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### РАЗВИТИЕ ТРАНСНАЦИОНАЛЬНЫХ КОРПОРАЦИЙ В АСПЕКТЕ ГЛОБАЛИЗАЦИИ

*В статье проведен анализ развития транснациональных корпораций в аспекте глобализации. В данной статье рассмотрены теоретические и методологические основы понятия глобализация. Исследована деятельность основных мировых ТНК. Проанализировано индекс глобализации КОФ в мире и в Украине. Рассмотрены глобальные цепи и их влияние на экономику.*

*Ключевые слова: транснациональные компании; глобализация; глобальные цепи; индекс глобализации.*

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### ECO-INTELLIGENT TOOLS – A NECESSITY FOR SUSTAINABLE BUSINESSES

*Many of the challenges associated with sustainable development can be traced in the way modern society produces and consumes. Production, distribution and supply of goods and services require material and energy consumption, having an impact on natural resources both quantitatively and qualitatively, generating waste, pollution and disrupting ecosystems. Eco-business intelligence is the capacity of people, processes and applications / tools to organize business information, to facilitate consistent access to them and analyse them in order to improve management decisions, for better performance management of the organizations that are increasingly pressed to synchronize their processes and services with a sustainable development agenda, through the development, testing and implementation of decision support software. By adopting sustainable practices, eco – intelligent companies can gain added value, increase market share and boost shareholder value. Moreover, the growing demand for "green" products has created new markets and the visionary entrepreneurs already reap the rewards of approaching sustainability. Large and small companies are learning that sustainable business practices not only help the environment but also can improve profitability by pursuing higher efficiency, fewer harmful side-effects, and better relationships with the community and more. Gaining competitive advantage is a core concern of the companies and the existence of systems of identification, extraction and analysis of available data in a company, but also from the external environment, to provide real support for business decisions, is an essential ingredient of success. This paper highlights the necessity of eco-intelligent tools that help determining the organization's strategies, identifying the perceptions and capabilities of the competitors, analyzing the effectiveness of current operations, deploying long-term prospects for environmental action and establishing indicators and key variables for organizational health, security and natural growth of its assets. The proposed tool is a decision support system that will be implemented in an online environment, tested and integrated with the information systems of the organizations. The eco-intelligent business tool can be used to obtain competitive advantages by the organizations that seek to contribute to a better quality of life in the present without compromising the development and life quality of future generations.*

**Keywords.** *business intelligence, sustainable companies, decision support systems.*

**Introduction.** The intelligence in the business society has occurred in the late 1960s, early 1970s, emerging from government and military spheres, where it remains deeply rooted even today.

During 1960-1970, marketing and strategic management broke into management thinking, both being based on the theory of "turmoil in the business" by Igor Ansoff.<sup>1</sup> Thus, companies have started to collect information about competitors, initially focusing on tactical and operational sales and marketing. As a result, information about competitors, although limited, have become part of business plans.

In the years 1980-1990 there was an incisive penetration of competitive intelligence. The most important event was the publication of Michael Porter's books "Competitive Strategy" (1980), "Competitive Advantage" (1985) and "Competitive Advantage of Nations" (1990). They have had a decisive influence on the business community, presenting aspects of competition and the business environment. Porter's five forces model is still used by many companies as an important part of the strategic process. Although at the time many companies started analyzing the industry and competition, they lacked the full support of the management. Also in the '80s and '90s, in the United States appeared concept of benchmarking, "introduced by Xerox, it became a very important management application to

compare performances between companies' branches and even between competing companies" [1, p.24].

Another important milestone in the evolution of competitive intelligence was the establishment in 1986 of the Society of Competitive Intelligence Professionals (SCIP), and in the 90s the term "competitor" was replaced with "competitive". On the anniversary of 25 years of existence, the directors voted "the official change of the name from the Society of Competitive Intelligence Professionals into Strategic and Competitive Intelligence Professionals, to reflect the development and evolution of competitive intelligence" [2].

From the beginning until now, the mission SCIP has been amended four times. Thus, in 1986, its mission was to help professionals develop their expertise in collecting and gathering information, dissemination of competitive intelligence and involvement of decision makers in a productive dialogue, creating organizational competitive advantage. Then, in 2003, there was the first change of the mission, SCIP becoming the global organization chosen by professionals in terms of competitiveness and related disciplines, the first to use qualified personnel to improve business decision-making and organizational performance. In 2005, the objective was to enhance the success of the organization's members through leadership, education, support through legal means and networks.

The last change occurred in 2007, when it was developed the strategy for 2009-2013. The new plan now guides the company aims to meet a number of high value targets. It also recognizes the competitive intelligence as an essential discipline for business decisions and organizational success.

**Understanding Competitive Intelligence.** The competitive intelligence process continually seeks to detect

<sup>1</sup> According to Igor Ansoff's theory, in order to be effective, the strategy of a company must match the level of turbulence present in its environment. Due to the strong impact that turbulences have on the companies, understanding these levels lead to a more profitable business.

any signs of change, analysis, trends and responses, opportunities and new threats to hold at any given time updated information.

If we were to consider competitive intelligence as a tool that will increase competitiveness, we see that it brings significant improvements to the products and services offered by the company.

From the point of view of Craig S. Fleisher and David L. Blenkhorn [3, p.7], competitive intelligence can be understood from two perspectives. The first perspective is that of looking like a progression from raw inputs to final outputs. In this case, it starts from the raw data chunks, which are then organized by experts and processed into information. This information becomes intelligence products when placed in decision making. Thus, competitive intelligence is the intelligence refined product that meets the needs of a decision maker to understand a competitive aspect of the internal and / or external environment.

The second perspective of understanding the competitive intelligence is seen as an organizational function. Effective intelligence activities range from the wider business intelligence area to the narrowest analysis of competitors. They can provide the foundation upon which are built market strategies and tactics. As a function mainly staff oriented, competitive intelligence will overlap and reduce other functions, particularly those associated with marketing and planning.

So competitive intelligence plays an extremely important role in the strategic management of a company. This is mainly due to the fact that it has the function of early warning regarding threats to the interests and objectives of business organizations. But it must be emphasized that the information collected can not be of real use only when administered in an intelligent way.

In order to address competitive intelligence and all that it entails in a private organization, it is necessary to understand the meaning of terms such as business intelligence, counterintelligence, information flow, and benchmarking. These processes are closely interconnected, and their implementation in an appropriate manner can lead to a better positioning.

First, it must be stressed that competitive intelligence is an integral part of a much broader concept, namely the business intelligence community. One of the best definitions of business intelligence site was provided by the American consulting and IT research company Gartner. According to its experts, such a concept can be defined as "the ability of people, processes and applications / tools to organize information, to facilitate access to them and analyze them to improve decisions, for better performance management" [4].

Large companies, under increasing pressure of chaotic changes that occur in the market and increasing competition, are increasingly required to develop a system of external data collection and processing them into intelligence, leading to a better functioning of the decision-making process, and therefore success in business.

Therefore, business intelligence cannot be considered a system or a product, but a concept that spans strategy, databases, and applications. Collection, recovery and analysis helps to understand trends, to highlight the strengths and weaknesses of both the own company and competitors.

Business intelligence is not addressed only big companies but also small and medium enterprises, i.e. everyone who need information to better development.

Another component of business intelligence community is the protection of the company, known in technical terms as the competitive counter – intelligence.

Counterintelligence "aims to neutralize the collection efforts of a competitor through a series of imaginative, flexible and active measures" [5, p.5].

Counterintelligence "deals with intrusions that are not illegal. There can be used barriers to prevent an exodus of information, but they must be placed in company procedures and in the minds of employees, not on points of entry sites" [6, p.184].

The counterintelligence action is a multi-layered protection that hides own weaknesses from those who, knowing them, can get benefits. Counterintelligence is also used to limit exposure to those strengths that will let them know. "It's an ongoing process by which an organization sees itself from its competitors' perspective, in order to lock the exposure to economic terrorism, cyber and industrial, fraud, negligence, unlawful acquisition of information and other security risks" [7, p.79].

Information flow is achieved through four steps:

1. Scheduling and routing, which is determining information needs, collection planning and issuing requests to the search departments;
2. Effective collection of information using various sources and transmission of data obtained for the optimal exploitation;
3. Exploitation of information in which collected data are evaluated, analyzed and synthesized;
4. Dissemination, which involves dissemination of information products to beneficiaries in the form of bulletins, analysis, synthesis, for final capitalization of the cycle.

All these steps lead to the formation of a procedural cycle as information obtained highlight new information needs and information are always reviewed to adapt to changing circumstances.

Benchmarking can be defined as "the process of identifying, understanding and adapting key practices within the organization and other organizations to improve performance" [8].

The emergence of benchmarking dates not very long, it can be identified around 1980, when Rank Xerox<sup>2</sup> realized that its market dominance was strongly affected due to Japanese competition. "Returning the company's assets, 19 % in 1980, was reduced to 8 % three years later, when 80 % of European photocopiers were provided by Japan" [9, p.212].

Per V. Jenster and Klaus Solberg [10, p.114] present the main elements of the benchmarking process:

1. Determining who should be included in this process, by comparing the performance ratios of competitors or by using an indicator that shows that performance could be improved;
2. Establishing the entity on which it is applied. This process requires the agreement of the other party because normally, benchmarking is a reciprocal process;
3. Studying its own processes in the area of interest;
4. Studying the processes of benchmarking partners;
5. Comparing the results with what is already in the organization;
6. Developing an action plan to improve weaknesses.

The use of benchmarking is limited in terms of the analysis of competitors and is more useful for internal procedural restructuring, especially as it is likely to get a collaboration between different business organizations. However, normal practice in benchmarking is that "information obtained from a reciprocal process are used only for the purpose agreed at

<sup>2</sup> Rank Xerox was formed in 1956 through the combination of Xerox Corporation in the U.S. and UK Rank Organization, for producing and marketing Xerox products in Europe, Africa and Asia. Initially, the shares were 50/50, but in a few years, Xerox has bought other shares, leading to a ratio of 80/20, which led, in the late 1980s, the company's name change from Rank Xerox to Xerox.

the outset, as their use for other purposes makes the process of benchmarking unethical." [10, p.115].

Benchmarking can be a useful tool in building a competitive advantage and is one of the tools that could help achieve world-class performance. It can be used only within the organization, for example, in a business that operates in several countries and has several branches that perform the same tasks. This leads to an overall improvement and a significant increase of trust, but is unlikely to help business organizations to place themselves ahead of the competition.

In the process of benchmarking there can be identified five stages: data collection, report production, preparation of the evaluation report, discussion of the results and implementation of the action plan.

Therefore, benchmarking aims to evaluate data by experts discussing the results, so that in the end the most innovative methods that benefit the organization to be taken and implemented.

It can thus be seen the multitude of processes and actions occurring in the private sector for better business management and success. All, managed with the highest degree of reliability, lead to understanding the environment in which private organizations operate.

It can be said that the ability of a competitive intelligence analyst to achieve a vision of the future is driven by creativity, by observation, but also by understanding the ways of developing new technology.

In carrying out competitive intelligence one should not lose sight of the ethical aspect, the whole process being compromised if this essential component is not met. The issue of ethics has been much discussed in recent years, the line between industrial espionage and competitive intelligence is a volatile one.

Competitive intelligence can be developed by all legal means, through information available on the internet or by using specialized software, and any information available to the public.

#### **Management and Sustainable Business Practices.**

In a world facing increasing environmental, social and economic challenges, business companies have been charged with the task of aligning their processes and services with a sustainability agenda. However, the concept of sustainability is complex, interdisciplinary and contested. Approaches to sustainable businesses may range from the development of new technologies for increased efficiency to re-framing technological uses and pursuing more fundamental changes within the ingrained culture of the organization. Furthermore, while all business enterprises can make a contribution towards sustainability, the ability to make a difference varies greatly by sector and organization size.

A good management of environmental services has now become the focus of many business strategies tending to the aspiration of 'greening' their infrastructures and product deliveries. The growing demand for "green" products has created major new markets in which visionary entrepreneurs reap the rewards of approaching sustainability [11]. Hence, by adopting sustainable practices, companies can gain competitive advantage, increase market share and boost shareholder value.

Over the last years, there has been an increased pressure on enterprises to broaden the focus of sustainability and accountability in business performance beyond that of financial performance. Demands for sustainability management spring from a variety of sources, including societal mandates incorporated into regulations, fear of loss of sales, and a potential decline in reputation if a firm does not have a tangible commitment to corporate sustainability management [12, 13].

Corporate sustainability is not just a buzzword—for many industry leaders and corporations, it has become an invaluable tool for exploring ways to reduce costs, manage risks, create new products, and drive fundamental internal changes in culture and structure. However, integrating sustainability thinking and practice into organizational structure is not a trivial task and it requires a vision, commitment and leadership. It also requires a systems approach with an appropriate management framework that enables design, management and communication of corporate sustainability policies [14].

Industrial systems cause and determine flows of material and energy in society and are therefore an important part of the human economy. Although industry is sometimes seen as a source of environmental degradation and social concerns, it is widely recognized that it is an essential part of development and wealth creation. Therefore, as an important social actor, industry must play a prominent role in creating a sustainable future [15].

The challenge of sustainable development for any business is to ensure that it contributes to a better quality of life today without compromising the quality of life of future generations. If industry is to respond to this challenge, it needs to demonstrate a continuous improvement of its triple bottom line, i.e. economic, social, and environmental performance, within new and evolving governance systems [14].

Furthermore, environmental (e.g. climate change) and social (e.g. accountability) demands from shareholders and stakeholders are contributing to the pressure for companies to consider sustainability issues more seriously. However, the major challenge to companies and industries is to demonstrate their current contribution to the society as a whole without compromising the potential for continuing to deliver improvements or future generations. In short, sustainability management practices at a firm level may help the management board to align its corporate and business strategy and to meet key sustainability challenges [16].

However, increasingly, a second major reason for incorporating sustainability into business practice is starting to emerge: it makes business sense to be more sustainable. In their recent report, the World Business Council for Sustainable Development (WBCSD) and the International Institute for Sustainable Development (IISD) identify a number of business benefits of addressing sustainable development concerns [17]:

- Cost savings due to cleaner production methods and innovation—innovation and technology can improve material, energy and product efficiencies;
- Lower health and safety costs—a safe and healthy environment for workers and the community improves wellbeing, which translates into higher productivity, reduced compensation and damage suits, and reduced costs for social services and medication;
- Lower labour costs and innovative solutions—providing good working conditions can improve motivation and productivity, lower labour absenteeism or turnover and result in fewer union disputes;
- Easy access to lenders, insurers, preferential loans and insurance rates—lower risks achieved through implementation of a sustainable development strategy may lead to lower loan rates or insurance costs;
- Best practice influence on regulation—companies that follow best practice are much better placed than their competitors to influence how standards are set and the direction of regulatory change;
- Company's reputation—a commitment to sustainable development may enhance a company's reputation and secure its social licence to operate, also helping to attract the best people to join the company;

- Market advantage—a move towards integrated supply chain management may allow building deeper relationships with customers and capturing more value by providing service rather than selling products only;

- Ethical investors—the rapid expansion of the ethical and socially responsible investment movement poses a new challenge for companies as investors screen out those associated with unacceptable social and environmental performance.

Despite urgent calls for the adoption of corporate sustainability management practices [18, 12, 13], its incorporation into corporate organizational management often remains more superficial than effective [18]. One of the reasons for this lack of integration is, according to Briassoulis [19], both that companies do not know how to measure and

address the issues in a systematic way, as well as the shortfall of available tools to support sustainability management practices in concrete and operational terms.

**Knowledge Management and Instruments for Assuring Competitive Advantage.** Uncertainty forces us to guide our future events in different directions, but without knowing if the chosen direction is the safest. Uncertainty creates opportunity plans and strategies that may not work as expected, and this situation is generating risk. Uncertainty arises due to the amplitude of changes and identifying changes underlies the assessment of potential risks. To evaluate the risks specific to the business, identification must begin with the vectors of change.



Vectors of change in business are events or variations leading to the development of the business. Vectors vary by environment and scope. In the business area there were identified four major types of vectors that produce change:

- scientific and technological innovation;
- new laws and new government policies;
- new social / demographic / ecological trends;
- new habits, new consumer preferences.

To avoid the uncontrolled widening of the gap between risks and opportunities, fueled by uncertainty, it is preferable to build a bridge between strategic knowledge based on science and supported by business intelligence mechanisms.

Knowledge management determines how internal / external knowledge can be balanced or how an organization can create added value of its intangible / immaterial assets. More specifically, knowledge management can be explained as the process of identification, retrieval, sharing, implementation, dissemination and creation of knowledge in the circumstances held by an organization. Knowledge management plays an important role in facilitating strategy formulation and implementation of business intelligence; it involves learning from success and failure previously.

According to J. Bickford [20], lessons learned is that knowledge gained from an innovation or a negative experience that causes an employee or an organization to improve its processes or activities for job security, efficiency or increased quality intake.

The lessons help the collection, analysis and dissemination of relevant casuistry enabling project teams and organizations to fight for success.

Another ingredient, recently used by business intelligence is artificial intelligence. It integrates and complements the power of the human brain with computer intelligence power through the use of advanced interpretation and technologies such as knowledge -based systems, artificial neural networks, algorithmic, based on case arguments etc. However, interpretation and discovery are based on intelligent links and patterns in large data and text. It involves technologies such as extraction of information from data (data mining), the extraction of information from text (text mining), rule induction, self-organizing maps and other related techniques.

Collecting and applying lessons learned are important processes in knowledge management in engineering, but certainly in project management. These lessons learned are intended to avoid repeating the failures, the shortcomings of the past and allow the spread of best practices.

Although lessons learned systems are developed to promote the exchange of knowledge, in the literature it is estimated that approximately 70% of these systems are

inefficient [21]. A key reason for this lack of efficiency due to use of analysis of passive and / or active approaches to dissipation.

One problem found in systems using lessons learned has to do with the process itself. For knowledge management to be successful, its specific practices to be incorporated into the daily activities of the employees.

Bob Galvin, former President of Motorola, identifies five key features of the business intelligence specialist: appreciation of anthropology, to highlight human intelligence, to be an active listener, a creative thinker and always have something new to say. According to Galvin, the ability to master these features make the difference between a business intelligence professional who has success and those who don't [22].

Moreover, before taking a decision, leadership must promote the views of the minority. Only in this way it is progressing and producing innovations. A business intelligence specialist can provide a revolutionary thought so both minority opinion to be expressed, and the view of the majority. It is understood that one skilled in business intelligence will spend more time gathering information than doing analytical work. Process refers to the correct questioning, understanding and prioritizing business information needs, the process of gathering information, interpreting complex data and achieve early warning, finally, improving the field of action of those decisions.

A tool for preparing and training to acquire specific skills is the famous war game – games / methodologies for business strategies, divided into teams representing the company and its competitors home, working on the basis of competitive intelligence research provided from inside (a library or drive their own competitive intelligence) or obtained from an external provider.

**Sustainable Businesses.** The business sector is responsible for a significant proportion of the environmental footprint, in addition to having a major influence on wider social and economic sustainability issues, both nationally and internationally [23]. Therefore, it is crucial to improve the environmental and sustainability performance of businesses and organizations in order to achieve a more sustainable society.

Sustainable businesses and green businesses are businesses that have no negative impact on global or local environment, the community, society and economy. Sustainable business is business trying to satisfy the triple approach of sustainability: its economic, social and environmental components [24]. Often, companies have progressive policies for environmental sustainability and human

rights [25]. Generally, a business is considered to be green if it meets the following four criteria [26]:

- Incorporating sustainability in each of its business decisions.
- Provides environmental products and services that replace the demand for products and / or organic services.
- It is greener than traditional competition.
- Made a commitment to the principles of environmental sustainability in its business operations.

A sustainable business is any organization participating in ecological or green activities to ensure that all processes, products and production activities adequately address the current environmental concerns, while maintaining a profit. In other words, it is a business that "meets the needs of the present world without compromising the ability of future generations to meet their own needs" [27]. It is the process of evaluating how to design products that take advantage of current environment and how well a company behaves when products are made from renewable resources [28].

The Brundtland Report stressed that sustainability is a stool with three legs: people, planet and profit [27]. Sustainable business tries to strike a balance between these three pillars of sustainability, using the concept of sustainable development in the supply chain to reduce environmental impact, economic growth and social welfare [29].

Everyone affects market sustainability and the planet in one way or another. Sustainable development in an enterprise can create value for customers, investors, and the environment. A sustainable business must respond to customer needs while at the same time, treating the environment well [30].

Gerard Keijzers argues in his paper The transition to the sustainable enterprise [31] that the sustainable business is about "business processes that not only curb polluting emissions, and ensure re-use of renewables and recyclable resource stocks, but also allow for the preservation of the key stocks of natural capital, while at the same time allowing for adequate social and economic development, both nationally and internationally".

The turn of the 'green' in business has been associated with a multitude of conceptions and practical ideas. Authors like Keijzers [31], Rennie [28, 30], Galvao [29], and Matthews [24], attempted to define sustainable business or green business as business that not only curb pollution, ensure re-use of renewables and recyclable resources, and preserve natural resource stocks, but also respond to customer needs while at the same time leaving no negative impact on the environment, community, society and economy.

According to Hart's model [32], quoted by Keijzers [31], enterprises undertake the following steps in the transition towards sustainable businesses:

- "first they concentrate on their strategies on preventing waste and pollution,
- subsequently they start working on improved collaboration in the supply chain through integrated chain management and product stewardship schemes,
- and, finally, they arrive at an integrated strategic environmental management approach incorporated in all levels within the business organization".

However, customers, financial partners, non-governmental organizations, governments, the globalization of economies and internationalization of social and environmental standards exert new pressures on companies to take on social and ecological responsibilities. As a response, companies start to contribute to the development of sustainable energy and transport infrastructures, and in designing and implementing new sustainable technologies [31].

#### **The Necessity of Eco-Business Intelligence Tools.**

The business environment is not static, and companies that

fail to see the dynamics of change and adapt, are finally defeated by those that succeed. Failure to identify risks is not related to a particular area, however failure can be identified with the mentality / culture within companies. The most likely to fail are large and arrogant companies that become cumbersome to change and unable to adapt to market developments. On the other hand, studies show that surprise attacks were not successful due to the skills of misleading the competitor or the lack of early warning signals. They were unsuccessful due to lack of accountability and believe as they happen, which led to ignoring the signs of risk. Due to lack of discernment and a formal system to overcome the deadlock in time, certain managers are waking up only when crisis strikes and the performance is low. At this point, it is already too late for recovery, both for themselves and for the company, employees and investors, which ultimately end up paying the price of management errors.

It is necessary for senior management to demand not only the information you want to possess and those that need to know. This principle applies to structures for collecting and processing information, which should provide not only information management needs (specific information required by management) and those that represent or may represent a point of utmost importance for management structures.

The flow of information and decision should be one fluid, in both senses of the chain of command, to prevent formation of undesirable vacuum. Stagnation at the decision flow of information and response is partial or total closure of the system.

Openness to new ideas, new information for decision calculated and filtered, not just focus on tradition and innovation can create a system capable of self-sustaining at risk. Intuition management becomes valuable when it is supported by values well aware, however, intuition turned spectrum of cognitive dissonance will certainly lead to a failure predetermined side effects.

Knowing the vulnerabilities and threats, risk assessment strategies based on tradition and innovation, monitoring information internally and externally, using internal and external tools for collecting and processing information, facilitate a continuous flow of information (flow obstructions may lead the partial or total collapse of the system) – are elements necessary for the operation management through business intelligence system.

**Conclusions.** Sustainability topics are influencing the economic success of companies more than ever. Sustainability has become a driver for both risks and opportunities in business. Strategic management and information management are thus challenged to take into account sustainability information. Independent of the strength of their influence, elements of sustainability can work through market or non-market processes to have an effect on business success [33].

The starting point for an effective management of elements of sustainability relevant to business success is an understanding of their interrelationships. Building a sustainable business is a long-term and multilevel challenge which requires strategic thinking and a systems approach. Corporate sustainability is not an 'add on' but must be an integral part of business and, like all other business activities, it must be managed in an appropriate way.

Although business responses to corporate sustainability issues are varied, the core message is simple: corporate sustainability is a managerial issue as well as a strategic issue. Researches also indicate that a company's decision to engage in corporate sustainability management is a strategic choice [13].

After years of significant investment in putting in place a technological platform that supports business processes and strengthens the efficiency of operational structure,

most organizations have reached a point where the use of tools to support the decision making process at the strategic level emerges as more important than ever. Herein lies the importance of the area known as business intelligence (BI), seen as a response to current needs in terms of access to relevant information through intensive use of information technology (IT) [34]. BI systems have the potential to maximize the use of information by improving the company's capacity to structure a large volume of information and make it accessible, thereby creating competitive advantage, what Davenport calls "competing on analytics" [35].

The managerial approach sees BI as a process in which data gathered from inside and outside the company are integrated in order to generate information relevant to the decision-making process. The role of BI here is to create an informational environment in which operational data gathered from transactional systems and external sources can be analyzed, in order to reveal "strategic" business dimensions for the transition towards the sustainable organization.

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### ЗАСОБИ ЕКО-РОЗВІДКИ ЯК НЕОБХІДНІСТЬ ДЛЯ СТАБІЛЬНОСТІ БІЗНЕСУ

*Багато з проблем, пов'язаних зі стійким розвитком, можна простежити на шляху виробництва і споживання, яке здійснює сучасне суспільство. Виробництво, розподіл і постачання товарів і послуг потребує як матеріал, так і споживання енергії, що впливає на природні ресурси як кількісно, так і якісно, генерує відходи, забруднює і руйнує екосистему. Еко-бізнес-розвідка це здатність людей, процесів та програм / інструментів організувати бізнес-інформацію так, щоб полегшити постійний доступ до них і аналізувати їх з метою поліпшення управлінських рішень, для кращого управління ефективністю організацій і впровадження підтримки прийняття рішень. Ця стаття підкреслює необхідність екологічно розумних інструментів, які допоможуть виробленню стратегій організацій, виявленню можливостей конкурентів, аналізу ефективності поточної діяльності, розгортанню довгострокової перспективи для природоохоронної діяльності та встановленню показників і ключових змінних для здоров'я, безпеки і природного приросту активів.*

*Ключові слова. бізнес-розвідка, стійкі компанії, системи підтримки прийняття рішень.*

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### СРЕДСТВА ЭКО-РАЗВЕДКИ КАК НЕОБХОДИМОСТЬ ДЛЯ СТАБИЛЬНОСТИ БИЗНЕСА

*Многие из проблем, связанных с устойчивым развитием, можно проследить на пути производства и потребления, которое осуществляет современное общество. Производство, распределение и поставка товаров и услуг требует как материалов, так и*

потребления энергии, что непосредственно воздействует на природные ресурсы как количественно, так и качественно, генерирует отходы, загрязняет и разрушает экосистему. Эко-бизнес-разведка это способность людей, процессов и приложений / инструментов организовать бизнес-информацию так, чтобы облегчить постоянный доступ к ним и анализировать их с целью улучшения управленческих решений, для лучшего управления эффективностью организаций и внедрения поддержки принятия решений. Эта статья подчеркивает необходимость экологически разумных инструментов, которые помогут выработке стратегии организаций, выявлению возможностей конкурентов, анализа эффективности текущей деятельности, развёртыванию долгосрочной перспективы для природоохранной деятельности и установления показателей и ключевых переменных для здоровья, безопасности и природного прироста активов.

*Ключевые слова:* бизнес-разведка, устойчивые компании, системы поддержки принятия решений.

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## INNOVATION CONSTITUENT OF SUSTAINABLE DEVELOPMENT

*The paper substantiates an innovation constituent of sustainable development along with environmental, social and economic pillars of the concept. Determining of implementation details of innovation activity by J. Schumpeter is a theoretical prerequisite to understanding of innovation constituent. An innovator-entrepreneur provides a customer with an information image of 'new combinations.' The image is created by identifying customer's future needs, which outline business aims, subject and appropriate means for creating the innovation products. However, consumer choice is largely motivated by values and specific rules of behavior. The rules of consumer society that in the industrial age become the motive, morality and institution, did not consider the reproductive capabilities of the environment. This disagreement was previously presented in *The Limits to Growth* by the Club of Rome and was reflected in the concept of sustainable development, which gained immense significance after the report of the World Commission on Environment and Development in 1987 (*Our Common Future*). The study highlights importance for establishment of new social values that motivate innovators to change their thinking, comprehend their responsibility not only to consumers but also to the environment and future generations. The Rio+20 Corporate Sustainability Forum: Innovation and Collaboration for the Future We want, organized by the UN Global Compact, demonstrates the interest of entrepreneurs in practical implementation of the concept of sustainable development, through an effective innovation activity. The paper summarizes management tools for implementing business commitments to action in priority areas of ensuring sustainable development: Energy & Climate, Water & Ecosystems, Agriculture & Food, Economics & Finance of Sustainable Development, Social Development, and Urbanization & Cities. Main stages of changes in companies are outlined for making responsible innovation solutions and implementing the innovation constituent of sustainable development.*

*Keywords:* the concept of sustainable development; innovation constituent of sustainable development; information image of innovation; values; tasks for business agents.

**Problem statement.** The foundation of the concept of sustainable development forms the three pillars: environment, society and economy. However, phenomenon of development provides such element as innovations. The innovation constituent of sustainable development targeted at ensuring business agents involvement in establishing mechanisms for implementation of the concept of sustainable development and harmonious combination of efforts at the international, national and micro levels. Because creation of such innovative product or service, that are not only able to identify new customer needs, but also will meet public values generated within the concept of sustainable development, depends on the company.

**Analysis of recent researches and publications.** A significant amount of research reports and publications are addressed to issues relating to sustainable development among which it is worth noting the Club of Rome studies, including A. Peccei, Dennis and Donella Meadows, G. Pauli. A fundamental role in establishing the concept of sustainable development performed the Brundtland Report, which elucidated the term 'sustainable development' for world community. Among the Ukrainian researches who working on creation of the national concept of sustainable development are experts of the State Institution *Institute of Environmental Economics and Sustainable Development of NAS of Ukraine*, in particular M. Khvesyuk, I. Bystriakov, Y. Khlobyustov. The role of innovation in the concept of sustainable development takes an important place in studies by the following developers and practitioners: M. Atkins, F. Grosse-Dunker, E. Hansen, B. Kaafarani, R. Nidumolu, C. Prahallad, M. Rangaswami, R. Reichwald, J. Stevenson, and others.

**Unsolved aspects of the problem.** Numerous meetings under the auspices of the UN, the World Development Reports, and Conferences on Sustainable Development

demonstrate the immense significance of the concept in preserving life on Earth and actualize corporate sector involvement in establishing mechanisms for achievement of sustainable development. It is important to identify tasks of the innovator-entrepreneur in creating 'new combinations' for customer. The current customer before deciding to buy a product or service will carefully weigh own 'costs of choice' (described by T. Sakaiya) and pay attention to values. Nowadays, producers of material and perfect goods should clearly realize that humanity requires not only economic dimension of well-being but also provide environmental and social components of public welfare.

**The paper aims to** substantiate the innovation constituent of sustainable development as a conceptual basis of environmental, social and economic components and organizational essentials for their harmonization in the triad 'customer-producer-society' through development and commercialization of sustainable products and services, which materialize scientific and technical knowledge.

**The study results.** The innovation constituent is of special importance for issues relating to sustainable development mainly because of the fact that in the previous research literature dealing with analysis of innovation as a creation of 'new combinations' J. Schumpeter was probably the first who pointed out a problem of future needs, difficulties in persuading consumers to percept new needs and resistance to changes of social environment due to emergence and development of innovations, that interrupt common economic activities [1, pp. 88, 155-157]. The theoretical prerequisite to understanding of system-forming function of the innovation constituent of sustainable development is Schumpeter's approach as to implementation details about business activities of the innovator-entrepreneur, – exposing fundamental differences in such