

The power of knowledge and the learning corporation¹

Force and wealth are the property of the strong and the rich, but even the poor can grasp knowledge. Therefore, knowledge is the most democratic source of power. *Alvin Toffler, American thinker.*

Introduction

Globalisation and the 'new economy' symbolise the spirit of the age at the beginning of the new millennium and represent a new viewpoint on the world. There is a strong wave of economic, social, cultural and other changes which first started taking effect in developed western countries at the end of the 20th century and were brought about by the mass emergence of IT and communications technologies. A production-based industrial society has now been transformed into a knowledge-based IT society. Information used to be available only within limited circles whereas now it has become omnipresent and available to everyone via the internet. Companies used to be geographically-isolated organisations whilst there are now virtual companies in which employees communicate between themselves via the internet. Knowledge becomes obsolete too quickly in the modern business environment which has prompted innovations and permanent education to become a new corporate business strategy.

Ideas, information and knowledge are at the core of the new economy and the foundation of economic growth. Nowadays, information means both power and money, and, as the authors of the cult book *Funky business* say:

Information on money is more valuable than the money itself.

The information technology revolution is complementary to the explosive boost of knowledge. Information and knowledge are becoming powerful factors (*sui generis*), they are crucial for social and economic development and for the processes of production and are quite important both for ensuring national economic growth and for helping individuals acquire all the skills necessary to secure employment or, alternatively, to succeed as self-employed. The growth rate of information and communication sectors worldwide is twice as fast as in the rest of the economy. The importance of technology, education and institutional flexibility is on the increase in the information era whilst the significance of geography, population and raw materials is constantly eroding.

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Therefore, information and knowledge can be said to present a factor of utmost importance regarding human life and market success. Knowledge incorporates information in any conceivable form, but it also entails both skill (know-how) and understanding (know-why), including types of interaction too, both amongst individuals and across the entire society. So-called knowledge economies are those based on production, distribution and the use of knowledge and information. This directly influences the increase of high technology investment, highly sophisticated labour and appropriate productivity growth.

Knowledge is becoming a key resource which, contrary to all other resources, does not get spent through usage but rather increases. The main strategic advantage of one organisation, region and country compared to others is precisely the aptitude for using and developing knowledge. Differences in knowledge and its application are becoming the main factors of division between developed and developing countries, rich and poor, and high and low living standards. Technological advance, knowledge, education, specialist training and the free movement of labour and capital, as well as several other quality factors, have become growth generators leading to the development and improvement of competitive advantage.

Recent emphasis on the role of knowledge has resulted from some relevant structural changes in economic development. At the end of the 20th century, the role changed drastically and the shift from an industrial to a post-industrial economy made resources based on the implementation of knowledge, rather than material resources, essential. Worldwide practice has shown knowledge to be the resource of the future and indicates that companies aspiring to survive in the global market have continually and swiftly to adopt new forms of knowledge. The adoption of knowledge has to be evident in all segments of a company, not only at the management level but also at that of every individual employee. In order for every individual's knowledge to be transferred to the company level, it is essential that information and communication technologies should be administered.

Knowledge-based economy paradigm

Nowadays, change is much quicker and both more radical and powerful than ever before in history. The world has been transformed from an industrial economy to a knowledge-based economy by means of the increased availability of information, to the point where over-saturation menaces, as well as simple access to it. The world is undergoing a process of conversion from the traditional market which has been in place up to now to a virtual market space. A new era has come, bringing along some new questions that, in turn, prompt the necessity of a reform of business philosophy. Thus, the new economy era is based on the, economy-wise, productive links between information, communications and creativity. A constant boost to the sale of 'intangible' products – that is, an intense growth in the market participation of intellectual property – has created the conditions to talk of seriously defined and directed creative economic potential.

The knowledge-based economy has become a reality in many organisations and countries. The speedy development of information and communications technologies (ICT) has altered the very foundations of trade and business. The prosperity of a country no longer depends on the ability to collect and convert raw materials but rather on the ability to improve and develop both the intellectual and the specific

skills of the population pertinent to organisations within the country. Different organisations' business success hinges on their respective ability to operate in a fast-changing global market where consumers acquire new knowledge at a speedy rate and where there are several alternatives, along with constant changes in relations between suppliers and clients. Individuals operate in environments of ever-increasing complexity and their aptitude for information use and management, acquiring new skills and feeling comfortable in a great number of varied situations have altogether become a major factor in their success, on a par with academic achievements.

A leading role in knowledge-based economies lies with 'creative industries', within which the exchange of goods has been marginalised and replaced by economies based on ideas, knowledge and information. Theoretically, creative industries represent a new economic model characterised by self-employment, autonomy and flexibility, and highly-trained staff comprised of exquisitely-motivated freelancers who make up teams or specialist and expert networks. A number of brand new concepts, categories, terms and contemporary web-based issues are arising, such as: employees of knowledge; knowledge-based job; knowledge-based economy; inter-linked workforce; digital management; network-based organisations... The knowledge-based economy is such a form of economy in which a major part of its workforce is under strong scientific and technological influences and no longer involved in the physical production and distribution of material goods but rather in their shaping, technology, marketing, sales and maintenance.

By means of a stimulating environment in which intellectual property is used in an efficient and effective way, organisations can advance their 'organisational aptitude'. The advance of both organisational and individual abilities is a primary success factor in the knowledge-based economy. Focusing on intellectual property and information calls for new approaches in the area of knowledge and information management, as well as within the environment where this kind of management was created. By means of this, a new combination of skills is required which encompasses every aspect of the complex information world in which we live.

Problems arising from knowledge-based economy issues gain weight to an outstanding degree in the conditions of the belated transition in Serbia, even more so as we are at the very rear of the European pack. Accession to the world's modern flows is possible only as far as a well-defined and implemented knowledge- and information-based strategy is put in place. The philosophy stemming from the industrial era, based on efficiency, productivity and the economy of volume, has ceased yielding results and the *colossi* of the era are disappearing from the market. Mass production is losing the race. It does not suffice in such circumstances only to produce at minimum expense and believe in the trite statement that all goods will have their buyers. Nowadays, buyers' demands are shifting through the changes that have taken place and are characterised by the speed of modern lives, IT influences, the increase in gross national income in western countries, globalisation processes and the shifting of the initiators of social progress from the material to the non-material sector that constitutes the knowledge-based sphere.

New paradigms of the knowledge-based economy are responsible for the differences between countries and an understanding of these is a premise for an organisation achieving great successes in a world of an ever-increasing competitiveness in which the differences between countries are defined exclusively through quality

thinking, speed of reaction and business wisdom. Software is becoming a key development factor the application of which is bringing about some major changes in all segments of economy both in supply (the emergence of digital products) and demand (new market, virtual market, new consumers, e-consumers, etc). There are some telling recent data according to which two-thirds of the increase in global productivity over the last five years can be accounted for by the implementation of IT technology, followed by the expansion of the service sector and by comparative advantage no longer being the main factor in competitiveness but, instead, innovation, the quality of products and services, time and low expenses. Bearing this in mind, it becomes clear as to why this new or IT-based economy is nowadays insisted upon in both economic practice and theory.

Today's successful economic branches are constantly adapting to existing markets and their competition. Competition conditions are also changing, along with market shifts. Accordingly, economic branches have to change too if they want to remain successful, especially in the conditions of the knowledge revolution that is bringing about even more rapid changes. There is a long process of economic restructuring lying ahead of Serbia which is supposed to result in the country's appropriate competitive position in the global environment. Investing in innovation and knowledge will become the main generator of future development in conditions of a shortage of capital.

Regardless of the future shape of industry, constant technological innovation is certain to be of paramount importance for the achievement of economic competitiveness. The building up of new networks and the appropriate knowledge systems necessary for the application of innovations will be of critical significance. A successful company's stronghold should be a long-term strategy of development.

Knowledge management

Up to mid 80s of the 20th century, the importance of knowledge as a competitive means was obvious, although classic economic theories kept denying its significance. At the same time, most organisations still lacked strategies and methods for its management. Knowledge management systems relied at the time on artificial intelligence and specialist systems in which the concepts of 'acquiring knowledge', 'knowledge engineering' and 'knowledge-based systems and computer-based ontologies' were created.

A number of management and consulting companies had already started applying knowledge management systems before 1990, whilst several renowned American, European and Japanese companies had adopted knowledge management programmes. Thanks to the internet, knowledge management initiatives blossomed up to the mid 90s. In 1989, the International Knowledge Management Network (IKMN) was created in Europe; it was extended in 1994 and was soon joined by the Knowledge Management Forum created in the USA. Knowledge management, as an alternative to failed TQM (Total Quality Management) and business re-engineering initiatives, became a great project for big international consulting companies such as Ernst & Young, Arthur Andersen and Booz-Allen Hamilton.

Knowledge management, as a modern business phenomenon, represents a process of:

- the identification, organisation, implementation and development of knowledge in companies
- the management of knowledge activities in companies
- the identification and harmonisation of collective knowledge to ensure competitiveness.

It is also a means of accomplishing organisational goals through information, impressions and opinions, and the generation, synthesis and application of experience. Furthermore, it is a form of discipline focused on systemic and innovative methods, experiences and tools in the process of generating, exchanging, protecting and distributing knowledge, intellectual capital and intangible property.

Knowledge, as the most important means in a company, is crucial for survival in the era of the 'new economy'. Companies find it difficult to manage something that cannot be quantified and universally defined. In the conditions of knowledge integration and exchange, managers know what they would like to happen; however, they do not know how to achieve it. These are the reasons for the numerous obstacles to the adoption of efficient knowledge management. They are primarily determined by the dependence of an organisation on knowledge (software companies rank high on the knowledge scale and look upon knowledge as a key differentiation factor), but also by the existence of some standard difficulties at the very beginning (for example, the way some companies manage knowledge).

In those situations when companies 'do not know what they know', it is necessary to answer two important questions: what are the means of knowledge a company has at its disposal; and in which way are the means to be managed in order to ensure maximum profit? Efficient knowledge management depends on a string of factors such as: organisation; staff (employees); and technology. Computer and communications systems present a good way to the retention, distribution and transformation of rapidly-changing structured knowledge. Some companies make use of analyses, planning and computer-supported work systems in order significantly to improve decision-making processes, as well as resource allocation, management systems, the know-how process and overall performance, along with ways of developing the strategic competence core.

To sum up, knowledge and information have become the means of solving business problems. Possibilities of savings and the achievement of competitive advantage have arisen from knowledge management. Knowledge management is much needed not only by big systems but also by small enterprises that do not have market utilisation or the resources of a big company, or are inert. Such companies have to be more flexible and they need to be able to respond adequately and take better business decisions since even minor mistakes can prove fatal.

Some of the benefits of knowledge management directly correlate with total savings whilst others are much more difficult to determine; companies are presented with ample possibilities in a modern, information-based economy. In this sense, and in order to maximise the effects of intellectual property usage, knowledge management experts insist on the necessity of conveying knowledge and on the basis for co-operation that it represents. However, unless there is a complete business context, knowledge management not only does not yield the expected results but can also occasionally be damaging.

An effective knowledge management programme should assist companies in:

- achieving innovations by means of facilitating the free flow of ideas
- improving consumer service by means of adjusting the response time
- increasing profit by the faster delivery of goods and services to market
- increasing the rate of staff retention through recognising the value of staff knowledge and rewarding employees accordingly
- achieving the reduction of expenses through eliminating redundant and unnecessary processes.

A creative approach to knowledge management can result in improved efficiency, high productivity and increased income in every business function. However, not all pieces of information have the same influence and significance for business efficiency. For that reason, it is necessary for a company to establish which information or means are knowledge-based. There is a commonly accepted division of intellectual and other knowledge-based means into two categories, known as explicit and tacit means. The first category encompasses such means as patents, labels, business plans, marketing research studies and client lists. Generally speaking, explicit knowledge includes everything that can be documented, archived and codified, often by means of IT technology. The concept of tacit knowledge – that is, the know-how in people's heads – is much more difficult to understand. An important tacit knowledge-related challenge is to realise how it should be recognised, created, divided and managed. Tacit knowledge distribution is helped by IT technologies such as e-mail, groupware, instant messaging and similar technologies, but the very identification of tacit knowledge presents the most significant difficulty for a majority of organisations.

Corporate knowledge is comprised of implicit and explicit knowledge, so the content of knowledge management must be formulated in such a way that it makes its formal realisation as simple as possible; that is, it is to support the entire knowledge spiral cycle, starting from the creation, formulation, conveying and combining of knowledge and continuing all the way to its adoption. The content of knowledge management has to support a company's internal organisation, which means that it has to adapt to specific communities (groups, project teams and the like) that are then integrated into a unique whole by means of which the inter-company conveying of knowledge may be enabled.

Knowledge management projects have been extremely beneficial to many companies. However, many others have been disappointed by the results. The most common mistakes that lead to failure in the knowledge management implementation include, amongst others, the following:

- failure to find main investors (sponsors)
- insufficient investment in human resources
- underestimating the available technology
- initiating new technological projects without having already established business purposes
- receiving faulty advice from inexperienced consultants
- disregarding the issue of motivation.

Knowledge management is not a software product. It does not even start with technology. It begins with business goals and processes and a recognition of the need for knowledge distribution. A new process calls for a permanent and structured acquisition of new knowledge and its infinite study, and then the conversion of that knowledge into an essential resource – which, in turn, creates new knowledge, challenges

and responsibilities. Knowledge management is also a risky investment as it includes a number of other disciplines and requires a completely new approach and way of thinking. Knowledge management is not merely a term by means of which only the process of learning can be defined, but also increasingly the strategic use of knowledge with a view to achieving a higher level of consumer satisfaction and a better market position.

The personal profile, role and position of modern managers are significantly different in similar circumstances compared to a classic understanding of them as 'people of challenge'. They are no longer endowed by a crafts-type of knowledge, the skills of individual careerists or exclusively the mere corporate sense of association; they are primarily distinguished by a positive egoism that characterises individuals who are builders of their own personality and whose main business aim is their own continuing personal development. They are constantly on the look-out for jobs that develop their personal skills with which to maintain their market competitiveness. They have no illusions whatsoever that, in conditions characterised by unstable corporate positions, such corporations will look after them. Therefore, their main goal is not autonomy within a corporation but rather their total independence. Many of them do other parallel jobs in the private enterprise sector. Simultaneously, they enjoy team working within the corporation along with their own jobs that also serve as a client problem-solving means, a tool for learning from others and a possibility for socialising at work.

Instead of a classic type of a deal that potential managers used to clinch with a corporation and which envisaged absolute dedication to the corporation in return for 'lifelong security', personality builders now look for a new type of contract with corporations. Corporations can no longer guarantee security and this new breed of managers does not believe in guarantees anyway; they are looking for a deal that enables them to maintain their level of expertise and acquire the flexibility necessary for maintaining a balance between family life and career. In return for that, they offer entrepreneurial initiative, real team work and honest and fair information: less career chasing and more devotion to a productive project.

The success of such a deal depends largely on a management that listens, respects their views on decision-making and can offer jobs that involve both challenge and responsibility. However, technological complexity and the pressure of international competition have influenced changes in organisational structure and classic corporate management style as modern management requirements are much more complex. Corporations cannot afford the luxury of egotistical career-chasing since the individualism that used to boost risk-taking and entrepreneurial spirit has now become an obstacle to competitiveness. Nevertheless, rigid conformity is neither necessary nor possible. What a modern corporation needs is people capable of team working within a corporation that stimulates and rewards individuals' initiatives and their constant betterment.

Learning corporation

Corporations are basing their competitive advantage increasingly on intangible assets such as experience, information, ability to process information, know-how, management capabilities, brand, image, reputation, organisational culture, consumer loyalty, trust, consumer preferences and similar.

In the turbulent conditions of rapid change, learning is increasingly becoming a basic premise on which organisations develop the essence of their competence with which they can respond to all new management challenges. A company – that is, an organisation in the broader sense – can adapt to changes and initiate changes in its environment only if it is capable of learning. Thus Peter Senge, the author whose name is most often attached to the ‘learning organisation’ concept, says:

A learning organisation boosts continuous learning and generation of knowledge on all levels. There are some processes enabling unhindered flow of knowledge where it is necessary in an organisation, and these can quickly transform knowledge into changes in a way that enables the organisation to operate both internally and externally.

Managers started considering the concept of the ‘learning organisation’ once Peter Senge published a book entitled *Five disciplines: art and practice of learning organisations*, in which he describes all kinds of changes managers have to undergo in order for the organisations they manage to be able to adapt to an ever more chaotic world. However, Senge’s original ideas on management learning capacity building have further evolved.

There is not a unique learning organisation model. The learning organisation has a particular attitude and philosophy concerning the issues of how an organisation and the role of its staff should be defined. The learning organisation concept is a paradigm for all the changes in ways of thinking about organisations.

Everyone is involved in identifying and solving problems in the learning organisation, thus enabling the organisation constantly to experiment, enhance and increase its capabilities. The learning organisation’s essential value is problem-solving, as opposed to a traditional organisation created with the sole purpose of efficiency. In the learning organisation, members of staff are involved in the identification of problems, which means understanding the needs of consumers. Employees are also included in problem-solving with a view to meeting consumers’ requirements. Thus, an organisation adds value by means of defining new needs and meeting them, all of which is more often achieved through ideas and information than through specific products. Even after physical products have been created, ideas and information still provide competitive advantage as products change constantly in order to respond to all the new and increasingly challenging needs stemming from the environment.

Amidst the modern and innovative conditions, traditional skills such as finance, marketing and technology call for a permanent learning capability in an organisation. Learning and competitive advantage spotting are components referring to the capability to enhance such financial, marketing and technological skills and upgrade them to a higher level by means of motivating employees and gaining their active involvement in problem-solving which then, in turn, will help the organisation change in a creative fashion. The greater the learning capacity, the more flexible and successful in the market the organisation.

On a long-term basis, a company’s task will change by means of shifting its priority from organising to recruiting. Organisers offer opportunities, not jobs. Organisers offers creative space. They have to identify resources needed for the practical realisation of their ideas, followed by the actual use of those resources. Thus, an inspired organiser recruits ‘intellectual mercenaries’ to solve a problem. Furthermore, nothing is

given once and for all in an organisational paradigm; tasks change. It is a temporary, powerful but unstable fusion of people and ideas. Organisational driving forces are risk, dynamism and the constant generation of value. Leaders have to keep creating magnets for the gifted instead of recruiting people who retain their posts by ingratiating themselves with superiors or by sycophancy and adulation.

Leaders liaise with a great number of business partners and associates, decisively networking. Inspiration has to reach the far ends of the extended net whereby those individuals most appropriate for a particular job may be recruited. In addition, each of the co-operating individuals or companies has alternatives and may be lost forever; every moment of carelessness may be much more damaging to a company than to a quality individual.

The further progress of the learning organisation is based on the contribution of staff to the enhancement of all the directions of an organisation's strategic development. In identifying consumers' needs, employees signal their findings to managers who subsequently work on improving the corporation's strategy. The learning organisation thus corresponds to a network whose individual parts change and adapt independently whilst contributing to the company's mission simultaneously.

Unlike the traditional hierarchical structure, the new corporate organisational structure is horizontally oriented. Its main components are: experienced leaders (management); staff with powers, strategy creation capability and a high level of corporate culture; information exchange; and a horizontal structure. The learning organisation needs experienced people – that is, managers who understand the ways organisations operate and can help others achieve success. A learning process that is subsequently improved and fully comprehended requires managerial initiative. In the learning organisation, managers know people are curious by nature, which makes learning a joyful experience: therefore, they tend to boost their staff's motivation and curiosity which then can lead to the enhancement of the whole work process. Managers do not actually guide their staff in a learning organisation; they help them apply new information and learn from the experience. Managers also provide the time required for the exchange of feedback information, research and a consideration of the relationship between action and reaction, which is then followed by their agreement on the actual direction of their activities.

The learning organisation's business strategy is built on the principles of 'bottom to top' and 'top to bottom'. The employed at the top as well as those at the bottom observe consumers' needs and demands and decide what consumers might need in the future. Hundreds, even thousands, of people who are in constant touch with the surroundings provide plenty of information on external needs, which then accumulates into a strategy. The strategy is also built on information received from partnerships with suppliers, consumers and even the competition. The learning organisation is not autonomous. Information it obtains from its partners provides valuable data on new strategic needs and directions. Most companies join associations and partnerships and link amongst themselves electronically. Thus, organisations become more associates than rivals in their experimentation and search for the best learning methods and in their adaptation to new findings.

Culture also fosters the feeling of community and care for others. People like the feeling of belonging to something and the learning organisation becomes a point where a network of relations is created but also where every single individual's devel-

opment within a community is considered. People learn and experiment both as members of a team and as members of a big community. Activities that create differences between people are considered to be shameful. Everyone is keen on openness and communication. This is the approach to the corporate relationship development that is increasingly used in American companies.

Learning organisations are stacked with information. In order to identify needs and to solve problems, people have to be aware of what is going on. Everyone has access to all formal data on the budget, profits and sectoral expenses. Every employee is free to exchange information with whomever within the company. Information exchange reaches giddy heights in all idea-based organisations. Learning organisations also give boost to silent communication amongst their staff; ideas are exchanged throughout organisations and can be applied wherever.

A formal, vertical structure that created distance between managers and staff has been abandoned in learning organisations. The concept of bosses has almost been done away with and team members now assume responsibility for staff training, the leave schedule, office provisions and all decisions made around salaries and general work. Boundaries between respective sectors have been blurred or completely eliminated; even boundaries between individual organisations are becoming more and more diluted. Companies co-operate in quite unexpected ways. Groups of companies enter organisational networks and virtual organisations in order either to achieve certain goals or research specific circumstances. These new structures enable the flexibility necessary for rapid adaptation to changes in competitive conditions.

The learning organisation resembles the knowledge development process except in that knowledge development takes place at the individual level whereas organisational learning happens at the level of the entire company. A company qualifies to become a 'learning' type of organisation once it has developed capabilities for the guidance, exploitation and implementation of individual competencies. Organisational learning results in an increase in intellectual capital. Learning is an incessant process in the creation of knowledge.

It can be concluded that all companies have a certain knowledge and are, in theory, aware of its significance in modern times, but few of them really know how to manage it and subsequently make use of it in the form of competitive advantage. A high knowledge awareness organisation that recognises and respects its hidden assets helps to create favourable working conditions and organisational culture, along with motivating its staff to study, work in teams, exchange knowledge and experiences, and enhance their creativity and innovativeness. By doing all this, the organisation manages its knowledge in a quality way with the final goal of achieving global competitive advantage with knowledge being its crucial economic resource.

Instead of a conclusion

Knowledge is regarded as the most important business resource in the modern economy and knowledge management is, therefore, modern management's unavoidable and essential component. With the development of IT technologies and the internet, some intangible and high-quality parameters are beginning to blossom, such as: ideas, innovations, intellectual capital and knowledge. Such modern technology enables huge amounts of data to be collected and processed, along with the creation of new types of knowledge crucial for further development.

As knowledge is becoming the central economic resource and electronic networks and media the key infrastructure, those who manage knowledge and the means of communications are becoming essential factors of power. In a world of high technology, nations' economic bases are disappearing. The new economy's most dynamic sectors are not of a national nature; they are, rather, sub-national, supra-national or trans-national. It is obvious that trans-national business enterprises are creating networks that surpass the structure of national states, but the question remains as to whether these enterprises are undergoing changes themselves. Namely, in the same way that national states are undergoing a difficult process of economic reconstruction, gigantic corporations are getting either re-organised, dissolved or lost in terms of their significance. New companies are taking their place: small units of all kinds that proliferate and form temporary alliances and consortiums, interspersing society with thoroughly modular-type 'switch on-switch off' firms. With mass society getting increasingly de-massed, markets are being broken down into smaller and smaller segments. In a whirl of cacophonous ideas and interests, knowledge remains the only 'invariable value' determining both the corporate future and that of the entire world.

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