

## NET READINESS OF SME ENTERPRISES FROM WEST POMERANIAN VOIVODESHIP

Tomasz Ordysiński\*

**Abstract:** The article presents results of the Net Readiness research of SME enterprises from West Pomeranian voivodeship as the preparation level to e-business. There is described Net Readiness method (invented by CISCO). The main part presents general Internet readiness card and indexes for micro, small and medium enterprises. The final part contains conclusions and the direction of further research.

**Keywords:** Net Readiness, e-business, e-business awareness.

JEL Codes: M15, O32

### Introduction

Rapid IT development influences more and more aspects of human life. E-business and the increase of role of ICT are the most visible, worldwide change in economy. These changes concern every enterprise. The market conditions are changing – all transactions or contracts are realized faster and require faster decision making. [5] The enterprise is now challenged with constantly changing economical conditions and proper rating of its position on the market. All those changes happen concurrently with social and economical transformations connected with development and popularization of computer and communication technology [2]. Most companies, which introduce Internet solution, don't realize the full potential of such a applications. Without that knowledge and awareness they are not able to decide, whether this investment should be based on totally new technology or be just a new functionality of the old, legacy information management system.

There are two main attitudes towards Internet in business: most companies identify those technologies as a chance to develop and create/access new markets but there is also a group, which just concerns Internet as not useful necessity [3, p.37]. The research problems, which is presented in this article concerns the level of Net Readiness and Internet awareness in Polish enterprises. The questionnaire was sent to almost 400 SME companies from West Pomeranian Voivodeship and the final response group encountered over 100. The initial research (based on

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interviews) showed, that the level of Internet-based applications is rather low. That is why CISCO Net Readiness (in spite of several newer indexes) was chosen as final research method. The article presents the results of conducted studies.

### Research objects and method

The questionnaire, containing 4 classification questions and 20 from Net Readiness method, was prepared and sent with Google Apps. in January 2012. More than 500 companies from West Pomeranian Voivodeship were invited. Classification questions concerned the type of company business, geographical range of service, annual turnover (in million EUR) and number of employees. The electronic poll was filled by 139 companies, but SME criteria fulfilled 102.(Table 1) Those were further divided into middle, small and micro enterprises according to following national rules:

- middle company: hires less than 250 employees, the annual turnover is not more than 50 million EUR,
- small company: hires less than 50 employees, the annual turnover is not more than 10 million EUR,
- micro company: hires less than 10 employees, the annual turnover is not more than 2 million EUR.

Due to those criteria the questionnaire was filled by 18 middle, 20 small and 62 micro companies (2 companies could not be classified because of extremely high turnover). The profile of classified companies is presented in Table 1.

Presented classification was used in further research based in CISCO Net Readiness method. The idea of using this particular method was a result of initial interviews with managers of several companies in West Pomeranian region, which clearly showed very low level of professional Internet usage in their companies. According to them, the main application of Internet solutions was looking for materials, suppliers etc. based on Web crawlers (usually Google). That was a reason why Net Readiness was chosen as a method of identification and describing the level of Internet awareness.

Type of business	Geographical range of business	Annual turnover (in EUR)	Number of employees
• service – 34	• local - 37	• up to 2	• up to 10 -

<ul style="list-style-type: none"> <li>• trade – 29</li> <li>• production - 5,</li> <li>• service-production - 6,</li> <li>• trade-service - 21,</li> <li>• educational/training – 1,</li> <li>• financial – 2,</li> <li>• insurance – 2</li> <li>• other - 2</li> </ul>	<ul style="list-style-type: none"> <li>• regional - 21</li> <li>• national - 23</li> <li>• international - 21</li> </ul>	<ul style="list-style-type: none"> <li>million - 85</li> <li>• 2 – 10 million - 14</li> <li>• 10 – 50 million - 6</li> </ul>	<ul style="list-style-type: none"> <li>63</li> <li>• 11-50 - 21</li> <li>• 51-250 - 18</li> </ul>
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**Table 1. Profile of studied companies according to classification**

*Source: self study.*

The Authors of Net Readiness method were employees of CISCO Systems: Armir Hartman, John Sifons and John Kador. The level of net Readiness indicator is a combination of four determinants, which enables a company to start extremely effective business processes based on Internet technology. There are identified as:

- leadership,
- governance,
- competences,
- technology.[1, p. 3-37]

The leadership, according to presented method, is described as thinking and acting in new economy dimension, active application of Internet solution and execution of responsibility in measureable way. The authors of Net Readiness method pointed features of good leader of Internet project such as giving an example with own actions and skills, giving advices, alternative thinking, business fantasy and basing on customer's expectations. In governance aspect the method is similar to process attitude – delegation of decision power, horizontal vision of organization, inter-departmental teams, flexible structure and measurable goals to achieve. The competences concerns the way the organization responses to environment changes: how available resources are used, opportunities are taken and how the company adapts to constraints. This dimension of Net Readiness requires efficient coordination of the other three areas. The last element, the technology, is understood as modern and standardized infrastructure, which supports three other pillars in the area of

optimal human resources usage. The infrastructure must be scalable and conform to customer's needs. The very important point in attitude toward technology in Net Readiness method is ability of company of business thinking in the IT area and IT thinking in the business area [4].

The application of Net Readiness method (in simplified form) is a questionnaire containing 20 questions, which are classified into four groups according to the method's pillars. All the questions can be answered as a note (the scale is from 1 to 5). The notes are calculated as an arithmetical average in particular areas and the total sum of points for whole questions is calculated. The averages from notes in four areas are presented on radar charts compared to ideal situation (all notes as 5 points). Those charts clearly present how big is the gap between present situation and ideal one. The total number of points, according to the method, indicates the membership of analyzed company to one of five groups:

1. Internet visionary (90 – 100 points) – the company demonstrates the best preparation level for e-business. There should be quick and very positive results of Internet-based business projects.
2. Internet leader (74 – 89 point) – there is very good level of e-business consciousness but there is a lack of some important elements.
3. Internet savvy (60 – 73 points) – enterprises showing 'higher than average distance from the concept and language of Net Readiness'.
4. Internet aware (45 – 59 points) – the organization is more conscious of Internet applications than ready to implement them in business.
5. Net agnostic (0 – 44 points) – e-business is beyond the interest of organization. All Internet projects must be preceded with understanding the features of net-based applications.

### **The results of research**

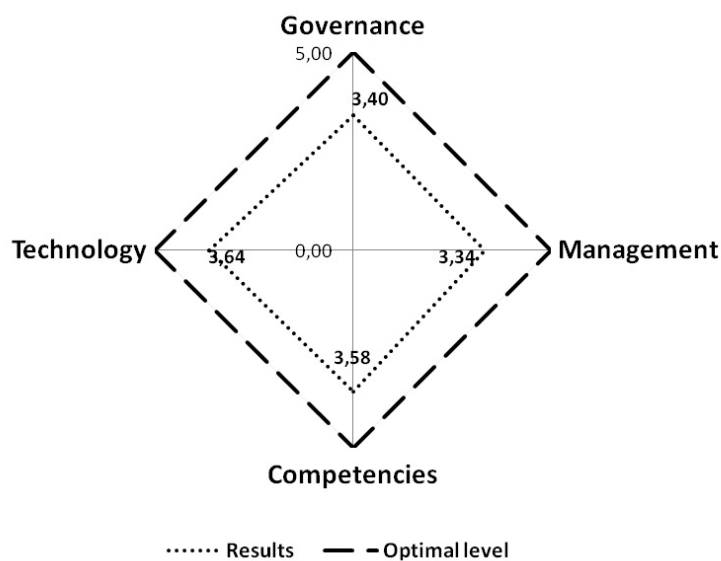
All the notes given by 102 companies from West Pomeranian Voivodeship were analyzed with MS Excel. The cumulative Net Readiness card revealed relatively weak preparation of questioned companies in e-business. Only once, for technology area, the average note from specified pillars was higher than 4. The second high points were given to competences – especially in the area of simultaneous management of internal and external relations. The weakest results were in the in governance field – there appeared lack of experience in e-

business projects, which causes that new ones can be quite a problem for organizations.

	Net Readiness factor	Results	
<b>Leadership</b>			
1	Top leadership keeps in mind opportunities/threats resulting from Internet economy.	3,31	3,40
2	Internet projects under implementation are well integrated with the overall business strategy of the company	3,45	
3	There is a culture of information sharing within the entire organization.	3,77	
4	Company has a clearly defined and accepted 12-to 18-month development strategy regarding e -business	3,25	
5	Company's e-business efforts stress more the strategic significance of value creation rather than concentrate on its operational effectiveness.	3,23	
<b>Governance</b>			
6	Company has started principles of work organization of e-business projects	3,31	3,34
7	We have stable indices rating the effects of e-project implementation	3,24	
8	Company has clearly specified functions, range of duties, responsibilities and control in relation to e-business projects	3,25	
9	E-business projects are implemented by the right people who are properly motivated to achieve expected goals	3,47	
10	Department sees itself as a business partner and consultant in utilizing Internet services by the company business units.	3,40	
<b>Competencies</b>			
11	Company is able to function in the face of rapid and constant change	3,82	3,58
12	E-business projects are implemented quickly and efficiently i.e. by 3 to 6 people in less than 3 month.	3,37	
13	Business managers have IT knowledge while IT managers have business knowledge	3,27	
14	Company is experienced in simultaneous management of internal and external relations.	3,73	
15	Company can quickly start and develop cooperation with business partners	3,70	
<b>Technology</b>			
16	Entire company is covered by a stable and standard IT infrastructure	3,70	3,64

17	Company has indispensable technical infrastructure such as networks, hardware etc.	4,09
18	Company's solutions are flexible enough in response to changes in the environment	3,59
19	Company's solutions can be easily adopted to changing needs of its customer	3,71
20	Majority of company's solutions is e-business oriented.	3,14

**Table 2. Cumulative Net Readiness card for companies from West Pomeranian Voivodeship**  
*Source: self study.*



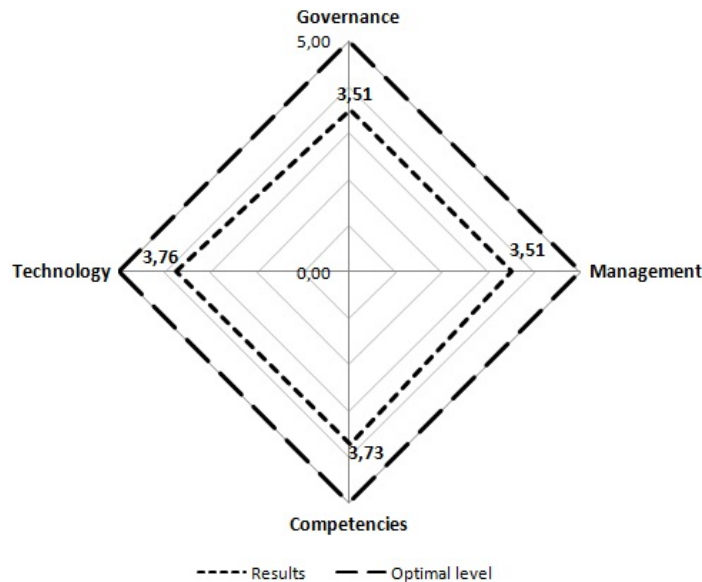
**Figure 1 General results of Net Readiness in companies from West Pomeranian Voivodeship.**

*Source: self study.*

The average of total sum of all notes (cumulative note) reached a value of 69,8. According to Net Readiness classification the companies from West Pomeranian Voivodeship are in the group of Internet savvy, showing 'higher than average distance from the concept and language of Net Readiness'. The total results are presented in Table 2.

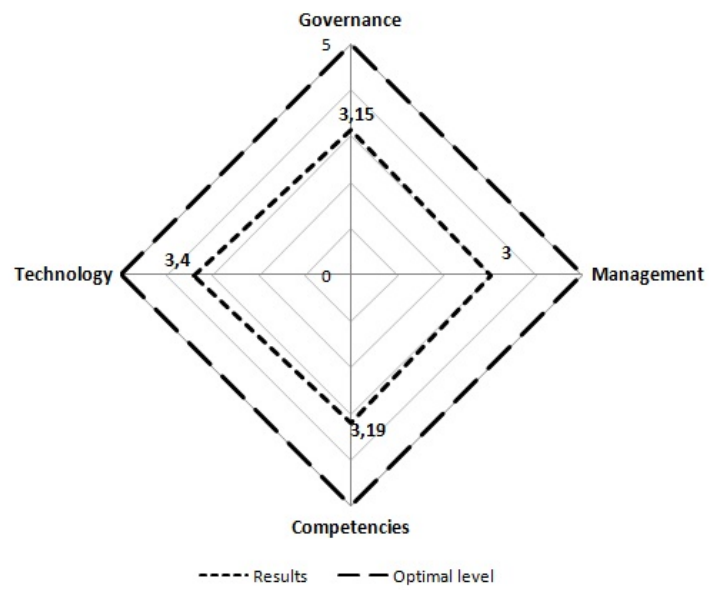
The visualization of research on radar chart (compared to ideal situation, when all notes are equal to 5) shows rather stable engagement level in all four pillars of Net Readiness - the average notes are in the middle of “neutral” and “rather agree”. Higher evaluation in the areas of technology and competencies can suggest that the lack of Internet awareness can be mainly caused by top management in organization (Fig. 1). The final conclusion from the general results is that reaching better or the best level of Net Readiness must be caused by harmonic development in all four mentioned areas.

The following analysis of the questionnaire are focused on checking the diversity of Net Readiness level between micro-, small- and middle-sized enterprises. The results show clearly that the highest Internet awareness is among micro companies – the average note in all pillars of the method are above general results of whole analyzed group (Fig. 2). The worst situation is in small companies of SME sector. As in general results, the lowest notes were given to management (Fig. 3). In the middle of classification there are small enterprises. In that type the leadership was evaluated with the best notes but, as in all previous SME groups, the governance got the lowest notes (Fig. 4).



**Figure 2 General results of Net Readiness in micro-companies from West Pomeranian Voivodeship.**

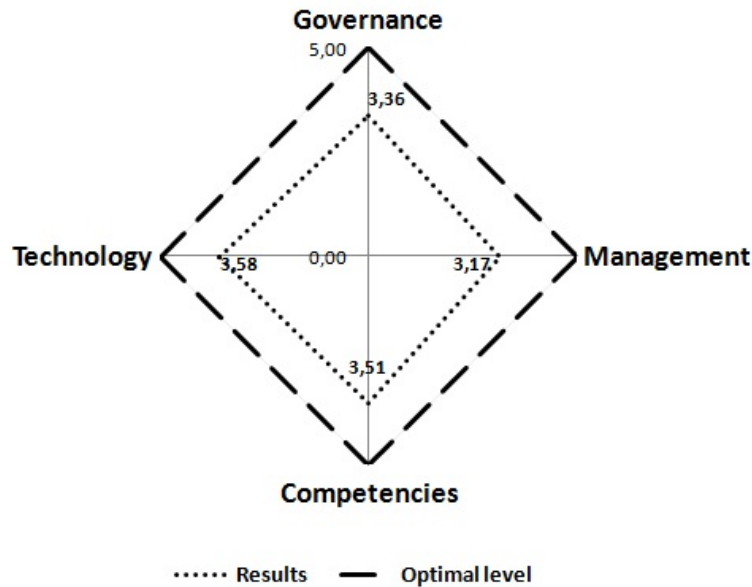
*Source: self study.*



**Figure 3 General results of Net Readiness in small companies from West Pomeranian Voivodeship.**

*Source: self study.*





**Figure 4 General results of Net Readiness in middle-sized companies from West Pomeranian Voivodeship.**

*Source: self study*

### Summary

The presented results are the second step of analysis of collected research material. The classification of enterprises into micro-, small- and middle-sized revealed the diversity in Net Readiness level inside SME group. The position of leader belongs to micro-companies, what can be explained with flexibility (considering the size) and perception of Internet as a chance of improvement of competitive position and reaching new markets.

The general results showed quite big gap between present Internet awareness and optimal state of the four pillars of Net Readiness. The main problem, confirmed in all sub-groups, is management. The questionnaire evaluation very strongly strengthened the initial impression of the Author from personal interviews with several top managers. There could be noticed a feeling that top managers (very often just owners) of SME are completely uninterested in e-business or even sometimes scared of its technological aspects. There was indirect negative connection between the age of interviewed manager and the level of Internet consciousness. In many cases the lack of interest in e-business was explained by managers with "Internet inappropriate" type of their business.

This argumentation in present times seems to be rather incorrect. The popularity of Internet usage in searching for business partners, suppliers or customer should make any company to consider minimum involvement in e-business by e.g. simple company website. Such a initiative can be classified as Internet project being excellent beginning of e-business development in organization.

**References:**

- [1] A. Hartman, J. Sifonis, J. Kador, : *E-biznes – strategie sukcesu w gospodarce internetowej*, Liber, Warszawa 2001.
- [2] Nakamura L.I. *Economics and the New Economy: The Invisible Hand Meets Creative Destruction*. Federal Reserve Bank of Philadelphia Business Review, 07-08.2000
- [3] Ordysiński T.: Modelowanie strategii rozwoju e-biznesu w przedsiębiorstwie, WNUS, Szczecin 2007
- [4] Pastuszak Z., The Philosophy of Supply Chain Management in the New Economy : Net Readiness in the Net Supply Chain. [http://www.fm-kp.si/zalozba/ISSN/1581-6311/2\\_015-030.pdf](http://www.fm-kp.si/zalozba/ISSN/1581-6311/2_015-030.pdf) (visited 12 February 2012)
- [5] Szapiro T., Ciemniak R., *Internet – nowa strategia firmy*, DIFIN, Warszawa 1999

**PRZYGOTOWANIE PRZEDSIĘBIORSTW SEKTORA MŚP  
WOJ. ZACHODNIOPOMORSKIEGO DO E-BIZNESU**

**Abstrakt:** E-biznes wkracza do działalności polskich przedsiębiorstw w bardzo szerokim zakresie. Wg powszechnych trendów i dostępnych danych nowopowstające firmy uwzględniają go swojej strategii jako jeden z ważniejszych elementów. Pytanie, które jest stawiane w artykule dotyczy sytuacji rzeczywistej. Stosując metodykę Net Readiness (stworzoną i stosowaną przez firmę CISCO) zbadano ponad 100 przedsiębiorstw sektora MŚP z województwa Zachodniopomorskiego w zakresie poziomu „świadomości sieciowej” i zagadnień e-biznesu. Artykuł prezentuje wyniki tych badań.