The Use of Balanced Scorecard in Implementation of the User-Driven Innovation Concept

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Abstract

Customers play a crucial role in innovation processes. Their importance is proved by numerous theories and innovation models which put users and clients in the heart of innovation processes.

One of the newest concept, popular in Scandinavian countries, picking up this thread is the User–Driven Innovation (UDI).

To increase probability of innovation success consumers must be involved in the firm's business model / innovation strategy, becoming a part of the innovation processes and all other stakeholders should be aware of the significance and character of the linkage between customer and company. As a result, building, implementing and monitoring of the customer–oriented innovation strategy should take place. The Balanced Scorecard (BSC) may turn out to be very helpful in achieving the above.

The aim of this paper is to show that BSC may be a device of implementing the User–Driven Innovation concept, helping to understand UDI assumptions and the role of customers in creating value. Examples of strategic goals and performance indicators presented in this paper may be used by enterprises, which intend to build UDI-based BSC.

Key words: *Balanced Scorecard, customer, innovation, User-Driven Innovation.*

JEL classification: *M41, O31, O32.*

INTRODUCTION

Contemporary world alters very fast and each change significantly influences the surroundings of firms. Globalization, the Internet, technological progress, free flow of the resources, including information, make enterprises follow transformation or even get ahead of competitors, becoming initiators of changes. Innovation, which must be a priority for enterprises which want to grow and develop, plays a key role. Companies should undertake trials of activities, becoming innovation-active and in the long perspective innovative, leaving competitors behind.

It's not so easy to become an innovative firm. Innovation requires undertaking many new activities, gathering them into processes which will be put in the heart of a chosen business model. Innovation also needs: changes in the strategy and in the way of thinking of all

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participants of the innovation process, flexibility and openness. Only then firms will be able to see and use so far unknown sources of innovation.

In the innovation processes the consumers play the key role, as they are not only present or potential customer of offered products or services. Enterprises, which want to innovate, must realise that regular and targeted customers are important source of information for innovation and also often a source of innovation.

This is not a new thesis in economy or finance. The role of consumers in the innovation process was and still is a subject of scientific research.

The opening to consumers and including them in the innovation processes bring a lot of consequences to firms. Enterprises must know the customer value, determine how to create and fulfil this value. This requires adaptation of consumer–oriented thinking, observation of clients' behaviour, recognition of their needs and even cooperation with them. Innovation strategy should also be oriented on consumers. Balanced Scorecard (BSC) may be helpful in achieving the above.

The main aim of this paper is to show usefulness of Balanced Scorecard in implementation of the User-Driven Innovation concept within innovation strategy by firms. Additionally mentioned theories on importance of customers in innovation processes will be briefly presented.

1. SOURCES OF INFORMATION FOR INNOVATIVE ACTIVITIES AND ITS IMPORTANCE – EVIDENCE FROM POLAND

Published by OECD in cooperation with Eurostat Oslo Manual (2005) spotlights the essence of external linkages between enterprises and sources of information for innovation activities, listed below (OECD/ Eurostat, 2005):

- Open innovation sources. It assures access to information and knowledge for free or after paying a marginal fee. Feedback from customers is an example of such information.
- Acquisition of technology and knowledge. It includes: purchasing information and knowledge, taking on employees possessing new ideas and knowledge or using of research contract.
- Innovation co-operation with other participants of the innovation processes. Innovation co-operation can involve customers in collaboration of new goods, processes and other innovations. The reason to cooperate is a will to acquire information on customer needs and about their experience of products and services.

In Poland one of the organizations collecting data on innovation of enterprises is Central Statistical Office of Poland (*pl:* Główny Urząd Statystyczny, GUS). GUS, as Oslo Manual, classifies sources of information for innovation, which can be used by innovative or innovation-active firms, as: internal, market, institutional and other sources (GUS, 2013).

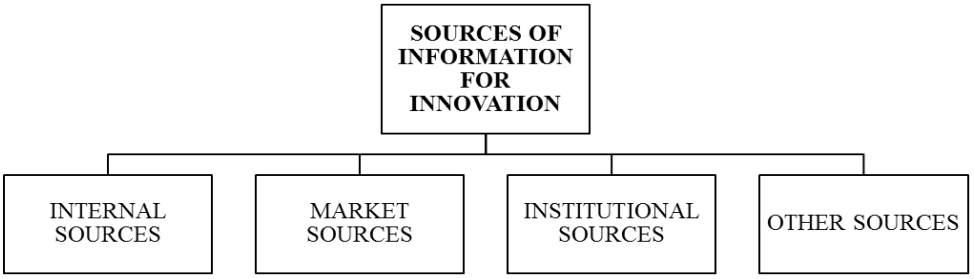

Figure 1. Classification of sources of information for innovation by Central Statistical Office of Poland

Source: own elaboration based on GUS (2013, p.107)

Relevance analysis of particular sources of information for innovation shows that the largest share of Polish innovation-active enterprises, both from industrial and service sectors, as the most important source indicated internal sources from company's inside, that is employees with their ideas and knowledge and own research and development facilities.

As important were also indicated: suppliers, clients and customers, conferences, trade fairs, exhibitions and scientific journals and publications (GUS, 2013). For more details see table 1.

Table 1. Share of innovation-active enterprises in Poland in years 2010-2012, by ownership sectors, which found the importance of classified sources of information for innovation as "high"

Specification		Industrial		Service sector	
		Public sector	**Private sector**	**Public sector**	**Private sector**
Internal sources	Inside enterprises	42.7	43.1	56.4	43.2
	Other enterprises within enterprise group	3.6	8.9	2.4	18.3
Market sources	Suppliers of equipment, materials, components or software	21.1	22.3	17.4	22.9
	Clients or customers	14.2	16.7	21.6	24.0
	Competitors or other enterprises in the same sector	8.2	8.2	5.2	13.9
	Consultants, commercial labs or private R&D institutes	6.3	7.4	5.2	9.8

Specification		Industrial		Service sector	
		Public sector	Private sector	Public sector	Private sector
Institutional sources	Scientific units of the Polish Academy of Sciences	1.9	4.6	12.2	7.3
	Research institutes	7.1	6.4	16.7	7.4
	Foreign public research institutions	1.1	4.2	8.4	7.7
	Higher education institutions	3.8	8.0	11.8	8.0
Other sources	Conferences, trade fairs, exhibitions	15.1	14.8	25.4	13.2
	Scientific journals and publications	13.7	8.7	29.6	16.9
	Professional and industry associations	4.7	5.1	12.2	9.6

Source: adapted from GUS (2013), p.107-109

Thus, Polish enterprises recognise clients as a very important source of innovation for innovation activity. Detailed analysis of customers' relevance considering firm size measured by number of staff headcount and sector of activity (industry or services) brings interesting results.

Taking into account the size of the firm the percentage of innovation-active enterprises which recognised customers as important source of information for innovation is higher for SMEs (employ fewer than 250 persons) compared with big companies (GUS, 2013).

Similarly, the percentage of innovation-active enterprises which indicated consumers as significant is higher for firms from service sector than from industrial sector. It is worth emphasizing that both industrial and service sector enterprises value customers and clients from private sector more than from public sector (GUS, 2013). For more details see table 2.

Table 2. Share of innovation-active enterprises in Poland in years 2010-2012, by size classes and ownership sector, which found the importance of customers or clients as "high" source of information for innovation activities

Number of employees	Clients or customers from private sector		Clients or customers from public sector	
	Industrial enterprises	Service sector enterprises	Industrial enterprises	Service sector enterprises
10-49	8.9	15.1	7.6	12.2
50-249	10.1	11.5	6.1	6.8
250 and more	11.5	8.6	6.4	7.7

Source: adapted from data presented by GUS– zip file. Retrieved August 17, 2015, from: http://stat.gov.pl/obszary-tematyczne/nauka-i-technika-spoleczenstwo-informacyjne/nauka-i-technika/dzialalnosc-innowacyjna-przedsiebiorstw-w-latach-2010-2012.2.6.html

2. THE IMPORTANCE OF CUSTOMERS TO INNOVATION – THEORETICAL FRAMEWORK

Innovation is the subject of research in many disciplines. Studies on innovations, depending on the aim, can focus on different aspects of innovation. One of them is sources of information for innovation, which additionally can be detailed to market sources or even limited solely to clients, consumers and users. Worldwide literature on the undertaken research problem is rich in confirmatory theories that customer value, customer needs and their expectations of products / services play a vital role in innovation. The most important and latest scientific studies on customers role in the innovation processes are presented briefly below.

2.1. Lead users by von Hippel

Eric von Hippel is one of the first who have undertaken research on the role and importance of users as a source of information for enterprise innovative activity. In the 1970s he noticed that accurate understanding of users' needs is determinant of innovation success. Including customers' expectations and demands in the innovation processes distinguishes successful innovation from innovation that failed on the market (or at least hasn't brought the expected results). At the same time he remarked that vast majority of successfully implemented innovative projects are an answer to perception of users' needs, and are not a result of technological opportunities of manufacturers – innovators (von Hippel, 1976).

Von Hippel also classified and named Lead users, customers whose needs are ahead of the present trend and time. Manufacturers should search for Lead users or at least prototypes of innovation created by Lead users and carefully observe their demands, because in the future more and more users will have the same needs and will want the same solutions (von Hippel, 1986; von Hippel, 1988; von Hippel et al., 1999).

He also noticed that Lead users are ready (and willing) to share their knowledge and experience related to innovation (democratize innovation) mostly within innovation communities. When Lead users make their innovation information conveniently accessible, other members of innovation communities create and use innovated solution, test and diffuse innovations created by the Lead users and help to increase the speed and effectiveness of its development. Thus, innovation communities help innovation to succeed (von Hippel, 2005).

In European Scandinavian countries the concept named User-Driven Innovation, which is largely based on presented findings by von Hippel is very popular (Krawczyk, 2013b).

2.2. The Essence of User-Driven Innovation Concept

According to Nordic Council of Ministers (2006), User-Driven Innovation should be understood as "…a more systematic way to understand and develop solutions that respond to user needs" (Nordic Council of Ministers, 2006, p. 10, 12). It spotlights it is not enough to respond to consumers' revealed expectations. Enterprises must take steps to recognise latent, or even unconscious, needs of customers. As a result two main perspectives on UDI emerge (Nordic Council of Ministers, 2006):

1. The Voice of the Consumer Methods. This perspective focuses on identifying hidden customer needs and employ "design thinking". Manufacturer undertakes various activities to find out what exactly users need and expect to produce innovations based on this knowledge.
2. Lead-User Methods. This method is taken from *Lead user* concept by von Hippel. In this perspective manufacturer cooperates with Lead user in order to create innovation together or producer commercializes solutions created by users themselves.

Both perspectives emphasize the role of customers. The main difference between them is the source of innovation. In the first mentioned method (Voice of the Consumer), innovation is created and delivered by the manufacturer. In the second one (Lead-User Method), innovation is created by the user or is a result of cooperation between customer and producer (Nordic Council of Ministers, 2006).

Rosted (2005) remarked that in UDI concept consumer doesn't have to be an active participant in the innovation process, but customer is a crucial element of the whole process. The essence of UDI is based on recognizing users' needs, mapping them and using accessible skills for translating collected information into innovation. That is why it is important to gain knowledge on user needs, which may happen by chance or may be a result of using scientific and systematic tools (surveys, analysis and tests) (Rosted, 2005).

Enterprises with access to those tools and skills have a competitive advantage over their competitors. Such firms can be the first to recognize customers' needs, use this knowledge and produce innovations, which provide users with the value or experience that competitors cannot match (Rosted, 2005).

FORA (Rosted, 2005) proposed a model of the UDI processes. It consists of sixth sequential phases (see figure 2). The first step is a systematic and scientific customer observation in order to find out consumer needs, hidden and non-recognised as well as recognised. After gaining this knowledge, the next phase is to employ design thinking in order to find possible solutions and develop new ideas. This step is crucial – it helps to provide customers with desired value before competitors. However, it is very difficult and requires a broad set of skills of all participants of innovation process, together with customers. In the next two steps, the organization must recognise its own capacity and opportunities and then evaluate the market potential. When above analyses show a sound basis for moving on, an innovation strategy should be formulated. After drafting the strategy, the last step in the UDI process is bringing innovation to the market (Rosted, 2005).

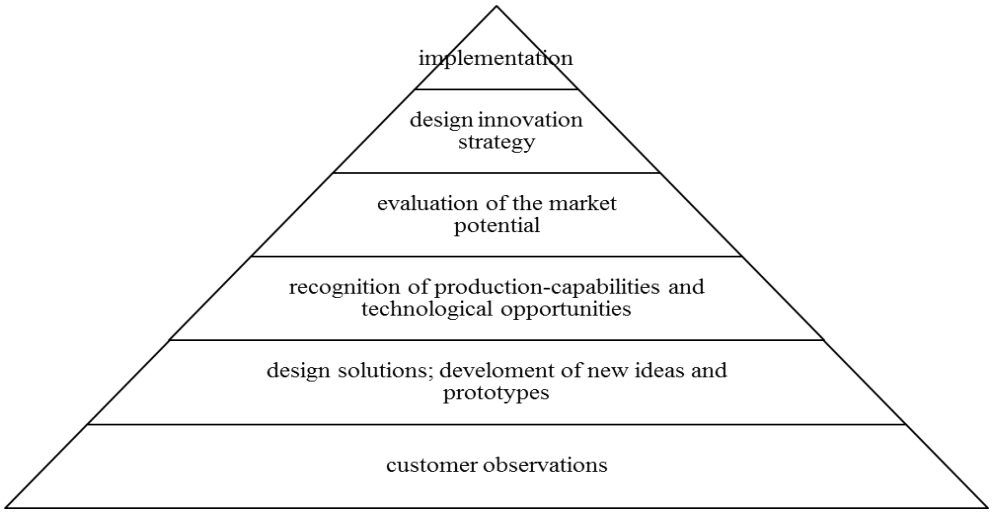

Figure 2. Model of the User–Driven Innovation processes according to FORA
Source: adapted from Rosted (2005, p.33)

The above model was improved by experts from CASE-Doradcy Sp. z o. o. According to CASE (Warzybok et al., 2008), the model should be closed in order to provide continuous innovation process. This will help to monitor changes in customer needs, improve implemented products / services or evaluate effects of innovation. Furthermore, according to CASE experts, innovation strategy is the background to entire innovation activities of the company. And UDI is just one of the tools of strategy development. That is why there is no need to itemize phase named „design innovation strategy" in the model (Warzybok et al., 2008). The above mentioned improvements are illustrated in figure 3.

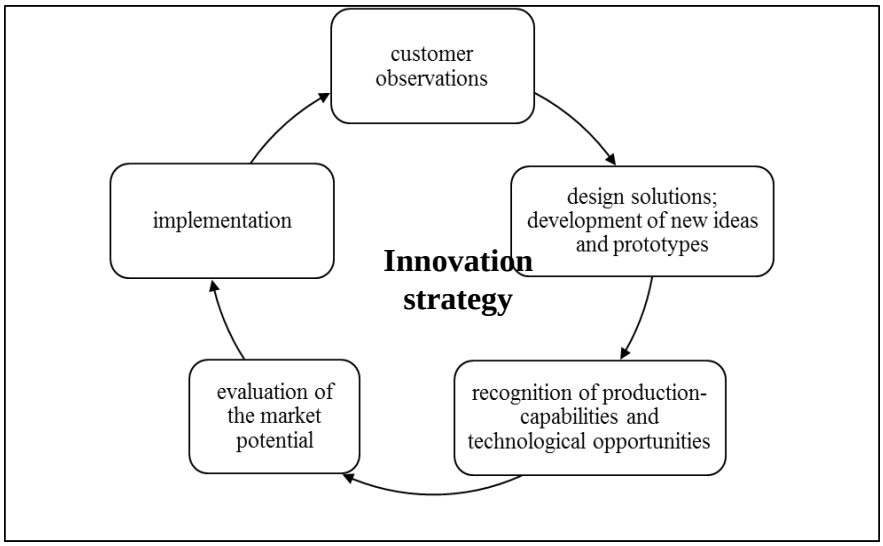

Figure 3. Model of the User – Driven Innovation processes according to CASE- Doradcy Sp. z o. o.
Source: adapted from Warzybok et al. (2008, p.17)

2.3. The importance of individual customer experiences (*N*=1*)* in the "New age of innovation" Model by Prahalad and Krishnan

C. K. Prahalad together with M. S. Krishnan (2008) are authors of the new approach to enterprise management in more and more competitive and unstable surroundings.

The authors remarked that the crucial element of a competitive edge is the ability to build strategic capital based on innovation and customer. In their model, innovation is a result of co-creation the value with customers. Experienced and aware of their own needs, consumers define their own personalized value (*N*=1). Organizations must not only shape customer expectations but also respond to the changing needs and behaviours trying to provide personalized value to customers. To do this, firms must engage all available talents and the resources, no matter where they are located (R=G). Consequently, the model can be summed up as: „the resources of many to satisfy the needs of one" (Prahalad & Krishnan, 2008, p. 6). The authors of the model spotlight the role of social architecture and technical architecture of the firm as "a glue" of the model (Prahalad & Krishnan, 2008).

2.4. Customers as activators and creators in the "A-to-F" Model by Trías de Bes and Kotler

Fernando Trías de Bes together with Philip Kotler (2011) are the authors of the scheme for innovation processes, which they named the „*A to F model*". The model helps to gather together (in the *Total Innovation System*) elements which determine effective and creative innovation management. The authors remarked that every single innovation has different character, source and aim. This explains why traditional approach, based on belief that each innovation goes through the same process included orderly: aim – research – idea – research and development – introduction to market, do not pass the exam. Trías de Bes and Kotler believe that it is a better solution to assign every participant of innovation process with the accurate role and let them build linkages and interactivity freely. This will help them to work out proper innovation process individually matched to each innovation (Trías de Bes & Kotler, 2011).

They singled out six different roles which are described briefly in table 3.

Table 3. Roles in the „A to F" Model

The A to F Model	Name of the role	Short description of the role
A	activators	They initiate innovation in an organization
B	browsers	They are experts in the field of gathering information
C	creators	They create new ideas, concepts, possibilities
D	developers	They transmute ideas into products / services
E	executors	They implement innovation into the market
F	facilitators	They approve financing and let the process go on

Source: adapted from Trías de Bes and Kotler (2011), p.15-17

Customers may act as activators as well as creators (Trías de Bes & Kotler, 2011).

3. THE ROLE OF THE BALANCED SCORECARD IN IMPLEMENTATION OF THE CUSTOMER-ORIENTED INNOVATION STRATEGY

Innovation process is determined by innovation strategy (Karlik, 2013), realization of which should be monitored continuously. What is more, innovation strategy must be coherent with the general strategy. Thus, before building innovation strategy on User-Driven Innovation concept, it must firstly be checked if UDI is compatible with mission, vision and strategic goals of the enterprise.

In a well-formulated UDI-based innovation strategy, consumers are perceived as active participants of the innovative processes, not only as passive customers of supplied products or services. It is because nowadays clients turn out to be very influential stakeholders (Tidd & Bessant, 2009). However, very often companies find it difficult to treat customers as important source of information for innovation, not to mention co-operating with or including them in ordinary activities. That is why enterprises meet a lot of difficulties in implementation of UDI-oriented innovation strategy, mostly related to:

1. identity of customer latent and unconscious needs,
2. employment of "design thinking",
3. availability and the use of skills for putting knowledge on customer needs into innovation or purchasing such abilities,
4. identity of Lead users,
5. cooperation with Lead users.

Furthermore, it should be remembered that organization which implement UDI, must strive for adding value to shareholders as well as to customers. Value which is defined by owners and by consumers. All the mentioned challenges are barriers to introduce UDI. In implementation of the customer – oriented strategy and monitoring its results, the Balanced Scorecard may be very helpful.

3.1. The Essence of Balanced Scorecard by Norton and Kaplan

BSC was created as performance measurement framework (Kaplan & Norton, 1992), becoming over time "… a mechanism for clarifying strategy and turning it into action" (Proctor et al., 2009, p. 455). Apart from adjusting the business activities to the vision and strategy, it also helps to communicate the strategy and monitor organization performance against strategic goals. It is also a tool which can be used to communicate completely new to firm strategies (Proctor et al., 2009).

BSC allows to look at enterprises from a few perspectives, represented by various stakeholders. Each perspective presents another point of view and provides answers to different fundamental questions (see figure 4). However, gathered together, they show the way of realisation of strategic goals.

In the original version, the authors proposed four perspectives: financial, customer, internal business, innovation and learning (Kaplan & Norton, 1992). However, there are no contraindications to put one more or one less perspective if the organization selects only these which are particularly important aspects of a chosen strategy (Atkinson et al., 2007). Usually financial perspective is put at the top of BSC. Nevertheless, more and more enterprises treat

customer perspective as the lead perspective. It is also possible to put customer perspective next to the financial perspective (Jaruga et al., 2014).

Perspectives are a guide in formulating the strategic goals and the questions should be answered in the context of the strategy (Proctor et al., 2009).

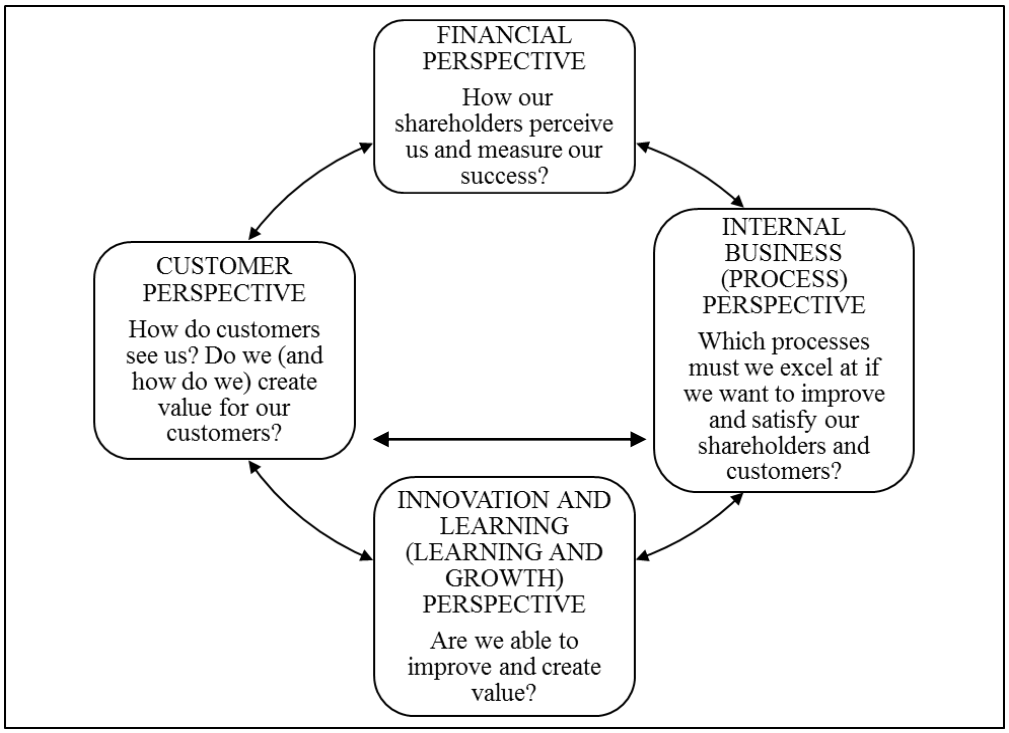

Figure 4. Perspectives of Balanced Scorecard

Source: adapted from Kaplan and Norton (1992, p.72); Atkinson et al. (2007, p.395)

BSC is a strategic system composed of (Jaruga et al., 2014):

- strategic goals of each perspective,
- performance indicators,
- expected (planned) value of selected performance indicators,
- lists of initiatives which should be taken to achieve strategic goals.

It is built of cause and effect relationships between strategic goals and undertaken activities, connected by performance indicators. That is why performance measures should be selected very carefully and show this cause and effect relationship. All elements taken together should give a balanced view of enterprise performance (Jaruga et al., 2014; Proctor et al., 2009). These linkages are presented by a strategy map, which illustrates relationship between the goals in the BSC perspectives (Świerk, 2009).

Financial perspective				
Long – term shareholder value				
Revenue growth strategy		Productivity improvement strategy		
Expand revenue opportunities	Increase customer value	Improve cost structure	Improve asset utilization	

Customer perspective								
Customer value proposition: e. g. Product leader; Complete customer solutions; Low total cost								
Product / service attributes						Relationship		Image
Price	Quality	Availability	Selection	Functionality		Service	Partnership	Brand

Internal business perspective	Operating processes	Customer management processes	Innovation processes	Regulatory and social processes
	Deepen supplier relationship Produce processes Distribute processes	Customer: selection, acquisition, retention and growth	Identify opportunities Design solutions Develop new ideas Launch new goods	Enhance communities Manage regulatory processes

Learning perspective	Human resources		Technology		Organization culture and alignment	
	Skills	Knowledge	Systems	Networks	Culture and climate	
	Training	Capabilities	Databases		Knowledge sharing	Alignment

Figure 5. Examples of Balanced Scorecard objectives and strategy map
Source: adapted from Atkinson et al. (2007, p.395-410)

Financial perspective goals and measures express what activities have been undertaken to add value to shareholders. There are two main approaches to improve financial performance: revenue growth and productivity improvement. In the first approach, firms try to deepen their relationship with existing customers (e.g. through selling regular customers additional products and services or creating and fulfil new needs) or expand sources of

revenues (introduce new products / services, selling to new customers). In the second one enterprises are trying to reduce costs and improve cost structure or improve asset utilization (Świerk, 2009; Atkinson et al., 2007).

Customer perspective consists of goals and performance indicators which express customer value proposition. The value proposition is a mix of attributes offered by enterprise to its targeted customers. There are two groups of performance indicators used in customer perspective of the Balanced Scorecard. The first set focuses on measurement of the results of the implemented strategy and include e.g.: customer satisfaction, customer loyalty, customer profitability. The second group includes indicators related to value proposition (e.g. being the first to the market, uniqueness of product / service) (see Krawczyk, 2013a; Atkinson et al., 2007).

Process perspective identifies critical processes which firm must excel at to achieve goals defined in customer and financial perspectives. Special attention should be paid to operating, customer management, innovation and regulatory and social processes (Atkinson et al., 2007).

Innovation and learning (learning and growth) perspective objectives and indicators highlight the employees capabilities and skills, technological opportunities and organization culture. Improvement of the employees skills, company culture and alignment as well as development of technology and information systems, will help to enhance crucial processes of the internal business perspective (Atkinson et al., 2007).

3.2. The Model of UDI-based Balanced Scorecard

It might be seen that in BSC based on consumer-oriented innovation strategy customer perspective should be the most important and the lead one. Such thinking is improper.

Firstly, because enterprises require not only customers to operate. Firms also need money coming from shareholders (financial perspective) as well as other intangible resources such as intellectual capital and information, which will be gathered together in on-going system consisting of the processes (internal business perspective). Second of all, as it has been said, BSC is a strategic system composed of strategic goals, performance indicators and different activities, connected by cause and effect relationships. Only if all these elements are gathered together, it is possible to implement and monitor the strategy. That is why it is necessary to formulate strategic goals in several perspectives, not only with reference to customers.

Implementation of UDI as a part of innovation strategy is a big challenge that organizations must face. Firms must transform innovation into a tool which will help to satisfy both: shareholders and customers, adding to them the value (Jabłoński & Jabłoński, 2011). So it can be ventured that customers are as important as shareholders. As a result, in UDI-oriented enterprises, customer perspective may be put next to financial perspective.

Moreover, the fifth perspective called innovation perspective can be added. It highlights the role of innovation in achieving strategically important targets.

In UDI-based BSC financial perspective objectives and performance indicators should concentrate more on the strategy of revenue growth (not forgetting about the strategy of productivity improvement), because this approach is more dependable on users behaviour. Enterprise must recognise needs of current and potential consumers and respond to their demands in order to deepen the relationship with customers and sell them more products / services, increasing revenues as a result. Going beyond regular customers towards potential ones is as good a method of increasing revenues as selling completely new products. Such indicators as: revenues growth rate, return on innovation investment (ROI2), revenues / profit from selling new products can be used to monitor financial performance.

Customer perspective should define customer value proposition. It must be remembered that Lead – user has different needs and expectations and requires different attitude than regular customer. Thus, it is important to know if the enterprise has anything to do with the Voice of the Consumer Method or the Lead-User Method. This will also determine strategic objectives of customer perspective. For example, if a firm implements the Voice of the Consumer Method, its objective can be providing customized, high-performance goods, with features desired by customers. For Lead-User Method it may mean being the first to the market or cooperation between enterprise and Lead-user. Customer satisfaction, customer acquisition, percentage of implemented innovation as a result of producer – user co-operation can be used as performance indicators.

<table>
<tr><td rowspan="4">Financial perspective</td><td colspan="3">Long – term shareholder value</td></tr>
<tr><td colspan="2">Increase customer value</td><td>Expand revenue opportunities</td></tr>
<tr><td>Deepen relationship with customers</td><td colspan="2">Sell new products/services (Innovation), often as additional products/services</td><td>Sell to new customers</td></tr>
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<table>
<tr><td rowspan="4">Customer perspective</td><td colspan="3">Complete customer solutions or Product leader</td></tr>
<tr><td colspan="2">Voice of the Consumer Method</td><td>Lead-User Method</td></tr>
<tr><td>Customer value</td><td>Co-operation</td><td>Partnership</td></tr>
<tr><td>Providing customized products and services</td><td>Providing high performance products and services</td><td>Being first to market</td></tr>
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Internal business perspective	Operating processes	Customer management processes	Regulatory and social processes
	Producing products and services desirable by customers Distributing finished goods responsively to customers	Deliver products and services responsively to customers Target high-value customers Communicate value proposition	Improve employment practices

Innovation perspective	Open on new sources of innovation	Anticipate future customer needs	Effective production of innovations

Employee and learning perspective	Human resources		Technology		Organization culture
	Skills	Knowledge	Systems	Networks	Innovation culture
	Training	Capabilities	Databases		Knowledge and information sharing

Figure 6. Examples of Balanced Scorecard strategy map with objectives related to User-Driven Innovation Concept

Source: own elaboration based on Atkinson et al. (2007, p.395-410; 431-432)

Process perspective identifies critical processes which the enterprise must excel at. In UDI vast majority of processes focus on recognising customer needs thanks to the use of accessible tools and skills as well as on undertaking cooperation with users. As a result, strategic goals put in this perspective (such as: producing products and services desirable by customers, distributing finished goods responsively to customers or anticipate future customer needs) are a response to users' demands. Examples of indicators which can be used in the process perspective are: number of relationships with targeted customers, time spent with key customers learning about future opportunities and needs.

Learning perspective objectives and indicators show which employees skills and capabilities as well as technological opportunities and information systems should be improved. Improvement on the flow of information, improvement on utilization of accessible technology and information systems, training employees in methods of

identifying customer needs can be chosen as objectives of this perspective. And: share of employees translating new knowledge into innovations, expenditures on new technology can be used as measures.

In UDI-oriented BSC, it is possible to put one more perspective, as the fifth, innovation perspective, with established strategic goals such as: effective production of innovations desired by customers or opening to new sources of innovation, especially to consumers. Number of planned innovative projects, number of innovative projects under realization, success rate of new products or number of innovation brought to the market based on client input can be used as performance indicators.

CONCLUSIONS

Opening to innovation as well as to customers play important role in achieving planned financial performance and even long-term competitive advantage. It is proved that customer-oriented innovation must be a priority for enterprises which want to grow and develop. Consumers are more and more aware of their needs and more often define the value which they want to be offered. What is more, they are an important source of information for innovation or source of ready innovative solutions. Innovation may be a result of undertaken trials to respond to customer needs, or be an effect of using consumers ideas, as well as outcome of companies cooperation with users. That is why recognition of customers' demands and expectations becomes key determinant of innovation success.

The above confirm the role of customers and the need to observe them. Consumer observations help to find out attributes of products / services important to users, which should become a part of value proposition offered to clients by enterprises. Next, firms ought to try to translate gained knowledge into innovations. The following step is recognition of production-capabilities, technological opportunities and employees' skills which can be used in designing, producing and introducing innovation to the market. Bringing in new products / services to the market does not finish the innovation process. It must be remembered that desires, needs and expectations of customers evolve, what makes the process continuous.

That is why User-Driven Innovation concept is not easy to implement. There are several problems that firms must deal with. The most common are: incomprehension of UDI, lack of awareness of possible profits coming from UDI implementation, staff reluctance to changes, lack of technology and information systems or even lack of financial capabilities (Warzybok et al., 2008). In the process of introducing User-Driven Innovation into innovation strategy it is worth using all possible tools which help to translate the concept approaches and monitor effects of UDI implementation. Balanced Scorecard is such a device.

Presented in the paper BSC helps to translate customer-oriented innovation strategy on communicable objectives and to monitor its performance thanks to carefully selected performance indicators. Chosen examples of strategic goals and performance measures can be used by firms in the process of building innovation- and customer-oriented Balanced Scorecard. UDI-based BSC spotlights that customer is the key element of innovation process (customer perspective, innovation perspective). As well as shareholders who finance innovation expenditures (financial perspective). Other resources, especially

professional and well-trained employees, who know how to use accessible information and technology (networks, databases) for better communication with customers, for consumer observation and for testing their behaviour (process perspective) are as important as the financial resources. That is why important part of innovation activity is continuous recognition of customer needs which require training employees in communication skills and channels and more effective use of accessible technology and information systems in customer relationship management (learning perspective).

REFERENCES

Atkinson, A. A., Kaplan, R. S., Matsumura, E. M., & Young, S. M. (2007). *Management Accounting.* (5th ed.). New Jersey: Pearson Prentice Hall.

Główny Urząd Statystyczny. (2013). *Działalność innowacyjna przedsiębiorstw w latach 2010-2012*. Warsaw: Urząd Statystyczny w Szczecinie. Retrieved July 16, 2015, from http://stat.gov.pl/obszary-tematyczne/nauka-i-technika-spoleczenstwo-informacyjne/nauka-i-technika/dzialalnosc-innowacyjna-przedsiebiorstw-w-latach-2010-2012,2,6.html

Jabłoński, A., & Jabłoński, M. (2011). *Strategiczna karta wyników (Balanced Scorecard). Teoria i praktyka*. Warszawa: Difin.

Jaruga, A., Kabalski, P., & Szychta, A. (2014). *Rachunkowość zarządcza.* Warsaw: Oficyna a Wolters Kluwer business.

Kaplan, R. S., & Norton, D. P. (1992). Balanced Scorecard - Measures that Drive Performance. *Harvard Business Review*. *70*(1), 71-79.

Karlik, M. (2013). *Zarządzanie innowacjami w przedsiębiorstwie. Poszukiwanie i realizacja nowatorskich projektów*. Warszawa: Poltex sp. z o.o.

Kotler, P., & Trías de Bes, F. (2011). *Winning at Innovation. The A-to-F Model.* Great Britain: Pelgrave Macmillan.

Krawczyk, M. (2013a). Zastosowanie miar perspektywy klienta BSC w koncepcji User - Driven Innovation. *Zeszyty Naukowe Uniwersytetu Szczecińskiego, 766. Finanse. rynki finansowe. Ubezpieczenia, 62*, 607-616.

Krawczyk, M. (2013b). The Use of Marketing Indicators to Measure and Monitor the Effects of Implementing the Concept of User-Driven Innovation. *Financial Internet Quarterly „e-Finanse*", *9*(4), 53–60. Retrieved July 17, 2015, from http://www.e-finanse.com/artykuly_eng/264.pdf

Nordic Council of Ministers. (2006). *Understanding User-Driven Innovation* (TemaNord 2006:52). Copenhagen. Retrieved August 16, 2015, from http://norden.diva-portal.org/smash/get/diva2:701139/FULLTEXT01.pdf

OECD/Eurostat. (2005). *Oslo Manual. The Measurement of Scientific and Technological Activities. Guidelines for Collecting and Interpreting Technological Innovation Data*. (3rd ed.), Paris. doi:10.1787/9789264013100-en

Prahalad, C. K., & Krishnan, M. S. (2008). *The New Age of Innovation. Driving Co-created Value through Global Networks.* McGraw-Hill.

Proctor, R., Burton, N., Pierce, A., & Burmiston, G. (2009). *Managerial Accounting for Business Decisions.* (3rd ed.). Essex, Edinburgh Gate: Pearson Education Limited.

Rosted, J. (2005). User – driver innovation. Results and recommendations. Copenhagen: FORA. Retrieved July 17, 2015, from http://www.euc2c.com/graphics/en/pdfs/mod3/userdriveninnovation.pdf

Tidd, J., & Bessant, J. (2009). *Managing Innovation. Integrating Technological, Market and Organizational Change.* West Sussex: John Wiley & Sons Limited.

Świerk, J. (2009). *Mapa strategii i strategiczna karta wyników w planowaniu działań przedsiębiorstwa. Studium teoretyczno-empiryczne.* Lublin: Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej.

von Hippel, E. (2005). *Democratizing innovation.* Cambridge, Massachusetts: MIT Press. Retrieved August 14, 2015, from http://web.mit.edu/evhippel/www/books/DI/DemocInn.pdf

von Hippel, E. (1988). *The Sources of Innovation*. New York: Oxford University Press. Retrieved August 14, 2015, from http://web.mit.edu/evhippel/www/sources.htm

von Hippel, E. (1986). Lead Users: A Source of Novel Product Concepts. *Management Science, 32*(7), 791-805. Retrieved August 14, 2015, from http://web.mit.edu/evhippel/www/papers/Lead%20Users%20Paper%20-1986.pdf

von Hippel, E. (1976). The Dominant Role of Users in the Scientific Instrument Innovation Process. *Research Policy, 5*(3), 212-239. doi:10.1016/0048-7333(76)90028-7.

von Hippel, E., Thomke, S. & Sonnack, M. (1999). Creating Breakthroughs at 3M. *Harvard Business Review, 77*(5), September–October, 47-57. Retrieved August 16, 2015, from http://web.mit.edu/people/evhippel/papers/HBR%2099%20LU%20pub%20version%203M.pdf

Warzybok, B., Pander, W., & Górzyński, M. (2008). Ekspertyza: Zwiększanie świadomości przedsiębiorców z zakresu korzyści płynących z popytowego podejścia do innowacji (User-Driven Innovation). Warsaw: CASE-Doradcy sp. z o. o. Retrieved August 18, 2015, from http://www.mg.gov.pl/NR/rdonlyres/7B61C99B-557E-4B4F-92EC-B557E197F4C7/52673/Ekspertyzauserdriveninnovation.pdf