# IMPLICATIONS OF LEAN MANUFACTURING ON MANAGEMENT ACCOUNTING IN ROMANIAN ORGANISATIONS

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ABSTRACT: The methods for calculating and managing the costs should meet customers' requirements as early as the stage of designing the products, in terms of their quality and price; it should also contribute to reducing the costs of existing products by continuously removing the losses. For this, one of the methods used in Lean Accounting is Target costing. This method starts from the premise that the product price and the processes of continuous improvement should be established taking into account customers' needs, starting from the price the customer is willing to pay, depending on the value attributed to the product. This paper presents a few of the implications of applying the Target costing on the structure and functionality of the accounts specific to managerial accounting in Romanian organisations that apply Lean accounting.

**KEY WORDS:** Lean accounting, management accounting, target costing, Lean manufacturing.

JEL CLASSIFICATION: M41, M12.

#### 1. INTRODUCTION

The technological advance, the new manufacturing systems, changing the manufacturers' and consumers' mentality are only a few arguments and requirements that impose the adaptation of accounting to the current development requirements. One of the drawbacks of traditional accounting is that it provides data that are often complicated, too complex and late, sometimes even erroneous. Transforming this data into information rather has to do with the manager's knowledge, skill, training and intuition. For the results obtained to be the expected ones, the organisations that have

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adopted the Lean manufacturing system must apply the Lean thinking model at all levels, also in the accounting activity. Lean accounting mainly refers to the managerial accounting, because the information of the financial accounting being established according to strict rules and must be presented according to the requirements of the legal regulations and as such they cannot be resized (Johnson, 2006).

Lean Accounting is fully consistent with the Lean philosophy, its success and precision depending on the application of Lean tools, the cost of the product being obtained through the value stream. Lean Accounting is based on an information system that reflects the structure and operation of the organisation and sets a system of costs integrated along the value stream. Organising a system of costs in direct relation with the value stream facilitates the understanding of the connection between the consumption of resources and the activities that create value, respectively the development of an analysis system in order to help the organisation's management to identify opportunities of continuous improvement and full use of the processes.

Starting from the need for a new system of costs for Lean manufacturing, a cost management model was developed based on the value stream (Maskell, Baggaley, Grasso, 2012), called *Value Stream Costing* (VSC). However, the authors warn that for the presented model to be efficient, the organisation should be in an advanced stage of Lean manufacturing. VSC should be adopted only when the organisation achieves short times of execution and delivery (the amount of times required from the customer's order to the delivery of the product demanded), has a low level of stocks (small and stable stocks) and is organised along the value stream.

Just like the Lean manufacturing system, which aims to simplify the processes and reduce the losses in the production process, Lean Accounting simplifies the accounting reports and facilitates their understanding (Carnes & Hedin, 2005). One of its main objectives is to measure the monetary impact of implementing the improvement projects that aim to support the business (Brosnahan, 2008). Lean Accounting reflects the business strategy, the information being collected and presented simply and in an easy manner to view (Maskell & Kennedy, 2007). The main goal of Lean Accounting is to remove the losses by identifying their sources.

In the organisations that have implemented Lean Accounting, this removes many of the current drawbacks of the accounting systems, providing easy to understand, clear, simple and usable information in a pro-active manger in the decision-making process.

## 2. MANAGEMENT OF LEAN COSTS: TARGET-COSTING

## 2.1. Target-Costing Characteristics

The current economic conditions (the trend of supply growth compared to the demand) force the organisations to innovate, to answer rapidly to changes and concentrate all their resources on their activity, in order to be competitive on the market and to reach the set goals. Thus, each organisation wishes to use the useful and reliable information, which used operatively lead to adopting correct decisions, contributing to the achievement of the set goals.

One of the most recent forms of management used to manage the costs and optimise the performance of organisations is the *target cost*. This aims at minimising the effects of the economic pressure of globalisation by creating strategies that would lead to combating the predominant fluctuations of the market and to maintaining a competitive advantage based on satisfying the customers and increasing the profitability. The organisation tries to obtain as many customers as possible who are willing to pay the price of the products and to constantly monitor the costs by optimising them.

In the current context, due to the recent economic and financial crisis, organisations manifest an increasing concern to maintain and increase their competitiveness on the market. This can also be done by means of the target cost, which involves the application of some strategic processes by means of which the cost of products is minimised by optimising the internal and external processes, so that products corresponding to customers' needs are obtained, at the lowest possible cost and with the best levels of quality and functionality, thus maximising the planned benefits.

Traditionally, when an entity wants to launch a product on the market, it starts with designing it, then it determines the sale price depending on the desired benefit. The sale price was created based on the equation:

#### **Cost** + **Profit** = **Sale Price**

Without doubt, this process cannot be applied taking into account the current economic realities, the market being that which ultimately decides the price of the products. In return, in terms of the target cost, the organisation starts by determining the price the market would pay for a product, analysing the strategic position of the product compared to the other products of the organisation and of the competition. Taking this price into account, the multidisciplinary teams formed design and build the product taking into account the target cost that ensures the desired benefit by the organisation. Thus, a product is conceived and developed taking into account the characteristics required by the customer and/or the market which it is intended for.

The target cost places special emphasis on the continuous improvement, reduction of costs and removal of losses, reducing the risk and protecting the profit, so the target cost generates the large scale benefits and is fully compatible with the Lean principles. The purpose of the target cost to manage the entity in the process of creating the value for the customer. Creating the value for the customer is the first of the Lean principles, therefore the target cost becomes the first step to be taken by an organisation in the process of implementing the Lean principles. In terms of the Lean Manufacturing, the target cost involves going through the following stages (Maskell, et al., 2012): setting the value created for the customer by the entity; determining the maximum cost of the value stream, based on the value created for the customer and profit expected by the entity in the value stream; creating an action plan by which one would pursue the growth of the value for the customer and obtaining the profit expected in the value stream.

In Romania, before 1990, the manufactured products were rapidly absorbed by the market, the demand exceeding by far the supply of products. For this reason, the sale price was set exclusively by the manufacturer, and due to the shortage of products, it was immediately accepted by consumers. Currently, a number of factors such as economic globalisation, increased (internal and external) competition, reduction of the life of products, rapidity of moral wear due to the technological changes, etc. have determined the change in the traditional approach by modifying the equation presented above, in:

This new approach implies the need for a change in the mentality of the Romanian organisations in terms of knowing the markets and the consumers whom it addresses and their requirements. Due to its undeniable global benefits, the target cost is used by famous companies, such as: Compaq, Daihatsu, Ford, General Motors, Honda, Intel, Panasonic, Sharp, Toyota, Toshiba etc.

#### 2.2. The Target-Costing Characteristics for the Management of Organisations

Starting from the characteristics of target costs specified in literature and from the methodology of applying it, we can say that the target cost fulfils several functions, being a relevant cost for the management of organisations.

Functions of target cost	Description					
Analysis of the	in order to apply the target cost, one should start from the					
market and	functional characteristics of the product and from the future analysis of the					
characteristic	market. Specifically, one should know aspects such as: what is the time					
or product	horizon when the product can be marketed; what the demand curve; what					
	are the functions necessary to obtain the product.					
	The demand curve is estimated starting from the market survey and based					
	on the competitors' strategy; thus, the market accessible to the entity is					
	evaluated for an estimated sale price, taking into account the market					
	potential and market share the entity can obtain in relation to its					
	competitors. The detailed analysis of the product potential on the market					
	leads to assessing the maximum risk in an unfavourable scenario or to					
	assessing the gain in a favourable scenario. The target cost determines the					
	unsatisfied needs of the current or potential customers taking into account					
	the evolution of the competition and studies the price which the market is					
	willing to pay considering a variety of possible variables related to the					
	economic situation in general, the market in particular and the product in					
	specific form. All this information is obtained by analysing the market.					
Informative	➤ the target cost involves the use of significant amounts of					
	information regarding the customers, competition, product and costs. The					
	most important information is that received from customers and refer to					
	what the customer wants, the value attributed to the product, the price they					

	are willing to and can pay. More difficult to obtain than the information
	received from customers are the possible reactions of the competition; they
	can be estimated if their products, costs, technology, financial conditions, etc. are known. The target cost uses for this the so-called "reverse
	engineering" that consists in decomposing and studying the products of the
	competition in order to analyse the design, materials and technology used
	for that product. The target cost also generates information on the future
	performance of the entity.
Decisional	the use of the target cost implies the supply of detailed information
	on the costs of the alternative activities. For those who make decisions, this
	information allow choosing the designs and manufacturing alternatives that
	best meet the functionality requirements of the product and set prices. The
	decision in designing the products and processes that would achieve the objectives set is made after consulting many databases with information on
	costs and manufacturing variables. The decisional function is an extension
	of the informative function; in order to be competitive on the market, it is
	important for the organisation to have relevant and reliable information,
	which is essential to make operative and strategic decisions.
Design	the target cost pays special attention to the product design stage, so
stimulation for	that it provides significant amounts of resources in the product planning
manufacturing	and design activities in order to reduce the resources used in the following
	stages. The difference between the estimated cost and the paid cost is
	important. The cost paid reflects the use of resources in the productive process; the productive activity develops in consonance with the design of
	the product which these costs have been estimated for when the type of
	material used was determined, the processes that should be performed and
	tests for execution. The costs estimated are the costs included in designing
	the product, but which have not actually been achieved, but because of the
	decisions taken, they shall be paid in the future. Once the estimated costs
	are established, any subsequent change thereof is difficult and costly.
	The target cost emphasises the importance of the product design stage due to its influence at the level of costs. Overall, it is considered that around
	80% of the level of costs is estimated at this stage. In the absence of
	approaching the target cost, design engineers are tempted to incorporate the
	new technological breakthroughs into the characteristics of the product,
	often ignoring customers' actual requirements regarding the quality and the
	price. Many times the end consumer does not need a product that would
	incorporate all the possible technology (which can be expensive and
	useless) and refuses to pay what they do not want. That is why focusing on
Integrative	the target cost also keeps the design attention on the end consumer.  the target cost involves an integrated mechanism to coherently join
imegranive	the various departments of the organisation that are related to the product in
	one form or another. Suppliers are also part of the multidisciplinary team
	usually, thus improving the possibilities to optimise the purchase and use of
	raw matter and materials.
Coordination	the target cost involves a teamwork culture and a permanent
	consensus, the coordination of the activities being done around the set
	strategic objective. It can be said that by using the target cost, the synergy
	of a project team is ensured, which works in tandem to achieve a

	continuous reduction of costs.		
	continuous reduction of costs.		
Warning	the target cost predetermines the cost to be achieved (achievable) of the product based on available information on similar actual processes, on the current cost that is expected in order to obtain a product in the current productive and technological context and on including the activities identified for reducing the costs. The target cost is determined by lowering the expected benefit from the sale price accepted by the market. Thus, any deviation between the acceptable predetermined cost and the target cost warns the entity on the non-fulfilment of the objectives, triggering activities to optimise the product design with the operations that are the productive process.		
Continuity	the target cost also aims at the reduction of costs, taking into account all the costs along the lifecycle of the product. Thus, in the stages of research, design and pre-production, the target cost uses the "value engineering", and in the production and marketing stages "the continuous improvement". The target cost involves following the costs in the lifecycle of the product along a global and continuous process, different than the traditional one where the costs directly related to the production are taken into account. The target cost requires that the activities to reduce the costs would not stop when the product passes from the final stage of actual production, and they remain and are maintained by applying "continuous improvements".		

Figure 1. Cost-target functions

# 2.3. Target-Costing - element of junction between the traditional methods for calculating the costs and Lean Accounting

The target cost involves a change of roles between *cost* and *value*. The value is configured as an independent variable of the model, replacing the actual cost or the standard cost that occupies this place in traditional methods. One goes from the conception according to which the cost determines the value at the conception, according to which the value determines the cost. In the traditional system, the cost was an independent variable, determining the sale price based on it; in the variant of the target cost, the cost is the dependent variable that is determined based on the sale price.

The target cost requires much more work, but it is more efficient, because it guarantees the acceptance of the sale price by the consumers and thus marketing the manufactured production is ensured.

In the case of the target cost, the analysis of the return of products starts in the design and conception stage, thus the performance is improved and the entity's competitiveness increases. The goal of the target cost is to trigger a process at the end of which the cost of a product would be obtained, the starting point being the strategic sale price set and taking into account the profit expected for that product. The target price, calculated depending on customers' wishes and taking into account the possible reactions of the competition forms the basis for determining the target cost.

The characteristics of the cost calculated through traditional methods	Cost characteristics in Lean Accounting		
Traditional cost:	Target cost:		
<ul> <li>it does not take into account the market requirements in the cost planning stage;</li> <li>costs are the starting point in determining the price;</li> <li>the reduction of costs focuses on the corrections of inefficiency and losses;</li> <li>the reduction of costs is not oriented towards the customer;</li> <li>the reduction of costs is managed by the cost controllers;</li> <li>suppliers are invited to participate after starting the production or are not invited at all;</li> </ul>	<ul> <li>the market of the competition guides the cost planning;</li> <li>prices determine the cost;</li> <li>the project underlies the cost reduction, avoiding the inefficiency and losses;</li> <li>the information coming from customers stimulates the cost reduction;</li> <li>costs are managed by interdisciplinary groups;</li> <li>suppliers are invited to the design stage;</li> <li>takes into account the value chain planning and analysis.</li> </ul>		
does not involve the value chain.			

Figure 2. Traditional cost versus target cost

When establishing the target cost, a multidisciplinary team of specialists consisting of design engineers, production engineers, economists, individuals involved in manufacturing, etc., being responsible for achieving the goal. If, after a detailed analysis, this team concludes that the target cost cannot be achieved, the new product is abandoned, avoiding what happens many times with traditional methods when customers do not buy the product at the set price.

The use of the target cost in setting the prices has the main advantage that it focuses on the market and the customer. A product is not manufactured before the organisation is not sure that it shall produce an appropriate profit and customers shall afford to buy it.

The characteristics of the cost calculated in		Cost characteristics in Lean Accounting		
	the standard-cost system			
Sta	ndard cost:	Ta	rget cost:	
$\triangleright$	it focuses on maintaining the level of the	$\triangleright$	it focuses on reducing the cost;	
	cost;	$\triangleright$	it regularly creates new objectives;	
>	it plans the annual standards of costs;	$\triangleright$	it analyses the objectives;	
>	it analyses and designs the standards;	>	it suggests improvements to reach the	
>	it analyses the deviations for identifying		objectives set;	
	the causes;		it analyses the causes when the	
>	it analyses the causes when the standards		objectives are not met.	
	are not met.			

Figure 3. Standard cost versus target cost

The target cost insists on the strategic management of the cost levels, complying with the functionality of the products, which will surely determine the achievement of cheaper products that are attractive for customers. The target cost

creates a continuous pressure to eliminate the unnecessary costs. Unlike the traditional systems, in the case of the target cost, the product's own design results as a consequence of the characteristics of the process that has been selected from all the possible alternatives.

A confusion that can be made at a first glance is that the target cost actually represents a standard cost that should be met. The standard cost is the one which the current expenses are compared to and usually has admissible errors (accepted losses) that should be removed, and the criteria used to determine the standard cost do not take into account the conditions in which the sector can reach, where the organisation operates, the technological, organisational and commercial level required for the organisation to cope with the competition.

Compared to the target cost, the standard cost covers only the manufacturing stage, leaving aside the other previous and posterior stages of manufacturing itself.

The difference between the target cost and the standard cost is similar to the difference between reducing the costs and controlling the costs. Thus, the goal of the processes to reduce the costs consists in a minimisation of the potential cost standards that can be implemented, while the cost control tries to maintain the costs at the level expected for various categories of cost. The essential difference between reducing the costs and controlling the costs is not in the time when it applies, not in the consequences that result from saving the resources, but in the result.

The target cost generates structural improvements, and the standard cost operational improvements. The structural improvement refers to the organisation's capacity to adapt its activities to the changes in the perception of market value. Thus, the structural characteristics of the organisation are those that determine its relative position on the market, depending on the capacity to create value, meaning the economic efficiency of its activity. The difference between the target cost and standard cost at a certain time is a valid indicator of the organisation's improvement potential in relation to the structural issues and is the effectiveness of the organisation's activity.

# 3. THE NEED TO ADAPT THE MANAGERIAL ACCOUNTING TO THE LEAN ACCOUNTING REQUIREMENTS IN ROMANIAN ORGANISATIONS

Regarding the expression of managerial accounting in the form of accounting records, we subscribe to it, due to the functional versatility that allows the transition from thorough analyses to expressive syntheses. Thus, taking into account the principles and instruments of the Lean philosophy, we propose a way to adapt the General Account Plan of Romania, class 9, to the specificity of the Lean Accounting.

The regulation on applying the Accounting Law in Romania specifies that the way of organising the managerial accounting is at the discretion of each organisation, depending on the specificity of the activity and its own needs. The Public Finance Minister's Order no. 1826/2003, in chapter General Provisions on Managerial Accounting, specifies that managerial accounting is organised either using specific accounts, or by developing the accounts in the financial accounting, or by means of own technical and operative records.

Therefore, managerial accounting is mandatory, but it is a management accounting, and its management needs to adapt to the philosophy implemented within each organisation. Within an organisation based on the Lean thinking mode, it is mandatory that all its activities would be based on this thinking mode, including the accounting activity, because all these activities interact and influence each other. Lean Accounting organises the costs in a value stream that includes all that creates value for the customer, regarding a product or a family of products. This approach is simple and easy to understand. The concept of value stream is based on the belief that, in order to obtain the expected financial performance, the activities as a whole should be analysed, from the customer's order to their payment of the product.

Taking into account the specificity of Lean Accounting, a few reviews of the class 9 of the general account plan proposed by the Ministry of Public Finance for the managerial accounting are required.

Table 1. Minimal Structure of Class 9 of the Account Plan in Lean Accounting

Groups of accounts	Synthetic and analytical accounts	Description	
90 "Internal settlements"	901 Internal settlements on expenses	makes the interface between the financial accounting and managerial accounting and is used for the bookkeeping of internal settlements on the expenses of the value stream, on the one hand, and on the other hand, to reflect the actual cost of the production obtained.	
	902 Internal settlements on the production obtained  903 Internal settlements on the price differences	<ul> <li>corresponding accounts: 921, 931.</li> <li>is used for the bookkeeping of the target cost of the production obtained over the month, on the one hand, and on the other hand for the settlement at the end of the month, of the actual cost of the same production obtained.</li> <li>corresponding accounts: 931, 921, 903.</li> <li>in analytics, it develops on value streams.</li> <li>it is used to for the registration at the end of the month, of differences between the target cost and actual cost of the production obtained in the</li> </ul>	
	904 Internal settlements on the turnover	<ul> <li>value stream.</li> <li>corresponding accounts: 902, 931.</li> <li>in analytics, it develops on value streams.</li> <li>is used for the bookkeeping of the forecasted turnover to be achieved in the value stream and the result of the forecasted production at the beginning of the month, on the one hand, and on the other hand for the settlement at the end of the month of the target cost of the same production forecasted.</li> <li>corresponding accounts: 941.</li> <li>in analytics, it develops on value streams.</li> </ul>	

00.00	T		
92 "Accounts	921 Cost of the		is used for the bookkeeping on the expenses
of calculation"	value stream		related to the value stream.
		$\triangleright$	corresponding accounts: 901.
		>	in analytics, it develops on value streams.
	921.1 <i>Cost of</i>	>	keeps the record of the costs with raw matter and
	raw matter and		materials in the value stream.
			materials in the value stream.
	materials		
	921.2 The cost	$\triangleright$	keeps the record of the costs with the salaries in
	with salaries and		the value stream, including the contributions
	contributions		related thereto.
	related thereto		
	921.3 Conversion	$\triangleleft$	keeps the record of all the costs in the value
	cost		stream, less that of the raw matter, materials,
	921.31 The cost		salaries and contributions related thereto.
	with machines and		satures and contributions related thereto.
	work systems		
	921.32 Other		
	/		
	costs of the value		
	stream		
	921.34		
	External costs of		
	the manufacturing		
	process		
93 "Cost of the	931 Cost of the	>	keeps the record of the production obtained in the
production"	production		value stream, being used to translate the target
•	obtained		cost of the production obtained towards its actual
			cost.
		>	corresponding accounts: 902, 901, 903.
		۶	in analytics, it develops on value streams.
94 "Accounts	941 The result of	>	is used for the bookkeeping of the forecasted
	the value		1 0
of result"	1112 / 111112	_	result to be obtained in the value stream.
	stream		corresponding accounts: 904.
			in analytics, it develops on value streams.

Taking into account the minimal structure of class 9 in the account plan suggested in table 1, a possible model for the operation and correspondence of accounts adapted to the specificity of the Lean Accounting is shown in table 2.

Table 2. Comparative situation of the records in the managerial accounting

No.	Operation	Current accounting	Lean Accounting
1.	Recording the forecasted production at the target sale price	-	904 = 941
2.	Recording the target profit margin	-	941 = 904
3.	Collecting the direct expenses: - costs with raw matter and materials; - costs with direct salaries and accessories.	921 = 901	921.1 = 901 921.2 = 901

	·		
	Collecting the indirect production expenses:	923 = 901	
	-costs with indirect salaries and contributions		921.2 = 901
4.	attributable to the value stream;		921.31 = 901
	- the cost with work machines;		921.32 = 901
	- other costs of the value stream.		
	Collecting the general management expenses:	924 = 901	
	<ul> <li>costs with salaries and contributions</li> </ul>		
5.	attributable to the value stream;		921.2 = 901
	- other costs of the value stream.		921.32 = 901
	- costs outside the manufacturing process.		921.33 = 901
	Collecting the marketing expenses:	925 = 901	
	- costs with salaries and contributions		921.2 = 901
6.	attributable to the value stream;		
	- other costs of the value stream;		921.32 = 901
	- costs outside the manufacturing process.		921.33 = 901
7.	Distributing the indirect production expenses	921 = 923	-
8.	Distributing the general management expenses	921 = 924	-
9.	Distributing the marketing expenses	921 = 925	-
4.0	Recording the production obtained at the	931 = 902	
10.	previously calculated cost		_
11.	Recording the target cost of the value stream	-	931 = 902
12.	Settling the actual cost of the production obtained	902 = 921	
12.			-
12	Settling the actual cost of the production obtained	-	
13.	in the value stream		902 = 921
		favourable:	
1.4	Recording the differences between the actual cost	902 = 903	-
14.	and the previously calculated cost	unfavourable:	
	,	903 =902	
		-	favourable:
1.5	Recording the differences between the actual cost		902 = 903
15.	and the target cost of the value stream		unfavourable:
	<i>G</i>		903 =902
		favourable:	-
1.	Closure of the accounts of cost differences	903 = 901	
16.		unfavourable:	
		901 =903	
	Distributing the cost differences on the production	-	favourable:
17	obtained in the value stream		903 = 931
17.			unfavourable:
			931 =903
10	Settling the target cost of the production forecasted		
18.	in the value stream	-	941 = 904
19.	Closure of the expense accounts	901 = 931	901 = 931

## 4. CONCLUSION

As a result of the current technological developments, the methods for calculating and managing the costs should be subject to an adaptive and continuous process, in order to provide relevant, useful and timely information to managers.

In Romania, most of the organisations apply traditional methods for calculating and managing the costs, such as: the global method, method by orders and the method by stages. These methods use various procedures to determine the cost of the products and to provide relevant information to be used in taking the decisions. In terms of direct expenses, there is no doubt regarding their allocation, because they can be attributed according to a mathematically expressible functional relationship. In terms of indirect expenses, no objective explanation or justification can be found to distribute them on each product obtained. From our point of view, the focus of managerial accounting on distributing the indirect expenses is a diversion of its objective, and the focus should be directed on how an advanced activity can be achieved appropriately using the production capacity, meaning what products, in what quantity and when they should be manufactured to achieve a maximum short-term profit, respectively long-term performance and development.

There is a four-staged model to implement the Lean Accounting within an organisation that applies the Lean principles (Maskell, Baggaley & Grasso, 2012). He proposes a number of changes that must be achieved by the accounting system, in order to ensure the success and sustainability of Lean Accounting. Compared to the traditional methods for calculating the costs used by the managerial accounting, Lean Accounting has a different approach and this is exactly why the changes need to be made prudently and carefully, in order to avoid creating chaos in controlling the organisation's decisions. Authors suggest that it is not prudent to abandon the traditional methods for calculating the costs before Lean Accounting is fully implemented and the employees are accustomed to the new philosophy.

Lean Accounting organises the costs in a value stream that includes all that creates value for the customer, regarding a product or a family of products. This approach is simple and easy to understand. The traditional methods for calculating the costs based on the production volume that take into account the allocation of indirect costs and which requires high costs of resources for keeping and implementing them are contrary to Lean thinking. The concept of value stream is based on the belief that, in order to obtain the expected financial performance, the activities as a whole should be analysed, from the customer's order to their payment of the product. Through the value stream, the processes required to deliver the customer's product of a unitary form can be viewed. Not using it would mean that the departments of an organisation could optimise its own activity, without taking into account the impact of the measures taken on the other departments. The cost of the value stream makes no distinction between the direct and indirect expenses, all costs related to the value stream are included into the value stream cost, being considered direct expenses.

All losses in the value stream can be reduced, this being the goal of the *Value Stream Costing* (VSC) analysis and also one of the keys of the Lean philosophy continuous improvement. The traditional methods follow the costs at every stage of

production, generate a lot of unnecessary information and with high costs. Instead, VSC collects the costs along the value stream, all costs inside the value stream being considered direct expenses. Because it underlies making decisions, this tool is all the more efficient as the collection of costs is done over shorter periods of time.

Usually, VSC is calculated weekly and takes into account all the expenses of the value stream, being considered direct expenses, and the expenses outside the value flow are not included. The expenses included into the VSC are varied: expenses with raw matter and materials, labour, and related contributions, with the depreciation of machines, maintenance, production related costs, any other expenses related to the value stream (design, engineering, sales, customer relations, etc.).

The methods for managing the costs should meet customers' requirements as early as the design stage, in terms of the quality and price of products; they should also contribute to reducing the costs of products by continuously removing the losses. For this, Lean Accounting uses the *Target Costing* and *Kaizen Costing* methods. The Kaizen Costing method follows the Target Costing over time. The target cost is applied at the product design and development stage, and Kaizen Costing is used to manage the costs during production.

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