Change and Innovation Management

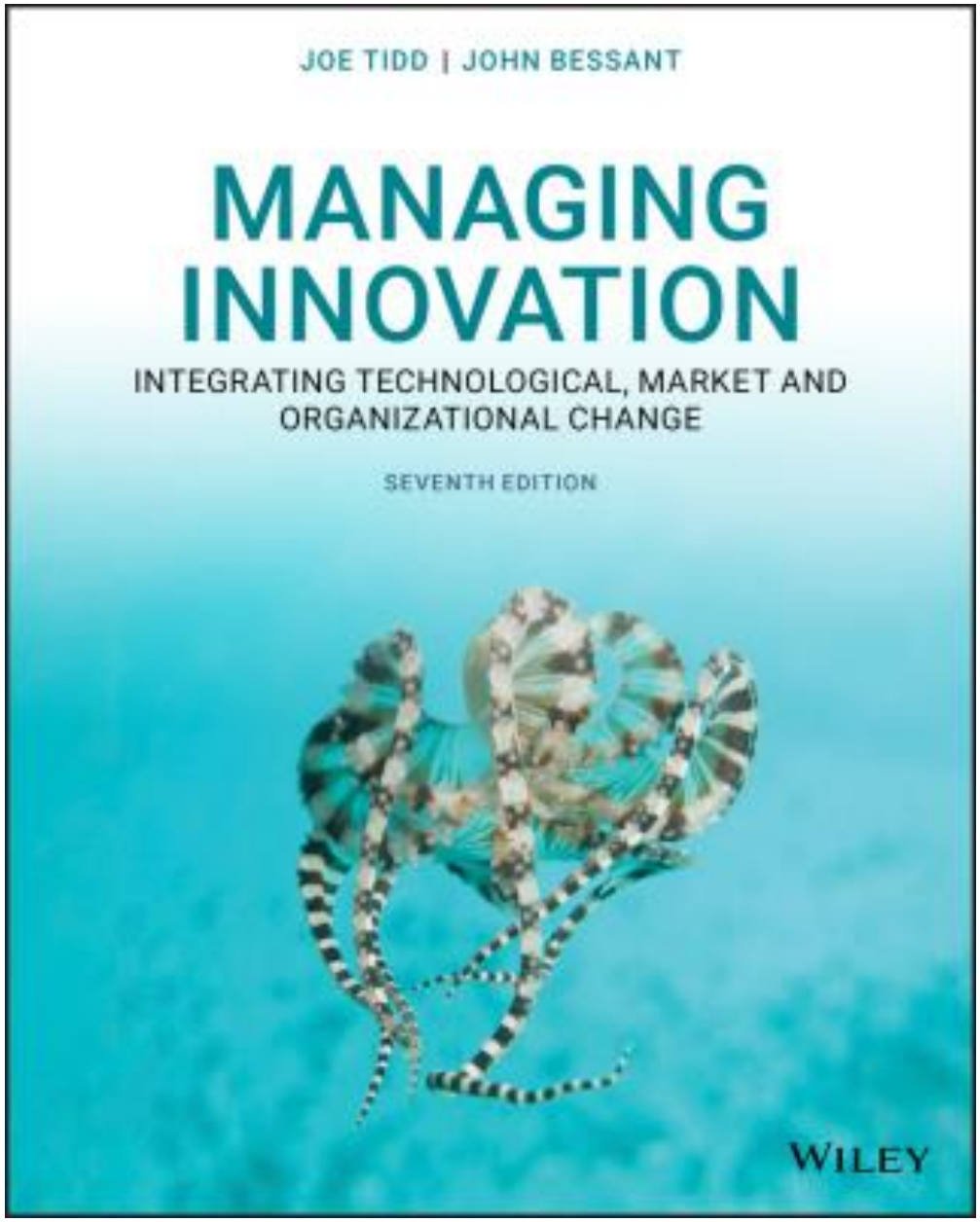
Unit 1. Innovation. What it is and why it matters. The role of innovation in an international context

Why innovation matters. Ch 1 (7th and 5th Editions)

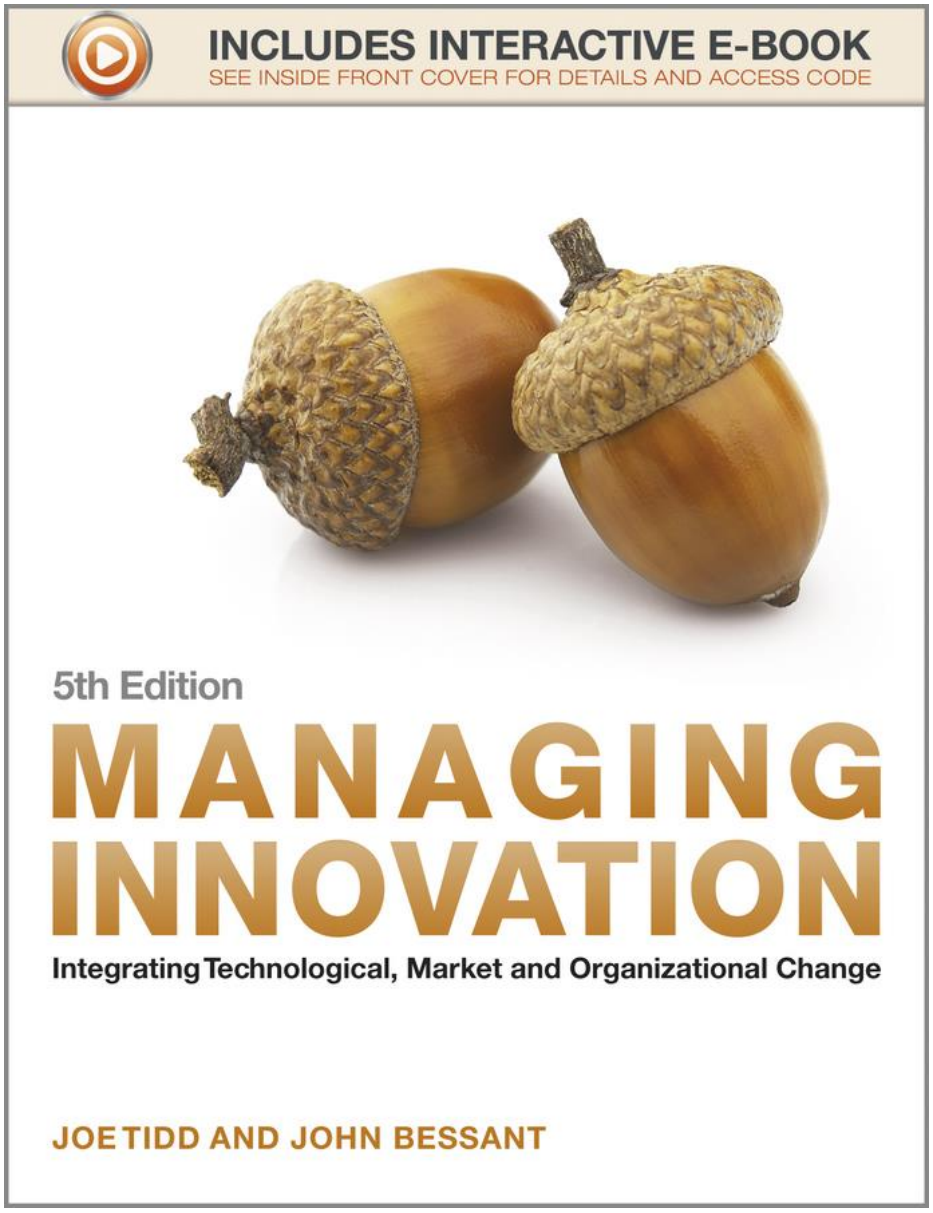
What is innovation? Ch 1 (7th and 5th Editions)

A process view of innovation. Ch 1 and 3 (7th Edition); Ch 1 and 2 (5th Edition)

The role of innovation in an international context. Ch 4 (7th and 5th Editions)



Joe Tidd and John Bessant



Joe Tidd
and
John Bessant

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Innovation – what it is and why it matters

What is innovation?

"Companies achieve competitive advantage through acts of innovation. They approach innovation in its broadest sense, including both new technologies & *new ways of doings things.*" Michael Porter (emphasis added)

"The *process* of turning ideas into reality and capturing value from them." Tidd & Bessant

Innovation has to be actively managed:

"Innovation is the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for *a different business or service*. It is capable of being presented as a discipline, capable of being learned, capable of being practiced."

- Peter Drucker

(emphasis added)

Innovation has an inherent variability, but its rate of success can be improved through better and different management:

85% of new ideas never reach a market.

60% of R&D projects are market failures.

40% of consumer products & services fail.

20% of business products & services fail.

"*Lack of technological knowledge is rarely the cause of innovation failures … the main problems arise in organization and, more specifically, in coordination and control … four mechanisms identified by earlier analysts of the innovating firms: competition, cognition, coordination and control.*"
(Keith Pavitt)

Models and Modes of Innovation

Dimensions of 'innovation space':

product – changes in the things (products/services) an organization offers.

process – changes in how the products/services are created and delivered.

position – changes in the context in which the products/services are introduced.

paradigm – changes in the underlying mental and business models that frame what the organization does.

Globalization of Innovation

- Globalization of innovation involves creating interfaces with specialized skills and innovative opportunities at a world level.
- It is more consistent with more recent notions of “open innovation” than with “closed innovation”, which relies on internal development.
- Globalization of innovation runs hand in hand with the development of the digitalization of processes and systems.
- Advances in IT enable spectacular increases in the international flow of codified knowledge in the form of operating instructions, manuals and software.
- However, the development of major innovations remains complex and costly, and depends crucially on the integration of tacit knowledge.

Change and Innovation Management

Unit 2. Managing innovation

Can we manage innovation? Ch 3 (7th Edition) and Ch 2 (5th Edition)

Developing an innovation strategy. Ch 4 (7th and 5th Editions)

Developing firm-specific competences. Ch 4 (7th and 5th Editions)

Meeting the challenge of uncertainty. Ch 3 (7th Edition) and Ch 2 (5th Edition)

Can we manage the innovation process?

Routines & innovation

What are organizational routines (Nelson & Winter, 1982)?

- Patterns of behaviour: regular and predictable
- Collective, social and tacit
- Guide cognition, behaviour and performance
- *"The way we do things around here"*
- They can promote or prohibit innovation

Routines

- Enable co-ordination
- Provide a degree of stability in behaviour
- Enable tasks to be executed sub-consciously, economizing on limited cognitive resources
- Bind knowledge, including tacit knowledge

Can we manage routines for innovation?

- Creating and enhancing routines for continuous improvement
- Routines for learning and the learning organization
- Teamwork and the high-involvement organization
- Creating and enhancing routines for a creative and innovative climate

Generic phases of the innovation process:

1. ***Searching & scanning*** the internal & external environments
2. ***Filtering & selecting*** potential opportunities; ***acquiring*** the technical, financial & market ***resources***
3. ***Implementing*** development & commercialisation
4. ***Reviewing & learning*** from experience; ***capturing*** the benefits

Scanning the external environment:

- Identify, segment and exploit lead customers.
- Identify, segment and involve key suppliers.
- Adopt explicit criteria for selecting alliance partners.
- Have clear objectives and guidelines for licensing and out-sourcing.
- Involve all relevant parties e.g. financial and regulatory.
- Use formal exploratory techniques to identify future trends.

Searching

Lead users can be critical. Typically, they:

- ***recognize requirements early*** **–** they are ahead of the market in identifying and planning for new requirements.

- ***expect a high level of benefits*** **–** due to their market position.

- ***develop their own innovations and applications*** **–** they are sophisticated and able to identify innovations and contribute to their development.

Resourcing the chosen innovations

- **Scope of innovation** – internal versus external resources
- **Structure of the project** – e.g. alliances, joint ventures, licensing

Implementing the innovation

- Functional integration and group structure
- Roles of suppliers, users and other stakeholders
- Timing and degree of involvement
- Project management
- Supporting tools and techniques

Developing an innovation strategy

Innovation: Response or strategy?

". . . chance favours only the prepared mind", **L. Pasteur, 1854**

"...the more I practice, the luckier I get…", **Gary Player (champion golfer)**

Advantages of being first to market

- *Earn a reputation as a pioneer*
- *Capture market share*
- *Obtain early learning curve benefits*
- *Define standards*
- *Establish entry barriers, e.g. patents*
- *Dominate supply & distribution chains*
- *Earn 'monopoly' profits*

Disadvantages of being first to market

- Costs involved in being a pioneer, educating buyers, and obtaining regulatory approval
- Demand uncertainty
- Changing buyer needs
- Low-cost imitations
- Followers leapfrog technology

Key demands of innovation strategy

- Develop firm-specific knowledge and the capacity to exploit it.
- Cope with environmental complexity and uncertainty.
- Create organizational structures and processes to manage trade-offs between specialized and broad knowledge.

Developing firm-specific competences

Characteristics of competences

- They are firm-specific and idiosyncratic.
- They provide a significant benefit or value to customers.
- They take time to develop.
- They are sustainable since they are difficult to imitate or acquire.
- They use unique *configurations* of resources.
- They have a strong tacit content and are socially complex.

Source: Hall (2000)

Characteristics of a learning organization

- Knowledge management
- Experimentation and structured reflection
- Challenges and multiple perspectives
- Formal processes and documentation
- Measurement and targets
- Emphasis on training and development

Meeting the challenge of uncertainty

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Unit 3. Implementing Innovations

Processes for new product development. Ch 10 (7th Edition) and Ch 9 (5th Edition)

Influences of technology and markets on commercialization. The development funnel model. Ch 10 (7th Edition) and Ch 9 (5th Edition)

Service innovation. Ch 10 (7th Edition) and Ch 9 (5th Edition)

Exploiting new ventures. Innovation, performance and success in collaboration. Ch 10 (7th Edition) and Ch 9 (5th Edition)

Process for new product development in practice (instructions for an NPD project)

Influence of technology and markets on commercialization

- The innovation literature has long debated the relative merits of 'market pull' versus 'technology push' to explain the success (or failure) of new products and services.

- **The usual truce or compromise is to agree on a 'coupling model', whereby technological possibilities are coupled with market opportunities**. However, this view is too simplistic.

- **In some cases, clear market needs are unmet because of technological limitations** (e.g., the elusive goal of a cure for cancer); **but in other cases, technological possibilities have no immediate or obvious commercial application and anticipate or even create new markets.** For example, for many years lasers were simply a useful instrument in scientific experiments initially used, with mixed success, in military applications. Later, however, they formed the basis of almost all optical recording and transmission of data, from broadband to DVD.

Service innovation

- In practice, most operations produce a combination of goods and services. **It is possible to position any operation on a spectrum from 'pure' products or goods through to 'pure' services.**
- However, **the distinction between goods and services is still important** because their different characteristics demand a different approach to management and organization.
- **The service sector comprises a wide range of very different operations,** including low-skilled personal services such as cleaners, higher skilled personal services such as tradesmen, business services such as lawyers and bankers, and mass consumer services such as transportation, telecommunications and public administration.

Common characteristics of service innovators

Results of a survey of over 100 service businesses from the PIMS database after separating out those with the highest sustained new service content in their revenue:

- High innovators **spend more on R&D** to change what they deliver to customers and how they deliver it.
- To do so, they have often **experienced technological change** and invested in fixed assets.
- The highest innovating firms are more likely to have **experienced entry into their markets by a significant new competitor.**
- They are also **much more likely to compete in open markets where international trade (both imports and exports) plays an important role.**

Process for new product development in practice

Instructions for an NPD project:

Within your group, prepare a new product development (NPD) for a company of your choice.

Stages of the process:

1. Idea formulation

What problems do you want to solve? List the main problems and look for solutions.

Define your criteria for selecting the best idea.

Instagram Video: Finding the Problem is the Hard Part (Available in the Aula Virtual)

2. Concept formulation

Develop the best idea from the previous stage in depth. Deep dive!

Canvas can be useful for a business model.

Process for new product development in practice

Stages of the process:

3. Product development

For products, develop the prototype. You can draw the product with details, for instance.

For services, you can specify their characteristics. Take into account the concept formulation developed in stage 2.

4. Marketing test

Gather information from the market through interviews, online surveys, observations, etc.

5. Presentation of your chosen company to the management committee

Your group will present your NPD in a practical session. Make your presentation creative!

Process for a new product development in practice

CANVAS BUSINESS MODEL

https://www.youtube.com/watch?v=QoAOzMTLP5s

EXAMPLE PRESENTATION

https://www.youtube.com/watch?v=cWsKG03rqTM

Change and Innovation Management

Unit 4. Innovation, knowledge and learning

Sources of innovation, how to search? Ch 6 (7th Edition) and Ch 5 (5th Edition)

Innovation and learning. Ch 13 (7th and 5th Editions)

Balancing exploitation and exploration. Ch 7 (7th Edition) and Ch 5 (5th Edition)

Absorptive capacity. Ch 7 (7th Edition) and Ch 5 (5th Edition)

Innovation networks and learning network. Ch 8 (7th Edition) and Ch 6 (5th Edition)

Sources of innovation

Creativity

Strategies for idea/concept generation

Conduct research & analysis

Imitate or adapt

Seek inspiration

Consult ‘creative’ types

Apply systematic creativity methods & tools

Benefits of structured approaches

- They create a ‘high frequency’ problem-solving cycle and a creative culture.
- They mobilise more learners across the organization and challenge convention.
- They embody a standardised learning process.
- They comprise easily digestible increments of learning – many and frequent small cycles.
- They emphasise display and measurement.

Innovation and learning

Tools to help learning

- Post-project reviews
- Benchmarking
- Case histories
- Structured reflection frameworks – innovation audits & self assessment methods

Benchmarking

- *Structured comparison to enable learning*

- Product/service or process focus
- Between processes within the enterprise
- Between sites across the enterprise
- Between enterprises in the sector/region
- Out of industry/cross-sector benchmarking

Are we in shape for innovation?

- Do we have effective enabling mechanisms?
- Do we have an innovation strategy – and are we committed to it?
- Do we have an innovative organisation?
- Do we have pro-active linkages?
- Do we learn and build capability?

Balancing exploration and exploitation

Related concepts:

- **Single loop learning** (Argyris and Schon, 1974,1978)
- **Incremental innovation** (Smith and Tushman, 2005)
- **Exploitation** (March, 1991)
- **Efficiency** (Adler et al., 1999; Thompson, 1967)
- **Alignment** (Gibson and Birkinshaw, 2004)

Related concepts:

- **Double loop learning** (Argyris and Schon, 1974,1978)
- **Discontinuous innovation** (Smith and Tushman, 2005)
- **Exploration** (March, 1991)
- **Flexibility** (Adler et al., 1999; Thompson, 1967)
- **Adaptability** (Gibson and Birkinshaw, 2004)

A core theme in discussion is the tension between exploration and exploitation activities

- **Exploitation and exploration are two forms of searching and learning that are fundamentally different and have very different consequences.**
- **Exploitation is based on refinement, choice, production, efficiency, selection, implementation and execution.**
- **Exploration is based on variation, risk assumption, experimentation, play, flexibility and discovery.**
- **Performing both activities in a correct, balanced way is fundamental to a system's survival and prosperity.**

Dangers of unbalanced E-E

- **Organisations that are involved in exploitation but neglect exploration will no doubt see visible improvements in effectiveness in the short-term, but this direction will prove to be self-destructive in the long term.**

- **A firm that sees a growth in demand for its current products but does not seek new avenues in products, markets, systems and technology runs the risk of dying of success. This firm could enter what is called a "competence trap", which leads it to excessively refine existing knowledge and steers it into a period of decline.**

- **Organisations that concentrate on exploration at the expense of exploitation find that they bear the costs of exploration without capitalising on many of the potential benefits available to them. These organisations tend to suffer from a lack of efficiency, which can hinder their competitiveness. A sustained strategy of being the first to move also carries serious risks. This can be a "failure trap".**

Cultural values
underlying this behaviour

- Control
- Discipline
- Precision
- Refinement
- Improvement

(Gil-Marques, M. and Moreno-Luzon, M.D., 2013)

Risks involve:

- **Attachment to the same processes**. Only small changes are allowed.

- **Resistance to radical changes** even if the market demands them.

"Organisations that are involved in exploitation and neglect exploration will no doubt see visible improvements in effectiveness over the short-term but this direction will prove to be self-destructive over the long term." (March, 1991)

Risks:

- The firm does not seek new avenues in products, markets, systems or technology.

- The organisation risks **dying of success.** The firm could enter what is called a **"competence trap",** which leads it to excessively refine existing knowledge and steers it into a period of decline.

Cultural values
underlying this behaviour

- Experimentation
- Creativity
- Risk taking
- Flexibility

(Gil-Marques, M. and Moreno-Luzon, M.D., 2013)

Risks:

- The firm **bears the costs of exploration** without capitalising on many potential benefits that could be available to them.
- The firm **lacks efficiency,** which can hinder its competitiveness.
- A sustained strategy of being the first to move also carries serious risk of potential frequent failures. This can be **a "failure trap".**

Ambidexterity – a key competence for balancing E-E

- The term ‘ambidexterity’ has been used frequently in reference to the ability to do two different things at the same time: for example, exploitation-exploration, efficiency-flexibility, and alignment of current activities-adaptability to change.

- The term derives from the Latin word ‘ambidexter’ (right on both sides), which comprises the prefix *ambi* (both sides) and the word *dexter* (right).

Ambidexterity – a key competence for balancing E-E

This term is often used but in the literature it sometimes refers to quite different concepts, i.e.:

- an individual management capability and behavioural orientation (here it may be defined as “a manager’s behavioural orientation towards combining exploration- and exploitation-related activities within a certain period of time”);
- a capability of the top management team; or
- a capability embedded in the behaviour of the organisation.

Ambidexterity – a key competence for balancing E-E

- Structural ambidexterity

The first three meanings of ambidexterity referred to behaviour, i.e. that of individual managers, the top management team, and the general behaviour of organisational members. A fourth meaning lies in the structure as an organisational capability for enabling dualism (more specifically, for creating units that focus specifically on alignment or continuity and others that focus specifically on the rapidly changing requirements of the surroundings).

- Structural ambidexterity enables organisations to separate their exploration units from their exploitation units, enabling them to have different processes, structures and cultures.

Absorptive capacity

Absorptive capacity

- Outside sources of knowledge are often critical to the innovation process, whatever the organizational level at which the innovating unit is defined.

- The ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends is critical to its innovative capabilities.

- The authors label this capability a firm's absorptive capacity and suggest that it is largely a function of the firm's level of prior related knowledge.

Absorptive capacity

- The discussion focuses first on the cognitive basis for an individual's absorptive capacity including, in particular, prior related knowledge and diversity of background.

- The factors that influence absorptive capacity at the organizational level are then characterized. The authors argue that the development of absorptive capacity and, in turn, innovative performance is history- or path-dependent and argue that a lack of investment in an area of expertise early on may foreclose the future development of a technical capability in that area.

Absorptive capacity

- The authors formulate a model of firm investment in research and development (R&D), in which R&D contributes to a firm's absorptive capacity, and test predictions relating a firm's investment in R&D to the knowledge underlying technical change within an industry.

- Discussion focuses on the implications of absorptive capacity for the analysis of other related innovative activities, including basic research, the adoption and diffusion of innovations, and decisions to participate in co-operative R&D ventures.

Maria D. Moreno-Luzón

Innovation networks and learning networks

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Why networks?

- Collective efficiency
- Collective learning
- Collective risk taking
- Intersection of different knowledge sets

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Unit 5. Building the innovative organization. Individual and team issues.

Shared vision and leadership. Ch 5 (7th Edition) and Ch 3 (5th Edition)

The role of facilitators. Ch 5 (7th Edition) and Ch 3 (5th Edition)

Teamwork. Ch 5 (7th Edition) and Ch 3 (5th Edition)

Participation. (High involvement in innovation) Ch 5 (7th Edition) and Ch 3 (5th Edition).

Building the innovative organization

Leadership, shared vision & climate:

- Innovation leadership, *not* senior management
- Broad vision, *not* detailed strategy
- Organizational climate – “the way we do things around here”

Contingency approach to leadership

- *The effectiveness* of different styles of leadership will depend on the *context.*
- *Task behaviour* (guidance & direction).
- *Relationship behaviour* (support & teams).
- *Maturity of followers* – the ability and willingness of people to define and take responsibility for own task behaviour.

Organizational slack

- *Organizational slack* is the difference between resources available and those currently needed (Cyert & March, 1963).
- It is a static inefficiency but can act as a dynamic shock absorber.

Organizational slack, innovation & performance

- When successful, an organization generates more slack, which provides greater resources (people, time, money) for longer-term, significant innovation.

- When less successful, an organization's searches for problems and their solutions tend to reduce slack.

The role of facilitators

- Inventors, champions, entrepreneurs, gatekeepers
- Job rotation, cross-functional teams
- Strong project management

The importance of teamwork

1. The synergetic effect.

2. Teams may be innovative but they must beware of:

'*group think',* which restricts interpretation and response; homogeneity limits innovation.

'*siege mentality':* group vs. organizational goals; a commitment to subunit vs. organization.

means vs. ends: an attachment to a social system not to a course of action.

Change and Innovation Management

Unit 6. Organizational context for innovation.

Building the appropiate structure for innovation. Ch 5 (7th Edition) and Ch 3 (5th Edition)

Creative climate. Ch 5 (7th Edition) and Ch 3 (5th Edition)

Organizational culture for innovation. Ch 5 (7th Edition) and Ch 3 (5th Edition)

Customer orientation (Towards Mass Customization) Ch 6 (6.8) (7th Edition) and Ch 5 (5.5) (5th Edition)

Appropriate structure

- There is *no* ‘one best way’, e.g. flat structure.
- Appropriate structure depends on task and environment, i.e. contingencies, e.g. uncertainty and complexity.
- Ideal configurations exist for different contexts.

Supportive structures, processes, tools and resources

- Bureaucracy is not bad, but bad bureaucracy is.
- Communication should be broad and two-way.
- Challenge, debate and risk-taking should be encouraged.
- Tools should be widely used.
- Training should be provided in how to use these tools.

Organizational climate versus organizational culture

- Different disciplines are involved
- Normative versus descriptive
- More easily observable and influenced

Characteristics of an innovative climate

- Challenge and involvement
- Freedom and autonomy
- Trust and openness
- Idea time and support
- Playfulness and humour
- Conflict and debate
- Risk-taking

Change and Innovation Management

Unit 7. Models and perspectives of organizational change

Individual, team and organizational change

Clues to avoid resistance to change

Success factors for cultural change

Cameron and Green (2014) Making sense of change management: a complete guide to the models, tools & techniques of organizational change. London; Sterling, VA

(This book is available in the Aula Virtual)

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Individual change

Personality types help to understand why people react differently to change.

There are four main personality types: the thoughtful realist, the thoughtful innovator, the action-oriented realist, the action-oriented innovator (Myers-Brigg's Type Indicators, MBTI).

Five factors determine a person's response to change: the nature of the change, the consequences of the change, the history of the organization, the individual's personality type, and the individual's history.

Team change

Group = a collection of individuals who draw a boundary around themselves, or people from the outside might draw a boundary around them, which thus defines them as a group.

Team = a group with a common purpose. It is generally tighter and clearer about what it is and what its *raison d'être* is. Its members know exactly who is involved and what their goal is.

TYPES OF TEAMS

Work, Parallel, Project, Virtual, and Management Teams

HOW TO IMPROVE TEAM EFFECTIVENESS FOR CHANGE

- Mission, planning and goal setting
- Roles
- Operating processes
- Interpersonal relationships
- Inter-team relations

Similarities and differences within teams can have advantages and disadvantages:

With similar team members:

- common understanding is reached sooner
- decision-making is quicker
- some possibilities are ignored

With dissimilar team members:

- it takes longer to reach understanding
- decision-making is slower
- more views and opinions are taken into account

Organisational change

Kotter's 8-step model

1. Establish a sense of urgency.
2. Form a powerful guiding coalition.
3. Create a vision.
4. Communicate the vision.
5. Empower others to act on the vision.
6. Plan for and create short-term wins.
7. Consolidate improvements and produce still more change.
8. Institutionalize new approaches.

Clues to prevent resistance to change

1. Explain the need for change; create a sense of urgency.
2. Have conviction; be open and honest.
3. Have a clear and accurate focus; set clear guidelines.
4. The more people are involved, the higher the chances.
5. Leadership skills and knowledge are needed to apply these skills.

Change and Innovation Management

Unit 8.New perspectives on innovation

Open Innovation. Ch 11 (7th Edition) and Ch 10 (5th Edition)

Social innovation. Ch 14 (7th Edition) and Ch 12 (12.4) (5th Edition)

Innovation for Sustainability. Ch 14 (7th Edition) and Ch 12 (12.4) (5th Edition)

Open innovation vs Closed innovation

Open innovation *is the use of purposive inflows and outflows of knowledge to accelerate internal innovation and expand the markets for external use of innovation.*

Within the ***closed innovation*** *paradigm, the process leading to innovation is completely controlled; all the intellectual property is developed internally and kept within the company frontiers until the new product is released onto the market.*

Advantages of open innovation

- Lower R&D and operating costs.
- Broader base of ideas: “Let the market and the community tell you what they want”.
- Minimized innovation risk. Spread risks. Fewer risks. Less guessing what the market wants.
- Improvement in internal learning capacity through the transfer of external knowledge and learning routines.
- Opportunity to bring innovations to the market more quickly.

Disadvantages of open innovation

- Process coordination and implementation costs.
- Loss of knowledge.
- Strong dependence on external knowledge
  → Loss of flexibility, creativity and strategic power.
- Loss of key knowledge control.
- Different levels of contractual experience compared to large enterprises (as potential partners).

Social innovation. Concepts.

1. Business can play a key role in eradicating poverty.

2. The poor are people to serve as well as help.

3. Markets at the bottom of the economic pyramid are new sources of growth for multinational companies.

4. Global companies have turned their attention to emerging countries such as China, Brazil and India and to developing countries such as Bangladesh, looking for wider-growing, low-income markets.

5. Since 2010, poverty rates have risen above 22% of the population in five European countries (Greece, Portugal, Italy, Spain and UK).

Innovation for sustainability

- Innovation is often presented as a major contributor to the degradation of the environment through its association with increased economic growth and consumption.

- However, innovation can provide solutions to a wide range of environmental issues.

Innovation for sustainability

Innovation can help to achieve:

- **Cleaner products** with a lower environmental impact throughout their life cycle.
- **More efficient processes** for minimizing or treating waste, reusing and recycling.
- **Alternative technologies** for reducing emissions and providing renewable energy.

Innovation for sustainability

Innovation can help to achieve:

- **New services** to replace or reduce the consumption of products.

- **Systems innovation** to measure and monitor environmental impacts and new socio-technical systems.

Change and Innovation Management

Unit 9. Capturing the benefits of innovation

Creating value through innovation. Ch 13 (7th Edition) and Ch 12 (5th Edition)

Exploiting knowledge and intellectual property. Ch 13 (7th Edition) and Ch 12 (5th Edition)

Creating value through innovation

Technological leadership in firms does not necessarily translate itself into economic benefits.

A firm's capacity to appropiate the benefits of its investments in technology depends on:

- its ability to translate technological advantage into commercially viable products or processes.
- Its ability to defend its advantage over imitators (secrecy, standards or intellectual property).

Firms need to balance the desire to protect their knowledge with the need to share aspects of this knowledge to promote innovation.

Data, Information & Knowledge*:*

***Data* –** discrete raw observations, numbers, words, records etc.

***Information* –** data that have been organized, grouped or categorized into some pattern.

***Knowledge* –** information that has been contextualized, given meaning, and therefore made relevant and operationable.

Types of knowledge

Explicit knowledge is:

- codified
- always conscious
- easy to transmit and store

Tacit knowledge is:

- uncodified
- sometimes unconscious
- difficult to transmit and store

Creating and diffusing knowledge:

- converting data and information to knowledge
- converting individual knowledge to group knowledge
- converting individual and group knowledge to organizational knowledge
- connecting people to knowledge
- connecting people
- connecting knowledge

Intellectual Property Rights (IPR)

Patents provide a legal monopoly on IPR for a limited period (usually 20 years):

- novelty
- industrial application
- patentable subject

Intellectual Property Rights (IPR)

Copyright is limited legal protection of certain material for a specific term:

- Type of material: 'original' literary, dramatic, musical, and artistic works.
- Protection: reproduction in 'material form' within 50 years.

Intellectual Property Rights (IPR)

Design registration is a cross between patent and copyright protection that:

- provides protection for up to 25 years,
- protects only visual appearance,
- covers four features (shape, configuration, pattern and ornament), and
- is cheaper and easier than patent protection but has a more limited scope.

Intellectual Property Rights (IPR)

Design rights are similar to copyright protection but mainly apply to three-dimensional articles. They protect:

- any aspect of the ‘shape’ or ‘configuration’, and
- all or part of the internal or external design.

Intellectual Property Rights (IPR)

Trademarks (and names) can be registered for a specific period (usually 10 years) and renewed (usually for further periods of 10 years). Important concepts in relation to trademarks are:

- distinctiveness (they must not prevent others from trading), and
- deceptiveness (they must not be similar to other marks or infer product qualities).

Intellectual Property Rights (IPR): Costs and Risks

Intellectual property rights also incur costs and risks in relation to:

- search, registration and renewal
- registration in national markets
- the full and public disclosure of one's idea

- *Research indicates that the use of Intellectual Property Rights (IPR) has* ***negative effects on a strategy of long-term value creation*** *and that secrecy and tacitness of knowledge are more strongly associated with creating value.*

- *Firms need to* ***balance the desire to protect their knowledge with the need to share aspects of this knowledge to promote innovation****.*