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On communication management as a key element of successful IT program

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Abstract. In this paper we discuss the role of communication management in each phase of the large implementation of IT solutions. It is well known that the majority of project failures in the recent years are not due to lack of technical competency of the supplying team, but rather because of not well enough prepared and executed communication between various participants of the implementation process. In the paper we present various dimensions of communication process, its role and objectives, as well as, main participants and several modern tools and channels, which can be used in the process.

1. Introduction

The process of project/program management, as well as, various techniques of software engineering is very well defined and described in both academic literature and practical textbooks [1, 2, 5]. For many years project management was very often focused on scope, time and resource management with various additional activities like risk, change management, ROI etc. But along with many years of observation of IT projects of various type and magnitude, we still see a significant amount of inefficiency and ineffectiveness in project management caused by lack of proper understanding of the role which well defined and then properly executed communication stream can play.

The goal of our paper is to put communication management in the right balance with other activities of the "classical" project management approach [3, 7]. Communication management has become more and more important nowadays with all new technologies and implementation techniques which make development and then deployment of new solutions a very communication intensive process. It is also very closely connected to all activities which are done in parallel to the main "technology" stream like for example: business model change management, knowledge transfer, as well as, such a "soft" area like change of the company culture.

We treat communication management as a strategic part of project/program management of any large IT initiative, in particular in times of booming solutions like

corporate intranets, intensive internal corporate communication management and IT governance solutions which migrate decisions towards "business" stakeholders.

In the next sections, we present some of the elements of communication management model prepared for large implementation of IT projects. Based on reviewed and verified data from implemented projects, the proposed model assumes the complete project lifecycle for communication management process. It starts from the assessment phase and ends up with post-implementation feedback review. We also describe examples of key elements of the model with selected predefined templates for:

- Scope and objectives definition.
- Process definition.
- Identification of participants/stakeholders with their roles and responsibilities.
- Definition of potential communication streams and their supporting tools, performance measures with indication how to use them and monitor them during project execution.

2. Communication management in the context of large IT implementation programs

2.1. Dimensions of communication management

In many cases, large IT implementation programs do not achieve planned benefits on the expected level or even end up with a failure with very significant costs. Some of these cases are very spectacular and are being commented in academic and business publications.

One of the key reasons is that while the business and technical related aspects of the implementation are planned and managed with appropriate attention, the change management dimension is very often underestimated and thus inadequately treated.

Time horizon of large IT implementation programs takes several months or even years, but the path for change management activities is even more challenging and longer. For example, an IT system may be implemented in 6-9 months, the business processes redesigned and implemented in 3 months. But it will take over 12 months for the end users to learn the new processes, new system functionalities and accept them. If the end users will not accept the new system, the planned business benefits will never be fully realized.

One of the critical components of the change management process is communication management. The role of communication management in a large IT implementation can be considered in the following dimensions:

Managing stakeholder perceptions from awareness to acceptance. With a large IT implementation, the change management process begins before the actual change is implemented and ends far after the actual change occurred. Every IT project or program has different stakeholders – groups of people that have different views, interests and impact on the implementation. All these perceptions impact the readiness

for change of stakeholders and should be analyzed and assessed. Communication management activities must ensure that the end users know why they have to change, what benefits the change will bring to them, what are the potential barriers and problems with the implementation. Communication management establishes a shared vision of change that the IT program will bring. It provides all information about what is happening with the project/program – now and in the future.

Development of new skills and competences. Large IT implementation usually results with a new system in place that will require new skills from the end users. It is critical to provide appropriate training for all types of users. The trainings should be delivered with tools, that are tailored to needs of different stakeholders. For example, direct end users should be trained in detail about the new ERP system, while sales representatives that don't have direct contact with the solution, should have enough knowledge to explain to their clients how this new system will affect cooperation with them. Apart from traditional classroom trainings, the end users should have direct and online access to different tools providing the required knowledge that will reinforce and enhance the new set of skills e.g. computer-based-training materials, manuals, presentations etc.

Knowledge management. IT implementation is a continuous learning process. As the end users are starting to utilize their new skills in practice, their own experience and recommendations are being developed. Communication management should provide the right platform for sharing knowledge and experience among all stakeholders [6].

Crisis management. Due to their complexity, large IT implementations are high risk initiatives. The nature of programs, and uncertainty associated with them, mean that inherent risks are always a threat to success. Program and project managers must be proactive in identifying potential risks and ensuring that appropriate mitigating actions are taken before these risks impact the cost, timescales or quality of project deliverables [3, 6]. Planning appropriate communication actions in case a risk turns into an issue or crisis is one of the key areas of risk mitigation.

Communication within the project team. It is vital for the success of the program/project to provide the team members with communication tools and platforms supporting their activities in the areas of planning, progress monitoring, coordination, risk management, benefits tracking and others [3].

Feedback from stakeholders. Communication during large IT program implementation is a two way process during the whole cycle. Information requirements of the stakeholders are researched and analyzed since inception of the initiative. During the project, stakeholder perceptions and acceptance of change is being monitored and potential improvements and modifications are being implemented. Another extremely important aspect is to "listen" to the stakeholders – their view on the system implementation, perceived problems, comments, recommendations and fears about change. This means that appropriate communication channels and tools that enable collection of such information from the stakeholders should be established.

Dimensions of communication management are summarized on the diagram below.

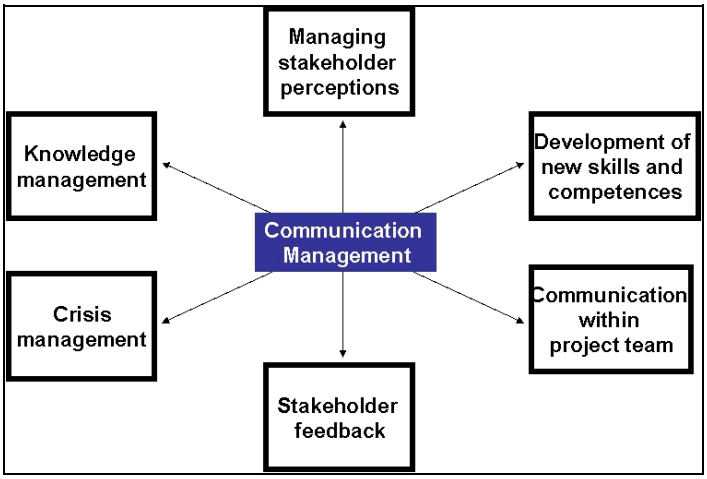

Fig. 1. Dimensions of communication management in large IT implementation programs

2.2. Communication management process

Communication management activities in a large IT implementation program can be structured into a set of interdependent phases:

Assessment. Before the actual change starts, all the requirements for communication activities have to be analyzed and assessed. They are strictly related to the scope and depth of the planned implementation as well as to readiness for change in the organization. All stakeholder groups have to be identified and their perceptions and impact on the planned change assessed. This phase is critical for the success of communication management. Poorly analyzed requirements may cause major issues during the implementation of the IT solution.

Planning. At this stage a detailed communication plan has to be developed. Content, communication channels, tools and feedback mechanisms have to be designed in accordance with the assessment results. All planned activities have to fulfill the requirements of identified stakeholder groups.

Development. After planning is commenced, an infrastructure supporting all the designed tools has to be implemented. Depending on the level of sophistication of the designed tools and communication channels, this may be a demanding task in terms of time, budget and quality. Development and implementation costs of the infrastructure shouldn't exceed the expected benefits. It is extremely important, that all channels and tools are tested before execution – failure may cause mistrust to the overall communication process and become a barrier during implementation.

Execution. All activities are executed according to dates or frequencies defined in the communication plan. Before execution all content must be carefully inspected so only up to date information is sent to the stakeholders

Feedback. All communication activities should be monitored, assessed and appropriate actions undertaken if required. Feedback from the stakeholders may require additional analysis, changes in the communication plan, improvement of the

tools and channels used. Additionally effectiveness of the communication channels is measured. The results should be analyzed in detail and implemented in a way that will not disturb the change management process.

The diagram below summarizes the communication management process.

Fig. 2. The communication management process in large IT implementation programs

Usually, communication management is in the area of the program/project manager responsibilities. In many cases, due to his wide range of responsibilities and heavy workload, communication management falls into the lower priorities on his agenda. Successful communication management requires an additional role on the program/project team – Communication Manager. His responsibilities cover the following areas:

- Identification of stakeholder groups.
- Analysis of the information needs of the stakeholders.
- Development of the communication plan.
- Acceptance of the content that will be delivered to the stakeholders.
- Supervisory of execution of the communication activities.
- Supervisory of maintenance and administration of the communication channels and tools.
- Monitoring, measuring and analyzing feedback from the communication management activities and deciding on improvements and modifications.

Depending on the scale of the IT implementation program, the Communication Manager has to be supported by a team specialized in content creation, moderators etc.

3. Objectives

The objectives of communication management are linked with business and IT implementation program objectives [3]. They should be tailored to specific requirements and milestones of the project phases. Each phase has different requirements and perceptions of the stakeholders. Communication management activities have to be planned in accordance with them. The objectives should be linked with key performance indicators (KPI) that will be measured to assess whether the planned change management activities are fulfilling the requirements.
Decomposition of objectives into project cycle and communication management is presented on the diagram below.

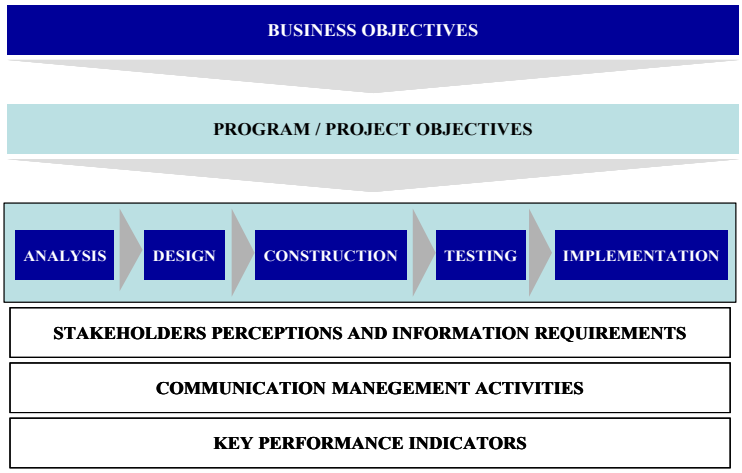

Fig. 3. Decomposition of business objectives into project cycle and communication management

Objectives of communication management in a large IT implementation consist of the following elements:

- Establishment of a communication platform with stakeholders regarding the change process.
- Development of effective communication tools required for a successful implementation of the IT solution.
- Support for the program managers in elimination of risks associated with the implementation.
- Build acceptance for the implemented solution among stakeholders.
- Preparation of end users to effectively work with the new solution.

Communication management objectives presented above are the most common to large IT implementation programs and for each program/project they depend on specific scope, business objectives, environment etc.

4. Key performance indicators

For each IT program/project a specific set of key performance indicators (KPI) should be defined. They have to be related to each communication dimension, for example:

- Understanding of new business solution.
- Knowledge and understanding of new processes, roles and responsibilities.
- Acceptance of new technology solutions.
- Maturity level of new competency and skills.

Each KPI has to be measured against a common scale consisting of 5 levels of excellence:

- Awareness.
- Understanding.

- Simple skills.
- Advanced skills.
- Leader of change.

A curve describing maturity levels and its growth over the period (phases) of project development is defined and monitored for each KPI. Target levels of each KPI for every group of stakeholders are defined in the communication strategy. The diagram below summarizes the transformation of communication dimensions into KPI's and then into maturity levels.

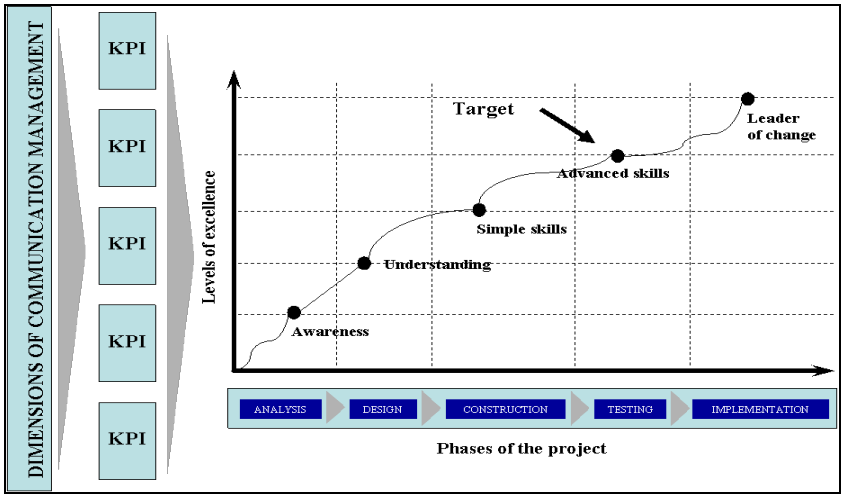

Fig. 4. Transformation of communications management dimensions into KPI's and maturity models

5. Communication management tools

The range of tools that can be used in large IT implementation programs is related to the information requirements of different stakeholder groups. Every group of stakeholders has different information needs that require specific information content, intensity, frequency and channels to be used.

5.1. Key stakeholders

The characteristics of the stakeholder group differ on every project. However four generic groups of stakeholders can be defined:

Project team. This is the group of employees that is directly involved in daily operations of the IT implementation program. This group is relatively small in quantity in comparison to others and requires the most intensive information which

consists of project progress, risks, problems, change requests, technical information required to project implementation, access to documentation.

Employees cooperating with the project team. This group consists of all employees of the company that are supporting the project team during implementation: delivering business and technical information, coordinating implementation activities within their departments, giving feedback to the project deliverables. Communication to this group covers information related to project progress and system implementation within the area of cooperation with the project team.

End users. This group is critical in terms of IT implementation success. Information requirements of this group are focused around knowledge about the new solution as well as around the benefits it is offering. Communication to end users must ensure their acceptance of the newly implemented system.

All employees. This is the largest group of stakeholders. In the most critical cases, large IT implementation programs affect all employees of the company. Usually, the information requirements of this group are focused around awareness of the functionality and benefits it brings to the organization.

The key stakeholder groups are summarized on the diagram below.

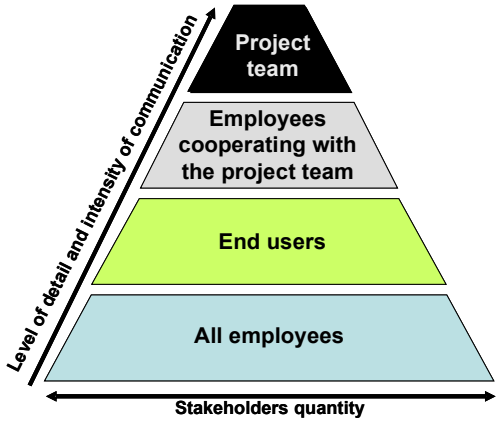

Fig. 5. Typical stakeholder groups in a large IT implementation project [7]

5.2. Communication tools

Communication tools used during large IT implementations programs are tailored to the specific project and information requirements of the identified stakeholder groups.

Table 1. The most frequently used communication tools [6]

Tool	Effectiveness	Coverage
1 to 1 meetings	High	Low
Workshops	High	Medium
Large presentations	Medium	High
Cascade briefings	Medium	High
Newsletters	Low	High
Intranet Portals	High	High
Moderated discussion groups	Medium	High
Articles	Medium	High
Video	Medium	Medium
Formal letters	Medium	High
Frequently Asked Questions (FAQ)	Low	High
Internal call centre	Low	Medium
Interactive Voice Response messages	Low	Medium
Suggestion box	Low	Low
Email	Medium	High
Notice boards	Low	Medium

Effectiveness of the communication tools depends on several factors including the quality of content provided by the tool, frequency of updates, reliability of the tool, scope of project, characteristics of the stakeholder groups.

5.3. Management dashboard

For the visualization and basic browsing activities, a standard business intelligence tools or predefined balance scorecard solutions can be used. They can present target levels and actual figures on the management dashboard. They can be available to all authorized actors of the process.

As a part of communication management solution infrastructure, the firm should also consider creation of knowledge warehouse with findings/"good practices" collected during projects that were taking place. It can be used as a source of information of successfully applied communication methods and tools for different kind of IT engagements. They should be coherent with company culture and its readiness for change (planning and execution).

6. Conclusions

The scope of communication management in large IT implementation programs covers areas from support to the communication within the project team through managing stakeholder perceptions and knowledge management to monitoring and assessment of stakeholder feedback. The objectives of communication management

are linked with business and program/project objectives and are focused around building acceptance for the implemented solution among stakeholders, empowerment of end users to effectively work with the newly implemented solution and development of an effective communication platform for a successful IT implementation.

The communication management process starts with stakeholder analysis which is critical for the success of all communication activities and is followed by planning, infrastructure development, execution of communication activities and ends with feedback.

The success of IT implementation depends strongly on the involvement of executive and senior management of the company in communication activities which usually are at the responsibility and supervision of the program/project manager. However to ensure the success, communication management has to be at the responsibility of a dedicated person who has the appropriate authorization and position in the program/project and as well as in the organization.

With development of electronic media platforms, the set of communication tools and channels is very wide. A portfolio of tools and channels has to be tailored to the specific needs of stakeholders, scope of the implementation as well as to the depth of the change process conducted in the program/project.

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