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REAPING STRATEGIC BENEFIT BY UNDERSTANDING INNOVATIONAL INFORMATION FLOWS IN THE ORGANISATION

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Abstract

In this paper it is pondered whether the principles of business managerial theories are suitable for understanding defence forces internal production management as well. Defence products can broadly be understood as those acts, introductions and systems, which produce real security or secure feelings to the nation. In this paper, focal point is set to material acquisition coordination processes supported by technical research. It is assumed that successful acquisition demands good knowledge in both needs of the customer and the possibilities and restrictions of technology. This tripod combination – technological (and other) research, development and other scientific work, knowing the customer, and purposeful production – will produce those kinds of products, which could be marketed to publicity legitimately and justifiably. But this transpires only, if information during total process is flowing in the right direction. Theoretical basis of making strategic benefit by understanding the meaning of information flow in the organisation is adopted from Ikujiro Nonaka and Hirotaka Takeuchi.

1 CREATING KNOWLEDGE – TO REAP STRATEGIC BENEFIT

Knowledge tends not to get its appearance from the mental emptiness or from non-communicative space. Information is created by intensive perception and it is cultivated by transferring it between different actors, which are having a capability to process this information. Every actor has its own time-space for making and understanding those possible perceptions, which the outer world is serving. This happens whether those actors are members of organisation or not. This writing supposes that those actors are members of the very same organisation having a sense of mutually agreed direction. Because these perceptive time-spaces are somewhat different between different actors, it is more than advisable to try to combine knowledge and skills of different actors in order to gain something more than a bunch of obstinate opinions.

So, how is it possible to get rid of this imminent possibility of danger of discording factionalism. The answer is very simple. The tacit knowledge that all these actors have must be dialogued, linked to former explicit knowledge, and this combination be learned and launched. [1][3] Fig. 1 depicts this process. But what to do, if several different products are waiting for to be burst in reality? In the field of defence system it is merely so, that all these products exploit more than one specific technology. Defence systems are merely multi-technological and therefore the acquisition process¹ demands somewhat broad spectrum of skills and knowledge. What a claim for an organisation with limited resources! Fortunately this kind of problem is solved already [2]. If it is understood, that one technology can support several products, functioning teams can be formed to combine technology, production and marketing in order to gain best possible output (Fig. 2). Every actor brings its tacit knowledge into this process. Information flows freely

¹ And not only acquisition process, but the search of technological possibilities and restrictions, too. But this area is worth of its own story and in this case we have to leave this ever so interesting field of technological prospective.

from customers' demands and expectations via technological possibilities to production lines ennobling in iterative process.

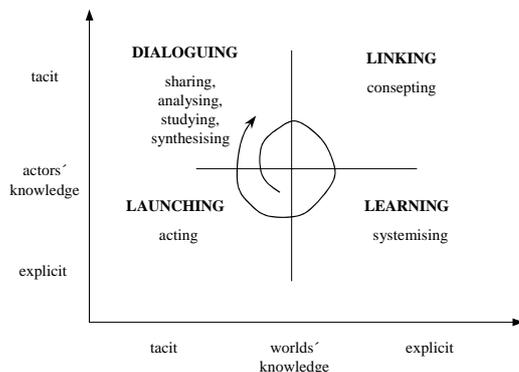


Fig. 1. From multiple tacit knowledge to future building [1][3].

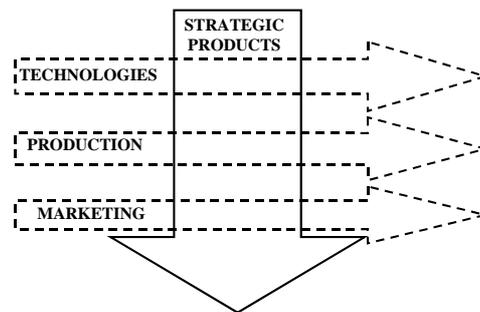


Fig. 2. Organising innovation combination [2].

Three essential items can be pointed out:

- 1) All relevant information concerning the product under interest can be gathered and exploited.
- 2) Same technological knowledge serves several production lines.
- 3) One production line can exploit several technological knowledge areas.

2 MILITARY APPLICATION – TO SERVE

In this paper defence forces material acquisition process is approached at the level of coordination responsibility of knowledge management. This is assumed to be a key in the process to achieve the fulfilment of those long-lasting products and systems, which are needed to satisfy citizens needs to feel secure also in the future. After all, defence is using public property – it is duty-bound to fulfil its' task cost-effectively, and for the best of the members of the nation.

Acquisition management coordination process can be formalised in the structure of system in the spirit of Chekland and Scholes [4]. Fig. 3 depicts this system in a very brief way. In this case business management theory, which is primarily used to describe production, is changed to portray acquisition management process. Functions are very same, but instead producing goods, here defence systems are produced by furnishing necessary systems and items. So it can be pictured that marketing function is the part of General Headquarters (GHQ), which is responsible to political decision makers and which is producing the safety fortifying information and acts to the publicity. Production function is the part of GHQ, which is directing, managing and coordinating systems acquisition processes and R&D-function is as itself. Those together will produce necessary and justified defence products.

It could be seen, that relevant information is emerging in knowledge generating process taking place in time-space formed by R&D and production functions directed by strategic outlining, which are ushered by demands of citizens expectations and political decisions. Main information flow circulates from marketing function via the emerging combination of R&D possibilities and production coordination back to marketing in order to generate those defence products that nation needs. Sounds simple. Main question is, how this mega-process can be managed? Answer is very simple, too. Money. Money flow directs information flows rather efficiently. If money flow goes through R&D, very good technological innovations are turning out, but no relevant products will occur. If this flow goes through production lines, plural and divert technological knowledge will not give full benefit for all products, but few and

only short time. Further on, long-term intellectual capital will have no breeding ground. Which will be the final answer? Production and R&D funding must be separated, but their knowledge combined. Separate funding is forcing R&D and production to form mutual communicative time-space to gain common results. And not for present day needs only, but for the foreseeable future as well.

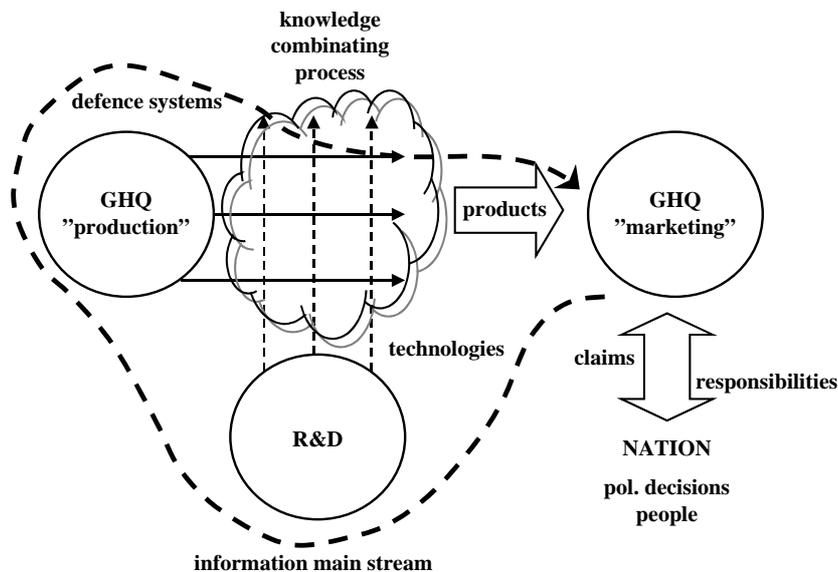


Fig. 3. Main information flow in defence systems acquisition management process described as a very simplified system. First must be known, what is (technologically) possible in foreseeable future. After that it is possible to gain such products, which are probably feasible.

3 CONCLUSIONS – TO LEARN

Money is powerful director. Money flow inevitably directs information flows. Money flows demonstrate strategic choices. Essential is that different actors in strategic production process are successfully managed to do intensive cooperation by funding management. This leads not good present day products only, but developing and evolving the intellectual capital to serve unexpected challenges of futures.

In this chiefly ruminative essay it has been tried to point out that long-term thinking in defence product development is necessary to produce security feelings to the nationals. Long-term thinking is unable to disinter without dialogue, linkage to existing knowledge, learning and launching those thoughts. Keyword is dialoguing cooperation in knowledge-appreciative culture.

REFERENCES –TO FIND OUT

- [1] I. Nonaka and H. Takeuchi, *The Knowledge-Creating Company – How Japanese Companies Create the Dynamics of Innovation*, pp. 63 - 75 Oxford University Press, 1995.
- [2] Ibid., 201.
- [3] R. Suurla, *Helmiä Kalastamassa – Avauksia tietämyksen hallintaan*, Eduskunnan kanslian julkaisu 1/2001, pp. 25 – 55, Oy Edita Ab, Helsinki 2001.
- [4] P. Checkland and J. Scholes, *Soft Systems Methodology in Action*, section A, John Wiley & sons, Ltd. Chichester 2000.