CO457 Business Modelling

Module Week 12

Motivation

Analysing Motivation

- The analysis of business **motivation involves associating means and ends and the factors that influence them**
  - Documented in the business architecture
  - Used for strategic business planning
- Described in Object Management Group's Business Motivation Model
  - http://www.omg.org/technology/documents/br_pm_spec_catalog.htm

Means and Ends

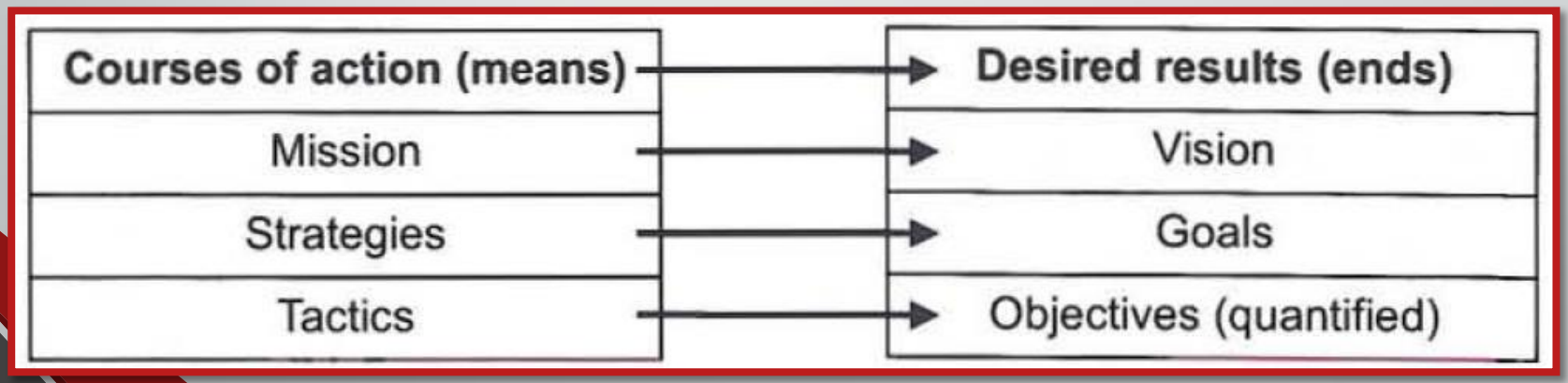
- **Ends are future desired results**
  - **Needed states** and values for attributes of business objects
    - Nightly meal volume shall be 20 percent higher next year
  - **Performance requirements** for business processes
    - A main course shall be prepared in less than 18 minutes

Means and Ends

- **Means are courses of action to achieve the ends**
  - **Steps and changes** described in a business plan
    - Find additional media for advertising the restaurant
  - **New business processes** or changes to existing ones
    - Rearrange cooking equipment to streamline preparation flow

Means and Ends

- **Multiple levels of detail based on timeframe**
- **Vision**
  - To be recognised as an ecologically friendly, carbon-neutral business
- **Mission**
  - Serve appetizing and healthy locally grown food
  - Reduce, reuse, and recycle all restaurant supplies



Means and Ends: Examples

- **Goals**
  - Make sure the kitchen is able to prepare all the meals on the menu
  - All dishes will be washed and sanitised in a dishwashing machine
- **Strategies**
  - Have the executive chef and customer service manager work together on the types of dishes on the menu
  - Arrange to use the dishwashing machine in the bar if necessary

Means and Ends: Examples

- **Objectives (quantified)**
  - Main courses shall be served in less than 22 minutes
  - If broken, the dishwashing machine shall be repaired within one day
- **Tactics**
  - Rearrange cooking equipment to streamline preparation flow
  - Always have a person fill the expediter role, even on slow nights
  - Contract with an appliance repair company to provide on-call repair of the dishwashing machine

Business Rules and Policies

- In business planning, **means are constrained by business rules and policies**
- Examples of business rules and policies:
  - The executive chef has the final say as to meals on the menu
  - There shall be 10 burners, a steamer, broiler, and fryer in the kitchen
  - The expediter shall ask about meal status 15 minutes after the ordering time
  - Servers should place cutlery in the soak bin and scrape plates clean
  - A repairman shall be on call to fix the dishwasher during hours of operation

Influencing Factors

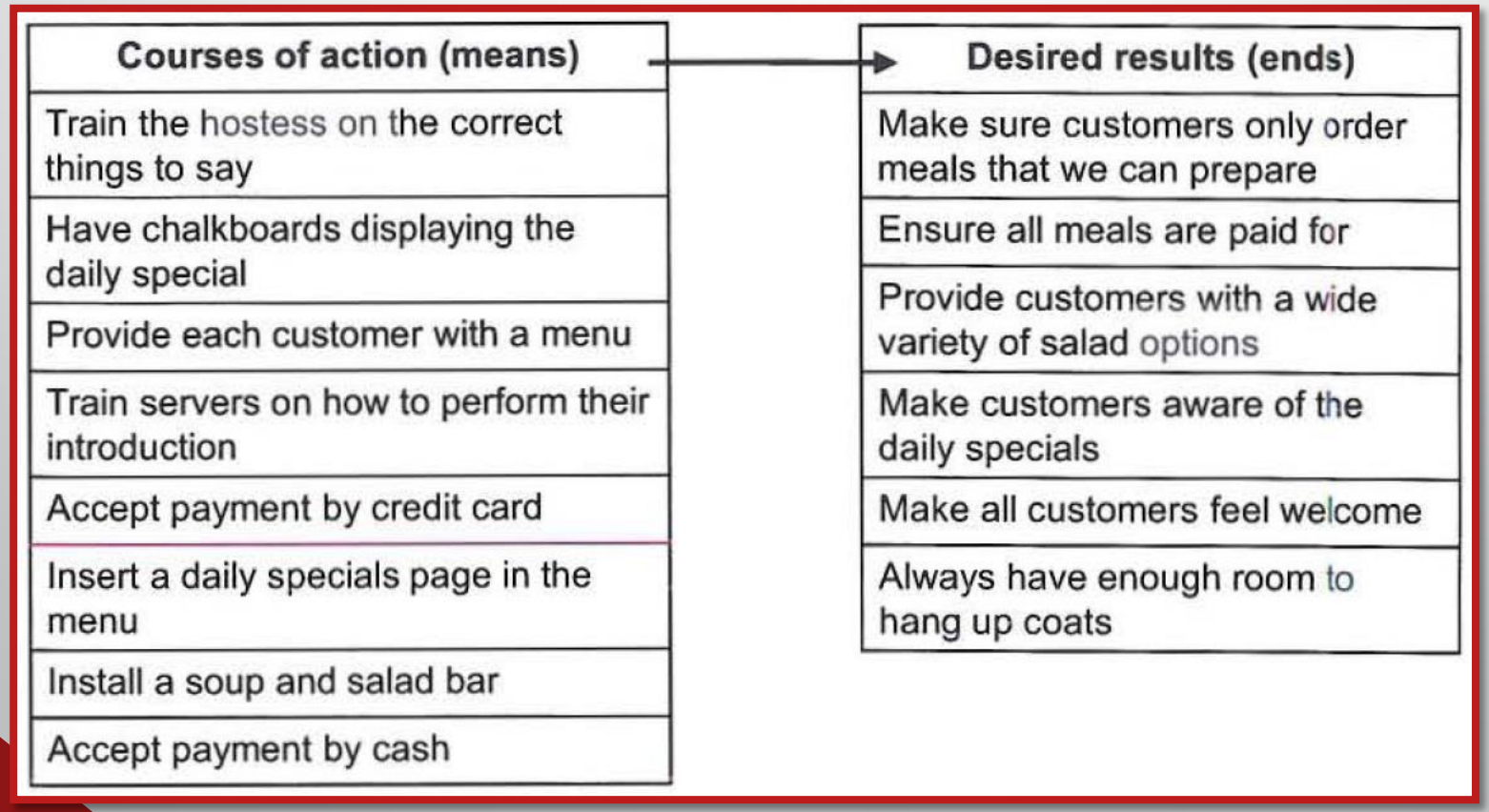
- In business planning, **assessments are made of influencing factors that have an impact on the means and ends**
- Influencing factors are:
  - **Internal**
    - Strengths and weaknesses
  - **External**
    - Opportunities and threats

Influencing Factors

- Examples of **influencing factors**:
  - The executive chef has no training in preparing Thai dishes
  - It takes a chef two minutes of work to prepare a main course
  - The expediter knows how the dining room functions because he has worked as a server
  - The health inspector is known to visit during open hours and inspect the use of the dishwashing machine
  - There are three dishwashing machine repair companies in town

Connecting Up Means and Ends

- **Connect up the means to the ends they achieve**
  - Note that one course of action can satisfy more than one desired result



Courses of action (means)	Desired results (ends)
Train the hostess on the correct things to say	Make sure customers only order meals that we can prepare
Have chalkboards displaying the daily special	Ensure all meals are paid for
Provide each customer with a menu	Provide customers with a wide variety of salad options
Train servers on how to perform their introduction	Make customers aware of the daily specials
Accept payment by credit card	Make all customers feel welcome
Insert a daily specials page in the menu	Always have enough room to hang up coats
Install a soup and salad bar	
Accept payment by cash	

Supplementary Requirements

Specifying Supplementary Requirements

- **Supplementary requirements are business rules describing constraints and limitations within which the business must operate**
  - Usually quantified in the textual part of a model
  - **Rarely detailed on diagrams**
  - Also known as **non-functional requirements**
- **Used as critical success factors to test a solution and measure the success of a project**
  - When stated as goals or objectives

Specifying Supplementary Requirements

- **Prioritise them**
  - Use shall, should, and may in the business rule sentences
- **Check each category on the list of supplementary requirements as to its relevance** in the business you are modelling

Supplementary Requirements

- Categories for supplementary requirements:
  - **Environment**, including
    - Audit
    - Globalisation and localisation: languages, date, and currency format
    - Legal or regulatory (trademark, copyright, patent)
    - Standards or certification
  - **Interface**
    - Hardware, software, and communication

Supplementary Requirements

- **Categories for supplementary requirements**:
  - Operational
  - Performance (throughput, response time)
  - Privacy
  - Quality of service
  - Safety
  - Security
  - Training

Quality-of-Service Requirements

- **Categories for quality-of-service requirements**
  - Designability
  - Reliability
    - Functional reliability is availability
    - Data reliability includes accuracy and referential integrity
  - Usability
  - Maintainability (supportability)
  - Efficiency
  - Human engineering (accessibility)

Quality-of-Service Requirements

- **Categories for quality-of-service requirements**
  - Testability
  - Understandability
  - Scalability
  - Portability
  - Failure and disaster recovery
- The BABOK refers to the **ISO-9126 standard**
  - **Software engineering: Product quality**

UML Profile for Quality-of-Service Requirements

- The UML Profile for Modelling Quality of Service and Fault Tolerant Characteristics and Mechanisms Specification, categorises quality-of-service requirements as:
  - **Performance**
    - Throughput
    - Latency (response times)
    - Efficiency
    - Demand
  - **Coherence (consistency)**

UML Profile for Quality-of-Service Requirements

- The UML Profile for Modelling Quality of Service and Fault Tolerant Characteristics and Mechanisms Specification, categorises quality-of-service requirements as:
  - **Dependability**
    - Reliability
    - Availability
    - Security
    - Integrity
- In addition to these, we must also consider **financial requirements**
  - http://www.omg.org/technology/documents/profile_catalog.htm#UML_for_QoS_and_FT