Introducing New Knowledge in a Public Organization

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Our society invests a lot in new knowledge, but in Slovenia the
return of this investment is not as high as we would expect. Pri-
vate sector is traditionally more successful in implementing new
knowledge than public sector. We believe that it is necessary to in-
vest in knowledge although it is characterised by high levels of un-
certainty. It is also extremely important to combine new knowl-
edge with practice. The paper presents the case of a big public ten-
der for science projects for the Slovenian Ministry of Defence. The
usefulness of new knowledge depends on selected projects and on
organizational culture as well as on process aspects of conducting
projects and implementing its results. The aim of this paper is to
present the process of building a learning organization, which is
willing and able to implement new knowledge.

introduction

The 21st century is a century of big investments in knowledge. Individ-
uals strive to gain new knowledge and competences through education
and training, organisations in different sectors invest in research and de-
velopment, and they organise all sorts of trainings for their employees.
Developed societies invest a lot in schools at a primary and secondary
level, higher education as well as science and technology are becoming
more and more important. Learning is a way of living, for us, individu-
als and for organisations. Why?

- *Because we want superior performance.* This seems to be the essence
  of management that wants to gain competitive advantage by build-
  ing a high-performance organisation. Management used to put for-
  ward ideas about performance and placed them into the hands of
  people at the bottom. This of course is not a prevailing idea any
  more; bottom up approaches are also important in a variety of
  ways. Total quality management, self managing working teams, em-
  powered organisations, improving innovation and productivity of
  an organisation, finding core competences, building a learning or-
  ganisation (Senge et al. 1995) are different concepts that stress not

only the economic performance but also an individual and organisational development.

- *To improve quality.* Quality is an important driving force that enables us to learn more about our work, to become responsive to customers' (internal and external) expectations, to develop and implement new ideas, to change the environment we live and work in, to perform better. Organisations committed to total quality management or Common Assessment Framework (CAF) performed by the Slovenian public sector are learning organisations.
- *For customers.* Private sector can only survive in a market place if it offers customers what they need. Customers' needs and expectations are a strong driving force that gives to an organisation the needed impulse for change and self development.
- *For competitive advantage.* In the long run, the only sustainable source of competitive advantage is the organisation's ability to learn faster than its competition. Learning and generating new ideas should be an ongoing process, and should not be done only from time to time. It is important to incorporate new ideas in a daily work, and to continue this process.
- *To manage change.* We live in a changing environment and we often have to change our daily practice and redefine it. Organisations that invest in new knowledge manage change easier than others (Senge et al. 1995).

Why is learning so important for us, individuals? We could expect a great variety of answers, but the most important would be *because we want it.* Living in a routine is boring for those people who want to get more out of life and make a change.

KNOWLEDGE MANAGEMENT IN THE PUBLIC SECTOR

Change is a driving force of our time. The most successful societies and organisations are the ones who promote change and development, those who cannot keep up with others are less fortunate. This is mainly true for the private sector, the public sector being more rigid and less flexible mostly because of the lack of market mechanisms that stimulate the development of organisations. Instead, it needs to install other mechanisms of feedback such as: reporting, monitoring, and evaluation. That does not mean that it can resist the pressure from the external environment, namely customers, citizens, international associations (e. g. Euro-

pean Union and NATO), different types of inspections, legislation etc. Public organisations of today have to conform to norms and standards, their customers and partners, as well as to their environment. The easiest way to achieve that is to invest in knowledge and development.

However, the public sector often finds another solution to the needed changes. It implements public reforms, which are popular worldwide. But reforms often fail for many different reasons: they require a long period until they take root, there is a lack of public support, of top management support, the involvement of middle management is not high enough, there is partial or no cooperation between employees, there are too many reforms (a reform after non completed reform), a lack of monitoring a change, the organisation of a reform is not central enough etc. The approach to the reform is the one that matters, yet much more attention is given to the content of a reform than to the way it is conducted (Polidano 2001). This experience reassures us to invest in knowledge and development which result in a constant development of the system. This strategy however is complex: it involves capacities to share information, build knowledge and create innovations, in other words, to learn. The success of knowledge management depends on how flexibly the organisation is able to react to unpredictable changes. Organisations that are based on rigid structures and inert minds are not able to succeed and grow.

Public organisations, which are inclined to be rigid, have an important mission in the 21st century. They should develop a new, less hierarchical structure, become more flexible, more responsive to the demands and expectations of the environment, take the initiative for their own development etc.

There are of course many different interrelated strategies to achieve that. In this article we will explore one of them – the introduction of new knowledge into a public organisation through projects with external experts.

HOW TO CREATE AND TRANSFER KNOWLEDGE INTO A PUBLIC ORGANISATION

This paper presents the case of a big public tender for the Ministry of Defence of the Republic of Slovenia, which brought a new set of activities for the Ministry and for experts in Slovenia. The budged for the research and development increased drastically in 2004 compared to previous years – some needed projects could see 'the light of the day' although

new challenges, questions, and obstacles appeared. A public tender is of course only one activity, a lot of supporting processes and structures were needed to enable it.

The Ministry that was established in 1991 had no official institute or department for research and development. There were several development centres, dispersed in the system with more than 7000 employees, namely informatics, equipment, doctrine and strategies etc. The activity was dispersed and used to depend upon individuals with knowledge, ambition and abilities of the organisational unit to support their training and development programmes for the organisation/ministry etc. In short, those organisational units who had resources benefited in comparison with those who did not have resources. The development did not always correlate with the needs of the ministry as a whole, because funds were not systematically allocated for this purpose.

One bigger fund for research and development for the whole ministry changed this practice. Needs (in terms of projects needed) were collected in one place and communicated inside, a prioritization on the level of the whole ministry as well as a definition of new responsibilities were needed.

There were many questions to be answered first. Our activity in the research and development area started with questions like:

1. What is the shared vision of the ministry (or what do we think the shared vision should be)?
2. What are the development priorities of an organisation? What operational goals we need to follow?
3. What are the needs that reflect these priorities, how to prioritise them?
4. How much research and development is needed to achieve the stated goals and how many additional resources we need to allocate for infrastructure, training, equipment etc.

In terms of processes we faced many challenges. The following was needed:

1. Human resources to lead and support these activities.
2. New rules about the proposals that were collected from the employees of the Ministry (forms, signatures, collection of forms, feedback on the proposals – additional information needed, clarifications etc.).

3. A new organisational structure that would support the research and development activity.
4. A new decision making body that would decide about project proposals financed by the ministry.
5. Forms of a public tender for different types of research proposals.
6. Ways of communicating and working together with experts and research organisations outside the ministry (e. g. industry).
7. Rewarding employees for their effort in running projects (which is in most cases their additional activity).

It was not possible to answer all these questions in such a short time but a lot of new effort brought some important results. The first set of questions seemed easy because national strategies have already been designed and some major decisions have been taken. On the operational level midterm goals were not so easy to establish. Each decision has implications for the future budget, organisation and structure of the ministry as a whole, not only for the research and development area. Project proposals, collected in the ministry, reflected the needs of the organisational units and they did not all receive the needed consensus. Those needs had to be elaborated further into research and development proposals, as well as proposals concerning infrastructure, human resources etc. Often we stimulated employees to write business plans especially for developing new technologies. At first, the ideas were not so clear, but they emerged in the process of writing business plan proposals, which helped to clarify several issues like:

1. Reasons for the project to be implemented.
2. The list of advantages that the implemented project brings to our ministry and daily work.
3. Alternative solutions to the detected problem: their advantages and disadvantages.
4. Assessment of resources needed.
5. SWOT analysis.
6. Risk analysis.
7. Long-term consequences of implementing a good solution, an average solution and a poor one.

When the completed proposals arrived, the newly established board of research and development of the ministry had to prioritise them. Resources are always limited and the implementation of project proposals

was crucial for those who suggested it. It was the first time that an integrated list of project proposals of the ministry appeared and had to be prioritised. These decisions raised all sorts of new questions about the supporting structure, the consequences of decisions taken and more importantly about the vision and operational goals of the ministry as a whole. Organisational units, divided in separate decision making structures and separate budgets started to talk about priorities of the ministry as a whole. Politeness among colleagues inside the board had to be replaced with a frank discussion about concrete project proposals. We all learned more about the needs of the system.

A new budget for research and development led to the establishment of a new department for research and development that coordinated those activities. There were many new tasks and a public sector did not respond quickly enough to provide human resources needed to coordinate all the activities in this area. There were only two and a half people in the first year that handled all the needed activities and the international cooperation in the field of research and development. Apart from paperwork a lot of time was spent on communicating a new filed of activities to the employees involved with new projects. Sometimes training was provided to users of the project and people responsible for the cooperation with industry and the science arena.

A new department for research and development coordinated new activities that were spread all across the ministry. We decided not to establish our own research institute but to use different forms of public tenders to engage different profiles of researchers and different brands of Slovenian industry to work for the ministry. This concept brought many new dilemmas in the traditional, rigid and hierarchical structure. Research activities based on a network structure with the outside world and with inside experts represented a new mode of operating which was necessary for the success of the public tender and for further activities but was not always welcomed. We divided responsibilities within the ministry: the newly established department for research and development prepared public tenders (in accordance with project proposals and decisions of the board), coordinated organisational units and responsible experts of the ministry with standards and forms, gave feedback to project proposals, defined selection criteria for projects arrived to the public tender in accordance with the board initiatives, took care of the organisation of activities concerning research and development in the ministry, supported work of the board of research and technology, and most importantly, took care of the accountable budget spending.

Other activities connected with projects rested on employees, who were responsible for the quality control of the projects. They provided contractors with the needed information to conduct projects in time, controlled their work and suggested activities related to the projects (round table discussions, meeting with other experts, testing phase, conferences etc.). They confirmed payment of the project if the results were satisfactory and acceptable.

INVESTMENT IN KNOWLEDGE: WHO BENEFITS?

This is a crucial question but it is too early to answer it. Around 70 new projects for the Ministry started in 2004. They are applied research projects in different fields of science or projects concerned with the development of equipment or technology. At the moment many employees find these activities as a set of new work and responsibilities that are not always welcomed. The workload of particular experts in the ministry has got bigger, whereas a rewarding system for such an additional work has not been established yet.

The reward for the contractors is evident. At this stage they are the ones who benefit as it is our intention to introduce new knowledge into the ministry. In the long run the ministry will benefit from the success of those projects or it will experience difficulties at different stages of a project and possibly a failure. The cooperation with contractors, the usefulness of the results of the project for the ministry, its successful implementation into the system – these are all factors that will influence further cooperation of the ministry with selected contractors.

The most difficult question is how to measure the success of the projects. We are aware that up to now processes and outcome approaches to evaluating project effects have been necessary. Outcome measures depend on project goals and anticipated results. They also depend on the readiness of the ministry to implement its results. Sometimes bureaucratic obstacles prevent the implementation of project results, in other cases this is due to human factors or changes in the organisation and environment.

The process of conducting projects and their implementation are even harder to evaluate. We have reached a consensus on how to monitor the work of contractors, but this system involves a lot of integration activities inside the ministry. Employees responsible for quality control of the projects need a support of their superiors, of the board of research and development, the department for research and development, of top management. Contacts with contractors are usually intense and not always

recorded in memos. They can be an important inspiration in their work. The levels of expectations of the contractors and people responsible from the ministry often need to be clarified. We will need to create measures for process evaluation such as (Hellstrom and Jacob 2003, 59–60):

- the number of interactions with academics, consultants and other advisors,
- the number of 'lessons learned ' through cooperation with them,
- the number of new ideas concerning their work, resulting from this cooperation,
- the number of new colleagues or partnerships spawned in the organisation and outside it due to the project.

For the ministry the following was also important:

- quality of the relations with responsible organisational unit for research and development and the decision-making board,
- quality of the relations with contractors,
- support of the superiors and colleagues (inside the team) etc.

We believe that measuring all the impacts associated with the creation and transfer of knowledge and the capability to grow is too impractical. However, we will need to find an answer to the question about how to find an adequate way of conducting a project to meet the needs of contractors and responsible employees of the ministry as a whole.

It is very hard to evaluate the overall activity and its impacts. It relates to the goals of the research and the development activity, which are not always clearly stated. When evaluating outcomes of the creation and transfer of new knowledge 'we are trying to hit a moving target, because when we advance, the goals change due to what is learned in the process – indeed if they do not change we may not be advancing at all' (Hellstrom and Jacob 2003, 57).

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