DENVER**
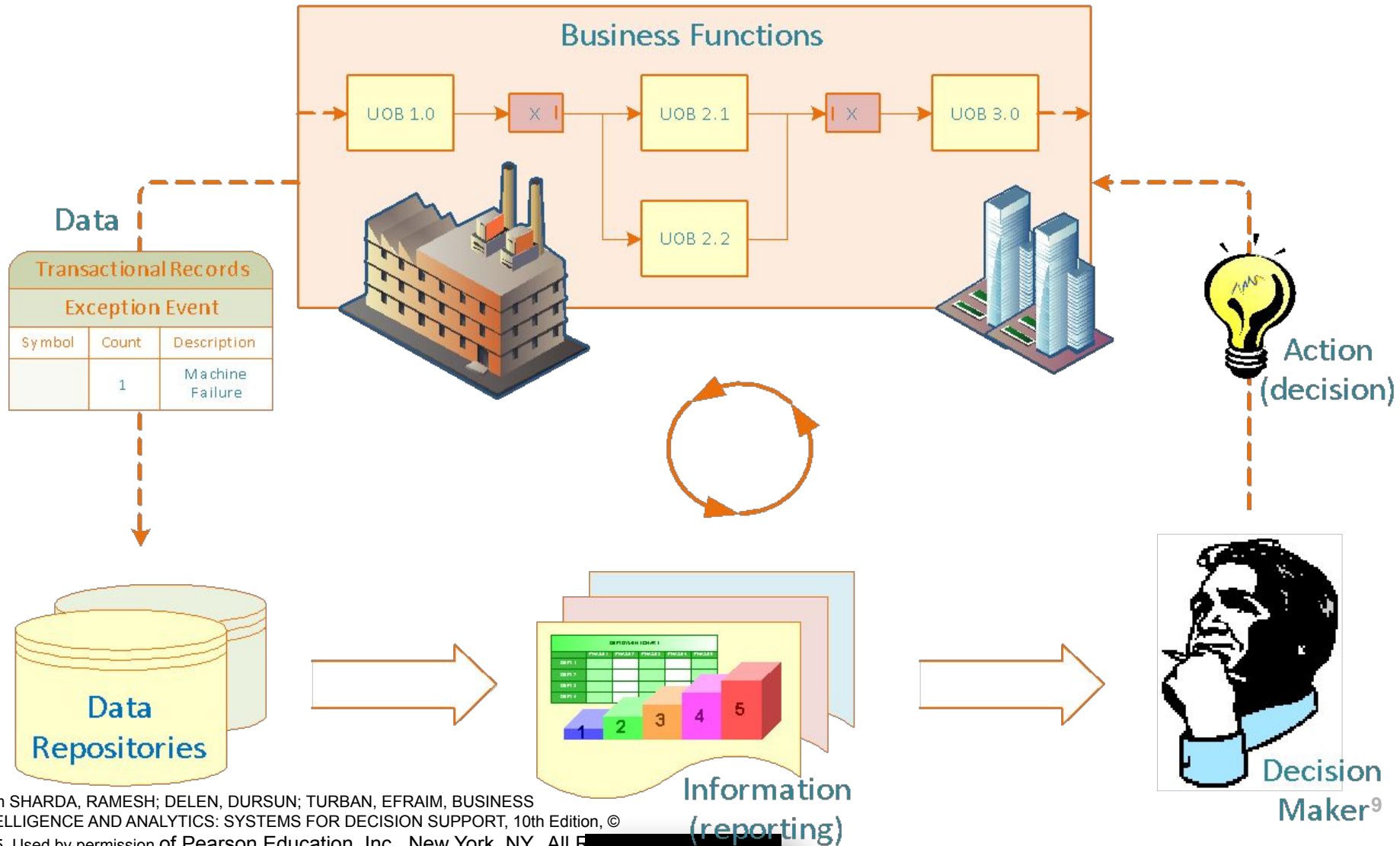
Information Systems Program

Types of Business Reports

- *Dashboard-type Reports*
  - present a range of performance indicators on one page, with both static/predefined elements and customizable widgets and views.

- *Balanced Scorecard-type Reports*
  - present an integrated view of a company's health and include financial, customer, business process, and learning/growth perspectives.

- *Metric Management Reports*
  - involve outcome-oriented metrics based on service level agreements and/or key performance indicators. Can be used as part of business performance management

Business School
UNIVERSITY OF COLORADO **DENVER**

Information Systems Program

Business Reporting

Business Functions

UOB 1.0 → X I → UOB 2.1 → I X → UOB 3.0

UOB 2.2

Data

Transactional Records

Exception Event

Symbol	Count	Description
	1	Machine Failure

Action (decision)

Data Repositories

Information (reporting)

Decision Maker

CU Business School
UNIVERSITY OF COLORADO DENVER

Information Systems Program

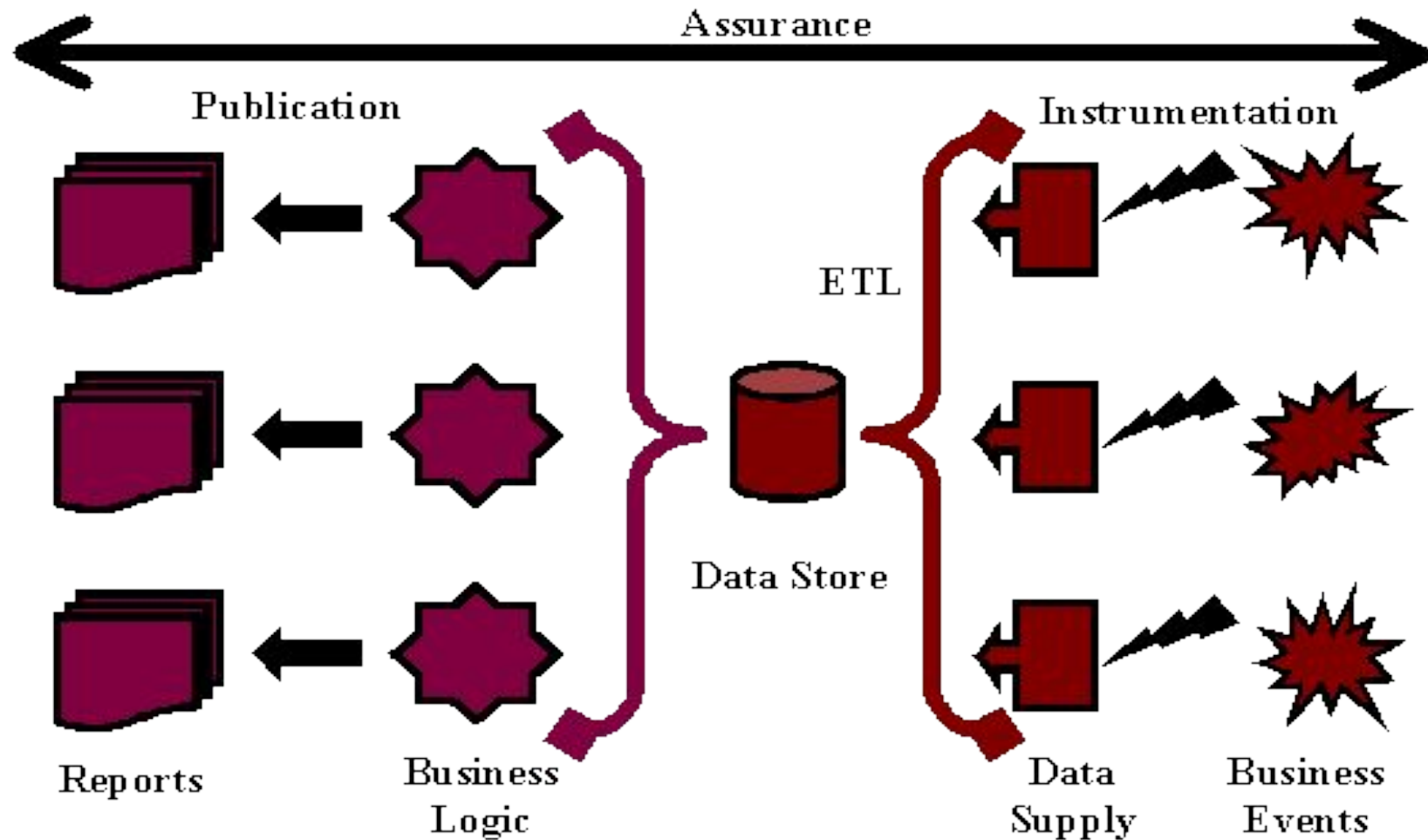# Business Reporting

- Business reporting is about good story-telling.
  - Think of your analysis as a story—use a story structure.
    - Be authentic—your story will flow.
    - Be visual—think of yourself as a film editor.
    - Make it easy for your audience and you. Invite and direct discussion.

Business School
UNIVERSITY OF COLORADO **DENVER**

Information Systems Program

Components of Business Reporting Systems

Assurance

Publication · Instrumentation

ETL

Data Store

Reports · Business Logic · Data Supply · Business Events

Adopted from Hill, G. (2008). "A Guide to Enterprise Reporting."

Information Systems Program

Business Reporting Systems Components

According to Hill (2008) there are following components to a business reporting system:

- *OLTP (Online transaction processing)*- A system that measures some aspect of the real world as events (e.g., transactions) and records them into enterprise databases.

- *Data supply*- A system that takes recorded events/transactions and delivers them reliably to the reporting system.

- *ETL (extract, transform, and load)*- This is the intermediate step where these recorded transactions/events are checked for quality, put into the appropriate format, and inserted into the desired data format.

- *Data storage*- This is the storage area for the data and metadata. It could be a flat file or a spreadsheet, but it is usually a relational database management system (RDBMS) set up as a data mart, data warehouse, or operational data store (ODS)

Business School
UNIVERSITY OF COLORADO DENVER

Information Systems Program

Business Reporting Systems Components- contd

- *Business logic-* The explicit steps for how the recorded transactions/events are to be converted into metrics, scorecards, and dashboards.

- *Publication-* The system that builds the various reports and hosts them (for users) or disseminates them (to users). These systems may also provide notification, annotation, collaboration, and other services.

- *Assurance-* A good business reporting system is expected to offer a quality service to its users. This includes determining if and when the right information is to be delivered to the right people in the right way/format.

Adopted from Hill, G. (2008). "A Guide to Enterprise Reporting."

Business School
UNIVERSITY OF COLORADO **DENVER**

Information Systems Program