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**THE FIRST STEPS IN THE COMMERCIALIZATION  
OF A RESEARCH PROJECT  
— THE EXAMPLE OF NEIBERIA.COM**

## THE FIRST STEPS IN THE COMMERCIALIZATION OF A RESEARCH PROJECT — THE EXAMPLE OF NEIBERIA.COM

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### Abstract

Neiberia.com is a prototype business and social networking website created for the project: “New information technologies for electronic economy and information society based on the SOA paradigm” under the Operational Programme Innovative Economy.

The idea of the portal is based on local communities, both focused on private users as well as small and medium-sized enterprises (SMEs) and electronic markets, where they both meet and may interact.

After completion of the project in January 2013, the team faced a completely new task of commercialization of its results. The first stage of project promotion was participation in competitions for business idea, conferences for startups and pitching.

The project qualified for the final of the competition “Innovative Poland. How to jump over the crisis.” organized by the Institute for Liberty (Instytut Wolności).

At the same time, team members decided to increase their knowledge on raising capital, running a business and marketing by participating in trainings and workshops.

According to the creators of the portal Neiberia.com the knowledge and experience gained during the training sessions, workshops and competitions was very valuable and it is not sufficient for the commercial success of the project if the team is provided only with financial support.

**Keywords:** commercialization, a research project, Neiberia.com, 3D market

## About the project

Neiberia.com website was established in course of the project “New information technologies for electronic economy and information society based on the SOA paradigm<sup>1</sup>” within the framework of Operational Programme Innovative economy: Action 1.3.1<sup>2</sup> (<https://www.soa.edu.pl>).

The task of IPI PAN (as a partner in the project) was establishing a *communication platform for electronic markets of complex business services* taking advantage of the current potential of social media. A prototype of such a platform is a business-social service called Neiberia available online at [www.neiberia.com](http://www.neiberia.com).

The concept of the portal is based on communities, both those gathering private users, as well as small and medium companies and electronic markets, where all can meet and carry out transactions.

The basic difference between Neiberia.com and popular social media websites involves:

- introducing new structures responding to real communities (including business communities in B2B relation) allowing their members online communication and organization
- introducing business functions typical of electronic market regarded as a meeting place for consumers and enterprises

In the current, first prototypical version of Neiberia.com is a proposition of new architecture of a business-social network based on the community concept, that is a virtual meeting place for users. It is not the single user and his profile that is the basic element of the portal, but the community he belongs to and which defines his image. The service offers many business functions (typical for electronic markets) such as services (offers), orders, group purchases and auctions, exchange of skills, advice, recommendations and ventures — partially automated business processes involving a composition of simple services aimed at achieving a particular business goal. Apart from this, such popular communication tools as: events, chat room, forum, image galleries, blogs and comments are available.

Within the Neiberia.com website three kinds of communities are available:

- private — linking private users with certain common traits such as place of residence (neighbourhood communities) or interests

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<sup>1</sup> SOA — Service-oriented Architecture.

<sup>2</sup> Support for R&D projects for the benefit of entrepreneurs, carried out by scientific units.

- business — linking potential business partners from the small and medium enterprise sector. Two kinds of business communities are available:
  - Horizontal — local communities, corporations, traits, etc. which are aimed at the protection of interests of particular professional branches;
  - Vertical — focused on search, planning and implementing joint business activities (*Business networking and Business clubs*).
- virtual markets — linking private users (consumers) with business users (SME)

Another assumption of the Neiberia.com website is focusing on the local dimension. Popular Internet services have a global reach (or at least function on the scale of one country or language). This concerns both social media networks and electronic markets in form of auction sites or advertising sites concerning sale and purchase offers or provision of services, as well as electronic commodity exchange platforms.

Existing electronic markets offer a small range of community tools; most often it is just forum and chat room. At the same time social media sites, if they contain any market elements, these are mainly advertising services concerning goods and possibly services.

Currently available solutions concerning the use of maps in services (social and business services) cover planning routes between two points or locating a particular address on a map. Additionally, it is possible to place a point on a map depicting the presence of a company, institution or a service point in a particular location. Through this point it is possible to access information concerning the represented object (e.g. the name of a company, contact data, website, as well as branch and opinions of clients).

The current way of using maps in Internet services is generally static and acts only as a source of information. However, as soon as such maps are upgraded with 3-D models and start using appropriate graphic engines, they could be used in new ways, more attractive for the user. Applying such a solution in a social-business service could have a positive impact on its development by on the one hand attracting users and on the other hand providing companies with new tools for marketing and interaction with the client.

The key to achieving the above-mentioned goal is introducing local communities for a particular city as a basic element of a social portal. Localism concerns both communities themselves and electronic markets which should be ascribed to local communities. Localism also means territorial limitation, particular locations in a city where shops, restaurants, cafes, hotels, service points, government offices, museums, etc. can be found.

Electronic market can be expanded through the introduction of a 3D model of a city and combining it with classic electronic market solutions that is, offers, orders, auctions, group purchases etc. User having at his disposal an Internet browser should be able to participate in such a market, including (by analogy to the traditional markets) meeting other users (possibly his neighbours or friends). Owners of service points receive a new innovative tool for communication with clients and clients are granted a simple and attractive (through social media and 3D market model) access to offers and promotions.

The concept of 3D virtual market involves creating a 3D model of a city's shopping streets (usually covering the old town market square). Models of buildings include shop windows and entrances to shops, restaurants, cafes, service points and other kinds of venues running business activity. There is no problem with including administrative buildings and public use buildings as well. These models constitute a virtual representation of chosen parts of a city available through Internet browsers and mobile devices. A logged-in user is represented by a character (avatar) that can walk around the virtual environment, meet other users and talk to them, arrange to visit a cafe, restaurant, shop, museum, go sightseeing together. The interiors of buildings are also shown to the extent desired by their owners. After entering a building users can learn about business offers and promotions (eg. discounts for bringing friends).

The owner defines the content of the offer (including rules of promotion) displayed on a stand bought at a chosen market in the Neiberia.com service. Markets are managed and moderated by their administrators as soon as they receive a license to run them. The user of the service looking through offers (stands of service providers or sellers) provided on a particular local market will be able to enter the virtual environment of a particular city by clicking a link. Depending on the parameters of the link, the user's avatar can appear in front of a building or in its chosen part. It is also easy to pass from virtual environment to the service, for example by clicking the logo of a company on the market, clicking on the list of offers of visited service point or shop.

In Neiberia.com service it is possible to define profiles of companies containing their offer. Markets gather the offers of not just companies, but also of the portal's users. Users can visit markets and stands looking for interesting goods and service. In order to make learning about the offer of a chosen stand (which can be owned by a company or an individual user) more attractive for the user, the user has the opportunity to enter "3D market". "3D market" is a physical map which contains 3D models of companies, institutions, service points etc. The transition from the service (Internet website) to 3D market takes place after clicking on a link of the market or stand. Clicking on the link of

a market or stand launches an application in the user's browser and places the character representing a particular user in front of a particular service point or in a particular location on the 3D market. From this moment on the user has the ability to:

- walk around the 3D market with his virtual character,
- meet with other users and communicate with them (text messages),
- enter service points represented by 3D models (names of points and their offers are downloaded from the Neiberia. com service); within them the user can:
  - obtain discount coupons,
  - purchase a product or service, book a table in a restaurant etc.,
- learn about the actual street plan and location of buildings (especially in case of cities he doesn't know),
- participate in various kinds of mini-games.

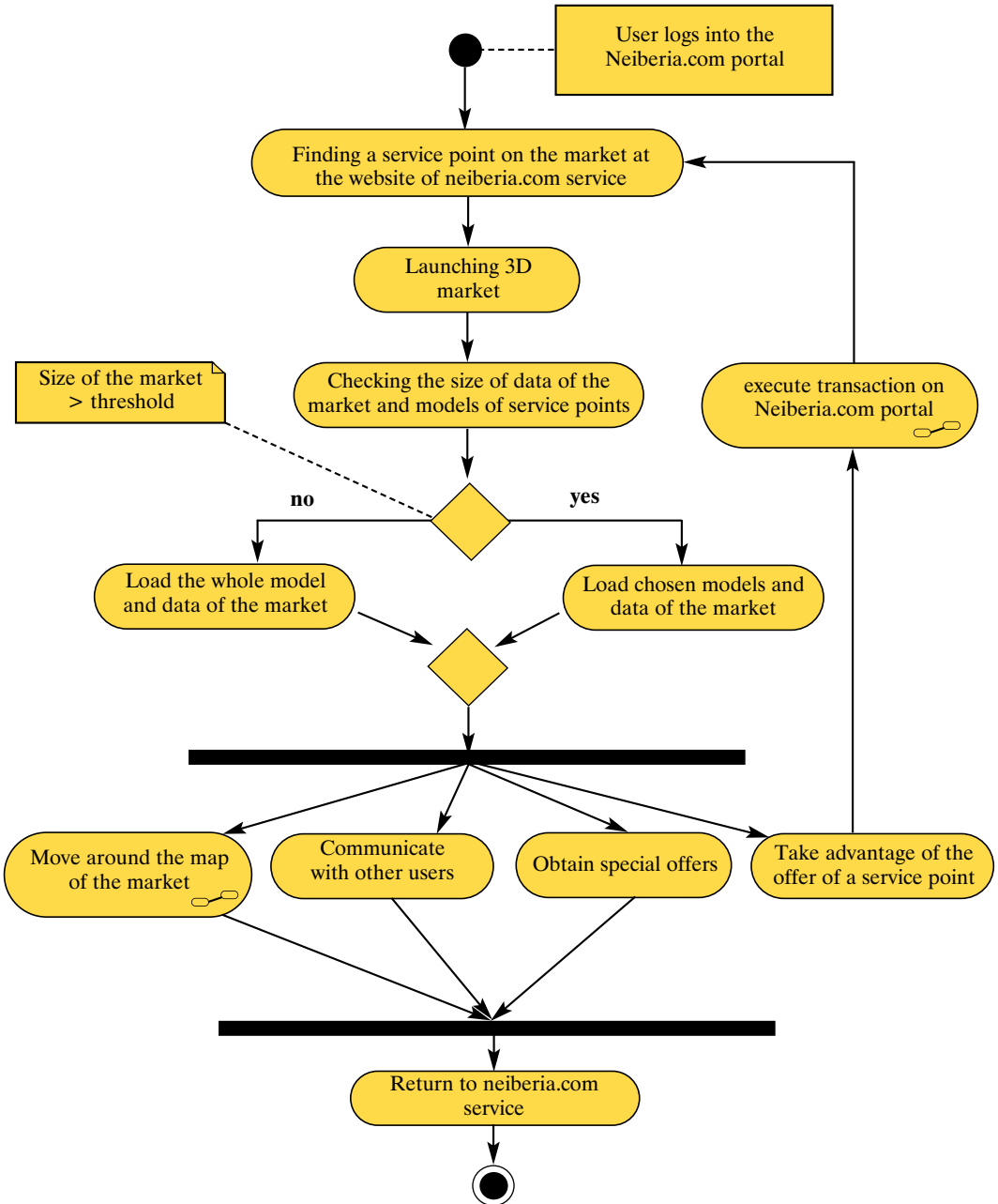
If a user wants to use the offer of a service point, for example buy a particular product or book a table in a restaurant, by clicking the appropriate element he is transferred to the www version of the Neiberia. com website where using appropriate forms he can carry out the transaction. After carrying out the transaction, the user can return to the 3D market. It is also possible to create a mechanism enabling a transaction directly on the 3D market without the need to return to the website.

Picture 1. A fragment of a 3D map of Siedlce



Source: Own materials.

Picture 2. Navigating between a social media website and 3D market for users from any community



Source: Own materials.

3D markets work in the user's browser window. The only thing that is required to display the 3D market properly is an appropriate browser plug-in. The volume of downloaded data is optimized to ensure smooth functioning of the application. Depending on the browser (for desktop computer or a mobile device) a defined threshold of the size of downloaded data is set. If the size of 3D market data is lower than the threshold, all data about the market are downloaded, otherwise the part of the market surrounding the place where the user's character appears on the map is loaded. The missing models are downloaded as the character moves around the 3D market. The described algorithm is presented on Picture 2.

The concept of 3D market and the method of its implementation described above has been registered as a patent application. The application is titled: *Method of delivering user's interface especially for the purpose of carrying out commercial transactions on the Internet* (Request for grant of a European patent: Submission number 1600001835. Application number EP12461556.8).

## Project commercialization

An assumption of the IT SOA project, in line with the action 1.3 of the Innovative Economy Programme: is "Support for R&D projects for the benefit of entrepreneurs carried out by scientific units". This means that the know-how generated in course of the project should find commercial application. Over four years a team from Polish Academy of Sciences worked on the development of Neiberia.com portal. In this period a working and tested prototype of the service was created. After the conclusion of the project in January 2013 the team faced a completely new and not easy task of commercializing the results of the project.

During the project the concept for the product evolved and expanded. New functions were added, which required not only more programming work, but also more effort in testing the functioning of the whole portal and its optimization. As a result a product much more complex than originally planned, containing more functions and tools was created. In the first stage of the project Neiberia.com portal was tested mainly by its creators and students of the Siedlce University of Natural Sciences and Humanities in course of a contest organized in the Institute of Computer Sciences. Reaching out to a broader group of recipients was postponed a few times in order to fine-tune the portal as much as possible. Defining the right moment is not an easy task, as it is always possible to find elements that should be corrected or improved. It is also necessary to remember that the effect of the work of the team for the day when

the project was concluded, was a prototype of the portal (beta version). In the first quarter of 2013 the portal was presented on a public website. Promotional measures were taken to attract first users and an investor whose financial contribution, as well as business experience would allow further development of the portal. The first stage of promotional activities was participation in contests for business concepts, conferences for start-ups and presentations to potential investors (pitching). At the same time members of the team decided to boost their knowledge in the area of raising funding, running business and marketing by participation in trainings provided free of charge by institutions from the environment of business (among others, Polish Agency for Enterprise Development, business angels networks, business incubators). Already during the project a person not associated with the computer science branch and in particular an economist joined the team in order to bring a new view of the project, new competences and experience. It turned out that participation in trainings, seminars and conferences was very valuable, however, it would have been more beneficial if this had taken place in the initial stage of the project when there were more options for modification and adaptation of some elements of the project to market reality. Also participation in contests was an important experience. The very stage of applying to participate in contests, which involved filling out long forms, encouraged deeper insight into many aspects of the project and devoting more time to such issues as market analysis, target group or business model. One of the team's biggest achievements was qualifying to the final of the "Polska Innowacyjna. Jak przeskoczyć kryzys?"<sup>3</sup> (ed. Innovative Poland. How to skip the crisis?) contest organized by Institute for Liberty (Instytut Wolności). The goal of the contest was to reveal most innovative business concepts that could solve social problems and facilitate life in cities. Participation in this contest was a very valuable experience. Above all, this was the first real confrontation of the product with a broader group of recipients (at the same time with high-class experts from the contest jury). Moreover, the finalists participated in workshops which concerned among others building a business model, promoting projects or attracting an investor. Workshops preparing participants for final presentation and individual consultations with experts were especially helpful. The form of workshops resembled actual presentation for a potential investor (so-called pitching). The work on the final presentation was also very helpful. An analysis of the market and target group was carried out, business model was fine-tuned. A schedule of remaining work was drawn up. The budget necessary to continue (this time based

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<sup>3</sup> <http://www.polskainnowacyjna.org/>

on purely commercial rules) the project to the moment when profitability could be achieved was defined.

Neiberia.com portal was also presented during the Speed Mentoring Event! organized by Google during the Google for Entrepreneurs Week on October 1, 2013 in Kraków and on Demo Day during the Inno-Tech Expo on October 17, 2013 in Kielce<sup>4</sup>.

Looking back, if the knowledge gained in trainings, contests and other events had been available from the start of the project, the team would have approached certain issues and tasks in a slightly different way which would have probably facilitated the task of commercializing the project. There are many tools and techniques supporting the creation of products with potential for success on the market, such as Design Thinking, "lean start-up" approach, Minimum Viable Product, SWOT analysis or business model template according to Alexander Osterwalder<sup>5</sup>. Most of the approaches applied by contemporary start-ups assume that it is best to start with a prototype offering possibly smallest number of necessary functions and test it on the market before expanding it and fine-tuning the details. Moreover, at the very start an analysis of the market and target group should be carried out. The budget of the project should include the costs of promotion, as despite many opportunities for promoting a product in social media for free, an efficient advertising campaign is expensive and its importance in a project is usually underrated. Currently the team that created Neiberia.com, now with more experience and knowledge, is still developing the beta version of the product, is promoting the project and looking for an investor, despite the fact that the project is officially over.

## Conclusions

Scientists' knowledge in their area is broad, however, they usually lack practical know-how in business issues. Receiving a grant even if it is aimed at linking the spheres of science and business is usually not accompanied by adequate training for the beneficiary or granting the beneficiary access to such knowledge. Solely financial support for a project is not sufficient to guarantee its commercial success. On the basis of experience gained by the creators of Neiberia.com portal it is possible to conclude that knowledge and experience gained in trainings, workshops and contests are very valuable. What is equally important is diversification of the team in terms of skills,

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<sup>4</sup> <http://www.targikielce.pl/innotech/index.php?s=demoday>

<sup>5</sup> Alexander Osterwalder, Yves Pigneur, *Tworzenie modeli biznesowych. Podręcznik wizjonera*, Helion 2012.

education and experience. Investors know this very well, as for them one of the main criteria for the assessment of a concept is the team behind a project. It is mainly the team's skills and involvement that determine whether a project is successful or not. Another problem with projects co-financed by the European Union is low flexibility in terms of making changes, especially if the changes concern expenses. After all, the situation on the market is dynamic and quick reaction to change and the ability to adapt to new reality can guarantee commercial success.

That's why it is important for scientists carrying out projects with a commercial potential to have access to not just financial support, but also to necessary know-how, trainings and above all support not only from experts or institutions from the environment of business, but also entrepreneurs themselves. Teams carrying out such projects should gather representatives of various areas in order to guarantee possibly highest diversity and a broad range of competences. The effects of work should be tested and verified by the market at possibly earliest stage of the project. Science and business can find a common ground, but they need support (not only financial) and appropriate conditions.

## Bibliography

1. Ambroszkiewicz S., Bartyna W., et.al., *A revision of the SOA paradigm from the e-business process perspective. A chapter in: "SOA Infrastructure Tools. Concepts and Methods"*, Poznan University of Economics Press 2010, pp. 419–438.
2. Ambroszkiewicz S., Brzeziński W., Cellary W., Grzech A. and K. Zieliński (Eds.): *"SOA Infrastructure Tools. Concepts and Methods"*, Poznan University of Economics Press 2010 ISBN 978-83-7417-544-9.
3. Ambroszkiewicz S., Bartyna, W. et.al., *The SOA Paradigm and e-Service Architecture Reconsidered from the e-Business Perspective*, F. Daniel and F.M. Facca (Eds.), LNCS 6385, pp. 256–265, 2010. Springer-Verlag Berlin Heidelberg 2010, pp. 256–265.
4. Ambroszkiewicz S., Bartyna W., et.al., *E-service architecture for the SOA based e-business*, Proc. CS&P 2010.
5. Ambroszkiewicz S., Barański M., Faderewski M., Mikulowski D., Piłski M., Terlikowski G., *Elektroniczne Rynki Usług: Technologie i ich realizacje*. Wydawnictwo: Akademicka Oficyna Wydawnicza EXIT, Warszawa 2011, ISBN 978-83-60434-95-6.
6. Ambroszkiewicz S., Bartyna W., Faderewski M., Kulma P., RyzkoA., et.al. *Platform for development of electronic markets of sophisticated business services*. In Ambroszkiewicz, S.; Brzeziński, J.; Cellary, W.; Grzech, A.; Zieliński, K. (Eds.) *Service Oriented Architecture — Advanced Tools and Applications*, Studies in Computational Intelligence Vol. 499, Springer, Heidelberg and New York 2013. ISBN 978-3-642-38956-6.
7. Team headed by Associate Prof. S. Ambroszkiewicz. *Ontologie i planowanie w elektronicznych procesach biznesowych*, Akademicka Oficyna Wydawnicza EXIT, Warszawa 2013, ISBN 978-83-7837-019-2.
8. Osterwalder A., Pigneur Y., *Tworzenie modeli biznesowych. Podręcznik wizjonera*, Helion 2012.

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