**Announcements**

- **Read**
  - Messerschmitt Ch 2.3 (38-50)
  - Messerschmitt Ch 3.1-3.3 (59-82)
- **News Folio 1 due Thursday 1/20**
  - (for those of you not assigned a presentation)
- **Homework assignment 2 will be posted Thursday 1/20**
- **Business Paper Proposal due Tuesday 1/25**

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**Porter Competitive Model**

(Identify the Industry and the Specific Market Being Evaluated)

- Potential New Entrants
- Bargaining Power of Suppliers
- Intra-Industry Rivalry
- Strategic Business Unit
- Bargaining Power of Buyers
- Substitute Products and Services

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**Basic Competitive Strategies**

- **Counter the competitive forces by implementing 5 basic competitive strategies:**
  - Cost leadership
  - Differentiation
  - Innovation
  - Growth
  - Alliances
- **How does IT support these strategies?**
Porter Model and Information Systems:

1. Build barriers to prevent a company from entering an industry?
2. Build in costs that would make it difficult for a customer to switch to another supplier?
3. Change the basis for competition within the industry?
4. Change the balance of power between a company and its customers or suppliers?
5. Provide the basis for new products and services?

Porter’s Value Chain

- *Porter’s Competitive Model* deals with the company’s competitive environment.
- *Porter’s Value Chain* tracks progress of a product through organization:
  - Starts with idea in research
  - Finishes with delivery to customer.

Generic Value Chain

**Primary Activities**

- Procurement
- Technology Development
- Human Resource Management
- Firm Infrastructure

**Support Activities**

- Inbound Logistics
- Operations
- Marketing and Sales
- Customer Service

Simple Value Chain for Retail Industry

- Partnering with Vendor
- Buying
- Managing Inventory
- Distributing Inventory
- Operating Stores
- Marketing and Selling

Other terms in Chapter 2

- Agile Company
- Virtual Company
- Knowledge Management Systems

Agile Company

- Agility: the ability to prosper in rapidly changing environment
- Marshall’s customers moto: “Free - Perfect - Now”
  - Free: Lower the costs, Adjust based on their perceived value, not cost of produce
  - Perfect: Defect-free products, Customization, Anticipation of future needs
  - Now: 24/7 accessibility to products/services, short delivery times, time-to-market
A Virtual Company

A form of organization that uses telecommunications networks and other IT to link the people, assets and ideas of a variety of business partners, no matter where they may be located, in order to exploit a business opportunity.

Virtual Company

• Positives
  - Share infrastructure and risk with partners
  - Link complementary core competencies
  - Reduce concept-to-cash time through sharing
  - Expand market coverage, gain access to new markets and share market/customer loyalty

• Negatives?
  - Ability to perform the service at a cost sufficiently low enough and still gain a profit
  - Respond to the organization’s new needs for capabilities and flexibility

Other terms in Chapter 2

• Explicit knowledge
  - Data, documents, things that can be written down/stored in computers
• Tacit Knowledge
  - That can not be written down
  - “How-to”
  - Example: How to Ride a bicycle
• Much of a company’s value is in its knowledge
  - Patents, documents
  - Tacit knowledge in employee’s heads

Knowledge Management

• Knowledge-Creating Company
  - Create new business knowledge
  - Disseminate knowledge throughout company→ products, services
  - Get employees share what they know and accumulate enterprise knowledge
• Knowledge Management Systems
  - Facilitate this dissemination
  - Often, like a search engine on a company intranet.
• Aside: a knowledge management system might affect the negotiating power of employees?

Total Quality Management

Quality from the customer’s viewpoint
Meeting/exceeding the requirements/expectations of customers for a product/service

Presentations

• Casey Bender news article
• Asia Mikiko Olivia Kolb (Frito Lay)
**Frito Lay Case**

**Frito Lay**

- **Market:** Salty Snacks
- **Competitors:**
  - P & G (Pringles)
  - Anheuser Busch (Eagle Snacks)
  - Borden (Wise Chips)
  - Small Regionals
- **Sales Force**
  - 10000 people
  - Drive around in trucks; sell and deliver snacks

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**The “Store-Door Delivery System”**

- **Strategy:** Support your salespeople AND value your customers
- **HOW?**
  - Service point of sale twice/week
  - Restocked shelves
  - Removed stale products
  - Introduced new products/promotions to customers
  - Lined up new accounts
  - Initially: "national patterns" for product arrangement
  - Happy salespeople ☺

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**1985- Two Goals**

- **Two Goals**
  1. Sustain at least 6% real sales growth
  2. Double-digit profit growth
- **Key strategies:**
  1. Build share & volume in the 7 brands. Move from 'national' to 'regional'.
  2. Effectiveness of new products, increase # of products and lower time to markets
  3. Improve productivity: technical limits of the delivery system

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**Frito Lay**

- **Growth**
  - In the 70s, "double digit"
  - Mid 80s - slowed to single digit.
- **Foreign Expansion?**
  - Not for Frito-Lay division, because PepsiCo has a separate international snacks div.
- **Good:**
  - Several top brands
- **Bad**
  - Monolithic national approach

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**Hand Held Computer**

- Small computer for each salesperson to carry around
- Log sale transaction data.
A day in the life of a salesperson (before HHC)… Sales + Account

5 a.m. (Warehouse)
- Load truck with ordered products
- Fill out consignment order form
- Calculate total order price (promotions, stales, new products)

6 a.m. (Customer site)
- Remove stales/Replenish shelves
- Fill out sales ticket
- Calculate total order price (promotions, stales, new products)
- Turn in sales tickets. Fill "end-of-day" report

4 p.m. (Warehouse)
- Paperwork sent for scanning

6 p.m. (Home)
- Review sales ticket. Confirm calculations

A day in the life of a salesperson (after HHC)… Sales!!!

5 a.m. (Warehouse)
- Load truck with ordered products
- Update HHC with consignment / price changes etc.

6 a.m. (Customer site)
- Remove stales/Replenish shelves
- Enter data in HHC
- Confirm order in HHC. Print sales ticket

4 p.m. (Warehouse)
- Upload data from HHC to corporate computer

6 p.m. (Home)
- Review sales ticket. Confirm calculations

Frito Lay

- HHC was a $40+ million project
- What were risks?
- How did they mitigate risks?
- Risk Mgmt
  - Pilot test of technology
  - 3 layer rollout
    - 1) essential systems
    - 2) sales compensation
    - 3) strategic uses of new data (fuzzy)

Frito-Lay

- 3 stated objectives
  - Replace optical scanner system used now
    - IBM will stop supporting it soon
  - Salesperson
    - ½ hour per day per driver paper-work reduction
    - No accounting errors
  - Marketing effectiveness (micro-marketing)
    - Detailed sales data
      - will help make regional marketing decisions
      - Negotiate with stores for more shelf space

- Action plan
  - Region by region?
  - All at once?
  - Weakest or Strongest region first?
Frito Lay

- HHC deployed to LA area first, a region that won a sales award.
- By the end of the 80’s:
  - HHC deployment completed
  - Development of Information Systems to process HHC data to support operations.
- Early 90’s re-org to decentralize decision making to different regions.
- 1985:
  - Revenue: $2847
  - Profit: $401
- 2004:
  - Revenue: $9091
  - Profit: $2366
- Revenue growth ~ 6% per year on average.

Cash Flows

- Cash Flow: A series of payments/receipts over a time period

```
0 1 2 3
$-3 $1 $1 $2
```

- Visualize using timeline
  - Current year: 0

Net Present Value

- NPV: A quantity of money which, if received today, would be equally desirable as the cash flow.
- NPV of $x$ received in year $n = x^n \delta^n$
- A cash flow may have payments/receipts in multiple years.
  - Compute NPV for each year and add them.

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NPV = -3 + 5 \delta + 28 \delta^2
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- NPV = $x_0 + \delta x_1 + \delta^2 x_2 + \delta^3 x_3 + \ldots = \sum_{j=0}^{\infty} \delta^j x_j$

Interest Rate

- The discount factor might be based on the interest rate $i$ that could be received if investing in bank/other project.
- $\delta = 1 / (1+i)$

```
NPV = x_0 + \delta x_1 + \delta^2 x_2 + \delta^3 x_3 + \ldots = \sum_{j=0}^{\infty} \delta^j x_j
```

Rate of Return (ROR)

- Also known as Return on Investment (ROI)
- Is the ratio of money gained/lost in an investment relative to the amount invested.
- Computing ROR is the inverse problem to computing NPV.
  - "What would the interest rate at the bank have to be in order for me to be neutral about investing in my project?"
  - The ROR equals the interest rate for which $NPV = 0$
  - Use this equation ($NPV = 0$) to find the ROR.

Know how to solve simple quadratic equations!!!
- Use of quadratic formula.

Cash Flows

- Be able to compute:
  - NPV given the discount factor
  - NPV given the interest rate
  - Interest rate/Discount factor/ROR in order to have $NPV = 0$
  - Compare different investment plans based on their ROR/ROI
  - Evaluate whether it is worth investing on a plan given a desirable ROR

Know how to solve simple quadratic equations!!!
- Use of quadratic formula.
- **Net Present Value when i = 0%**
  \[ NPV = \sum_{t=0}^{\infty} \frac{X_t}{(1+i)^t} \]
  \[ = -500 \text{K} + 300 \text{K} \cdot (1+0) + 350 \text{K} \cdot (1+0)^2 \]
  \[ = -500 + 300 + 350 = 0 \text{K} \]

- **Net Present Value when i = 10%**
  \[ NPV = \sum_{t=0}^{\infty} \frac{X_t}{(1+i)^t} \]
  \[ = -500 \text{K} \cdot 0.9 + 300 \text{K} \cdot (1.1) + 350 \text{K} \cdot (1.1)^2 \]
  \[ = -500 \cdot 0.9 + 330 + 385 = 0.3 \text{K} \]

- **Net Present Value when i = 20%**
  \[ NPV = \sum_{t=0}^{\infty} \frac{X_t}{(1+i)^t} \]
  \[ = -500 \text{K} \cdot 0.8 + 300 \text{K} \cdot (1.2) + 350 \text{K} \cdot (1.2)^2 \]
  \[ = -400 + 360 + 420 = 0.0 \text{K} \]

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- **Idea of RoR analysis:**
- **What i makes NPV = 0?**
  \[ NPV = \sum_{t=0}^{\infty} \frac{X_t}{(1+i)^t} = 0 \]
  \[ = -500 \cdot 0.8 + 300 \cdot (1.1) + 350 \cdot (1.2)^2 = 0 \]
  \[ = 0.365 \cdot (1.2)^2 + 0.3 \cdot (1.1) - 0.5 = 0 \]

  **Quadratic Formula:**
  \[ aX^2 + bX + c = 0 \rightarrow X = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \]
  \[ (1+i)^2 = 1.44 \text{ or } 1.09 \]
  \[ (1+i)^2 = 1.44 \text{ or } 1.09 \]
  \[ (1+i)^2 = 1.44 \text{ or } 1.09 \]
  \[ i = 0.18 \text{ or } +0.05 \]