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PROCUREMENT MANAGEMENT ON THE EXAMPLE OF BALTICMUSEUMS 2.0 AND BALTICMUSEUMS 2.0 PLUS PROJECTS

Abstract

The paper describes experiences regarding procurement management gained during realization of international projects BalticMuseums 2.0 and BalticMuseums 2.0 Plus. The project team adopted instructions concerning the procurement management processes and phases from the Project Management Body of Knowledge but as the Project Procurement Management knowledge area is just a framework of suggested inputs, outputs, techniques and tools it had to be tailored to the requirements and conditions set by the projects. The paper provides some useful hints concerning realization of certain procurement management procedures and processes.

Introduction

One of the most important success factors in project realization is proper project management. To achieve this goal, the performing organization should, among other things, use an appropriate project management methodology

and tools to support it. In realization of BalticMuseum 2.0 project the project team acknowledged that PRINCE2 methodology should be adopted to provide structured planning, realization, delegacy, monitoring and controlling of all project processes in order to achieve project goals within scope, time and budget frames. The methodology also indicated essential communication and documentation processes and appropriate techniques and IT tools were used to support these processes[1]. However, when it comes to procurement management, PRINCE2 does not provide assistance, as it regards this process as a specialist activity rather than a generic part of project management[2]. That is why it was decided to apply instructions described in the Project Procurement Management knowledge area of the Guide to the Project Management Body of Knowledge to manage procurement processes within BalticMuseums projects.

When it comes to purchasing goods or services in projects co-financed by EU funds, as is the case with BalticMuseums projects, it is specially important to apply public procurement rules to insure and secure transparent and fair conditions for competing on the common market and even if the value of the purchase does not exceed the specific thresholds, the purchaser must take into account the general principles of the European Community Treaty and ensure the adequate transparency and equal treatment throughout the procurement process[3].

The following chapters concentrate on describing the main phases of the Project Procurement Management knowledge area according to the Guide to Project Management Body of Knowledge, charactarizing BalticMuseums 2.0 and BalticMuseums 2.0 Plus projects and sharing experiences concerning procurement management gained during realization of the projects.

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[1] Z. Drążek et al., *Zarządzanie projektem webowym na przykładzie BalticMuseums 2.0 Online Information Platform*, in: „Studia i Materiały Polskiego Stowarzyszenia Zarządzania Wiedzą", vol. 57, „Strategie zarządzania e-biznesem w przedsiębiorstwach 2011", ed. W. Bojar, Polskie Stowarzyszenie Zarządzania Wiedzą, Bydgoszcz 2011, pp. 39–49.

[2] Office of Government Commerce, *Managing successful projects with PRINCE2*, TSO, UK 2009, pp. 8–9.

[3] South Baltic Cross-border Co-operation Programme 2007–2013, *Programme Manual*, http://en.southbaltic.eu/files/?id_plik=3950, accessed 20.06.2012.

1. Procurement management knowledge area

According to the project procurement management knowledge area described in the Guide to the Project Management Body of Knowledge[4], there are six phases which should be performed to acquire goods or services from external suppliers. They are: procurement planning, solicitation planning, solicitation, source selection, contract administration and contract close-out. During the first phase the performing organization must determine what it wants to procure and when. In the second phase the requirements for the desired product have to be documented and potential sources should be identified. The solicitation phase is the time of obtaining quotations, offers or proposals. After that the decision of choosing one of the sellers must be made and a contract signed. The contract management phase is about managing relationship with the contractor and the last phase completes and settles the contract.

In the following subchapters, the above-mentioned procurement management phases will be described in detail including process inputs, outputs, techniques and tools which can and should be used in each phase.

2. Procurement planning

Procurement planning is a process of identifying what products or services need to be procured, how it should be done and when. The main inputs to this process include:
  – scope statement, which describes the project boundaries,
  – product description, which provides a description of the product/service which will be procured,
  – procurement resources, i.e. a formal contracting group or an expert to perform the procurement activities,
  – market conditions, which provide information on what products/services are available in the marketplace, form whom and under what terms and conditions,

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[4] W.R. Duncan, *A Guide To The Project Management Body Of Knowledge*, PMI, USA 1996, pp. 123–133.

– other planning outputs, like preliminary cost and schedule estimates, quality plans, identified risks, etc.,
– constraints, these are the factors which limit the procurement possibilities; most common constraint are the funds available.

The following techniques and tools can and should be used in the procurement planning phase:

– make-or-buy analysis, a technique used to determine whether the needed product/service should be bought or can be produced cost-effectively by own resources,
– expert judgment, required to assess the inputs to the process,
– contract type selection, choice concerning the type of contract that would be the most appropriate.

The output to this process include:

– procurement management plan, which describes how the remaining procurement processes will be managed,
– statement of work, that describes the procurement product in sufficient detail to allow the potential external suppliers to determine if they are capable of providing it and on what conditions.

3. Solicitation planning

Solicitation planning is a process involving preparation of documents needed to support solicitation. The inputs to this process consist of procurement management plan, statement of work and other planning outputs generated in the previous phase. The tools and techniques used in this process include standard forms of documents, such as: standard descriptions of procurement items, standardized versions of the needed bid documents, etc., as well as expert judgment to assess if everything is correct. There are two main outputs from this process:

Procurement documents, which are used to solicit proposals from potential suppliers, and the most common types of procurement documents include: Invitation for Bid, Request for Proposal, Request for Quotation, Invitation to Negotiation, and Contractor Initial Response; the procurement documents should be well structured, include relevant statement of work, a description of

the desired form of response and any required contractual provisions, and in some cases the structure and content of these documents are defined by law; the procurement documents should be rigorous enough to ensure consistent, comparable responses but at the same time flexible enough to allow consideration of possible suggestions for better ways to satisfy the requirements,

Evaluation criteria, which are used to rate or score proposals; they can be objective or subjective and are usually included in the procurement documents; the evaluation criteria may be limited to purchase price or, when other criteria are needed, they should be identified and documented to support an integrated assessment.

4. Solicitation

The solicitation process involves obtaining proposals/bids from the potential suppliers. There are two inputs to this process – the procurement documents produced in the previous phase, and qualified seller list, which is a list of potential sellers about which the organization has some information; if such a list is not available the organization has to develop it. The tools and techniques used in the solicitation process include:
 – Bidder conferences, which are meetings with the prospective suppliers prior to preparation of the proposal, to ensure that they all have a clear and common understanding of the procurement,
 – Advertising, that is placing advertisements in newspapers or professional journals; in some cases public advertising of certain types of procurement items is required by law.

The output from the solicitation process are the proposals submitted by the prospective suppliers, which describe their ability and willingness to provide the requested product, prepared in accordance with the requirements of the relevant procurement documents.

5. Source selection

In the source selection phase, the submitted proposals are assessed against the evaluation criteria set in the solicitation planning phase in order to select

the product/service provider. The proposals, evaluation criteria and additionally organizational polices are the inputs to this process. Tools and techniques used here include:

– Contract negotiation – clarification and mutual agreement on the structure and requirements of the contract prior to its signing,
– Weighting system – it is a method of quantifying qualitative data in order to minimize the effect of personal prejudice on source selection; it usually involves: assigning a numerical weight to each of the evaluation criteria, rating prospective sellers on each criterion, multiplying the weight by the rating and totaling the resultant products to compute the overall score,
– Screening system – it involves establishing minimum requirements of performance for one or more of the evaluation criteria,
– Independent estimates – these are estimates prepared by the procuring organization to check on proposed pricing; significant differences may indicate that the statement of work was not adequate or that the prospective seller misunderstood it.

The only output of this phase is the contract, that is a mutually binding agreement which obligates the supplier to provide the specified product/service and then obligates the buyer to pay for it.

6. Contract administration

This process is about ensuring that the seller's performance meets the contractual requirements and includes application of appropriate project management processes to the contractual relationship and integration of the outputs from these processes into the overall management of the project. The processes which need to be applied include: project plan execution, performance reporting, quality control, change control, finance management. The inputs to this process are:

– Contract, signed during the previous phase,
– Work results – the supplier's work results in the form of completed and not completed deliverables, costs incurred, etc.,
– Change requests – modifications to the terms of the contract or to the description of the product/service to be provided; in a case of

unsatisfactory performance of the supplier a decision to terminate the contract is also handled as a change request,
– Seller invoices – to request a payment for work performed the supplier needs to submit appropriate invoices.

The tools and techniques for contract administration include:
– Contract change control system – it defines the process by which the contract may be modified, like paperwork, tracking systems, dispute resolution procedures and approval levels necessary for authorizing changes,
– Performance reporting – it provides information about how effectively the seller is achieving the contractual objectives,
– Payment system – the payments to the seller are usually handled by the accounts payable system of the organization.

The outputs from this process include correspondence (documented communication between the buyer and the seller on different aspects concerning the contract), contract changes (approved and unapproved changes to the contract) and payments.

7. Contract close-out

The contract close-out process consists of product verification and administrative close-out. The main input to the contract close-out process is the contract documentation, which includes the contract, all requested and approved contract changes, any technical documentation developed by the seller, seller performance reports, financial documents and results of any carried out inspections. The technique used in this process involves procurement audits, which are structured reviews of the whole procurement process. Its objective is to identify successes and failures for future procurement processes. There are two outputs from the contract close-out phase: contract file, which is a complete set of indexed records associated with the contract and formal acceptance and closure, which often has a form of a written notice to the seller that the contract has been completed.

In the following chapters each phase will be discussed with an insight to the experiences gained during realization of the BalticMuseums 2.0 and BalticMuseums 2.0 Plus projects.

8. Characteristics of BalticMuseums 2.0 and BalticMuseums 2.0 Plus projects

Both BalticMuseums 2.0 and BalticMuseums 2.0 Plus are projects realized within the South Baltic Cross-border Co-operation Programme 2007–2013 and are part-financed from the European Regional Development Fund under the European Territorial Co-operation objective of the cohesion policy[5]. The budget of each of the projects exceeds the sum of one million euro, whereat refinancing from the European Regional Development Fund amounts to about 85%. The BalticMuseums 2.0 project was realized in the years 2009–2012 and BalticMuseums 2.0 Plus in the years 2011–2013[6].

The international consortium responsible for realization of both projects consists of two scientific institutions – the University of Applied Sciences in Stralsund and the University of Szczecin, and four oceanographic museums – The German Oceanographic Museum in Stralsund, Gdynia Aquarium, Lithuanian Sea Museum in Klaipeda and the Museum of the World Ocean in Kaliningrad.

The general objective of both projects is the promotion and effective use of the natural heritage stored in the oceanographic museums by means of cross-border tourism information tools, in order to increase their attractiveness and competitiveness, especially for international tourists. The main aims of the BalticMuseums 2.0 project entitled "Joint development of cross-border information products for South Baltic Oceanographic Museums" included: development of a multilingual online information platform, which enables a common presentation of tourist information by the museums – participants of the project, development of an online ticketing system and a prototype of a modern, multilingual visitor guidance system. The main objective of the BalticMuseums 2.0 Plus project entitled "Implementation of eGuides with cross-border shared content for South Baltic Oceanographic Museums" is to develop multilingual, shared content describing exhibits of the museums – partners of the project, and make it available for the tourists via multimedia e-guides[7].

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[5] *Operational Programme of South Baltic Cross-border Co-operation Programme*, http://en.southbaltic.eu/files/?id_plik=176, accessed 20.06.2012.

[6] *BalticMuseums 2.0 and BalticMuseums 2.0 Plus projects webpage*, http://www.balticmuseums.org, accessed 20.06.2012.

[7] Ibidem.

According to the assumptions in both projects, some products or parts of them were planned to be commissioned to external providers, what required application of suitable procurement management procedures, which was performed according to the procurement management knowledge area of Project Management Body of Knowledge described in the previous chapter.

9. Procurement and solicitation planning in the BalticMuseums projects

Due to time and personnel constraints, the projects' plans assumed that certain tasks will be performed or products developed by external entities and appropriate amounts were assigned for that purpose in the projects' budgets. The team from the University of Szczecin, was responsible, among other things, for development of the Online Information Platform, which included preparation of a detailed plan of all necessary activities and tasks as well as specification of all needed products associated with it. Some tasks and products were assigned for realization to external entities, what required carrying out procurement procedures in order to choose the best offer.

One of the most important and difficult to produce inputs to the procurement planning phase were descriptions of the products or services, because such a description had to be sufficiently detailed and precise to allow potential suppliers to determine if they are capable of providing it and on what terms and to insure that we get exactly what we need. It is essential that the descriptions of the products, in this case a website graphical layout, panoramic gallery or mobile version of a website, are done with assistance of an expert in the field, so that all important details are listed.

Another important issue was the investigation of market conditions in order to find out from whom and under what conditions the product or service was available. In case of the BalticMuseums projects, this was mostly done by searching the offers available via Internet, by e-mail or phone.

Before the solicitation process could be initiated, the team had to prepare all necessary documentation which, depending on the type of contract and the estimated cost, included standard forms of documents used for public tender procedure or internally developed documents for a request for proposal. The product/service description produced earlier had to be enriched by studied

criteria of bids' assessment. The experiences gained during realization of the projects taught us that in regard to certain services and products the purchase price cannot be the only decisive factor, which determines which bid should be chosen. When the product includes many subjective elements, as in the case of graphical layout of a website, or when the product is planned to be further developed or changed, like for example a content management system, it is important to take into account the bidders' experience and achievements in the field of interest and this should be properly described in the evaluation criteria. The two criteria most often used by us were the number of previously performed products of the same kind and portfolio of previously delivered products.

When all documentation was prepared and double-checked by experts, it was ready to enter the next phase: the solicitation phase.

10. Solicitation and source selection phases in BalticMuseums projects realization

In the BalticMuseums projects, there were generally two kinds of solicitation processes – one was public procurement procedure and the other one request for proposal. The first type of process was used in case of higher value contracts and the other type for minor value contracts. In the former case, the procurement documents prepared together with the Procurement Department staff in the previous phase were publicly advertised and so made available to any prospective supplier to see and to send their bid. After an appropriate time period the advertising was terminated and submitted proposals were collected, checked for correctness and presented for assessment in the source selection phase. In the letter case the request for proposal prepared in the previous phase by project team members was sent via e-mail to potential suppliers from the qualified sellers list, which was also produced in the solicitation planning phase. The received proposals were then checked for correctness and presented for evaluation.

The source selection phase concentrated on assessment of submitted offers against the predefined evaluation criteria in order to determine the product/ service provider. The first step of the assessment process included screening the bidders' offers to determine if all of them meet the minimum requirements (for example in the procurement processes for panoramic galleries of the museums,

we required that the bidders present at least one gallery made by them in dark interiors). The second step was to compare overall score obtained by each bidder according to the adopted weighting system. In case of quantitative data (like, for example, the number of previous realizations/projects/products) the rating could be done easily but in case of qualitative data (like, for example, uniqueness or quality of previous realizations), the assessing committee had to browse and evaluate each bidder's realizations in order to rate them.

There is one more important issue which should be carefully investigated when comparing and assessing the offers. If the proposed pricing of the submitted offers differs significantly or one of them is significantly lower than others, it may indicate that the statement of work was not precise enough or the bidder misunderstood it. In such case an additional clarification procedure should be carried out before indicating the winner.

After the assessment process all bidders were informed about the results of the solicitation process and the winning supplier was asked to sign the contract.

11. Contract administration and close-out

Due to projects' time constraints, contract administration phase was highly concentrated on regular monitoring the supplier's work results in the form of completed deliverables (i.e. completed galleries, maps, certain stages of website creation). Frequent check-ups were also important on account of the subjective aspects of the expected products (graphical elements, sound effects, layout and style of texts, etc.). As the contracts usually allowed for certain changes suggested by the Buyer, such changes could be introduced at the early stages of product development. One of the methods, used during realization of BalticMuseums projects, for keeping track of the work progress and complying with time constraints was making up a work schedule indicating the milestones when certain deliverables were due and how much time was available for the Buyer to submit their remarks or change proposals. Such a schedule motivated both parties to meet the deadlines and deliver/accept the final product or service.

The contracts included a section regarding financial panalties for the Seller in case of not delivering the product in due time or if the delivered product was not compliant with the statement of work but if the Buyer asked for changes

in some subjective elements of the products or services these panalties did not come into force. Such contract provisions were secure for both parties and worked well for the projects.

In the case of BalticMuseums projects, all payments were done after delivery of the final product or service so there were no part payments and the suppliers had only one final invoice to submit after the work had been done.

The close-out process consisted in verification of the product/service delivered by the provider together with all required documentation, which was carried out by team members and approved by the project manager. The formal acceptance of the product/service was confirmed by an acceptance protocol, which was signed by both parties.

Summary

Adoption of the instructions provided in the Project Procurement Management knowledge area of the Project Management Body of Knowledge proved to be successful in realization of procurement management processes in BalticMusuems projects. The requirements and conditions of the projects co-financed by the European Union required special attention in application of public procurement rules to ensure adequate transparency and equal treatment throughout the procurement process. The paper described how the following phases of the procurement management procedures were realized in BalticMuseums projects and gave an insight into possible pitfalls, which should be avoided and provided some useful hints, which should be followed.

Literature

1. *BalticMuseums 2.0 and BalticMuseums 2.0 Plus projects webpage*, http://www. balticmuseums.org, accessed 20.06.2012.
2. Drążek Z. et al., *Zarządzanie projektem webowym na przykładzie BalticMuseums 2.0 Online Information Platform,* in: „Studia i Materiały Polskiego Stowarzyszenia Zarządzania Wiedzą", vol. 57, „Strategie zarządzania e-biznesem w przedsiębiorstwach 2011", ed. W. Bojar, Polskie Stowarzyszenie Zarządzania Wiedzą, Bydgoszcz 2011.

3. Duncan W.R., *A Guide To The Project Management Body Of Knowledge*, PMI, USA, 1996.
4. Office of Government Commerce, *Managing successful projects with PRINCE2*, TSO, UK, 2009.
5. *Operational Programme of South Baltic Cross-border Co-operation Programme,* http://en.southbaltic.eu/files/?id_plik=176, accessed 20.06.2012.
6. South Baltic Cross-border Co-operation Programme 2007–2013, *Programme Manual*, http://en.southbaltic.eu/files/?id_plik=3950, accessed 20.06.2012.

ZARZĄDZANIE ZLECENIAMI NA PRZYKŁADZIE PROJEKTÓW BALTICMUSEUMS 2.0 I BALTICMUSEUMS 2.0 PLUS

Streszczenie

Artykuł opisuje doświadczenia związane z zarządzaniem zleceniami zdobyte podczas realizacji międzynarodowych projektów BalticMuseums 2.0 i BalticMuseums 2.0 Plus. Zespół projektowy przyjął zestaw wskazówek dotyczących procesów i faz zarządzania zleceniami opisany w zbiorze zasad zarządzania projektami Project Management Body of Knowledge, ale jako że opisany tam obszar wiedzy zarządzania zleceniami jest jedynie ogólnym zarysem sugerowanych wejść, wyjść, technik i narzędzi, trzeba było dostosować je do wymagań i warunków projektowych. W artykule zawarto kilka rekomendacji oraz przydatnych wskazówek związanych z realizacją procedur oraz procesów zarządzania zleceniami.

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