

# CONCENTRATION ON KNOWLEDGE AND CHANGE MANAGEMENT AT METALLURGICAL COMPANY

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The subject of this paper is an analysis of one of the most crucial aspects of the contemporary business, which is knowledge and change management. Competition on the market is more and more stronger. Knowledge is one of the most precious business resources, it lets companies be more competitive because knowledge inspires to changes. The paper contains examples of knowledge and change management, faced by the largest metallurgical company on the Polish market – Arcelor Mittal.

*Key words:* knowledge management, knowledge centre, change management.

**Koncentracija znanja i promjena upravljanja u metalurškoj tvrtci.** Predmet ovog referata je analiza jednog od najbitnijih aspekata suvremenog poslovanja, a to je upravljanje znanjem i promjenama. Konkurencija na tržištu je sve jača. Znanje je jedno od najdragocjenijih poslovnih resursa, čini poduzeća konkurentnijima jer znanje nadahnjuje promjene. Referat sadrži primjere upravljanja znanjem i promjenama, s kojima se suočila najveća metalurška tvrtka na poljskom tržištu – Arcelor Mittal.

*Ključne riječi:* upravljanje znanjem, središte znanja, upravljanje promjenama.

## INTRODUCTION

The conditions of the contemporary market game cause that corporate knowledge acquisition and development management is an inherent aspect of strategic development and market advantage. Intensive competition in the metallurgical sector increases risks relating to sale and maintenance of a significant market position. In such a case, producers try to acquire maximum information about market situation, consumer's needs and expectations, new corporate management methods, emerging techniques and technologies, new working methods, etc. At the company, knowledge is one of the most precious business resources.

## KNOWLEDGE – MEANING

Knowledge is a very broad term. It comprises both human capital, i.e. knowledge of employees, their skills, experience, creativity, as well as company's assets, including intellectual assets (technical documentation, publications, data), intellectual property (patents, copyrights, trade marks), business and organisational assets (key processes at the company and organisation of them), marketing assets (image, reputation, brand), material assets (fixed assets, equipment, buildings), information assets (data bases, computer systems) [1]. It is both theoretical and practical knowledge. Knowledge we are aware of and

knowledge we do not realise. Open and hidden knowledge. Knowledge available at the company (e.g. knowledge in the company's data bases) and acquired from the environment [1, 2]. Basic and additional knowledge. The first is connected with key functions of the company, second serves extra functions.

Analysing knowledge in terms of its dispersion at the company, we may distinguish dispersed and concentrated knowledge. Dispersed knowledge circulates at the company in an disorderly manner without any mechanisms for knowledge collection and persons in charge of information collection and protection. It often results from routine and even accidental events. Concentrated knowledge is easily identifiable since we know who is in charge of collecting and updating it. That knowledge is collected electronically in so called data bases [1,3]. At the company, all types of knowledge are collected in knowledge centre (Figure 1).

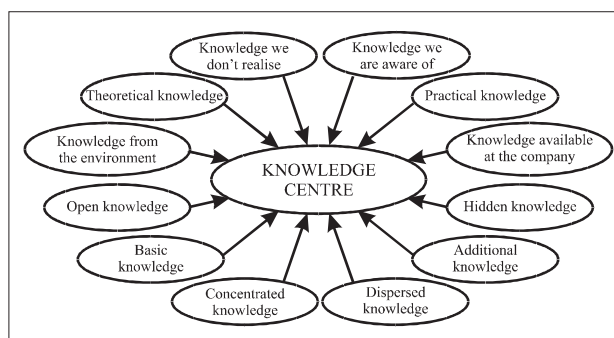


Figure 1. Knowledge centre at the company

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## KNOWLEDGE MANAGEMENT PROGRAMME GIVEN THE EXAMPLE OF A METALLURGICAL COMPANY

Knowledge used at the metallurgical company is very broad. Managers, engineers use[1]:

- metallurgical knowledge (knowledge on metallurgical processes, steel melting, cleaning, so called "cleaner steel"),
- technical knowledge (construction of machinery and equipment; technical specification and parameters of equipment; operating conditions and technical limitations),
- technological knowledge (terms of use of technologies; information about emerging technologies (new technologies),
- chemical and physical knowledge (physical and chemical reactions in metallurgical processes),
- accounting and financial knowledge (financial analytical skills, controlling and accounting rules),
- environmental knowledge (wastes management rules (recycling), elimination or reduction of pollution),
- psychological and social knowledge (operation of a unit, group, organisation; mutual interactions between employees; human behaviour rules; employee selection rules in relation to particular functions -psychological tests),
- market and marketing knowledge (all market phenomena favouring the company or not (opportunities and threats) and customer behaviour in the market, customer behaviour motives, customer characteristics, needs and expectations, marketing efficiency),
- structural knowledge (structure of the company, division into branches, departments, sections, units, mutual relations and rules of co-operation),
- management knowledge (management techniques and methods allowing for adequate use of the company's potential and external conditions).

The biggest metallurgical company in the Polish market is Arcelor Mittal. The company introduced its Knowledge Management Programme (KMP) based on the motto "Knowledge means success". The idea of the programme is not only to collect knowledge, but exchange and implement it, as well. An important element of the programme is the Manager Academy operating under a so called Knowledge University. The international training and development programme is available for all employees of the corporation. The programme is composed, inter alia, of on-line training (e-learning) accessible via the Internet. One of programme areas is continuous English learning via GlobalEnglish ([www.globalenglish.com](http://www.globalenglish.com)). Other training areas are: accounting and finance, customer service, human resource management, sale, marketing, project management, planning [1]. The Manager Academy programme was

prepared in April 2006 and is made up of three main blocks:

- block 1 Fundamentals and Knowledge – the purpose of it is to construct new employee approaches, new organisational culture and goodwill;
- block 2 Management Skills covers four subjects: performance management, leadership, personal effectiveness, team leadership – the purpose of this programme is to improve managerial skills of the management staff;
- block 3 Professional Skills comprises training on the art of presentation, innovative and analytical thinking, stress handling, decision making, trouble shooting, labour law, recruitment interviews, production cost management, lean manufacturing, value chain management, project management, commercial negotiations, sales management, negotiation techniques, motivating employees and delegating authorisations, solving conflicts and difficult situations at the company, business communication, establishment of team co-operation, employee appraisal and change management.

The programme will be successively completed with new subjects of training. It is a long-term programme. Three subsequent editions of the Academy are planned. Each edition provides training for around 300 persons. For organisational purposes, special procedures defining programme eligibility criteria were established. The programme was broken down into four levels:

- level 1 – management board and top management,
- level 2 – senior management,
- level 3 – medium-level management,
- level 4 – junior management.

The purpose of this programme is to make management staff co-responsible for the whole business and prepare them to effective achievement of strategic goals. The programme is to contribute to the development of a new change-focused approach among the management staff.

As a part of experience exchange, the company organises internal meetings. In 2004, in Poland, four meetings were held, in 2005 already 32 meetings, and in 2006 around 40 meetings. The company also holds meetings with scientists and experts from outside its structures. One of such meetings was held on 7 September 2005, when the branch of the company in D<sup>4</sup>browa Górnicza was visited by financial analysts from all over the world. They met the company's management staff and exchanged opinions on forecasts for and trends in the metallurgical sector. The company takes part in national and international conferences, symposia and workshops. It also organises workshops for persons interested (scientists, businessmen, external stakeholders) to present its achievements, as well as weekly telephone conferences, monthly and quarterly reviews of its strategies [1].

The analysed metallurgical company organises training systematically to cover many different prob-

lems, including industrial safety, customer service, equipment operation, SAP rules, current legal regulations, etc. It trains around 30-50% of its staff per annum. Knowledge is distributed via effective communication systems. The internal information system of the company is fast, reliable and ensures secure flow of knowledge of information via the Internet. The company has got Intranet and Extranet.

## KNOWLEDGE INSPIRES TO CHANGES

Employee knowledge brings about measurable effects. The company introduces a number of changes. Changes implemented at metallurgical companies are presented in the map of changes (Figure 2). The main areas subject to changes are: products, production techniques, organisation and management, and corporate culture. The company implements economic, organisational, marketing, technological, personnel and other changes. These are internal and external changes.

Taking into account individual needs of its partners, the company systematically introduces new products

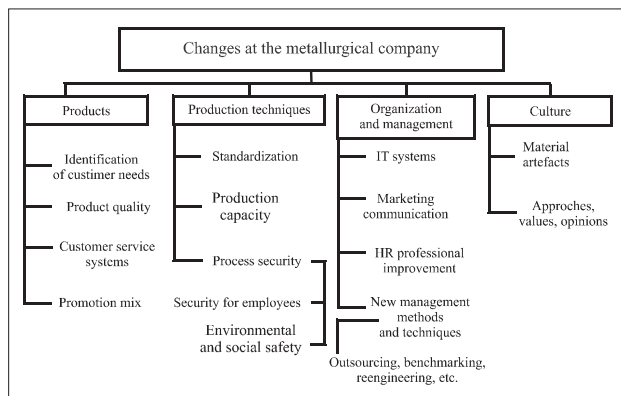


Figure 2. Key areas of changes at the metallurgical company [4]

and brands of steel through its Product Technology and Development Bureau. Each section of the company has got the certificate confirming its compliance with the standard PN- EN ISO 9001:2000 – *Quality Management System*. The company produces more than 5 million Mg steel a year.

The company implemented a relatively large number of changes in its organisation and management. It focused on making an order to its processes and establishing a consistent work management and organisation system. Many auxiliary functions are outsourced, e.g. transport, wastes processing. the company uses electronic business operation systems – SAP. The company uses all modern methods of management: just in time, reengineering, benchmarking, time based management,

outsourcing [4, 5]. The company has got a lot of features the concept TQM – Total Quality Management.

Besides the company Mittal Steel realises environmental management to protect environment. Production is more and more cleaner – effect of Cleaner Production strategy and environmental system ISO 14001. In 2006 the company spent about PLN 800 million on investments and BAT – Best Available Techniques. The company realises strategy of offensive activities. The strategy is directed at cleaner production, products development, proecological structure and style of management, proecological marketing, ecological culture of organization. The purpose is to prevent the waste production (source reduction) or its minimization. The innovations introduced within this strategy concern organizational, objective, functional and structural activities.

The company creates new culture organization. In June 2005 the company approved an ethical code. The code determines the principles of the employees' behaviour in their place of work, as well as in their contacts with the stakeholders.

## CONCLUSION

The company Arcelor Mittal using the cycle of Deming (plan, do check, act) continues improvement in all areas of its activities. The key elements of modern management are knowledge and change management. Now we can observe how the metallurgical companies are changed in Polish market. They build new market image. The company is a leader of innovations in polish market, others follow it (metallurgical benchmarking).

## LITERATURE

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**Note:** Responsible translator for English language is Niuns Translation Agency - Gliwice, Poland.