

## Chapter 6

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### VALUE MANAGEMENT IN THE INTERNATIONAL SCIENTIFIC PROJECT MANAGEMENT

**Abstract:** Contemporary institutions and enterprises which face market development challenges regarding the product and the service arrange activities aimed on advanced objectives reaching or management problems solving. The chapter concerns problems and main factors that are identified within the project cooperation between applicants, grantee and institutions that support international scientific events related to the research projects and cooperation with the industry based on projects results applying in practice. Factors identified in the research analysis and presented in the chapter result from project coordinators' observations, project partners perception and evaluation of fund institutions. Identification the most important issues in the scientific international projects in accordance to grants selection criteria and projects features let to find an application both in the practice for future research projects creating and institutional selection criteria in accordance with Value management theory.

**Key words:** Value Management, project management, international scientific project

#### 6.1. Introduction

“The final question needed in order to come to grips with business purpose and business mission is: “What is value to the customer?” It may be the most important question. Yet it is the one least often asked. One reason is that managers are quite sure that they know the answer. Value is what they, in their business, define as quality. But this is almost always the wrong definition. The customer never buys a product. By definition the customer buys the satisfaction of a want. He buys value (Drucker P. 1993).

Value management is the holistic approach that results in alignment

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between product management, marketing, pricing, sales and other business functions. The goal is sustainable and profitable revenue growth. This approach became very popular and useful in different disciplines of the human life including science and industry applications. It can be associated with the supporting proper communication between producer/server and client what can be presented in the form of the cycle (Fig. 6.1).



**Fig. 6.1. The Value Management cycle.**

Source: *What is Value Management? (And why you should care.)* Creative Commons (cc) CC BY-ND 3.0 2012 By the Value Management Advocates.

The Value Management cycle presents some factors that are involved in the Value Management process and there are some relations between identified factors that constitutes management fields, such as: strategy, sales, product management and marketing. Term Value within the presented cycle can be associated as (*What is Value Management?* 2012):

- Value is relative to an alternative – value cannot be judged in isolation.

- Value is composite and decomposable – value can be analyzed into a set of value drivers.
- There is more than one aspect of value – in B2B the most important aspect is the economic, but other aspects such as the emotional, environmental and social value can also be considered.
- Value can be quantified – economic value can be quantified in a currency, other aspects have their own forms of quantification such as Quality Adjusted Life Years in healthcare or Carbon Footprint for green solutions.

In accordance to John Connaughton and Stuart Green (1996) Value Management is defined as “a structured approach to defining what value means to a client in meeting a perceived need by establishing a clear consensus about the project objectives and how they can be achieved.” Another general definition of value management is: “a systematic review of essential project functions or performance, focused on achieving the best value for the money. It takes an overall view of the project function including capital and recurrent costs” (SANCANDI P. 2012).

Colin Gray and Will Hughes (2001) suggest that the introduction of Value Management into a project is ideally through a facilitated value management workshop either at the business case stage (feasibility) or at the outline design stage (concept design) or both. Value management provides analytical tools and recording techniques that greatly assist clients and the design team to articulate and prioritize their ideas (SANCANDI P. 2012).

Paul Sancandi in the article for Project manager. Education&opinion pointed the basic three stage process, where the basic values of the project management can be identified:

1. Developing a value hierarchy. The value hierarchy is a method of taking primary project objectives and breaking these down into their own sub-objectives. Each sub-objective is a means to achieving the main objective.
2. Develop the value tree. This involves a process of weighting the objectives and sub-objectives of the value hierarchy that produces an

ordering of priorities between all the conflicting demands in the project. The weightings are arrived at by group consensus during the workshop.

3. Develop a decision matrix. Once the weightings to the various project objectives and sub-objectives have been set then it is necessary to decide which of the options will provide the best value when set against the objectives, that is, how well they meet the targets that have been set.

Many of the assessments resulting from Value Management process will be subjective, but the essential characteristic of value management is the fact that the decisions are a consensus view of everyone involved in the process. The analytical techniques used in value management enable the client briefing document to be used throughout the project lifecycle as the clear basis of all judgments on the values of the various issues involved.

The essential for Value Management is a feature valuable for consumers' group and the final result/performance.

One of the method effective for searching the most valuable elements both in the products and services is Value Engineering, also known as Value Analysis, Value Methodology or Value Management, that is a systematic and function – based approach to improving the value of the products, projects and processes (STASIAK-BETLEJEWSKA R. 2012).

Value Engineering, as the term associated with Value Management, is defined as the systematic approach that search functions/features creating unnecessary costs. It is a typical economical approach that underlines fundamentals of the designing process.

Those two terms mentioned above are strictly connected with Value terminology. Each of the term has own features staff, that cause its appliance in the industry or organizational activity. To identify the most appropriate methodology (Value Management or Value Engineering) there should be characterized the object of the management and the goals for the analyzed object.

## **6.2. Concept of the project management within the scientific international projects realization**

Basic term for the project management is the term “project”, what is associated with the following factors such as: period of lasting, the enter date, date of completion, schedule, tasks, resources, costs, and its relationship. The other issues that can be related to the term “project” are following: milestones, changes, conflicts, communication, objectives, requirements, risk.

The project is defined as the sequence of actions taken with the intent to achieve unique objectives within a specific timeframe. The key factor is an unique character, which allows to distinguish between design and results of operations, it is difficult to create.

In accordance to Project Management Institute, a project is unique in that it is not a routine operation, but a specific set of operations designed to accomplish a singular goal. A project team often includes people who don't usually work together – sometimes from different organizations and across multiple geographies. And all must be expertly managed to deliver the on-time, on-budget results, learning and integration that organizations need. Project management, then, is the application of knowledge, skills and techniques to execute projects effectively and efficiently. It's a strategic competency for organizations, enabling them to tie project results to business goals — and thus, better compete in their markets (PROJECT MANAGEMENT INSTITUTE 2013).

Scientific project management is a type of the project, which involves the joint implementation of activities that result from the initiatives of research partners in cooperation with the industry representatives or institutional organizations.

Scientific projects concerns mainly the realization of the research projects including the industry for R&D results applications. The general idea of the scientific international projects is to connect different types of partners (not only scientific) from different countries and research centers within the frames of international cooperation on joint research focused on

the international development policy directions, such as the sustainable development idea. The international scientific projects involves also the international knowledge transfer as the result of the research findings popularization result that is shown in the form of scientific publications in advanced scientific journals and patent activity as well.

Project management in the scientific international projects has some specific areas such as:

- Integration (of the scientists group, research findings, application within R&D activity, creating integrated groups including industry representatives and scientists/experts).
- Scope (knowledge built within the research topic identification and knowledge sharing with others through the project).
- Cost (establishing and sharing costs of projects activities and research organization and its later publications).
- Quality (working in joint international experts group on the knowledge improvement within the research).
- Communication (creating the communication channels for the information sharing within the research realization).
- Risk management including unsuccessful research risk decrease.
- Stakeholder management (organization and building networks that play supportive role with regard to the science and its achievements).
- Time (organization of the research works within the project let make research process realization much shorter even costless).

Project management within the scientific research projects brings an unique benefit within the goals, resources and schedule of the project.

In accordance to Project Management Institute opinion, value of project management is provided by the rapid, worldwide growth of project management:

- as a recognized and strategic organizational competence,
- as a subject for training and education,
- as a career path.

Scientific projects are oriented to a career path creating and educating

researchers within their research achievements and its applying in the industry practice.

### **6.3. The types of the scientific international projects**

The scientific projects offered by European higher education in general:

- includes basic research, or original research in experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, without any direct practical application or use,
- the competition may be submitted projects in the disciplines included in the list of research disciplines panels suggested by Ministry of Higher Education,
- duration of the project cannot be shorter than 12 months and may not exceed 36 months,
- indirect costs may not exceed about 30% of the requested direct costs , excluding the costs of the equipment. The amount of indirect costs cannot be increased during the project,
- the tasks covered by the proposal cannot be funded from other sources.

The different type of scientific project is the international project that is based on the mutual international cooperation resulting from the bilateral agreement and accompanying personal exchange as the supporting element for existing research process. The basic feature of that type of the scientific project is the international character that is crucial selection criteria. Selection criteria are identified depending on the scope of the international partners group. The most recognizable international scientific projects are European partnership projects including European Union partners and pre-members partners.

Specific country group is Visegrad group that includes: Hungary, Slovakia, Czech Republic and Poland. It is historically founded group that result from the mutual cooperation. Visegrad projects with the exception of cross-border projects, entities from at least three Visegrad Group

(V4) countries (the Czech Republic, Hungary, Poland and Slovakia) must be involved (e.g. a V4 organizer and at least two V4 partners). It is advised, however, to include partners from all V4 countries. Any organization or natural person in the world (with the exception of institutions directly funded from state budgets) is eligible for the funding provided that the proposed project has “Visegrad” features. Most recipients are non-governmental and civil society organizations (NGOs and CSOs), municipalities, schools and other public institutions. Projects financed within Visegrad projects should fall within one of the following six categories: cultural cooperation, scientific exchange and research, education, youth exchanges, cross-border cooperation or promotion of tourism. There are no preferences as of content of a given project. Each project topic shall, however, contain a reasonable Visegrad feature, i.e., the project must deal with the Visegrad Group countries or with Central Europe and its peoples. Priority is given to projects that create **common added value** rather to projects which simply just involve partners from several countries. (VISEGRAD FUND 2013).

#### **6.4. Results of Values Management applying in chosen scientific Visegrad projects**

Visegrad projects with the scientific character were the object of the analysis in the context of the project values identification.

The objectives of selected analyzed Visegrad scientific projects (Small Grants in period 2010 – 2013 with the following number: 11020163, 11130004, 11230002, 11310223, 11240096, 11340164, 11030020, 21120319) were connected with: conference, publication, workshop & training. As the main project selection criteria, that concerns the project partner, analyzed projects included more than 4 countries (Visegrad partners) and the average of projects partner was 10, what means that projects involved about 2 partners from each Visegrad country and additionally there were about 3 – 4 partners from countries foreign for Visegrad group (e.g. Croatia, Italy, India). It means that common added



value was realized within the main selection criteria meeting.

**Expected outputs that underline project feature (value):** scientific publications (books, manual, journals), photos exhibition, workshop with project partners participation, network organization, media campaign on research problems.

**Target groups of examined projects were:** researchers, university workers, PhD. students, industry representatives from Visegrad countries and other European countries which could be interested in research results shown during project actions. Media (such branch journals and radio) can be other target groups, which can also participate in promoting of Visegrad universities achievements that are reached owing to studies edited in the form of conference monographs.

**The other valuable benefits from the projects are:** interchange of information in mentioned areas, further expansion of this cooperation and its deepening (for making other research and scientific project on state and universities levels), active promotion of the V4 tourism and culture (e.g. including Polish and Slovakian mountains culture comparing to Hungarian and Czech culture), education through workshop, publishing of research cooperation results in the form of monographs and its promotion on branch journal and radio.

## **6.5. Conclusion**

The scientific international projects realized with applying Value Management result in the intermutual briefing about practice research and its estate in the area of production and services of enterprises and institutes acting in the international groups. It create possibilities of connecting and deepening researchers cooperation from different countries (e.g. countries of V4 group).

Scientific cooperation conducted through international project management is based on the knowledge and scientific – organizational experience exchange within identification and solving of technological and socio - economic problems. Get research findings and other

experiences can support the knowledge transfer to quality improvement in manufacturing and service enterprises. The project undoubtedly create a solid foundation for further scientific cooperation, as well as strengthen the intellectual potential employees of partner universities.

### **Acknowledgement**

This work is connected to Visegrad Small Grant projects realized in period 2010 – 2013 (with the following number: 11020163, 11130004, 11230002, 11310223).

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