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REENGINEERING AND CONTROLLING IN I.D.C. HOLDING

REENGINEERING I CONTROLLING W HOLDINGU I.D.C.

Abstract: The role of reengineering and controlling is a leading issue of the article. The author used the case of I.D.C.Holding for this presentation. The article is a case study of practice and it fulfills a cognitive role.

Keywords: reengineering, controlling, enterprise, management

Streszczenie: Wiodącą kwestię artykułu stanowi rola reengineeringu i controllingu. Dla tej prezentacji autor wykorzystał działalność I.D.C.Heading. Artykuł stanowi studium przypadku i pełni rolę poznawczą.

Słowa kluczowe: reengineering, controlling, zarządzanie

Introduction

Reengineering is business concept of introducing radical changes in business processes. The goal of the change is to maximize organizational efficiency and reduce costs. The reengineering concept was published by Michael M. Hammer in 1990. Reengineering does not provide ready-made prescriptions. This is a expensive method, so changes should be made only when the economic calculation is indicated. It is oriented with controlling,which is business control system and it combines information, planning and control processes. Article is a case presentation. The purpose of the article is to indicate the controling role in a particular business situation.

1. Increasing Performance Efficiency by Integrating Scientific Knowledge in Production Practice

I.D.C. Holding, joint-stock company, is a foremost producer of confectionary and biscuits in Central and Eastern Europe. Its long-term strategy is to produce high-quality products for acceptable prices and it builds the strategy on traditionally high-quality products with history exceeding more than fifty years. Utilising the latest knowledge in the area of its performance and implementing the modern technologies at preserving the traditional recipes the company is producing high-quality products bearing its own brands. It utilises its free capacities for manufacturing products for great chains under their name, the so called private labels.

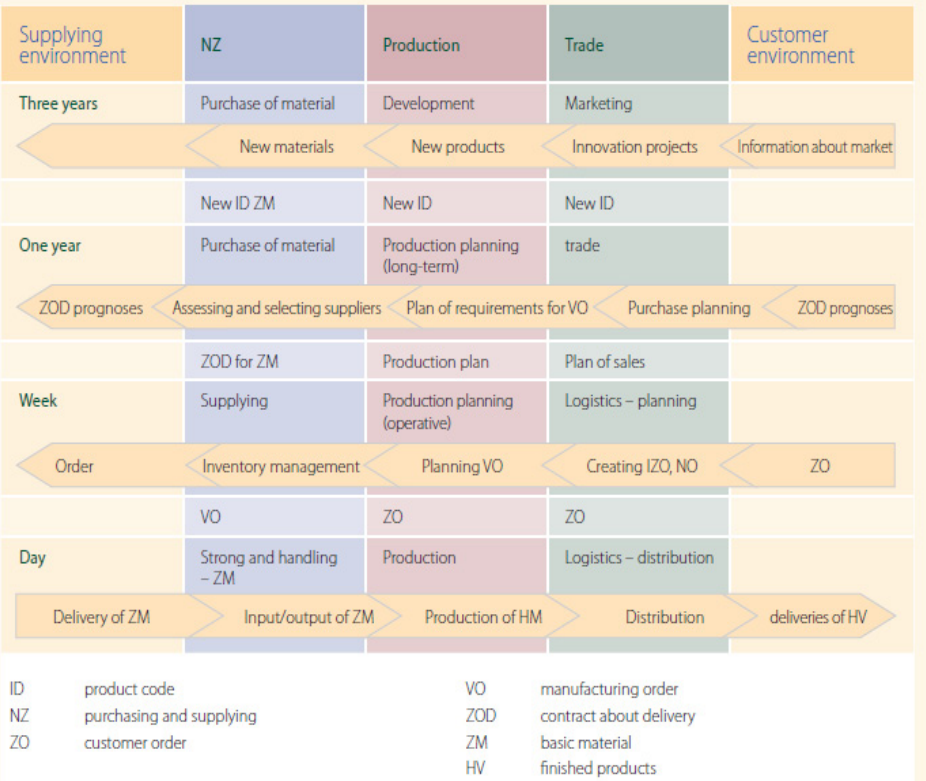
The process reengineering was realised in three sequential steps as follows: mapping the existing processes – a thorough analysis of all processes and activities, their inputs and outputs – working out the actual process maps, specifying the non-effective activities with the aim of eliminating them, defining the changes in the processes – creating a new process map and the subsequently adaptation of the organisational structures. All processes in I Each process has its internal or external customers who define their requirements. Their fulfilment is the basic task of the corresponding process. To what extent, what quality and in what time the outputs from the processes are to be in order for the customer requirements to be fulfilled has been defined in the documentation – in the guidelines which describe the individual processes and in the working and inspection procedures which describe the individual activities within the framework of the given process. The figure 1.14 shows the classification of all I.D.C. processes.

The so called main processes play the key role in every company. In I.D.C. they are all the processes of the information and material flows across the departments of trade, development, purchase and supply connected with planning, supplying, manufacturing, selling and distribution of products (see the tab. 1).

Table 1. The main processes in I.D.C.Company
Tabela 1. Główne procesy w I.D.C.Company

I. Main processes Processes connected with planning and realising products. In the framework of the main processes the following processes were defined:	H-01.01 Prognosing sales H-02.01 Creating internal purchasing orders, plans of purchasing goods and logistic controlling H-03.01 Supplying H-04.01 Production planning and production H-05.01 Distribution H-06.01 Sales, service, marketing H-07.01 Purchase
II. Strategic and management processes Processes determining the company's direction, determining competences, powers, responsibilities and communication rules of the company. The following processes belong here:	S-01.01 Product development and product documentation S-01.02 Crisis plan – managing emergency situations, stopping and withdrawing products from circulation S-02.01 Organisation order S-02.02 Investigation by management S-02.03 Documentation and data management S-02.04 Providing Personal Protective Equipment in I.D.C. Holding and economising with it S-02.05 Creating the financial plan of I.D.C. Holding, joint-stock company S-02.06 System of project management S-02.07 System of risk management and internal inspection S-02.08 System of education and training in the area of OHS, hygiene and protection against fire S-02.09 Regime measures by securing protection of property and objects of I.D.C. Holding, joint-stock company S-02.10 Corporate culture of I.D.C. Holding, joint-stock company S-02.101 Working rules and regulations of I.D.C. Holding, joint-stock company
III. Supporting processes Processes ensuring management of the company resources	P-01.01 Pricing, reporting and accounting the property and liabilities P-01.02 Consolidated financial statements P-02.06 Protection against computer viruses P-03.01 Planning and selecting HR P-03.02 Rise of employment, adaptation and termination of employment P-03.03 Business trips and travelling costs P-03.04 Trainings of employees P-03.05 System of employees' working assessment P-03.06 Processing wages P-04.01 Quality control P-04.02 Internal audits P-04.03 Management of non-conforming products P-04.04 Corrective and preventive activity P-04.05 Metrological order P-04.06 Hygiene regime P-04.07 System of ensuring products of (HACCP) FT are not harmful to health P-04.08 System of ensuring products (HACCP) in branches are not harmful to health P-04.09 External audits P-05.01 Administration of long-term tangible and intangible assets P-05.02 Preparation and realisation of material investments P-06.01 Guideline for protection of personal data

Process map of main processes



It depicts processes of information and material flows across individual company departments. It simultaneously integrates the time differentiation of the planning processes. The information depicted from right to left flows in the processes of strategic as well as operative planning which run horizontally across the trade and manufacturing departments and purchase. The final effect of all the levels of the planned processes is the material flows across the same department in the opposite direction – depicted in the diagram from left to right. From the time point of view the processes of strategic planning, creating annual sales and manufacturing plans and the operative processes of creating the sales prognoses and manufacturing plans on a weekly basis and almost uninterrupted material flows as a result of planning activities run parallely.

Source: Internal materials: Activity raport I.D.C. Holding, Bratislava 2011, p. 14.

The basic departments which ensure the main process are the departments of trade, manufacturing, purchase and supply. The diagram shows vertically the individual organisational components in succession; how they are engaged into the planning processes and, as a result, to realising the products and goods.

The remaining company departments which are not in the figure do not directly participate in this process. They ensure the management and supporting processes and utilise in this performance the outputs from individual activities of the planning and realisation process.The information flows of the main process, no matter whether strategic or operative, are based on the customer environment – from the

market and are determined by the I.D.C. orientation on the customer which is involved in its policy of quality as well as the quality objectives. The trade departments are the contact point with the customer environment. Therefore they are directly connected to this environment in the figure.

The manufacturing departments are oriented vertically in the middle and are the addressees of information from the trade departments for planning and, conversely, the information outputs from the manufacturing departments are utilised by the purchase and supplying departments that are in contact with the supply environment and manage the selections of suppliers of the basic material (ZM), the contracts, as a rule, on an annual basis or they ensure the operative management of the material flows.

From the time point of view, the information flows of processes are ranked into three levels. The strategic planning is the first level and starts at the marketing departments of the trade and consists of planning and managing the product portfolios and making use of the information from the customer environment. The innovation projects are the output and they respond to the requirements of the market and the strategic objectives of the company in the area of the trade policy.

The innovation projects are realised in the development departments and simultaneously this information is used in the process of creating the manufacturing policy which defines the size, technical level and distribution of the production capacities. During the resolving of the innovations, requirements on new materials develop which are the bases for the purchasing department for communication with the supply environment. The strategic planning process runs ahead of schedule by one to three years. The information about the results of the strategic planning is directed vertically in the framework of the departments to plan in a shorter time horizon of up to one year.

The annual planning represents the second planning level. It includes the preparation of the annual sales of finished products and goods in individual territories, the annual production plan in individual manufacturing plants and annual plans of purchase, bids, concluding annual contracts concerning deliveries of raw materials, packaging materials, energies and other materials. The first phase is planning the sales for the next year. The plan of sales is worked out at individual trade branches according to the territories. The basic inputs are the information from the customer environment; the conditions agreed in the contract about delivery (ZOD) are part of preparation of the annual plan of sales and the outputs from the process of strategic planning. The plans are prepared according to individual items of the product code (ID) and according to months.

The next phase is the process of preparation of the annual plans at individual manufacturing plants which utilise information about the plan of sales of items that they manufacture. From the annual manufacturing plans of all manufacturing plants in the information system (IS) we accumulate the needs of the basic material

(ZM) which is then the basis for the central purchase in the area of selecting suppliers and contracts of the basic materials, energies and other auxiliary materials for all the manufacturing plants for the next year.

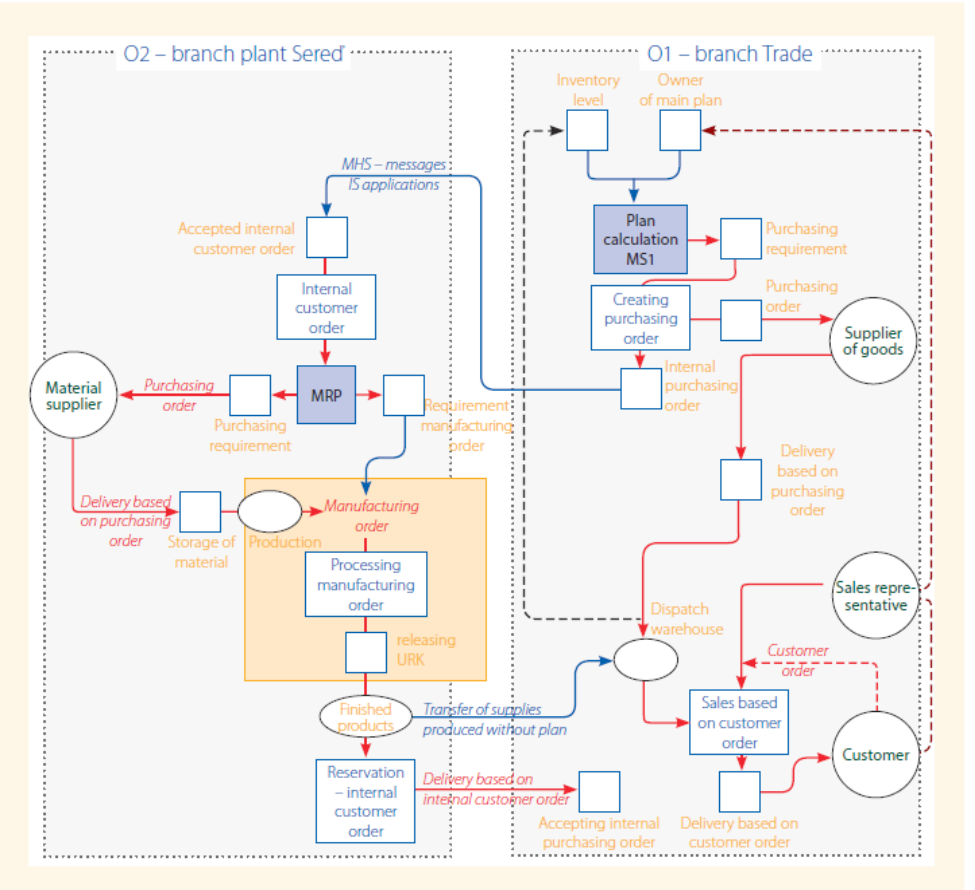
The outputs from the process of creating the annual plan are in the framework of the departments utilised in a further level of planning – in the operative planning.

Operative planning is the third lowest level of planning. The inputs are represented by the forecasts of sales and the plans for purchases from the trade departments and daughter trade companies and the customer orders. The outputs are the internal customer orders which manage all material flows of the main process. It is realised weekly with deadlines which comply with the individual planning calendar stated when creating the annual plan.The result of all the levels of the planning process is a continuous material flow – the process of input, storing and output of material by the departments of supplying, manufacturing in the manufacturing plants up to warehousing and distributing the products through logistics to the customers according to their customer orders.

The material flow begins with the deliveries of the basic material (raw materials and packaging materials) and auxiliary materials on the basis of the purchasing orders by the supplying departments from suppliers contractually ensured at the time of creating the annual plan. The purchasing orders for the basic material are managed by the manufacturing orders planned by the production when creating the weekly plan.

The planned manufacturing orders are released to production one day in advance and are manufactured in compliance with this order. The finished products are, after the output inspection, transported to the logistic warehouses and based on the customer orders are distributed to the clients (see the figure 1).

Figure 1. Planning process in IS-IFS
Rysunek 1. Proces planowania w IS-IFS



Source: Internal materials: Activity raport I.D.C. Holding, Bratislava 2011, p. 14.

The purchasing process is centralized and all information flows converge in one place both in the case of long-term and operative process control. The creation of the internal purchasing orders for finished products for individual manufacturing plants and the purchasing.

2. Implementation of controlling system in I.D.C. Holding

Each I.D.C. process has in its documentation (guidelines) a working procedure defined for checking the parameters of the given process. The parameters are monitored on the operative as well as long-term basis. The results are assessed by the management on all levels. Any possible deviations from the parameters defined are corrected by corrective measures and this fact ensures permanent process improvement.

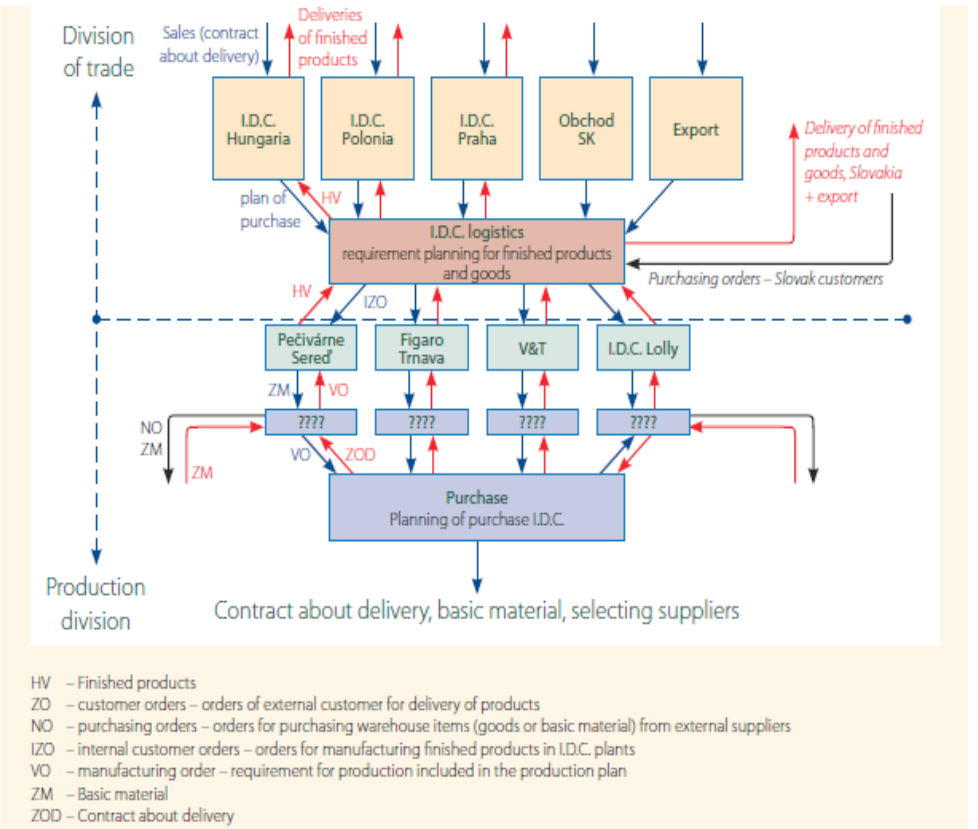
From the point of view of variability, the number of factors which affect the outputs of the manufacturing process belongs among the most complicated ones. The inspection process is divided into two levels as follows:

1. The operative controlling by fulfilling the process parameters – each phase of production from the input of materials through to preparing the routes and filling, baking, cooling, cutting, coating, packaging up to transporting the finished products to the warehouse has parameters that are defined and affect the quality and performance efficiency of the process. The operators check and record them at regular intervals. Should any deviation which is not allowed occur, the responsible employees will take corrective measures immediately (see the figure 2).

2. Controlling of the effectiveness of the manufacturing processes. In the framework of this activity we assess the fulfilment of the planned tasks in production, material and energy consumption and services for the realised production, the level of work productivity, the quality level of the process and products. Some indicators are assessed on a daily basis, otherson a weekly or monthly basis. The trend of the process development is obvious from the long-term point of view of the key indicators. This data is important for assessing the management processes.

Figure 2. Information flow when planning from the viev of the territorial structure of individual departments

Rysunek 2. Przepływ informacji podczas planowania z perspektywy struktury terytorialnej poszczególnych działów



Inormation flow when planning from the viev of the territorial structure of individual departments

The information and material flows in the main processes are performed in parallel at all sales and are, as well as manufacturing plants, synchronised in compliance with the planning calendar. The black arrows depict the routes of the information flows when planning sales, production, purchase and supplying between individual branches, logistics, manufacturing plants and purchase. The red arrows in the opposite direction depict the material flows. The interrupted line shows the division of competences between the departments of the trade division and the production divisions in the framework of the main process.

I.D.C. Holding, joint-stock company, branch plant Pečivárne Sereď, BU: 7221 | Manufacturing operation: COATING and COOLING Product: HORALKY 50 g, peanut filling | TP 205 15050013 Appendix No. 12.1 Production date / shift: Responsible: Signature:

Inspection time	Coating temperature (36-45°C)	WIP (1 hour)	Weight of non-coated cut: 46.25g (min. 24.1g)	Weight of coated cut 50g (min. 45.5g)	% of coating 7.5% (7-7.5%)		Product appearance (Z / N)	Temperature of cooling (4 -10°C)	Cocoa coating
Time of inspection	When re-filling record real temperature	Worked out – when – time	10 times a shift, 5 pcs individually	10 times a shift, 5 pcs individually	10 times a shift, 5 pcs individually	Z / N	10 times a shift, 5 pcs individually	When re-filling record real temperature	IS number
Date and time:			Printed by and signature:					Inspection:	

Follow- up of manufacturing coperations

Source: Internal materials : Activity raport I.D.C. Holding, ‚Bratislava 2011, p. 13.

In practice it is important to create an overview of the economic indicators for the individual manufacturing centres of the plant in the given time-period. As a rule, for practical reasons we prepare an overview in the form of a matrix. If for this reason no concrete numbers are necessary, then we are able to visualise the final shape of the matrix where the following data is introduced:

- in the heading the monthly and accumulated values are introduced.
- these values are concretised for the decisive groups of activities in the framework of production and further required data that result from the table 2.

Table 2. Selected economic indicators – overview
Tabela 2. Wybrane wskaźniki ekonomiczne – przegląd

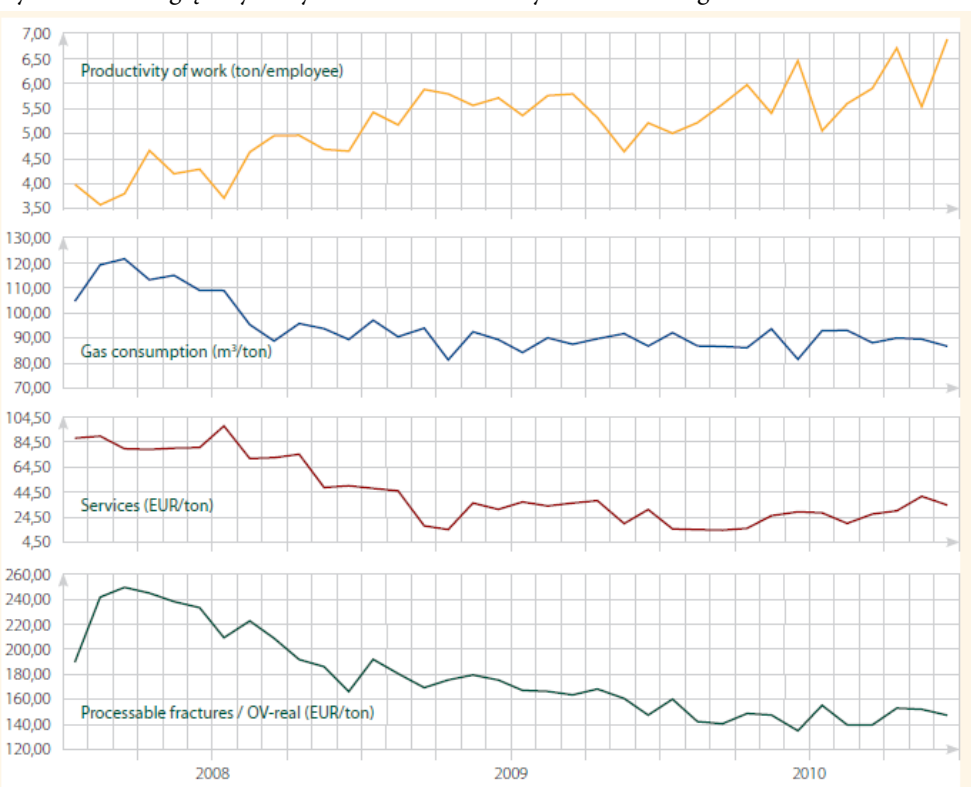
PRODUCTION	
Production-FP	tons
Production-FP	EUR
Production volumes, planned	tons
Production (taken away)	tons
Production (taken away)	EUR
QUALITY	
Passive claims - quality	pieces
Complaints	pieces
Number of assessed production batches	pieces
Non-conformities	pieces
Non-conformities/number of production batches	%
Non-standards for suspension record	kilograms
Non-standards for suspension record	EUR
Non-standards-fractures- ID assigned	kilograms
Non-standards-fractures- ID assigned	EUR
Non-standards - others	kilograms
Non-standards - others	EUR
Non-standards - total	kilograms
Non-standards - total	EUR
Non-standards/OV	kg/t
Fractures processable-THN	tons
Fractures processable – really produced	tons
Fractures processable-THN	EUR
Fractures processable – really produced	EUR
Fractures processable/OV - real	t/t
Fractures processable/OV - real	EUR/t
Fractures non-processable-THN	kilograms
Fractures processable – really produced	kilograms
Fractures non-processable-THN	EUR
Fractures non- processable – really produced	EUR
Burns - THN	kilograms
Burns – really produced	kilograms
Burns - THN	EUR
Burns – really produced	EUR
Fractures non-processable/OV- real	kg/t
Fractures non-processable/OV- real	EUR/t

MANUFACTURING CONSUMPTION	
Raw materials – THN	tons
Raw materials – reality	tons
Raw materials – THN	EUR
Raw materials – reality	EUR
Raw materials – reality per OV	t/t
Raw materials – reality per OV	EUR/t
Packages – THN	EUR
Packages – reality	EUR
Packages – reality per OV	EUR/t
Material consumption (S01)	EUR
Material consumption (S01)	EUR/t
Consumption of gas	m^3
Consumption of gas	m^3/t
Consumption of electricity	kWh
Consumption of electricity	kWh/t
Consumption of electricity (SO2)	EUR
Consumption of electricity (SO2)	EUR/t
Services (51)	EUR
Services (51)	EUR/t
Value added	EUR
Value added	EUR/t
Costs (5)	EUR
Costs (5)	EUR/t
PRODUCTIVITY	
No of employees incl. agencies	employee
Basic wages +SZ employees of branch plant	EUR
Labour costs + SZ + agencies	EUR
Hours worked – workers + agencies	hours
Work productivity	t/worker
Work productivity	EUR/worker
Work productivity	hour/t
Labour costs per ton	EUR/ton

Source: Internal materials: Activity raport I.D.C. Holding, Bratislava 2011, p. 15.

The pre-defined indicators of the manufacturing process for individual production units and for the whole plant are assessed on a monthly basis. Four basic areas are assessed – the fulfilments of the production plan, manufacturing consumption, productivity of work and the quality parameters. Each area involves defined parameters on the basis of which the process is evaluated. The proportional indicators in the table are also assessed graphically and are visualised directly on boards in the production halls (see the figure 3).

Figure 3. Overviev of selected indicators from January 2008 till December 2010
Rysunek 3. Przegląd wybranych wskaźników od stycznia 2008 do grudnia 2010



Source: Internal materials : Activity raport I.D.C. Holding, Bratislava 2011, p. 27.

The productivity diagram shows how the productivity of work in the indicator of produced tons per employee grows from the beginning of 2008 till the end of 2010.

The measures for reducing the idle times, improving the organisation of work, improving planning operations and last, but not least, also the updating of the manufacturing technologies brought an increase of productivity of work per employee from about 4 tons per employee to almost 7 tons per employee. This is a 75% increase within three years.

At the same time a significant reduction of the manufacturing consumption was achieved. Increasing the productivity of work and implementation of modern technologies have brought a reduction of gas consumption – the basic energy medium for manufacturing biscuits in m3 / t by 27% during the last three years.

Similarly, the pressure on reducing the fixed costs for the period followed were reflected in a reducing of the costs for services per ton manufactured by more than 60%. One possibility for reducing the costs is the rational utilisation of breakages which inevitably occur during production. That is the reason why the values of the produced processable fractures per ton manufactured are followed – from a value of 240 EUR/ton we dropped to 140 EUR/ton which is reduction of more than 40 %. This has a huge effect on the material consumption as well as the consumption of energy and human labour. Controlling creates pressure on the top managers for them to attempt to improve the processes through:

- the pressure on the increase of the work productivity, ni.e. reducing the wages,
- saving energy – reducing the requirements on energies,
- reducing the production of breakages and waste – decreasing the requirements on material.

Conclusion

Here I.D.C. Holding achieved a significant growth in the total effectiveness of the manufacturing processes. Besides the investment into updating the technological equipment, the process management of the company has an important effect on improving the company's competitiveness. Correctly defined processes are one of the cornerstones that the company I.D.C. Holding has built its success on. However, it is not the only guarantee of success. The assumption for success is the correct adjustment of the controlling procedure for each process. Controlling creates pressure on the top managers for them to attempt to improve the processes.

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