

DEVELOPING INNOVATION CAPABILITY IN ORGANIZATIONS

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Ask many of today's CEOs and they are likely to tell you that the ability to develop new ideas and innovations is one of the top priorities of their organisations. Innovation is the mechanism by which organisations produce the new products, processes and systems required for adapting to changing markets, technologies and modes of competition [1].

Innovation involves deliberate application of information, imagination and initiative in deriving greater or different values from resources, and includes all processes by which new ideas are generated and converted into useful products. In business, innovation often results when ideas are applied by the company in order to further satisfy the needs and expectations of the customers. Innovations are divided into two broad categories: evolutionary innovations (continuous or dynamic evolutionary innovation) that are brought about by many incremental advances in technology or processes and revolutionary innovations (also called discontinuous innovations) which are often disruptive and new. Innovation is synonymous with risk-taking and organizations that create revolutionary products or technologies take on the greatest risk because they create new markets. Imitators take less risk because they will start with an innovator's product and take a more effective approach. Examples are IBM with its PC against Apple Computer, Compaq with its cheaper PC's against IBM, and Dell with its still-cheaper clones against Compaq [1].

As manufacturing firms disappear, the potential for innovative opportunity is reduced as well. Mass production firms in high wage rate jurisdictions need to develop a capability of continuous innovation to survive and compete in the global marketplace [1].

Innovation management can be viewed as a form of organisational capability. Excellent companies invest and nurture this capability, from which they execute effective innovation processes, leading to innovations in new product, services and processes, and superior business performance results. An extensive review of the literature on innovation management, along with a case study of Cisco Systems, develops a conceptual model of the firm as an innovation engine. This new operating

model sees substantial investment in innovation capability as the primary engine for wealth creation, rather than the possession of physical assets [2].

Innovation represents today's competitive advantage, supported by strong mainstream capabilities in quality, efficiency, speed and flexibility. High-performing innovators are able to maintain a giant juggling act of capabilities, and consistently bring new high quality products to the market faster, more frequently and at a lower cost than competitors. Moreover, these firms use process and systems innovation as a way of further improving their products and adding value to customers. This combination creates a dynamic and sustainable strategic position making the organisation a constantly moving target to competitors [2].

Innovation is a force of instability, often requiring long-term vision and commitment to yield results [3].

Leading innovators encourage, expect and reward innovation from everywhere within the organisation – not just research and development. They make a point of linking organisational learning and knowledge to products, processes, technologies and mainstream capabilities. These companies do not see innovation as just a user of scarce resources for uncertain outcomes, but rather as a mechanism for creating new knowledge and competitive advantage. They recognise that business units producing profits today may not represent the best opportunities for business tomorrow. Mainstream factors and innovation are therefore managed integratively so that the two work in harmony [3].

Successful innovation requires an optimal overall formal business. Unless this structure and its resulting processes are conducive to a favourable environment, other components of the innovation system are unlikely to succeed. High performing firms motivate and enable innovative behaviour by creating permeable business boundaries helping break down the barriers separating functions, product groups and businesses. Reward systems are a powerful motivator of behaviour and therefore, key to successful innovative activity [4].

Change and innovation are closely related, even though they are not the same. Change often involves new and better ideas. The new idea may be the creation of a new product or process or it can be an idea about how to change completely the way business is carried out. Successful organisations understand that both innovation and change are required to satisfy their most important stakeholders.

For both established organisations as well as new organisations, innovation and change become important in a dynamic, changing environment.

References

1. Ashkenas, R. Real innovation knows no boundaries. *The Journal for Quality and Participation*, 21 (6), 1998. – 338 p.
2. Chiesa, V., Coughlan, P. & Voss, C.A. Development of a technical innovation audit. *Journal of Product Innovation Management*, 1996. – 226 p.
3. Jonash, R.S. & Sommerlatte, T. The innovation premium: Capturing the value of creativity. *PRISM*, Third Quarter, 1999. – 525 p.
4. Markides, C. Strategic innovation. *Sloan Management Review*, Spring, 1997. – 323 p.

НАНОТЕХНОЛОГІЇ ЯК ФУНДАМЕНТ ІННОВАЦІЙНОЇ ЕКОНОМІКИ НІМЕЧЧИНИ

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XXI століття, на думку багатьох експертів, є століттям нанотехнологій, вплив яких на суспільне життя має носити глобальний характер, сприяти кардинальним змінам не тільки в економіці, а й у всіх сферах людської діяльності.

Нанотехнологія – це область фундаментальної та прикладної науки і техніки, яка має справу з сукупністю методів теоретичного обґрунтування, практичного дослідження, виробництва та застосування продуктів із заданою атомною структурою [1]. Це сфера діяльності, що пов'язана з матеріалами і системами, структура та окремі компоненти яких є явищами і процесами з абсолютно новими або істотно поліпшеними властивостями. Вважається, що нанотехнології дають початок третій науково-технічній революції, де інтелектуальний внесок у будь-який кінцевий продукт різко зростатиме. Якщо в індустріальному суспільстві частка НДДКР у кінцевому продукті не перевищує 15-20 %, то в постіндустріальному, на думку вчених, має бути не менше 60 %.

Специфічною рисою нанотехнологій є їх міждисциплінарний, комплексний характер, тобто можливість використання одного й того ж винаходу в багатьох областях і сферах людської діяльності – в хімії, біології, електроніці, медицині, сільському господарстві, промисловості, екології тощо. Тому нанотехнології на