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**DEVELOPMENT OF E-SERVICES THROUGH  
PROJECTS – CASE STUDY**

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**ROZWÓJ E-USŁUG POPRZEZ PROJEKTY –  
STUDIUM PRZYPADKU**

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**Summary:** The aim of this paper is to identify the role of projects in the development of innovative company on the example of selected innovative enterprises from Lower Silesia. The enterprise selected for the research was the Samorządowy Informator SMS Sp. z o.o., which provides five main e-services. Each of those was designed basing on project management methodology and is a response for the market needs. The article presents the development of selected e-services and the enterprise development that could be reached through these e-services. Orientation for projects is one of the pillars to implement company's strategy. The analysis of the enterprise indicates that ability to create e-services as well as effective project portfolio management helps in company's development on a competitive market.

**Keywords:** e-service, project management, communication, SMS, information.

**Streszczenie:** Celem niniejszego artykułu jest identyfikacja roli projektów w rozwoju instytucji na przykładzie wyselekcjonowanego w badaniach innowacyjnego przedsiębiorstwa z Dolnego Śląska. Do badań wybrano przedsiębiorstwo Samorządowy Informator SMS Sp. z o.o., które świadczy pięć głównych e-usług. Każda z usług została wyprodukowana na podstawie metodyki zarządzania projektem i stanowi odpowiedź na zapotrzebowanie rynku. Artykuł prezentuje rozwój poszczególnych e-usług oraz rozwój przedsiębiorstwa, jaki udało się dzięki nim osiągnąć. Orientacja na projekty stanowi jeden z filarów realizacji strategii spółki, a analiza przedsiębiorstwa pozwala stwierdzić, iż umiejętność kreowania e-usług i efektywnego zarządzania portfelem projektów umożliwia przedsiębiorstwu rozwój na konkurencyjnym rynku.

**Słowa kluczowe:** e-usługi, zarządzanie projektami, komunikacja, SMS, informacje.

## 1. Introduction

The aim of this paper is to identify the role of projects in the development of innovative company from Lower Silesia. The enterprise selected for the research is the Samorządowy Informator SMS Sp. z o.o., which provides following e-services:

- Municipal SMS Guide (SISMS) – first project implemented by the company. Its product was launched in April 2009.
- SMS Guide (ISMS) – project from July 2010, dedicated for the passengers of Polish railways.
- SISMS Messenger (KSISMS) – mobile application being a support for SISMS since October 2013.
- ISMS Messenger (KISMS) – mobile application being a support for ISMS since November 2013.
- MOBIS – e-service which creates modular mobile units for local government units in Poland.

E- Services will be elaborated in further part of this research paper.

The authors have applied participant observation and interviews with company's management board as the fundamental research tools. The choice of the subject matter was preceded by the research conducted in 2010. The result of this research was to highlight the entity with the greatest development potential amongst 65 projects. Each of them was granted 200 000 euro from the Operational Programme Innovative Economy, Operation 8.1. Development potential of these projects was assessed on the basis of six criteria:

- geographical scope of service (from which voivodeships customers of this service come from),
- amount of service customers,
- competition for the studied service,
- current progress of service implementation,
- service revenue potential,
- granted prizes and awards.

Samorządowy Informator SMS Sp. z o.o., operating in Wrocław, is considered as an enterprise with the best development potential. Since 2009 the enterprise implements the project titled: "Creating a Web Service and Automated Collective Communication SISMS System for Municipality Inhabitants" and – since 2010 – "SMS Catalogue" for regional railways. Further part of the article provides the characteristics of key projects in the e-services development strategy for the enterprise SISMS Sp. z o.o. In addition, there are several important definitions and principles describing project management co-funded with the structural EU funds.

## **2. The project and project management – methodological objectives**

Minding the pragmatic approach towards the research problem, we adopt definitions from professional institutions which deal with project management. In the present deliberations definitions of "project" and "project management" are adopted following the Project Management Institute in the USA. This institution, as it is

recognized, is a global leader in the development of project management methods and has been setting the standards in this respect for few decades [*Kompendium wiedzy...* 2000].

What is the project therefore? The project is defined as an enterprise with the precisely defined beginning and ending, purpose and budget.

Project management is the process of control and application of available knowledge, skills, tools and techniques aiming to reach the expectations of project ordering party. This process should aim to use necessary human, financial, property and information resources efficiently.

EU subsidies, defined as funds provided to financial institutions in order to refund already incurred eligible costs for project implementation, can be the supplemental source of funding for these projects. The supplemental source of grants for studied enterprises is the European Regional Development Fund. The use of grants is described in so-called operational program, which is a document detailing objectives, criteria and procedures for the use of EU grants and the state budget, for a given type of support.

Project management should be held along with a proper methodology. Its best known, worldwide valued and widely used form was established by the Project Management Institute [Duncan 1996].

Another methodological proposition in the field of project management is the concept called PRINCE. It was developed in the UK on the basis of a longstanding experience in an implementation of numerous projects. PRINCE – i.e. Projects IN Controlled Environments is the registered and reserved trademark of the Office of Government Commerce and copyright is held by the government of the United Kingdom. In 1996 a modified version of this methodology was created under the name PRINCE2 and is now adapted for different types of projects.

Finally, it is worth mentioning the project management method particularly important for the object of these studies – the Project Cycle Management. This method is intended to manage financial projects funded by the European Union, particularly so-called training projects. It was established in 1991 at the European Commission request. In Poland, in 2004, the Ministry of Economy, Labour and Social Policy published the manual describing this methodology which was based on managing projects financed by the European Social Fund.

Understanding these methods and their accurate application helps in the efficient project management. For institutions benefiting from the EU funds it is crucial to identify and to use these methods adequately in managing projects co-financed by the EU. For the institutions benefiting from structural funds (and these are available since the accession of Poland to the European Union) it is important to realize several cardinal principles. Therefore the institutions should be aware that:

- co-financing is addressed only for the projects,
- co-financing is the refund of expenses already incurred in,
- this will reimburse only the eligible costs i.e. costs indicated by the European Commission in the regulation,

- the maximum amount of refund is defined in operational programs,
- in order to obtain the funding, each project passes the formal, conceptual and technical assessment,
- the basis of receiving grant is: signed agreement, implementation of the project in accordance with application documents, invoice paid to the contractor/supplier.

The European Commission sets the management standards for all projects co-funded from the European Regional Development Fund and the European Social Fund, being in effect in Poland in 2004-2013. These standards are included in the manuals for operational programs, annexes to them, regulations, generators of applications as well as in application documents templates available on the operational programs websites. The most important in the analysis of acquiring grants effectiveness is the compliance with standards set by the donors and institutions designated by them. It is also worth realizing that project management co-financed by the EU begins along with the necessity of the project initiator, and ends up while receiving a grant. In addition, the applicant must guarantee the permanency of project aims for the next three years [Białynicki-Birula et al. 1999].

### **3. Summary of projects implemented by the SISMS Sp. z o.o.**

Samorządowy Informator SMS Sp. z o.o. was the first after-incubation “spin-off” enterprise in Wrocław Scientific and Technological Medical Park. The founders of the enterprise were a researcher, a municipal worker, an IT specialist from Wrocław University of Technology and an experienced sales manager from an international corporation. The strategy of the company is to develop on the basis of following projects and services:

1. Municipal SMS Guide – first project,
2. SMS Guide – second project,
3. Messenger (KSISMS and KISMS) – third project,
4. MOBIS – fourth project.

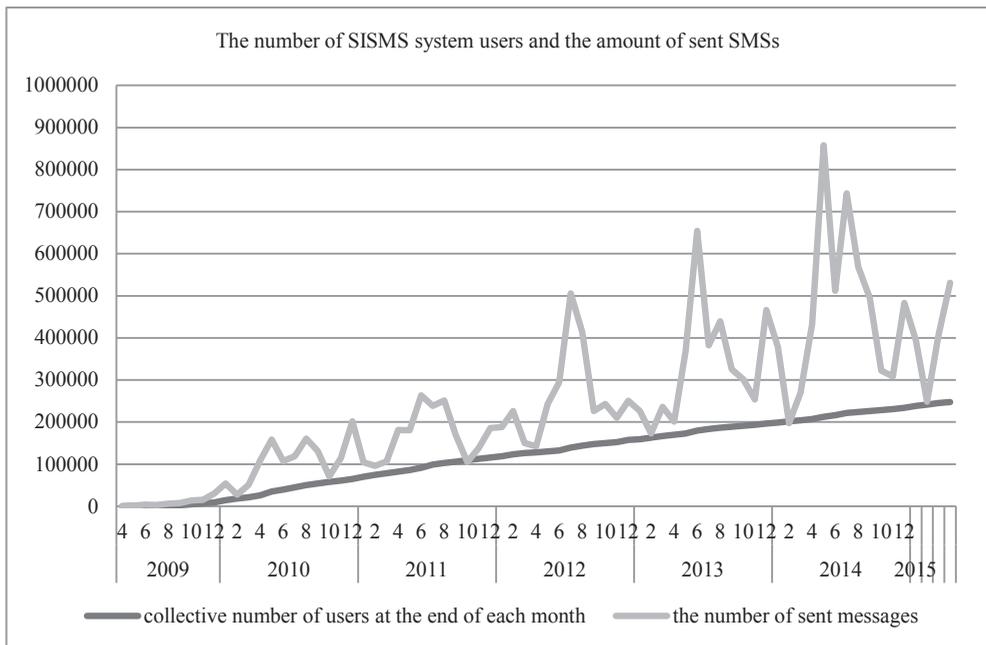
These projects became functionally activated and are continuously developing. An example of such development is what has been added to the basic functionality: sending SMSs in the first and second project, informational applications for mobile phones, e-mail communication, SMS Cloud as well as new, dedicated e-service (Messenger).

#### **The “Municipal SMS Guide” project**

This concept based on the creation and implementation of the fastest collective communication between local authorities and inhabitants via SMS. This project has been awarded with the second place in the national competition organized by the Polish Agency for Enterprise Development and the Ministry of Internal Affairs on the most innovative e-service in Poland in 2009. The project obtained funding from the Operational Program Innovative Economy (8.1) Municipal SMS Guide, designed

to communicate between municipality and its inhabitants. SISMS Company and administrators in municipalities inform every inhabitant registered in the system about important matters via SMS at a short notice. Information sent in advance about forthcoming dangers gives inhabitants a chance to protect from losing health or even life, as well as from the major property loss. The more frequent soaring atmospheric phenomena, catastrophes, serious industrial disasters, and other dangers determined creating innovating ICT system called “Municipal SMS Guide”. In order to register one needs to send SMS on the given phone number, and from this moment the inhabitant will be obtaining complimentary text messages with information about:

- cultural and sport events,
- dangers e.g. windstorms, strong storms, floods, disasters,
- accidents e.g. electricity, gas or water outage, closed road,
- heat outage,
- complimentary medical examinations and health programs,
- school education and childcare,
- sessions of the commune council,
- working hours of institutions like: offices, health centres,
- critical situations endangering life, safety and property.



**Fig. 1.** Growth rate of the SISMS system users in the years 2009-2015

Source: own elaboration on the basis of the information from SISMS Sp. z o.o.

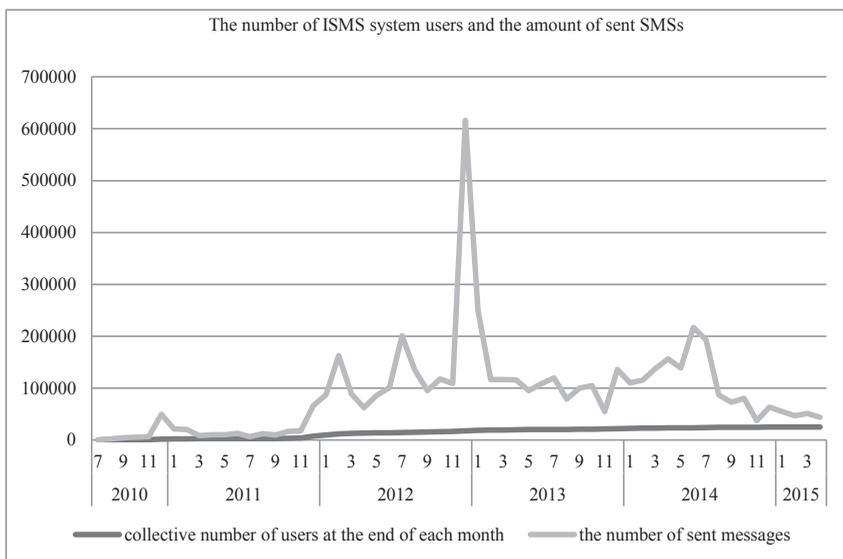
The company has been running the system since April 2009, firstly cooperating with Plus GSM, and further with ERA GSM, Play and Orange as well. In order to increase the effectiveness of sent SMSs as well as lower delivery costs by avoiding inter-operator costs, the company became an integrator of SMS service. The diagram below shows the number of users and messages sent since the system launched.

As can be seen in Fig. 1, the number of registered numbers in SISMS system systematically increased. In the graph one can see neither a drop in the number of registered phone numbers, nor a drop of the growing trend in the relation to the number of registrations. The above prefigures stable but consistent growth of interest for this e-service. It is worth noticing that SISMS system is used most frequently from May to August – the period with the most dynamic weather events in Poland.

Now 305 municipalities from all voivodeships in the country are the customers of SISMS in comparison with 71 municipalities in June 2010. Currently, it is the biggest collective communication system in Poland. The potential of this project is estimated at about 2500 institutional and about 2 000 000 individual customers.

**The SMS Guide project**

In July 2010 the company launched another railway information system for Lower Silesia on the request of Voivodship Government. Passengers of local railway trains upon registering in ‘isms’ system obtain SMS about delays, connection failures and train schedule-related accidents. The system is being used by the growing number of clients (more than 25 000) and while the growth is rather small, it is stable.



**Fig. 2.** Growth rate of the ISMS system users in the years 2009-2015.

Source: own elaboration on the basis of the information from SISMS Sp. z o.o.

In September 2011 the Company won a tender for launching the “SMS Guide” system on the national scale. In two months since the beginning the number of users as well as the number of SMSs sent grew rapidly, which is shown in Figure 2.

The statistics show that the second project of the Company, “SMS Guide”, can be evaluated positively in terms of the growing number of users and sent text messages. Nevertheless this number depends on the number of issues with rail schedule by the Przewozy Regionalne S.A. (regional railways) in Warsaw and by other local railways. The more changes and turbulences in Polish national and local railways, the greater number of text messages sent to passengers in 2012/2013, when new rail schedule was implemented, which is detailed in Figure 2. The potential of this project is estimated at about 50 institutional customers and about 1 000 000 individual customers.

### **The SISMS Messenger and ISMS Messenger projects**

E-service Messenger was created as a response to the SISMS Sp. z o.o. clients’ needs. The constant growth of registered customers of the SISMS e-service resulted in the growth of costs of system service on the customer side. It was linked to the number of sent SMSs. Not to let municipalities lower the level and quality of communication, e-service Messenger was developed in a way that text messages were free of charge. Some additional advantages of the messenger are:

- lack of strict limitations of text length, as it is in the case of SMS. For SMS this is 160 characters including space, while in the messenger the administrator can prepare message of 10000 characters including space. In addition, Polish diacritical marks can be used in the messenger, while the case of SMS using these marks reduces the number of characters.
- in the Messenger the administrator preparing a message can attach photographs, videos or other items.
- The Messenger gives also an opportunity to determine a priority of the message, e.g. “message for events in commune”, “urgent message” and “warning”. A user – the recipient of messages – can set the level on an application which messages they want to obtain.
- The Administrator, understood mostly as the municipality, can also use the “economic mode”. When turning this option on, the system shall attempt to deliver SMS Cloud message (via Messenger) for a given time period, and if that fails, regular SMS will be sent. It is important insofar as the SISMS system intends to warn inhabitants of the danger, and that it cannot be the subject of financial conditioning.

The idea of KSISMS service was met with a large interest both on customers as well as users side, which is visible in Figure 3. Presenting the collective number of registrations in the system.

The idea of SISMS Messenger was accepted so well from the very beginning that the month after its launch the company offered also the Messenger dedicated

to ISMS service. As studying the data shown in Fig. 4 it should be mentioned that ISMS Messenger is dedicated to Polish Railways, so the number of its users is limited to those using rail transport.

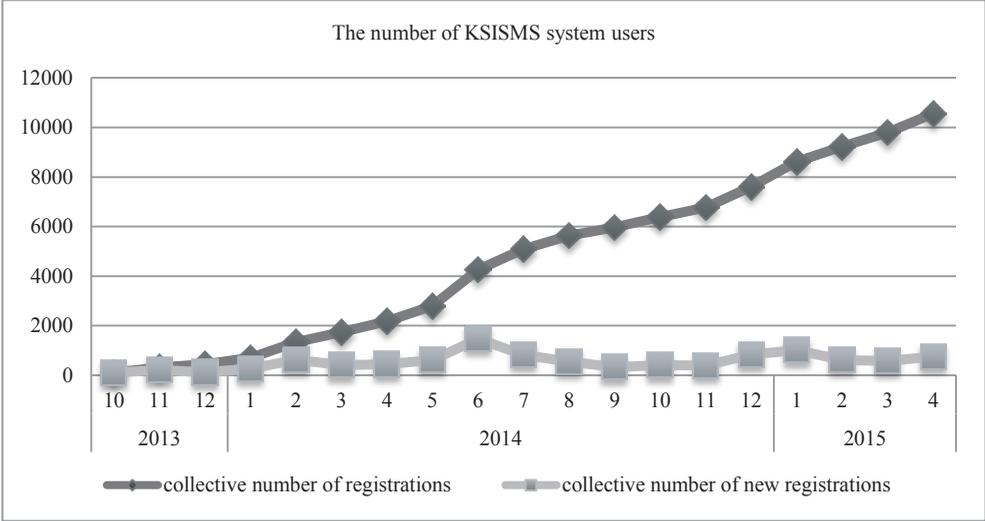


Fig. 3. The number of KSISMS e-service users

Source: own elaboration on the basis of the information from SISMS Sp. z o.o.

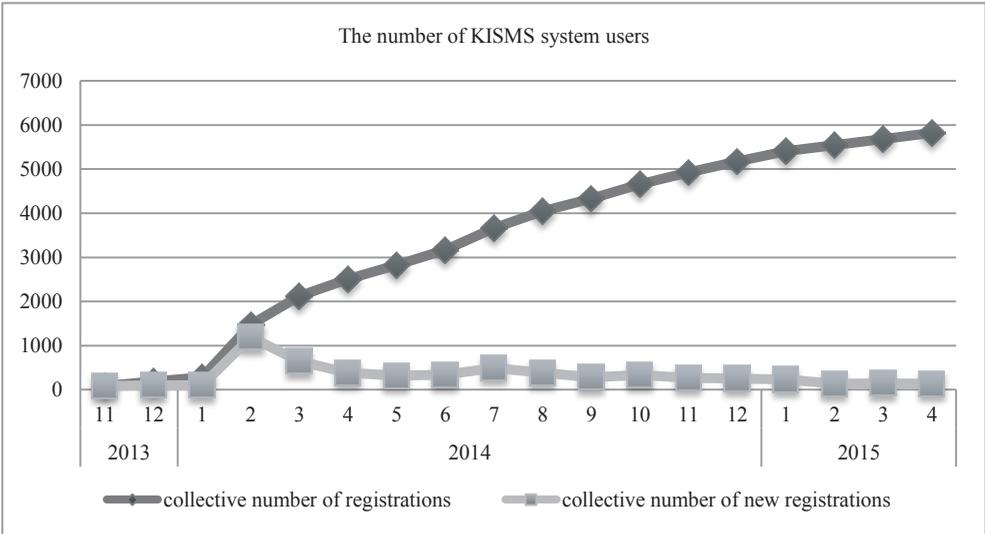


Fig. 4. The number of KISMS e-service users

Source: own elaboration on the basis of the information from SISMS Sp. z o.o.

On the graph one can clearly notice the moment of a strong promotion of ISMS Messenger in February-March 2014. Going further, monthly increase of new registrations gradually and progressively decreases, while the collective registration number constantly rises, which means that KISMS entered sustainability period.

### **The MOBIS project**

MOBIS is a relatively new e-service – it was set for the market on the second half of 2014. The core idea is to create a scalable application by which municipalities can communicate uni- and bidirectionally with inhabitants, tourists or entrepreneurs. By dint of the scalable solution, both small and large municipalities can have that solution implemented. An additional attribute is the exchange of information among application users without office administrators' intermediaries, so it can possibly gain a sense of local patriotism, and can boost the awareness of inhabitants regarding the most immediate problems.

The first local government evaluating MOBIS application is municipality of Polanica-Zdrój. Currently (May 2015) there are eight entirely ready and available services in Google Play and seven on the App Store. Subsequent several ones are in the preparation phase (filling with content), which means that the MOBIS project seems to be developing very quickly in the near future.

## **4. Conclusions**

SISMS Sp. z o.o. company offers innovative collective and mobile communication services in two sectors:

- local governments,
- railway carrier.

The analysis of company's operation and organizational structure as well as interviews with the management board confirms merit, functional and geographical approach of this enterprise. The following activities are recognized by the management board as prevailing:

- projects based on existing bulk SMS sending technologies and mobile web pages,
- direct sales features covering geographically the whole country.

Adopting this orientation and priorities in the development strategy for SISMS Company implies identified changes in the company's functioning. Merit, functional and geographical orientation adopted by the Board led to create systems supporting the realization of strategy at the operational level, that is:

- system of reimbursement and motivation for managing staff depends on the income value and sales profitability,
- system of reimbursement and motivation for sales staff depends on the amount and quality of sales,

- system of reimbursement for project management staff depends on the permanent and variable salary which is a bonus depending on the outcome (i.e. meeting a scheduled scope of project, deadline, budget and quality of the project),
- business controlling,
- choosing project management methodology and its implementation through training and workshops,
- using tools for managing projects by all company's staff, i.e. work timetable, monitoring of projects realization progress, quality standards in internal and external communication,
- price strategy of services based on three pillars: system start-up toll, monthly fee, SMSs toll.

The sense of “confidence of success” was observed among SISMS Sp. z o.o. management board members while working on abovementioned projects. Management board along with the staff, believe in the market success of each project. Management board is particularly oriented for the success. In their work, besides professionalism, one can notice great devotion for the project implementation.

Summing up the results of the study on this company we can clearly ascertain that the capability of creating e-services and efficient portfolio management helps the company to develop on a competitive market. It seems that small companies from ICT branch without flexible project management strategy are having much smaller potential for the development and market exploration of e-services in Poland than big ones. The role of projects and project management in such organizations is therefore significant.

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