**SUBJECT CODE: MGBB214** 

#### MANAGEMENT FOR INNOVATION

## <u>UNIT : 1</u> INNOVATION MANAGEMENT

- MEANING
- IMPORTANCE
  - NEED
  - PROCESS
  - PRINCIPLES
    - MODELS
- INNOVATION AS A PROCESS
  - PRACTICES

### <u>UNIT :2</u>

### **CREATIVITY AND BUSINESS IDEA**

- SOURCES OF IDEAS
- METHODS OF GENERATING IDEAS
  - OPPORTUNITY RECOGNITION
    - TESTING THE IDEAS
  - NEW PRODUCT DEVELOPMENT
    - CONSIDERATIONS FOR N PD
      - MODELS OF NPD

#### <u>UNIT:3</u>

# CREATIVE PROBLEM SOLVING AND OPPORTUNITY

- BRAINSTORMING
- METHODS OF PROBLEM SOLVING
  - PARAMETER ANALYSIS
  - EVALUATION CRITERIA
  - METHODS OF OPPORTUNITY IDENTIFICATION
  - E-COMMERCE AND BUSINESS OPPORTUNITY

#### <u>UNIT:4</u>

## PLANNING AND SEQUENCING CHANGE FOR INNOVATION

- ORGANISING CHANGE PROGRAM
- DETERMINING WHAT TO CHANGE
- SEQUENCING CHANGES AND PLANNING THE CHANGE PROCESS
  - MANAGER'S ROLE IN IMPLEMNETING CHANGE
  - FRAMEWORK FOR UNDERSTANDING MANAGER'S ROLE

#### REFERENCE BOOKS

 JAMES A CHRISTIANSEN, "COMPETITIVE INNOVATION MANAGEMENT", MACMILLAN BUSINESS, 2000

- PAUL TROTT, "INNOVATION MANAGEMENT & NEW PRODUCT DEVELOPMENT", PITMAN, 2000
- S S GEORGE, "MANAGING INNOVATION IN THE NEW MILLENNIUM", THE ICFAI PRESS, 2004

Innovation comes from the Latin innovationem, noun of action from innovare.

The Etymology Dictionary further explains *innovare* as dating back to 1540 and stemming from the Latin *innovatus*, pp. of innovare "to renew or change," from in-"into" + novus "new".

Innovation can therefore be seen as the process that renews something that exists and not, as is commonly assumed, the introduction of something new. Furthermore this makes clear innovation is not an economic term by origin, but dates back to the Middle Ages at least. Possibly even earlier.

### What does "Innovation" really mean?

The term "innovation"— along with it's shopworn adjective, "innovative" and it's breathless verb, "innovate!"— has become the rallying cry of every product manager, the pursuit of every design consultant, the autocomplete of every press release writer. The word's been wrapped around everything from the Apple iPod to a new template in Microsoft Word. So how can one term be used to describe such vastly different things?

In essence, what does "innovation" really mean?

Technically, "innovation" is defined merely as "introducing something new;" there are no qualifiers of how ground-breaking or world-shattering that something needs to be—only that it needs to be better than what was there before. And that's where the trouble starts when an organization requests "innovation services" from a consulting firm. Exactly what are they really requesting? The fact is, innovation means different things to different people.

- The central meaning of innovation thus relates to renewal. For this renewal to take place it is necessary for people to change the way they make decisions, they must choose to do things differently, make choices outside of their norm.
- Schumpeter seems to have stated that innovation changes the values onto which the system is based. So when people change their value (system) the old (economic) system will tumble over to make room for the new one. When that happens innovation has occurred. So innovation must be seen as something that does not something that is.

On a lower level, innovation can be seen as a change in the thought process for doing something, or the useful application of new inventions or discoveries. It may refer to incremental, emergent, or radical and revolutionary changes in thinking, products, processes, or organizations.

Following Schumpeter, contributors to the scholarly literature on innovation typically distinguish between invention, an idea made manifest, and innovation, ideas applied successfully in practice. In many fields, such as the arts, economics and government policy, something new must be substantially different to be innovative. In economics the change must increase value, customer value, or producer value. The goal of invention is positive change, to make someone or something better. Invention and introduction of it that leads to increased productivity is the fundamental source of increasing wealth in an economy.

Innovation is an important topic in the study of economics, business, entrepreneurship, design, technology, sociology, and engineering. Colloquially, the word "innovation" is often synonymous with the output of the process. However, economists tend to focus on the process itself, from the origination of an idea to its transformation into something useful, to its implementation; and on the system within which the process of innovation unfolds. Since innovation is also considered a major driver of the economy, especially when it leads to new product categories or increasing productivity, the factors that lead to innovation are also considered to be critical to policy makers. In particular, followers of innovation economics stress using public policy to spur innovation and growth.

In the organizational context, innovation may be linked to changes in efficiency, productivity, quality, , market share, etc. can all be affected positively or negatively by innovative forces. All organizations can innovate, including for example hospitals, universities, and local governments. Some will flourish under its influence. Other will die.

So as innovation typically changes value, innovation may also have a negative or destructive effect as new developments clear away or change old organizational forms and practices. Organizations that do not compensate effectively for innovative forces (mainly from outside) may be destroyed by those that do. Hence managing an organization typically involves risk. A key challenge in management is maintaining a balance between the current processes and

<u>business model</u>.

## Distinguishing from invention

Invention is the embodiment of something new. While both invention and innovation have "uniqueness" implications, innovation is related to acceptance in society, profitability and market performance expectation.

An improvement on an existing form or embodiment, composition or processes might be an invention, an innovation, both or neither if it is not substantial enough. According to certain business literature, an idea, a change or an improvement is only an innovation when it is put to use and effectively causes a social or commercial reorganization.

In business, innovation can be easily distinguished from invention. Invention is the conversion of cash into ideas. Innovation is the conversion of ideas into cash. This is best described by comparing Thomas Edison with Nikola Tesla. Thomas Edison was an innovator because he made money from his ideas. Nikola Tesla was an inventor. Tesla spent money to create his inventions but was unable to monetize them. Innovators produce, market and profit from their innovations. Inventors may or may not profit from their work.

The successful exploitation of an idea that adds value to the customer and commercial return for the creator"

"Innovation . . . is generally understood as the successful introduction of a new thing or method . . . Innovation is the embodiment, combination, or synthesis of knowledge in original, relevant, valued new products, processes, or

"Innovation is the multi-stage process whereby organizations transform ideas into new or improved products, service or processes, in order to advance, compete and differentiate themselves successfully in their marketplace."

Innovation typically involves creativity, but is not identical to it: innovation involves acting on the creative ideas to make some specific and tangible difference in the domain in which the innovation occurs.

"All innovation begins with creative ideas . . . We define innovation as the successful implementation of creative ideas within an organization. In this view, creativity by individuals and teams is a starting point for innovation; the first is necessary but not sufficient condition for the second".

For innovation to occur, something more than the generation of a creative idea or insight is required: the insight must be put into action to make a genuine difference, resulting for example in new or altered business processes within the organization, or changes in the products and services provided.

- Innovation, like many business functions, is a management process that requires specific tools, rules, and discipline."
- From this point of view emphasis is moved from the introduction of specific novel and useful ideas to the general organizational processes and procedures for generating, considering, and acting on such insights leading to significant organizational improvements in terms of improved or new business products, services, or internal processes.
- Through these varieties of viewpoints, creativity is typically seen as the basis for innovation, and innovation as the successful implementation of creative ideas within an organization.
- It should be noted, however, that the term 'innovation' is used by many authors rather interchangeably with the term 'creativity' when discussing individual and organizational creative activity.

- Joseph Schumpeter defined economic innovation as –
- The introduction of a new good that is one with which consumers are not yet familiar — or of a new quality of a good.
- The introduction of a new method of production, which need by no means be founded upon a discovery scientifically new, and can also exist in a new way of handling a commodity commercially.
- The opening of a new market, that is a market into which the particular branch of manufacture of the country in question has not previously entered, whether or not this market has existed before.
- The conquest of a new source of supply of raw materials or halfmanufactured goods, again irrespective of whether this source already exists or whether it has first to be created.
- The carrying out of the new organization of any industry, like the creation of a monopoly position or the breaking up of a monopoly position.

### Chapter 1:

#### Key Concepts in Innovation Management

The aim of innovation...

- Depends on the type of firm
- Goal is mostly to survive, to grow, to make profit
- R&D departments generally strive for the best technical solution...
- ... but what matters for innovation is how it influences survival chances, profit and growth opportunities!

#### Innovation and the corporate strategy

#### Innovation management.....

- has to be understood as a core process of the organisation -> It is related to what is being produced
- Is a long term race
- Is about continuity
- Has to deal with complexity!!
- Is about being systematic → developing routines around innovation

#### WHAT IS INNOVATION?

- Invention
- Technology?
- Innovation
- Creating new or improved products, processes and services
- Knowledge and learning
- Uncertainty

## Schumpeter's distinction between "Invention" and "innovation"

- An 'invention' is an idea, a sketch or model for a new or improved device, product, process or system. It has not yet entered to economic system, and most inventions never do so.
- An 'innovation' is accomplished only with the first commercial transaction involving the new product, process, system or device. It is part of the economic system.

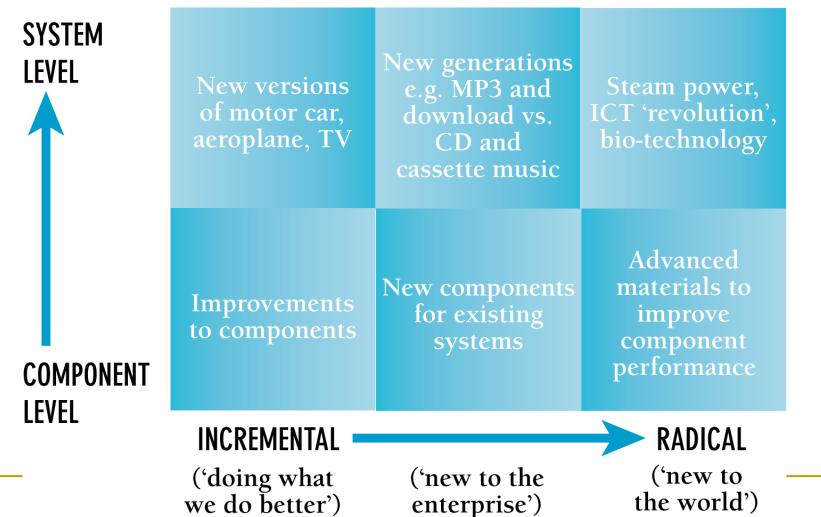
#### Dimensions of Innovation (1)

#### the '4Ps' of innovation

- Product innovation: changes in the things (products or services) which an organization offers
- Process innovation: changes in the ways in which they are created an delivered
- Position innovation: changes in the context in which the product or services are introduced
- Paradigm innovation: changes in the underlying mental modes which frame what an organization does

#### Dimensions of Innovation (2)

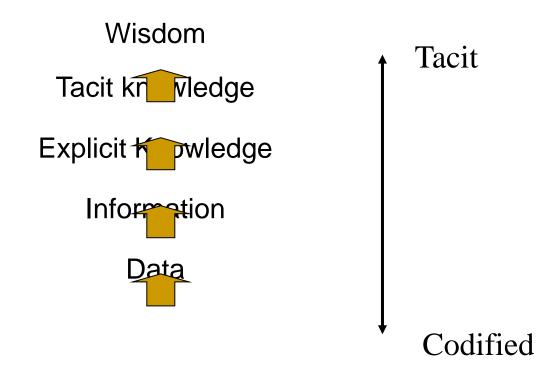
Figure 1.1 Dimensions of innovation



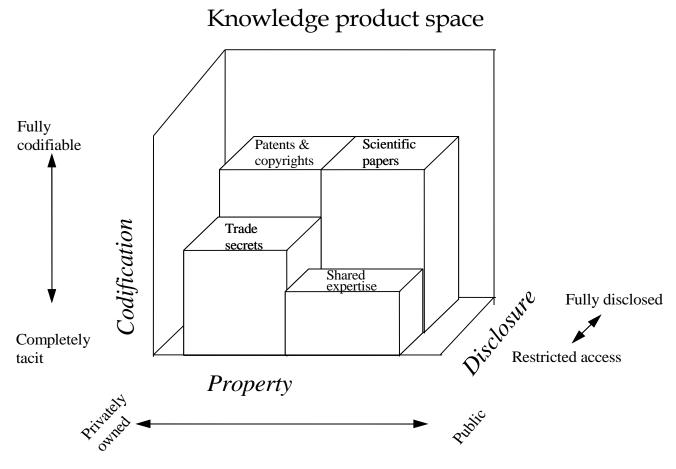
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#### Dimensions of Innovation (3)

According to the degree of codification: Information to tacit knowledge



## The knowledge of innovation



Source: David y Foray (1994)

#### Dimensions of Innovation (4)

Figure 1.4 Component and architectural innovation

Overturned

CORE INNOVATION CONCEPTS

Reinforced

ZONE 2

modular innovation

ZONE 1

incremental innovation

ZONE 3

discontinuous innovation

ZONE 4

architectural innovation

Unchanged

Changed

LINKS BETWEEN KNOWLEDGE ELEMENTS

## IMPORTANCE Why you have to innovate

- Advancing technology
- Changing environment
- Changing industrial structures and strategies
- Evolving society
- Evolving customer desires
- Competitors improve their products, processes and services
- Customers stop buying your old products and services so you need to replace them and add new products and services

#### Innovation happens in every industry

From new industries such as genetic engineering, electronics and telecommunications

through automotive and aerospace

to old industries such as shipbuilding and mining

#### What happens if you don't innovate

Customers stop buying your products, processes and services

Sales drop

Revenues drop

Shareholder returns drop

Stock price drops

Key employees leave

More customers stop buying your products, processes and services

Sales drop

#### Why innovation is becoming more important

Technology is changing fast, new products come from new competitors

Fast changing environment, product lifetimes shorter, need to replace products sooner

Products are increasingly difficult to differentiate

Customers are more sophisticated, segmented and demanding, and expect more in terms of customization, newness, quality and price

Customers have more choice

New technologies no-one understands

Apparently separate technologies come together

Markets forming and changing fast

With markets and technology changing fast, and good ideas quickly copied, there is continual pressure to devise new and better products, processes and services faster

Innovation is a positive message

Tell people you are going to cut headcount - and lose their support

Tell people you are going to downsize - and lose their support

Tell people you are going to reengineer - and 80% won't cooperate

Tell people you are going to be innovative - and win their enthusiastic support

#### Innovation as your corporate strategy

Poor implementation of many recent corporate initiatives - such as ERP implementation, ISO 9000 implementation, reengineering, and downsizing - hasn't resulted in fast growth. Often it's led to a reduction in quality levels and stagnation in sales

Innovation leads to faster growth, increased market share and better corporate positioning

Innovation is the prime strategy for the first decade of the twenty-first century