SECTION 3 (11.00 - 11.45):
Product Planning and Platforms
Choosing the right projects

3rd Section - Learning objectives

To be able to:
1. Define the different types of new product developments in relative terms.
2. List the 5 stages of the product planning process.
3. Explain what is meant by a product platform.
4. Apply portfolio management techniques.

Types of New Product Development

Enhancement product improvement:
- Modify features to keep product competence - familiar market
- Slight change to address any flaws
EXAMPLE: Software updates

Derivatives of existing product platforms:
- Extend existing products into a new market
- Use of new modules onto an existing platform
EXAMPLE: Creative New Apps for the Iphone

New product platform:
- Major development (but familiar markets and product categories)
- Create new family
EXAMPLE: Iphone3 to Iphone4

Breakthrough products:
- Radically different product or technology - new market
- More risk
EXAMPLE: Virgin Galactic Space Programme

Exercise (in pairs)

Try to come up with an analogous example for drug developments for each of the following product types:
- Enhancement product improvement
- Derivatives of existing product platforms
- New product platform
- Enhancements products
How is a product development project initiated?

Product Planning Process

Product Planning Process

Also referred to as Portfolio management

"Identifies the portfolio of products to be developed by an organization and the timing of their introduction to the market"

Evaluate and Prioritise

- Market segmentation: consider customers and competitors
- Technological trajectories: when to adopt a new technology
- Product platform planning

Identify Opportunities

- Where do ideas for new projects arise?
  - Marketing and sales personnel
  - R&D
  - Product development teams
  - Manufacturing / Operations
  - Customers
  - Third parties

- Each promising opportunity written in a short statement and stored in a database

Evaluate & Prioritise: Competitive Strategy

- Department
- Lakes Project
- Lakes Expansion
- Personnel
- Year of Expansion

- Marketing
- Workgroup
- HoldalPower

- Year of Release
- Product Development Process

Four Phases of Product Development

Planning
- Concept Development
- System-Level Design
- Detail Design
- Testing and Refinement
- Production Ramp-Up

The product planning phase precedes the product development process.
Evaluate & Prioritise: Technology Trajectory

**S-curves**

Evaluate & Prioritise: Technology Trajectory

**Technology Roadmap**

Evaluate & Prioritise: Platform Planning

**Product-Process Change Matrix**

Evaluate & Prioritise: Platform Planning

**Portfolio Management**

Case Study Xerox: Project-Product timeline
Why do we need portfolio management?

- Maximise return & R&D productivity (for financial goals)
- Maintain competitive position
- Allocate resources efficiently
- Link project selection to business strategy
- Focus – not too many projects, but instead resourcing ‘great’ projects
- Achieve balance- long term projects vs. short term, high risk v. low risk
- Communicate priorities within organisation
- Better objectivity in project selection

Portfolio Management: Popularity of methods used

Financial Method

Business Strategy Method

Bubble Diagrams / Portfolio Maps

Scoring Model
Rolls Royce: Portfolio Map (civil engines)

The best compared to the worst...
- have explicit, established methods for portfolio management
- have management buy in, and support through their actions
- have clear rules and procedures for methods
- treat all projects as part of a portfolio
- consistently apply methods across all appropriate projects
- rely less on financial method alone
- use multiple methods

- Results are strategically aligned, have a high value portfolio, the right number of projects and result in good time-to-market

Complete Planning: Resource Planning

Types of New Product Development

Product Planning Process

Objectives of product planning is to address:
- What product development projects will be undertaken?
- What mix of projects? - New products, platform or derivatives
- How do the projects relate to a product portfolio?
- How to time and sequence product development projects?

Factors to be considered in a mission statement:
- Market segments (new diseases, illnesses, customer needs)
- New technologies (new enzymes, mechanisms)
- Manufacture and service goals / constraints (new production methods, administering techniques, supply chain, legalities)
- Financial targets (compensation, profit margins)
- Budget and time frame (time to market, first to market)

Complete Pre-project Planning
**PRODUCT PLAN: Brief**

- Objective
- Team & plan
- Brainstorm brief
  - Target Market
  - Musts
  - Desirables
- Mission Statement

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**Reflect on the Results and Process**

Assessing the quality of the process and the results:

**Firms strategy and opportunities:**
- Does product plan support competitive strategy?
- Does product plan address current opportunities?

**Resources:**
- Are sufficient resources allocated?

**Mission statement:**
- Are challenges of the mission statement acceptable to the core team?
- Are assumptions in mission statement needed (or over constrained)?

**Improvements:**
- How can product planning process be improved?

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**Summary**

Five-step product planning process:
- Identify opportunities
- Evaluate and prioritise projects
- Allocate resources and plan timing
- Complete pre-project planning
- Reflect on the results and the process

Meeting the learning objectives?

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**Exercises (in pairs)**

1) For either an old project or your forthcoming project:
   - A. Draw out a market segmentation map (Slide 12), considering the axis in which to position your product.
   - OR:
   - B. Draw a technology trajectory chart (Slide 14), considering future and current technologies (drugs?).

   Hint: Reference slide 29 for relationships

2) Write 3 questions that you will ask of your project company in order to place your project within their bubble diagram (slide 23).