

IMPROVEMENT OF LOGISTICS IN MILK PROCESSING ENTERPRISE MADETA, inc. IN ČESKÉ BUDĚJOVICE (CZECH REPUBLIC) ZLEPŠOVÁNÍ LOGISTICKÝCH PROCESŮ V MLÉKÁRNĚ MADETA A. S. V ČESKÝCH BUDĚJOVICÍCH (ČESKÁ REPUBLIKA)

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ABSTRACT

The paper deals with increasing competitiveness in the biggest milk processing enterprise in the Czech Republic, Madeta, inc. The paper describes the know-how in logistic management. It concerns first of all outsourcing. Outsourcing is such a system, when the milk processing enterprise transfers specific activities, conducted formerly by itself, to so called logistics providers. This makes possible to focus on essential activities, which are manufacturing milk and milk products and modification of assortments. Into the logistic chain [supply chain] four new firms were incorporated.

ABSTRAKT

Logistika se zabývá materiálovým a s ním nezbytně souvisejícím informačním tokem, nutným pro dodávky surovin k výrobci a hotového zboží od výrobce k zákazníkovi. Zatím neexistuje jednotná definice logistiky, neboť tento pojem a jeho náplň se neustále vyvíjejí. Dříve se od logistiky požadovalo, aby plnila úlohu servisní organizace a zajišťovala, jak dostat správné zboží ve správném množství a správné kvalitě, ve správném okamžiku na správné místo. V současné době, kdy veškeré dění je stále více ovlivňováno rozšiřující se globalizací, musí si logistika dávat vyšší cíle. Podle PERNICI [3] je to především:

1. podíl na tvorbě logistických strategií,
2. řízení logistického řetězce. Řetězce se skládají z relativně autonomních, propojených článků (jednotek), které by měly být schopné provádět sladěné akce v reálném čase, ve smyslu pull principu. Do těchto řetězců jsou integrováni jak dodavatelé surovin a zákazníci, tak i poskytovatelé logistických služeb, kteří mají stále významnější úlohu, až po roli řídicího článku celého řetězce.

Nejde již o pouhou dopravu surovin nebo hotových výrobků, ale začal se rozvíjet koncept přidané hodnoty v řetězci jako nástroj konkurenceschopné strategie. Pro dosažení tohoto vztahu se začal rozšiřovat mimo jiné outsourcing, tj. přenesení určité činnosti, kterou podnik dosud prováděl sám (nikoliv ale jako hlavní svoji činnost), na externí firmu či firmy, tj. na poskytovatele služeb. Je lépe, když se podnik může soustředit jen na ty činnosti, které jsou jeho silnou stránkou a na které může efektivně vynaložit svoje zdroje. Ostatní činnosti by měl přesunout na jiné firmy a tak organizačně zehusit. Rovněž poskytovatelé služeb se pak soustředí na užší spektrum činností, které zajišťují buď u jednoho nebo i více podniků. Tím se stávají specialisty a jejich činnost se zkusitňuje.

Předání některých činností z výrobního podniku na poskytovatele služeb může být i riskantním krokem, který nevede vždy k očekávanému úspěchu a u kterého zpětný návrat k původnímu stavu nemusí být reálný, pokud se firma při přechodu k outsourcingu zbaví též dražších investic nebo i kvalifikovaných pracovníků. Tento článek analyzuje situaci při zavádění outsourcingu v největší české mlékárně, Madeta a.s. v Českých Budějovicích, která pro poskytovatele služeb vyčlenila činnosti týkající se uzavírání smluv na dodávky mléka od zemědělců, dopravu mléka do výrobních závodů, kontrolu kvality mléka, distribuci hotových výrobků včetně částečného skladování a některé marketingové činnosti. Uvedené změny se osvědčily.

CHARACTERISTICS OF MILK PROCESSING ENTERPRISE MADETA, INC.

The milk processing enterprise Madeta, inc. has been established in 1992 from the former enterprise which processed milk in South-Bohemia region from the end of World War II. Madeta, inc. purchases yearly about 450 000 000 litres of milk, which represents 20 % of the total volume of milk, purchased in the Czech Republic. There are about 1 700 people working in 8 differently located plants. The actual offer of products is 239 kinds every year. Eight processing plants are specialized as follows:

1. Madeta České Budějovice: milk, lactobacil cultured products, yoghurts,
2. Madeta Řípec: production of melted cheeses,
3. Madeta Planá: hard cheeses,
4. Madeta J. Hradec: cottage cheeses and deserts. Milk feeding mixtures,
5. Madeta Pelhřimov: durable milk,
6. Madeta Strakonice: dried milk for export, full fat instant milk Tatra,
7. Madeta Prachatice: natural cheese Jadel, Akawi [export], Mozarella,
8. Madeta Český Krumlov: blue cheese Niva.

Madeta logistics, inc. purchases and stores food industry products from different producers, including Madeta inc. and distributes them in the Czech Republic.

Advantage of mentioned specialization of 8 Madeta plants makes possible to transfer purchased milk from farmers to a plant, which has received higher demand and orders for its products. At the other hand, when there is a surplus of fresh milk, the production of dry or durable milk can increase.



Picture 1: Location of Madeta plants

Madeta, inc. is the biggest milk processing enterprise in the Czech Republic and it tries to be competitive in sale of own products from the view of quality and introducing new products. New methods of logistics and management, which to a great extent contribute to satisfy customers with low prices and complete deliveries, also help to this tendency.

SUPPLIERS OF RAW AND SUPPLEMENTARY MATERIAL

The main material flow represents fresh milk as a basic raw material. In spite of relatively large concentration of agricultural production in the Czech Republic, milk is still delivered to Madeta, inc. approximately from 1000 cowsheds and from 800 suppliers [farmers]. Many suppliers are associated in milk cooperatives, which receive higher reputation in price negotiation and delivery conditions with the milk processing enterprise than individual farmers. This influenced considerably purchase of milk after entry of the Czech Republic into the European Union in 2004. The biggest milking cooperative: JIH [south] started to sell a part of its milk production to the processing enterprise in Cham, Germany, which is situated near the borders and pays to the farmers 0,60 CZ Crowns per liter more than Madeta, inc. Farmers receive an average price of 8,55 CZ Crowns per liter and they are satisfied (2005). But 60 % of raw milk production is constantly delivered to Madeta, inc.

Madeta, inc. purchased in the year 2004 about 20 % of Czech milk production. Some volume of purchased milk is transported to the processing enterprise at a long distance, from regions, where other milk processing enterprises are active. Farmers sell milk to that producer, who offers the highest price.

The way of delivery milk to the processing enterprise of Madeta, inc. is interesting from the view of logistics. Picture 3 represents a former way of delivery.

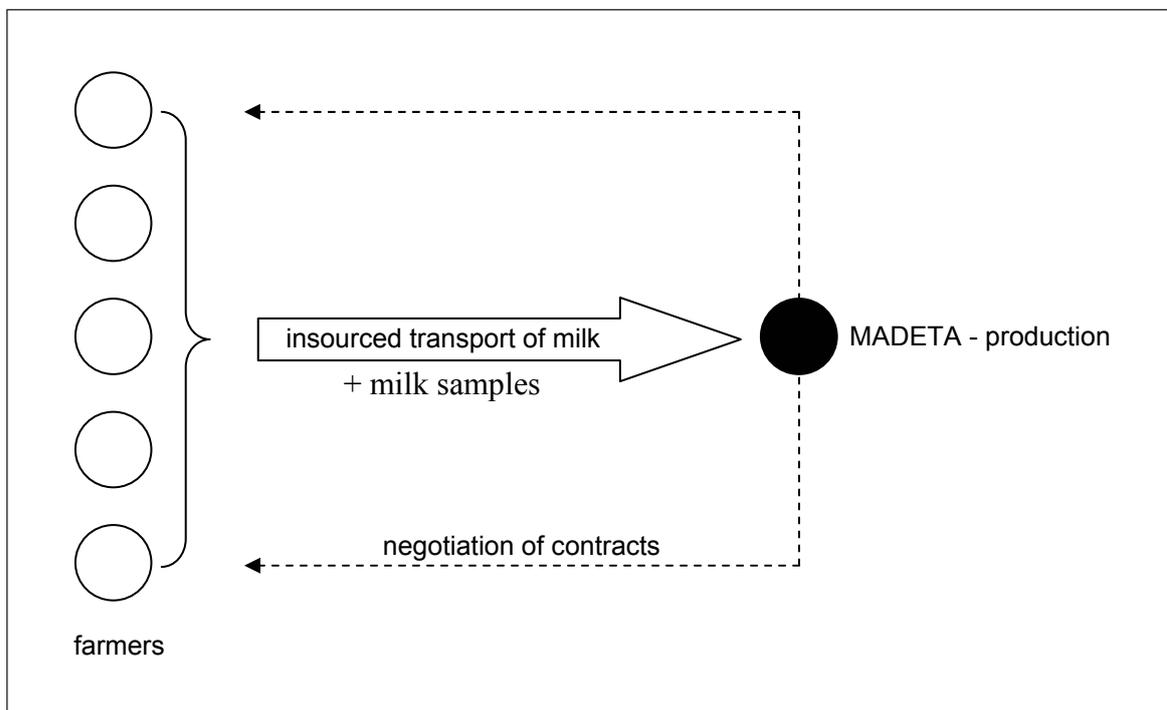
Madeta, inc. as a milk processing plant carried formerly milk from individual cowsheds together by its own transport means, collected milk samples, which made it possible to determine the milk price per liter. But there were always conflicts between Madeta, inc. and farmers. In milk processing enterprise Madeta, inc. exists there a new system of milk purchase (picture 4).

From the picture we can see a detailed specialization and extension of the labor division and expansion of outsourcing, when Madeta inc. transfers some activities to special organizations, as Milktrans, ins. and Madeta Agro, inc. and so can better focus on own manufacturing.

Madeta Agro, inc. is a service organization providing



Picture 2: MADETA logistic, inc. – central storeroom „EAST“ in Jesenice near Prague and regional stores network



Picture 3: Former way of milk delivery

Madeta, inc. with all activities, connected with purchase and classification of fresh milk. Madeta Agro, inc. has in South-Bohemia region 7 locations of business and in České Budějovice a central laboratory. This laboratory received official state certificate and makes yearly over 200 000 different analysis of milk.

Milktrans, inc. is a transport firm with 35 tankers for milk transport and 240 camions for domestic and international transport.

The supply chain of milk processing enterprise Madeta, inc.

The supply chain is relatively complicated, mainly because of these reasons:

- milk is not processed in one plant only, but in eight plants, located in the South-Bohemia region.
- It is necessary to supply not only central stores of big chains [Makro, Globus, Penny, etc.], but smaller customers, too.
- Deliveries must contain not only goods produced by Madeta, inc., but by some other milk processing enterprises from the Czech or Slovak Republic. Customers prefer broad choice deliveries, which are complemented by some special products of other producers, which Madeta, inc. doesn't manufacture.
- Because foodstuffs are of short durability,

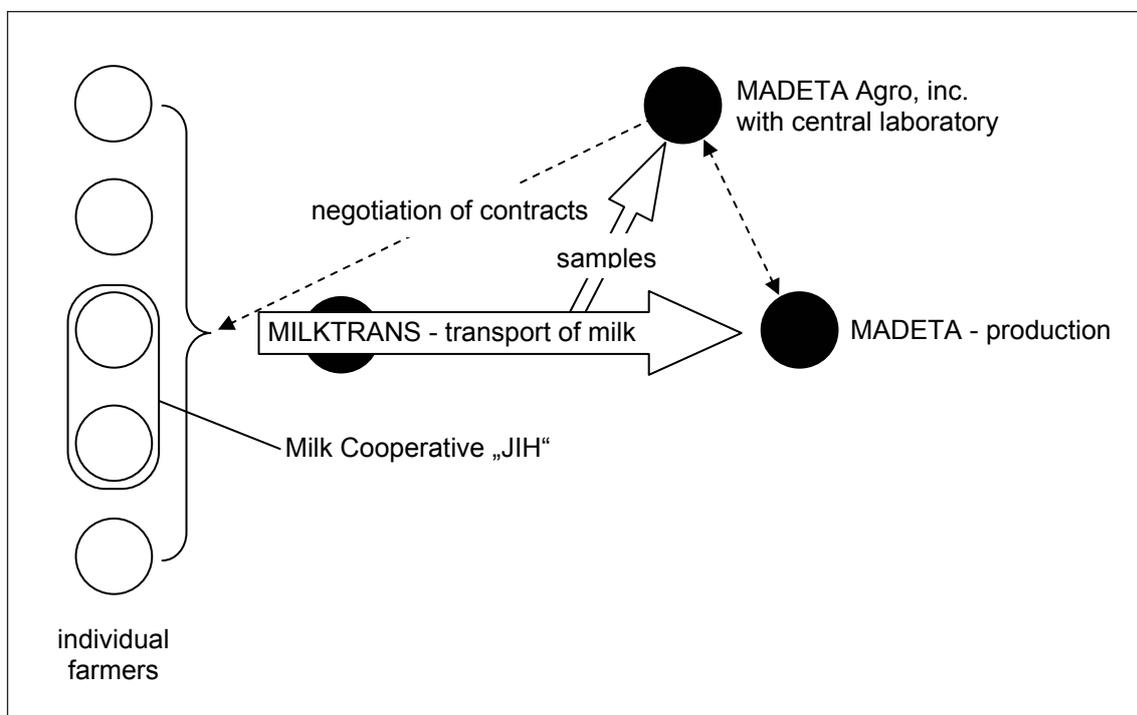
customers must be satisfied quickly, mostly during 12-24 hours.

Three distributors take part on the distribution of Madeta products:

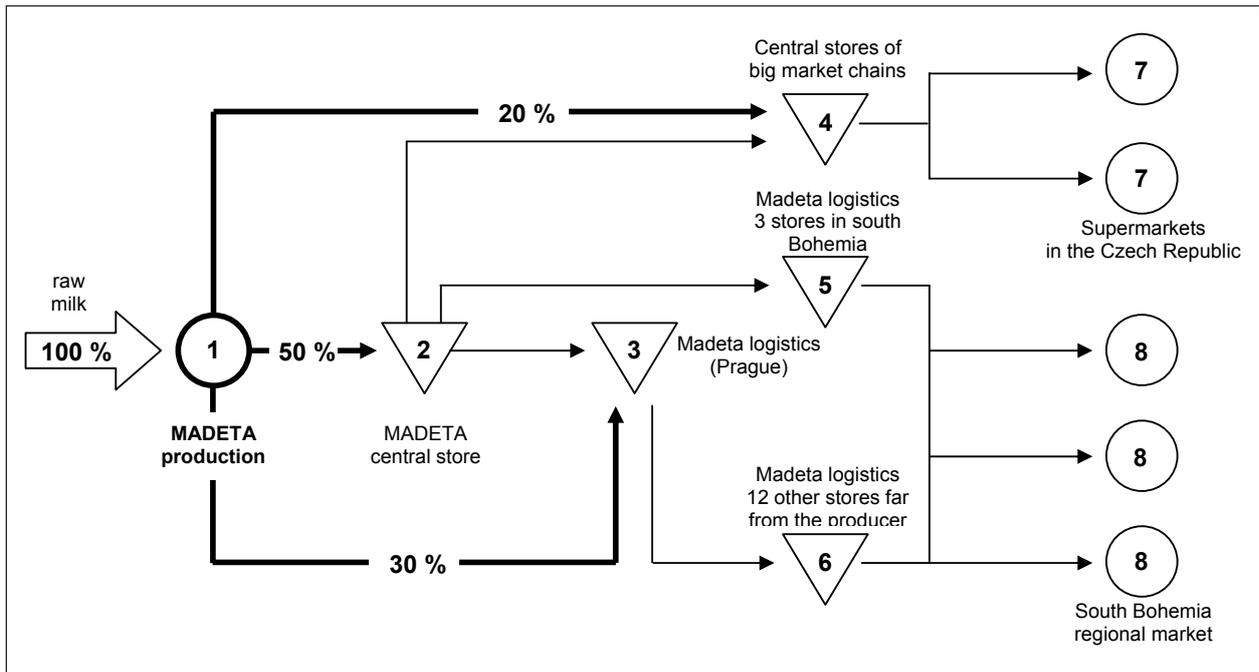
- Madeta, inc., as a manufacturer and partly as a direct supplier into the market network.
- Madeta logistics, ins. as a principal distributor of products into the market network.
- Milktrans, inc. who performs the physical transport in the whole supply chain, both for Madeta, inc. and Madeta logistics, inc. These relations are depicted on the picture 5.

Key to picture5:

1. Eight plants of Madeta inc. in South-Bohemia region.
2. Madeta's central store in České Budějovice.
3. Madeta logistics central store in Jesenice by Prague.
4. Central stores of big market chains [Globus, Penny Market, etc.].
5. Three distribution stores of Madeta logistics, inc., located near the central store of Madeta, inc. in České Budějovice.
6. Twelve other distribution stores of Madeta



Picture 4: Contemporary organization of milk purchasing



Picture 5: Distribution chain of Madeta, inc. products

logistics, inc., located in the whole Czech Republic.

7. Supermarkets and hypermarkets and other shops of big market supply chains [Globus, Penny Market, etc.].

8. Regional market [wholesale, retail sale, hospitals, school canteens, etc.].

▽ = store

○ = processing, activity

This supply chain makes possible:

- Use the advantage of centralization, when at least 50 % of products are concentrated in the central store in České Budějovice, from where deliveries can be better organized. The contact with the customers is more frequent in comparison with the situation, when every plant should do this activity separately.
- On the other hand it is possible for every plant to deliver goods by itself. Such situation appears when there are big orders of market chains which don't need to add assortment of special products from the central store. So such situation can be eliminated when products were formerly transported to the central storage of Madeta logistics, inc. [150 km distance to Prague in Jesenice] and later a part of this products went back again to shops in South-Bohemia region.
- Important part of this supply chain there are suppliers of such products, which are not manufactured

in Madeta, inc., but these products are specialities of other milk processing plants and customers demand them [for example sheep cheese "parenica" from the Slovak Republic]. Modified supply chain for this situation is at picture 6.

From the view of foreign milk processing firms which plan enter the Czech market, Madeta Logistics, inc. plays a role of an important partner with the experience of distribution relatively demanded assortments [short delivery time, storage and transport under controlled temperature etc.]. Madeta, inc. has already finished its distribution network including necessary logistics services. Using this distribution network in the form of outsourcing, new firms can reduce time and money when they enter the Czech market and so cut down costs for creation their own distribution network and necessary services. These services don't concern foreign firms only, but they are offered to Czech firms too, if their own distribution network has no expected reliability, speed and completeness.

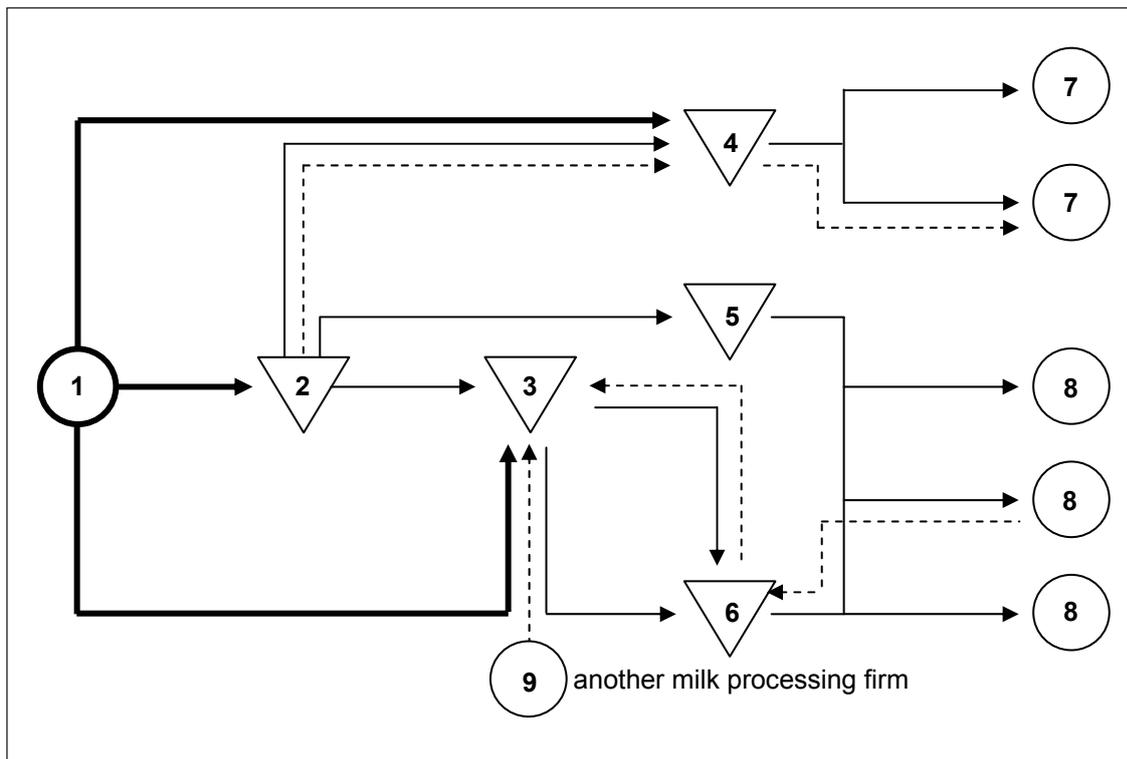
Key to picture 6 is the same as to picture 5.

----- Information flow

———— Deliveries of goods

Material flow is following“

According the demands of customers, Madeta logistics, inc. purchases some special products, which Madeta,



Picture 6: Material and information flow by access of other milk processing firms into distribution chain.

inc. doesn't manufactures [9]. Regional customer [wholesaler, hospitals - Nr.8] chooses the Madetia's goods from the catalogue and orders them in one store of Madeta logistics, inc. [6] in the Czech Republic. This storage sends the order to the central storage of Madeta logistics, inc. [3], orders are here processed and goods are delivered during 24 hours to the shops [5 or 6]. Transport of goods to regional shops [8] is performed according to a computer program, which looks for the best optimization between shortest delivery time and lowest transport costs, which are influenced first of all by the km distance of deliveries.

This way of distribution uses the advantage of outsourcing. Some activities of the manufacturers are transmitted to other specialized firms which can better concentrate on these activities and perform them better than the original manufacturer. Original manufacturer can again focus better on its own activities.

CONCLUSION

The new organization of material and information flow in milk processing plant Madeta, inc. was successful. The reason of this success is beside others, that the firms of service providers (Madeta Agro, inc., Milktrans, inc.) took origin as detached firms from the original enterprise,

Madeta, inc.

New solution removed distrust of farmers with milk quality evaluation, which formerly was an activity of the milk processing enterprise Madeta, inc. Transport of milk runs continually, 20 hours a day. Distribution of final milk products provides that element [member] of the supply chain, which is the nearest to the customer. At the same time, most of the unnecessary transport was eliminated.

The supply chain as a part of the logistics chain makes possible to provide complete deliveries of products, required by customers, including such products, which Madeta, inc. doesn't manufacture and which are specialty of producers from other regions. All this contributes to higher level of customer satisfaction.

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