Management Information Systems: Business Driven MIS

BSAD 141
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AGENDA
- BDIS Chapter 1
  - 1.1. Data, Information, Knowledge and Business Intelligence
    - IT vs. IS
  - 1.2. Systems Thinking
    - How information systems are designed to fit a competitive strategy (and not the other way around)
  - Learn smart Connect Follow Up

Questions
- Why can’t you observe Climate Change by looking out the window?
- What is the difference between IT and IS?
- What is ‘systems thinking’?
- How should your information systems drive your competitive strategy?

DATA
- Data - Raw facts that describe the characteristics of an event or object

<table>
<thead>
<tr>
<th>Order</th>
<th>Date</th>
<th>Customer</th>
<th>Sales Representatives</th>
<th>Product</th>
<th>Qty</th>
<th>Unit Price</th>
<th>Total Sales</th>
<th>Unit Cost</th>
<th>Total Cost</th>
<th>Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4-Jan</td>
<td>Walmart</td>
<td>Roberts Cross</td>
<td>Ruffles</td>
<td>50</td>
<td>$15</td>
<td>$750</td>
<td>$10</td>
<td>$800</td>
<td>$50</td>
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<tr>
<td>2</td>
<td>5-Jan</td>
<td>Safeway</td>
<td>Craig Schultz</td>
<td>Ruffles</td>
<td>27</td>
<td>$15</td>
<td>$405</td>
<td>$10</td>
<td>$500</td>
<td>$15</td>
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<tr>
<td>3</td>
<td>6-Jan</td>
<td>Walmart</td>
<td>Roberts Cross</td>
<td>Ruffles</td>
<td>67</td>
<td>$15</td>
<td>$1,005</td>
<td>$10</td>
<td>$1,010</td>
<td>$5</td>
</tr>
<tr>
<td>4</td>
<td>7-Jan</td>
<td>7-Eleven</td>
<td>Craig Schultz</td>
<td>Pringles</td>
<td>79</td>
<td>$12</td>
<td>$948</td>
<td>$8</td>
<td>$956</td>
<td>$8</td>
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<td>5</td>
<td>7-Jan</td>
<td>Walmart</td>
<td>Roberts Cross</td>
<td>Ruffles</td>
<td>52</td>
<td>$15</td>
<td>$780</td>
<td>$10</td>
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<td>$10</td>
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<tr>
<td>6</td>
<td>8-Jan</td>
<td>Kroger</td>
<td>Craig Schultz</td>
<td>Ruffles</td>
<td>38</td>
<td>$15</td>
<td>$570</td>
<td>$10</td>
<td>$580</td>
<td>$10</td>
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<tr>
<td>7</td>
<td>9-Jan</td>
<td>Walmart</td>
<td>Craig Schultz</td>
<td>Ruffles</td>
<td>66</td>
<td>$15</td>
<td>$990</td>
<td>$10</td>
<td>$990</td>
<td>$10</td>
</tr>
<tr>
<td>8</td>
<td>10-Jan</td>
<td>Target</td>
<td>Craig Schultz</td>
<td>Ruffles</td>
<td>40</td>
<td>$15</td>
<td>$600</td>
<td>$10</td>
<td>$610</td>
<td>$10</td>
</tr>
<tr>
<td>9</td>
<td>11-Jan</td>
<td>Walmart</td>
<td>Craig Schultz</td>
<td>Ruffles</td>
<td>71</td>
<td>$15</td>
<td>$1,065</td>
<td>$10</td>
<td>$1,070</td>
<td>$5</td>
</tr>
</tbody>
</table>
INFORMATION

- **Information** - Data converted into a meaningful and useful context

<table>
<thead>
<tr>
<th>Tony’s Business Information</th>
<th>Name</th>
<th>Total Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who is Tony’s best customer by total sales?</td>
<td>Walmart</td>
<td>$560,789</td>
</tr>
<tr>
<td>Who is Tony’s least-valuable customer by total sales?</td>
<td>Walgreens</td>
<td>$43,873</td>
</tr>
<tr>
<td>Who is Tony’s best customer by profit?</td>
<td>7-Eleven</td>
<td>$264,589</td>
</tr>
<tr>
<td>Who is Tony’s least-valuable customer by profit?</td>
<td>King Soopers</td>
<td>$23,989</td>
</tr>
<tr>
<td>What is Tony’s best-selling product by total sales?</td>
<td>Ruffles</td>
<td>$222,500</td>
</tr>
<tr>
<td>What is Tony’s weakest-selling product by total sales?</td>
<td>Pringles</td>
<td>$54,890</td>
</tr>
<tr>
<td>What is Tony’s best-selling product by profit?</td>
<td>Tostitos</td>
<td>$12,050</td>
</tr>
<tr>
<td>What is Tony’s weakest-selling product by profit?</td>
<td>Pringles</td>
<td>$23,000</td>
</tr>
<tr>
<td>Who is Tony’s best sales representative by profit?</td>
<td>R. Cross</td>
<td>$1,226,980</td>
</tr>
</tbody>
</table>

BUSINESS INTELLIGENCE

- **Business intelligence** - Information collected from multiple sources such as suppliers, customers, competitors, partners, and industries that analyzes patterns, trends, and relationships for strategic decision making

KNOWLEDGE

- **Knowledge** - Skills, experience, and expertise coupled with information and intelligence that creates a person’s intellectual resources

- **Knowledge worker** – Individual valued for their ability to interpret and analyze information

IT VERSUS IS?

- **Information technology (IT)** - Any computer-based tool that people use to work with information and support the information and information-processing needs of an organization
  - **Hardware** - Consists of the physical devices associated with a computer system
  - **Software** - The set of instructions that the hardware executes to carry out specific tasks

- **Information systems (IS)** – A coordination of hardware, software, data, people and procedures working together to produce, share, update and process information

THE SOLUTION: MANAGEMENT INFORMATION SYSTEMS

- **Systems thinking** – A way of monitoring the entire system by viewing multiple inputs being processed or transformed to produce outputs while continuously gathering feedback on each part


If accounting is the language of business, management information systems are the translators between IT and the business.
THE CHALLENGE: DEPARTMENTAL COMPANIES

Common Departments Working Independently

- Human resources: Maintains policies, plans, and procedures for the effective management of employees.
- Sales: Performs the function of selling goods or services.
- Accounting: Records, measures, and reports monetary transactions.
- Marketing: Supports sales by planning, pricing, and promoting goods or services.

THE SOLUTION: MANAGEMENT INFORMATION SYSTEMS

Common Departments Working Interdependently

ACCOUNTING
- Accounting Monetary data
- Sales
  - Transactional data
- Operations management
  - Production data
- Marketing
  - Transactional data
- Finance
  - Monetary data

WHAT IS MIS?

- Management Information Systems (MIS) – A business function, like accounting and human resources, which moves information about people, products, and processes across the company to facilitate decision-making and problem-solving.

BUSINESS STRATEGY

- What is a Business Strategy?
- Why are competitive advantages often temporary?
- How should Management Information Systems drive competitive strategies?

BUSINESS STRATEGY

- Why is it important for employees to have a general understanding of the organization’s strategy?

BUSINESS STRATEGY

- Difference between goals and objectives
EXEMPLARY DEGLOAS 

- Developing new products or services 
- Entering new markets 
- Increasing customer loyalty 
- Attracting new customers 
- Increasing sales

EXAMPLES OF OBJECTIVES

- First, identify a particular goal 
  - For example, increasing customer loyalty 
- Second, identify measurable, focused indicators of customer loyalty that can be used to determine whether you are actually meeting your goal 
  - Examples?

COMPETITIVE ADVANTAGE

- A feature of a product or service that customers value very highly or more highly than they do for similar features provided by their competitors 
  - Could be a unique product or service but doesn’t have to be unique 
  - How do you determine “better”? 
  - https://simplicable.com/new/metrics

THE THREE GENERIC STRATEGIES

CHOOSING A BUSINESS FOCUS

Porter’s Three Generic Strategies

THE FIVE FORCES MODEL –

How can IS be a strategic tool for the modern manager in a competitive environment?

Porter’s Five Forces Model
BUYER POWER

- **Buyer power** – The ability of buyers to affect the price of an item
  - **Switching cost** – Manipulating costs that make customers reluctant to switch to another product

Ex. Preference Influencing: Loyalty Programs or Consumer Banking - Financial Services account management open platform integration

RIVALRY AMONG EXISTING COMPETITORS

- **Rivalry among existing competitors** – High when competition is fierce in a market and low when competitors are more complacent
  - **Product differentiation** – Occurs when a company develops unique differences in its products or services with the intent to influence demand

Ex. Table Side P.O.S. Systems

THREAT OF NEW ENTRANTS

- **Threat of new entrants** – High when it is easy for new competitors to enter a market and low when there are significant entry barriers
  - **Entry barrier** – A feature of a product or service that customers have come to expect and entering competitors must offer the same for survival

Ex. Time Limited Access to Supplemental Online Learning Platforms

THREAT OF SUBSTITUTE PRODUCTS OR SERVICES

- **Threat of substitute products or services** – High when there are many alternatives to a product or service and low when there are few alternatives
  - Ex. Loyalty programs like SPG, Marriott, Hhonors.. (to AirBnB and camping…)

SUPPLIER POWER

- **Supplier power** – The suppliers’ ability to influence the prices they charge for supplies
  - **Supply chain** – Consists of all parties involved in the procurement, processing, and distribution of a product or service, or raw material

Ex. Group Coordination to increase purchasing power or Supply Chain Integration with Extranet services

ZAPPoS

- **https://www.youtube.com/user/zappos**

- Are they a technology company?
- Is technology driving their business strategy?
- What is their competitive advantage? Is it replicable?
VALUE CHAIN ANALYSIS
EXECUTING BUSINESS STRATEGIES

- **Business process** – A standardized set of activities that accomplish a specific task, such as a specific process
- **Value chain analysis** – Views a firm as a series of business processes that each add value to the product or service

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**Primary value activities**
- **Inbound logistics** - Acquires raw materials and resources, and distributes
- **Operations** - Transforms raw materials or inputs into goods and services
- **Outbound logistics** - Distributes goods and services to customers
- **Marketing and sales** - Promotes, prices, and sells products to customers
- **Service** - Provides customer support

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**Support value activities**
- **Firm infrastructure** – Includes the company format or departmental structures, environment, and systems
- **Human resource management** – Provides employee training, hiring, and compensation
- **Technology development** – Applies MIS to processes to add value
- **Procurement** – Purchases inputs such as raw materials, resources, equipment, and supplies

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**Porter’s Value Chain**

**Value Chain and Porter’s Five Forces Model**

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**Business process** – not a sexy topic, but organizations generally have processes for *everything* they do!
- Describe how something is done, the data and information involved, and who is responsible for doing what
SUMMARY
- Data versus Information
- MIS and integration of information from different functional areas
- Discussion of business strategy and why it is important
- Goals versus Objectives
- Competitive advantage
  - Cost-based matrix

SUMMARY
- Porter's 5 Forces Model
- Value Chains
  - 5 primary and 4 support activities