

# **COURSE OVERVIEW SS0496-6M-IH** Innovation (E-Learning Module)

### **Course Title**

Innovation (E-Learning Module)

## **Course Reference**

SS0496-6M-IH

## **Course Format & Compatibility**

SCORM 1.2. Compatible with IE11, MS-Edge, Google Chrome, Windows, Linux, Unix, Android, IOS, iPadOS, macOS, iPhone, iPad & HarmonyOS (Huawei)

#### Course Duration

3.0 online contact hours (3.0 CEUs/30 PDHs)



#### Course Description







This E-Learning is designed to provide participants with a detailed and up-to-date overview of Innovation. It covers the innovation and its effect in the economic growth; the innovation process, types of innovations models of innovation; the chronological development of models of innovation and linear models; the typology of innovations, chronological development of models of innovation and disruptive innovations; the key individual roles within the innovation process; and the innovation management tools and methodologies. EFQM excellence model and managing intellectual property.

During this interactive course, participants will learn the main types of intellectual property; the strategic alliances and networks, interlinkages and networks between firms; the management of research and development and strategic pressures on R&D; the R&D projects and organizing industrial R&D; the organisational characteristics that facilitate the innovation process; the open innovation and the VAG inter-firm product technology transfer; platform development and commonly presented linear NPD model; the packaging and product development; importance of technology and science in innovation; the models of innovation; and the linear, simultaneous coupling, interactive and chronological development.























#### **Course Objectives**

Upon the successful completion of this course, each participant will be able to:-

- Apply and gain a comprehensive knowledge on innovation
- Discuss innovation and its effect in the economic growth
- Identify the innovation process, types of innovations, models of innovation, the chronological development of models of innovation and linear models
- Explain the typology of innovations, the chronological development of models of innovation and disruptive innovations
- Manage innovation and identify the key individual roles within the innovation process
- Recognize the innovation management tools and methodologies, apply EFQM excellence model and manage intellectual property
- Recognize the main types of intellectual property and apply strategic alliances and networks, interlinkages and networks between firms, management of research and development and strategic pressures on R&D
- Manage R&D projects, organize industrial R&D and describe organisational characteristics that facilitate the innovation process
- Illustrate open innovation and technology transfer, VAG inter-firm product platform development and commonly presented linear NPD model
- Apply packaging and product development and discuss the importance, technology and science in innovation
- Describe the models of innovation including linear, simultaneous coupling, interactive and chronological development

### Who Should Attend

This course provides a wide understanding and deeper appreciation of innovation for managers and leaders who want to create a culture of rapid innovation and learning in their organization and other technical staff.

### Training Methodology

This Trainee-centered course includes the following training methodologies:-

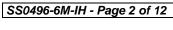
- Talking presentation Slides (ppt with audio)
- Simulation & Animation
- Exercises
- Videos
- Case Studies
- Gamification (learning through games)
- Quizzes, Pre-test & Post-test























Every section/module of the course ends up with a Quiz which must be passed by the trainee in order to move to the next section/module. A Post-test at the end of the course must be passed in order to get the online accredited certificate.

## **Course Certificate(s)**

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours.

#### **Certificate Accreditations**

Certificates are accredited by the following international accreditation organizations: -

ACCREDITED
PROVIDER

The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units** (CEUs) in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.



## **British Accreditation Council (BAC)**

Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

















## As per proposal

## **Course Contents**

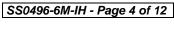
- Innovation Management: An Introduction
- Very competitive business market
- What should we do to adapt this changes?
- What is innovation?
- Innovation: yes, but how?
- Can we manage innovation?
- Effect of innovation in the economic growth
- Figure 1: Overview of the innovation process
- The need to view innovation in an organisational context
- Individuals in the innovation process
- Entrepreneurship
- Design
- Innovation and invention
- Successful and unsuccessful innovations
- Different types of innovations
- Type of innovations
- Technology and Science
- Popular views of innovation
- Models of innovation
- The chronological development of models of innovation
- Linear Models
- Simultaneous Coupling Model
- Interactive Model
- Innovation as a Management Process
- A framework for the management of innovation
- Network Models
- Quiz #1
- Innovation management
- Table 1.1 Market leaders in 2011
- Table 1.3 Nineteenth-century economic development fuelled by technological innovations























- Figure 1.1 Overview of the innovation process
- Table 1.4 Twentieth-century technological innovations
- Figure 1.2 The interaction between development activities and design environment
- Table 1.5 A typology of innovations
- Figure 1.3 The popular view of science
- Figure 1.4 Conceptual framework of innovation
- Figure 1.5 Linear models of innovation
- Figure 1.6 The simultaneous coupling model
- Figure 1.7 Interactive model of innovation
- Table 1.6 The chronological development of models of innovation
- Figure 1.8 Disruptive innovations
- Table 1.7 Explanations for innovative capability
- Table 1.8 Studies of innovation management
- Figure 1.9 The innovation circle with interconnected cycles
- Figure 1.10 The rise and fall and rise of Apple
- Figure 1.11 The future handheld device will probably incorporate many separate devices
- Quiz #2
- Economics and market adoption
- Figure 2.1 The role of the state in innovation
- Figure 2.2 Kondratieff waves of growth and their main features
- Table 2.1 Characteristics of the five waves of growth
- Figure 2.3 The EU showing five performance groups, ranging from the highest to lowest overall performers
- Table 2.2 Four different groups
- Figure 2.4 Three critical dimensions of change-of-technology intensive products
- Figure 2.5 Penetration of consumer electronics, 1978 2004
- Figure 2.6 S-curve of cumulative adopters
- Figure 2.7 Adopter categorisation on the basis of innovativeness
- Table 2.3 Paradoxes of technological products
- Table 2.4 Busiest container ports
- Table 2.5 Specifications of the three most common types of container
- Table 2.6 Biggest shipping container companies
- Quiz #3
- Managing innovation within firms























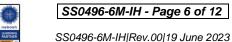
- Figure 3.1 Managing the tension between the need for creativity and efficiency
- Figure 3.2 Pearson's uncertainty map
- Figure 3.3 Matrix of complexity of architectural/component knowledge
- Figure 3.4 A two-dimensional typology of innovation projects
- Figure 3.5 Innovation stimulus, capacity and performance
- Figure 3.6 Critical factors for innovation success
- Table 3.1 Innovation management measurement areas
- Table 3.2 Summary of the organisational characteristics that facilitate the innovation process
- Figure 3.7 Technological linkages among different types of firms
- Table 3.3 Organic versus mechanistic organisational structures
- Table 3.4 Key individual roles within the innovation process
- Figure 3.8 Paradox of ERP systems and innovation organisational requirements
- Table 3.5 Innovation management tools and methodologies
- Table 3.5 Innovation management tools and methodologies (Continued)
- Quiz #4
- · Innovation and operations management
- Table 4.1 Operations inputs and outputs
- Figure 4.1 The operations manager's role
- Figure 4.2 Design simplification
- Figure 4.3 The design of processes
- Figure 4.4 Innovation gap analysis
- Table 4.2 Gap analysis
- Figure 4.5 The EFQM excellence model
- Figure 4.6 Supply chain management
- Table 4.3 The development of e-commerce and the impact on operations
- Figure 4.7 Innovation as an operations process itself
- Table 4.4 Innovation measures
- Figure 4.8 The design spectrum
- Table 4.5 Book titles published
- Table 4.6 Harry Potter books
- Quiz #5
- Managing intellectual property
- Table 5.1 An overview of the main types of intellectual property
- Figure 5.1 The effect on its market share of a drug coming off-patent

























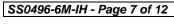
- Table 5.2 Reasons why firms patent
- Table 5.3 Alternative strategies to patenting
- Table 5.4 The scale of the AIDS epidemic in Southern Africa (% of adult population infected)
- Quiz #6
- Turning technology into business
- Managing organisational knowledge
- Figure 6.1 Tacit knowledge
- Figure 6.2 Core competencies
- Figure 6.3 Core competencies, imitability and profits
- Figure 6.4 Technology life cycles and S-curves
- Figure 6.5 How the whole can be viewed as more than the sum of the parts
- Figure 6.6 Knowledge embedded in relationships
- Figure 6.7 The knowledge base of an organisation
- Table 6.1 Phases of innovation and technology development
- Figure 6.8 Abernathy and Utterback's three phases of innovation
- Figure 6.9 Tushman and Rosenkopf's technology cycle
- Table 6.2 Throughout the twentieth century 'late entrants' have been surpassing pioneers
- Table 6.3 Cork production
- Table 6.4 Applications of cork
- Table 6.5 Modern and traditional wine
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- Table 7.1 Assembling the component parts to make an iPhone
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- Forms of strategic alliances
- Table 7.2 Reasons for entering a strategic alliance
- Figure 7.2 The process of forming a strategic alliance
- Table 7.3 Types of trust
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- Figure 7.4 The repeated game























- Table 7.5 DVD performance details
- Table 7.6 Studios supporting HD DVD and Blu-ray
- Table 7.7 Interlinkages and networks between firms
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- Figure 8.1 The R&D continuum
- Table 8.1 Europe's R&D expenditure league (2010)
- Table 8.2 R&D expenditure across industry sectors
- Figure 8.2 Comparison of share price performance of R&D-intensive firms and the FTSE 100 firms
- Figure 8.3 Classification of areas of research emphasis in industry and university
- Figure 8.4 The strategic role of R&D as viewed by the business
- Table 8.3 Description of five generations of the R&D process
- Figure 8.5 Strategic pressures on R&D
- Figure 8.6 The R&D strategic decision-making process
- Figure 8.7 Classifying the level of research using technology leverage
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- Table 8.5 The main stages in the development of Viagra
- Table 8.6 Sales of impotence drugs
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- Figure 9.2 Organising industrial R&D
- Figure 9.3 Technology acquisition: how much control of the technology is required?
- Table 9.1 Organisational characteristics that facilitate the innovation process and the management of R&D
- Figure 9.4 Managing scientific freedom within an R&D function
- Table 9.2 Research project outcomes
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- Figure 9.6 Drop out rates for R&D projects
- Table 9.3 R&D project evaluation criteria
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- Open innovation and technology transfer
- Figure 10.1 The economic perspective of technology transfer
- Figure 10.2 Chesbrough's open innovation approach

























- Table 10.1 Contrasting 'closed innovation' principles and 'open innovation' principles
- Figure 10.3 The tangibility of knowledge
- Figure 10.4 Conceptual framework of technology transfer and inward technology transfer
- Table 10.2 4A conceptual framework of technology transfer
- Figure 10.5 A conceptual framework for the development of genuine business opportunities
- Figure 10.6 Interlinking systems of knowledge-transfer relationships
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- Product and brand strategy
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- Figure 11.2 Platform development creates the architecture for a family of products
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- Table 11.2 Product strategies
- Table 11.3 Product performance criteria
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- Figure 11.4 Internal and external brand contacts
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- Table 11.6 Project analysis
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- Figure 12.2 Main inputs into the decision-making process
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- Figure 12.4 New product development strategies
- Figure 12.5 A product is multi-dimensional
- Table 12.1 Different examples of 'newness'























- Table 12.2 A new product has different interpretations of new
- Figure 12.6 The average new product portfolio
- Figure 12.7 Tauber's growth matrix
- Figure 12.8 Saunders and Jobber's phasing continuity spectrum
- Figure 12.9 Commonly presented linear NPD model
- Figure 12.10 Cash flows and new product development
- Table 12.3 The three main streams of research within the NPD literature
- Table 12.4 Customer roles in NPD
- Figure 12.11 Over-the-wall model
- Figure 12.12 Mike Smith's secret weapon: the salutary tale of 'How not to design a swing, or the perils of poor coordination
- Figure 12.13 An activity-stage model
- Figure 12.14 A network model of NPD
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- Table 12.5 Simple evaluation checklist
- Table 12.6 Smoothies brands (market value and market share)
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- Packaging and product development
- Table 13.1 Maintaining brand leadership through packaging developments, while the product remains unchanged
- Figure 13.1 The basic principles of packaging
- Table 13.2 FMCG packaging purpose and development considerations
- Table 13.3 A wide variety of packaging systems are used for soft drinks
- Table 13.4 Packaging systems
- Table 13.5 Ten of the most irritating packages
- Figure 13.2 Drawings for new packaging of oil container
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- Table 14.2 Typology of services
- Figure 14.1 Four main types of service processes
- Table 14.3 A range of new services that also create new business models
- Figure 14.2 Services as a process
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- Table 14.5 Four dimensions of service innovation by eBay























- Figure 14.3 The service innovation process a sequential model
- Figure 14.4 The new service development cycle
- Table 14.6 Customers' input into the new service development process
- Figure 14.5 How eBay works
- Figure 14.6 eBay profits
- Figure 14.7 Ansoff's growth matrix identifying opportunities for growth for eBay
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- Figure 15.2 The tripartite product concept
- Table 15.1 Products that were initially rejected by consumers but went on to be successful
- Figure 15.3 Gaining new customers of the future
- Figure 15.4 The spectacular growth of Dyson
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- Figure 15.6 Cleaning performance of five vacuum cleaners
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- Figure 16.1 The Valley of Death
- Figure 16.2 The NPD process as a series of linked activities
- Figure 16.3 Maintaining an organisation's knowledge base
- Figure 16.4 Sources of business opportunity
- Figure 16.5 A new product concept
- Figure 16.6 Classification of new product development activities across different industries
- Figure 16.7 Functional company organisation
- Figure 16.8 Functional company: diversification by product with centralised functions
- Figure 16.9 Matrix structure at Siemens
- Table 16.2 How marketing and R&D perceive each other
- Figure 16.10 Product failures
- Table 16.3 Reasons for new product failure























- Figure 16.11 3M sales over the past five years
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- THE IMPORTANCE OF INNOVATION
- **DEFINITIONS & VOCABULARY: Creativity**
- Creativity is the key to making change
- How our attitudes suppress Creativity [1/2]
- How our attitudes suppress Creativity[2/2]
- How our behaviors suppress Creativity[1/2]
- How our behaviors suppress Creativity[2/2]
- How our thought processes suppress Creativity[1/2]
- How our thought processes suppress Creativity[2/2]
- What happens without a Creative process[1/4]
- What happens without a Creative process[2/4]
- What happens without a Creative process[3/4]
- What happens without a Creative process[4/4]
- Summary
- What I Wish I Knew When I Was 20
- The Importance of Innovation
- Definitions & Vocabulary
- Definitions & Vocabulary: Idea versus Concept
- Definitions & Vocabulary: Innovation
- Definitions & Vocabulary: Innovation & Invention
- Different Types of Innovations
- The Importance of Technology and Science in Innovation
- Models of Innovation
- Models of Innovation Linear Models
- Models of Innovation- Simultaneous Coupling Model
- Models of Innovation Interactive Model
- Models of Innovation Chronological Development
- Innovation as a Management Process
- **Innovation Management: Introduction**
- Innovation Management: Summary
- Case Study

















