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KAIZEN COSTING AND VALUE ANALYSIS

WHITE PAPER

INDUSTRIAL & FINANCIAL SYSTEMS IFS

KAIZEN COSTING AND VALUE ANALYSIS

This document

This White Paper describes the costing and value analysis aspects of IFS Applications 2001 series.

Cut the price of your components by 5% per year!

The automotive industry is under increasing pressure to cut costs. Faced with ever-growing competition, the industry is beginning to open up its supply chain to take further steps to meet market demands for lower prices. Now, automotive producers consider that it's about time suppliers began to pull their weight. An increasingly well-developed outsourcing strategy means that suppliers achieve greater added value while automotive makers, with declining added value, become extremely sensitive to price changes.

Therefore, the question is what suppliers can do to continuously lower prices by 5% per annum. They can, of course, cut prices by cutting profit margins or by lowering costs. Stockholders, however, are unlikely to want to cut profit margins. Instead they want higher profits, higher dividends and a more attractive stock. So in addition to demands for a 5% decrease in costs, suppliers are also confronted with stockholders' demands for greater profit.

The picture begins to crystallize. The challenge facing suppliers is to get better results at lower costs to enable price cuts and higher profit. There are numerous possibilities here for meeting these challenges. These include the introduction of new technology, organizational changes, competence development, marketing measures, product development, logistics, costs, etc. Realizing all these possibilities requires sound methodology and knowledge of how to implement them because changes don't always produce the results that were envisioned.

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In concrete terms, there is already a product, a customer, an agreement, and an infrastructure related to the component that the supplier makes its living from. How then is the supplier to realize the required cost trend without changing anything? It's not certain that the detailed specification that forms the basis for the supplier's component cannot be altered despite the demand for price cuts. A major complication arises; the supplier should lower costs without changing the conditions.

A closer look at the complication

Some questions need to be asked to better understand this complicated situation:

- Two parties agree over a deal. How can one party agree to terms whereby an annex stipulating annual price cuts is added to the contract?
- If the terms are accepted, how can the target be reached?
- What will this mean in the short term and in the long term?

The automotive industry and its suppliers are living in an increasingly tougher competitive climate where there's no room for inefficiency. Those who want to compete do so on the terms dictated by the industry, unless they happen to be major players with a strong position at the negotiation table. The rules of the game change continuously in a mature industry. Thus, in the automotive industry, new ways of streamlining the supply chain are always being sought. One way of being part of the industry is to play the game according to the rules.

To realize this end, a more mature cost behavior should be developed, and a cost-conscious culture should be established. This is easier said than done. For example, will budget policies enable cost consciousness, i.e. annual budget targets are achieved, but not product cost targets? What technical aids are available and what models are required to establish cost consciousness?

In the short term, cost targets can be achieved via existing knowledge about cost improvements. However, to achieve long-term effects, a more repetitive procedure must be developed to ensure the viability of cost rationalization.

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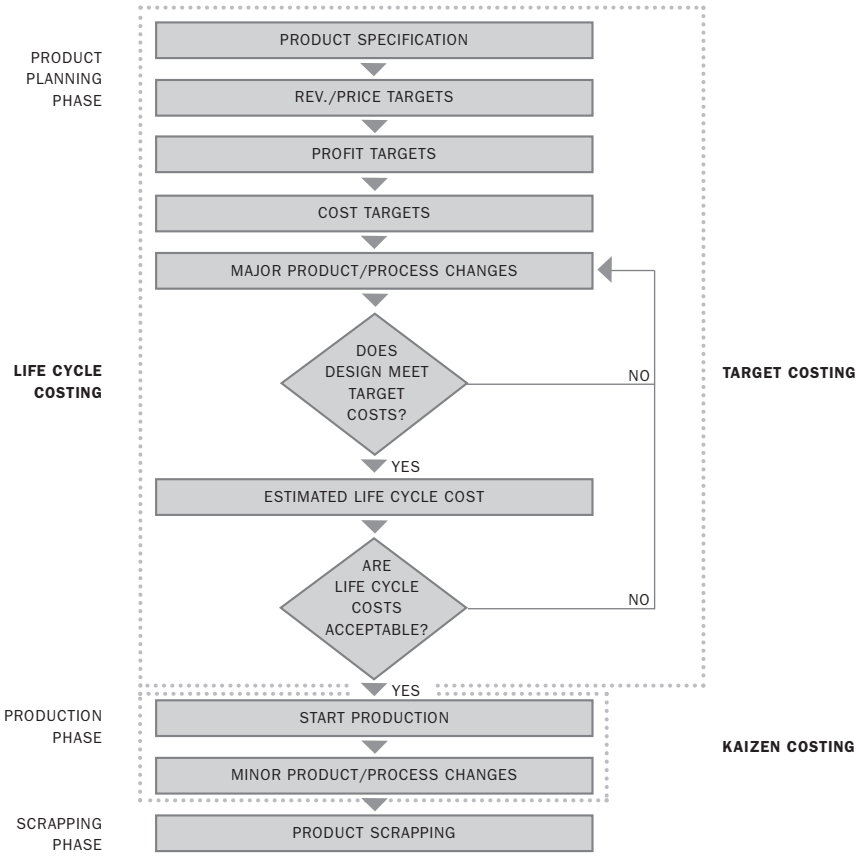
In the footsteps of quality assurance technology

Let us examine the situation to which this complication gives rise. The cost is set and the component produced at an already strained profit margin. What can be done?

The concept of Kaizen, meaning "improvements in small steps", was developed within quality assurance technology. Based on this concept, Yashuhiro Monden, from Japan, developed Kaizen Costing, which can be translated as "enhancement estimation". Kaizen Costing is applied to a product that is already under production. The time prior to Kaizen Costing is called Target Costing, which involves searching for a target cost for a product before it reaches the market. Together, these two concepts make up Life Cycle Costing.



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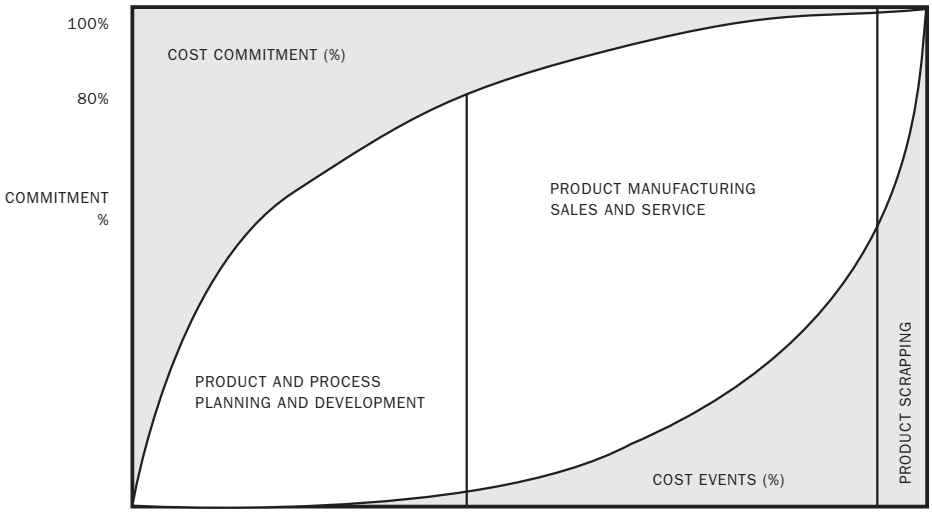
Let us look at how product costs build up throughout the life cycle. According to Kaplan Atkinson, as much as 80% of life cycle costs determined when production begins. Therefore, Kaizen Costing can be a suitable method for achieving cost reductions of 5%.



Kaizen Costing: a definition

Cost reduction systems, by Yashihuro Monden, defines Kaizen Costing as the maintenance of present cost levels for products currently being manufactured via systematic efforts to achieve the desired cost level. Monden describes two types of Kaizen Costing:

- Asset and organization-specific Kaizen Costing activities planned according to the exigencies of each deal
- Product-model-specific costing activities carried out in special projects with added emphasis on value analysis (Monden has the automotive industry in mind)

Further, Monden describes the major differences between a standard calculation system and Kaizen estimation.

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A standard system:

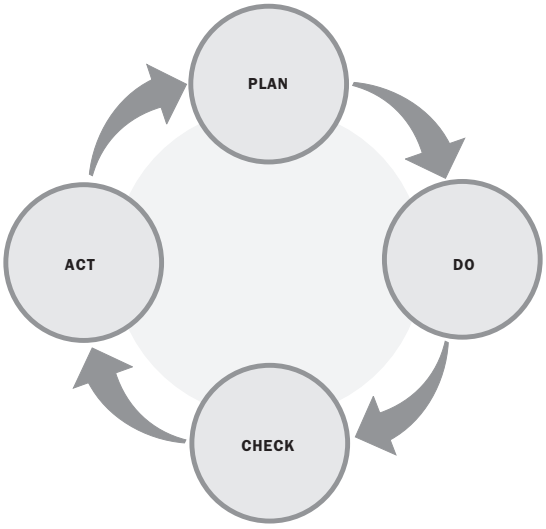
- Checks that final estimations agree with forecasts, i.e. a cost deviation focus
- Assumes that existing production conditions will only be maintained, not change

A Kaizen system:

- Is a cost reduction system whose goal is to reduce final estimations to a level that is lower than standard costs
- Checks that costing targets have been reached
- Continuously reviews existing production conditions in order to reduce costs

Procedures in standard systems apply standard costs one or two times per year, carry out deviation analysis between forecast and final estimation, and make investigations as well as corrections when standard costs have not been achieved. In the Kaizen system, on the other hand, the procedure sets new cost reduction targets each month by which the existing gap between the target and current costs is to be closed; carries out Kaizen activities during the entire operational year in order to achieve cost targets; analyzes deviations between targets and current costs; and makes investigations and corrections when cost reduction targets have not been reached.

Kaizen estimates in practice



Within quality control we can get inspiration from the PDCA circle (Plan, Do, Check Act)

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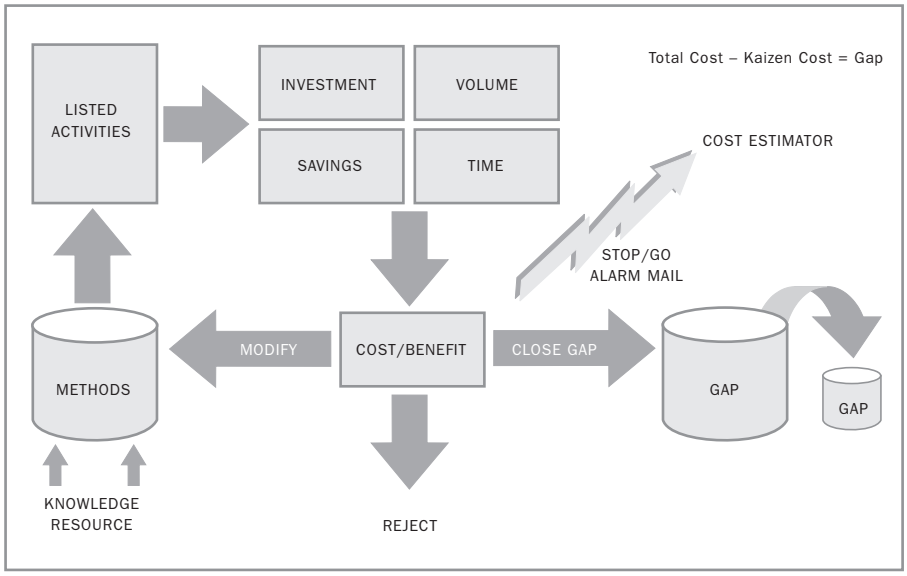
When planning, a cost target is set and a gap occurs. Then it's a matter of trying to establish why the goal was set and what the possibilities are of reaching the target. Major cost reductions can be broken down into smaller reductions and form their own activities where they are easier to handle. The activity is planned for a particular day when the change should be made and the new cost applies. Individual activities have a status in that the activity is either initiated, preliminary, final, verified, or rejected. Each activity bears its own investment and contribution according to an investment estimate. The activity does not commence until the investment estimate has been approved and resources with the appropriate competence have been allocated and planned.



Kaizen Costing

Naturally, work has to be done to produce suitable activities.

When the activity is identified and approved, and the work team has been selected, the work can begin. The results of the work team are followed up, and a dialog about deviation from target and correction of tasks helps support the work.

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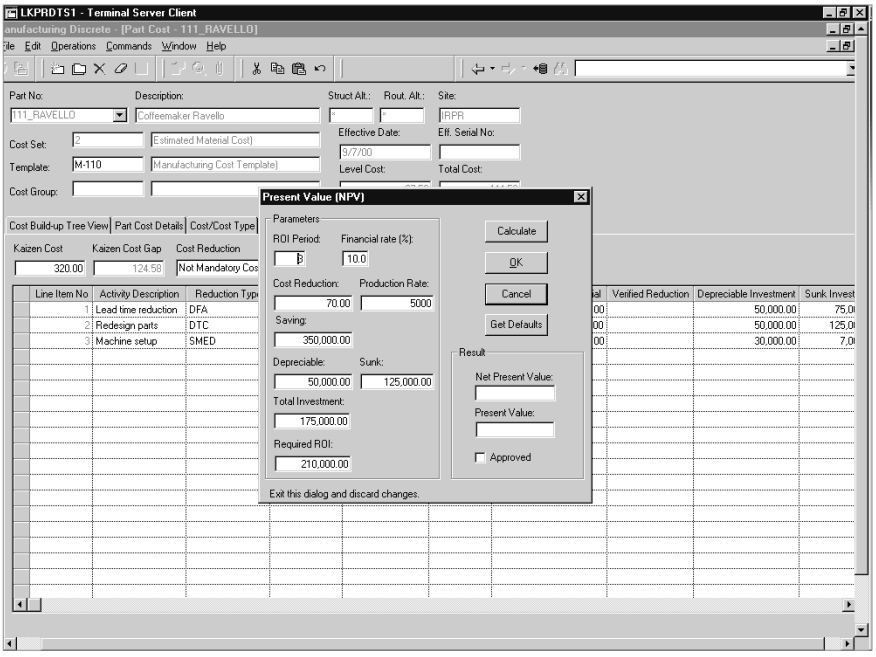
Kaizen Costing in business applications can have the following appearance: Via a dialog box, the investment estimate can be entered until the parameters included provide an approval.

When a number of activities have been registered, it might be of interest to review and focus on activities that contribute to the optimal investment. The following diagram illustrates priorities in a case where resources are to be re-allocated.



Choice of perspective

Once the model for Kaizen estimation has been determined, the next step is to choose perspective.

Several models are available to set us on the path to reduced costs. It's important to view the component in question rationally. A cross-functional group can provide several suggestions, but it's important to start off with various basic questions.

- Commonality can be one option. If there is an established platform with modular details, the underlying concept is economies of scale. Can the same item be used in several places? If so, what benefits can this produce related to purchasing, manufacturing, planning, and service functions, etc. A commonality analysis is made by measuring purchase and production values against unique and common material plus the number of unique and common items in order to arrive at where in the process you are and what you are doing.

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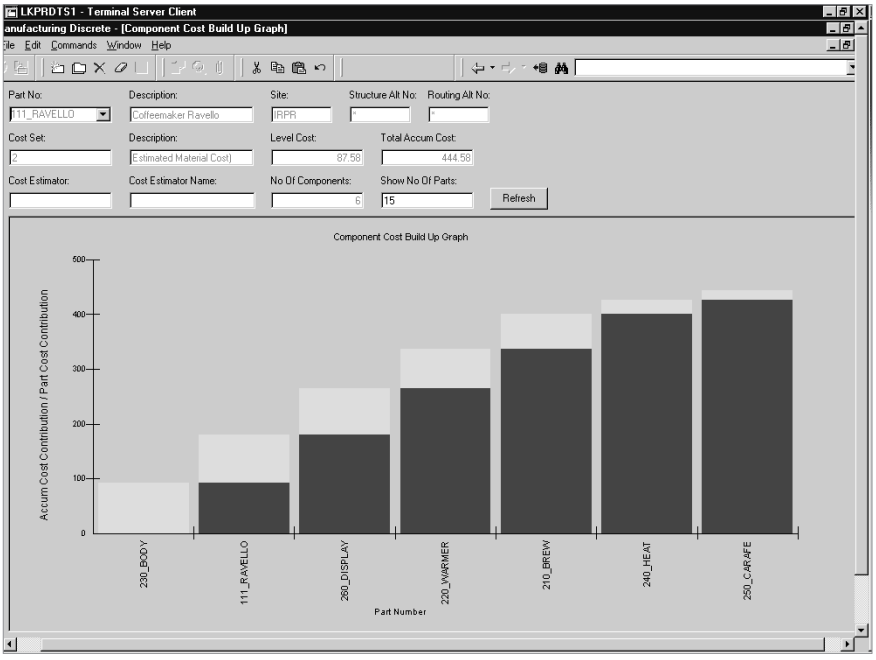
- Who are the suppliers for the component in question and how great is their added value? If a few of the suppliers own a large amount of the purchase value, it might be wise to test their willingness to work on costs.
- Are there blank spaces in the specification where there is a lack of experience and the final product specification consisted of an ad hoc technical solution?
- What can be done concerning logistics, packaging, investment, etc.?
- Can improvements be made in the purchasing function?
- What about production, maintenance, planning, etc.?
- Can the work be organized differently?
- Do we have the right customers?

The ability to report the amount of product value that is shared with other product families with respect to production items and purchased items provides useful information about the amount of a product's items that can be recycled. Recycling levels of items explain how modularization has been implemented or whether there is a platform concept for the product. This is a way to develop higher volumes of the items that are used by the company.



It is essential to understand the cost architecture of the product to focus correctly on cost-cutting efforts. A Pareto diagram of a product provides a good understanding of what it is that locks product costs. From this perspective, it is easy to detect which components and their production cost or purchase price tie the cost to the product.

Value analysis is necessary

Value analysis is not new, being introduced during the 1950s at General Electric by L.D. Miles. Value analysis studies the functions of the products and its parts. When the function-cost relation is established, it is easier to show whereabouts in the product the unnecessary costs are and how great they are.

One common trap is to carry out a Kaizen estimate without calculating the effects on customer value. This can be disastrous. The profits made may turn out to be a burden on the brand, marketshare may be lost, and customer complaints may increase.

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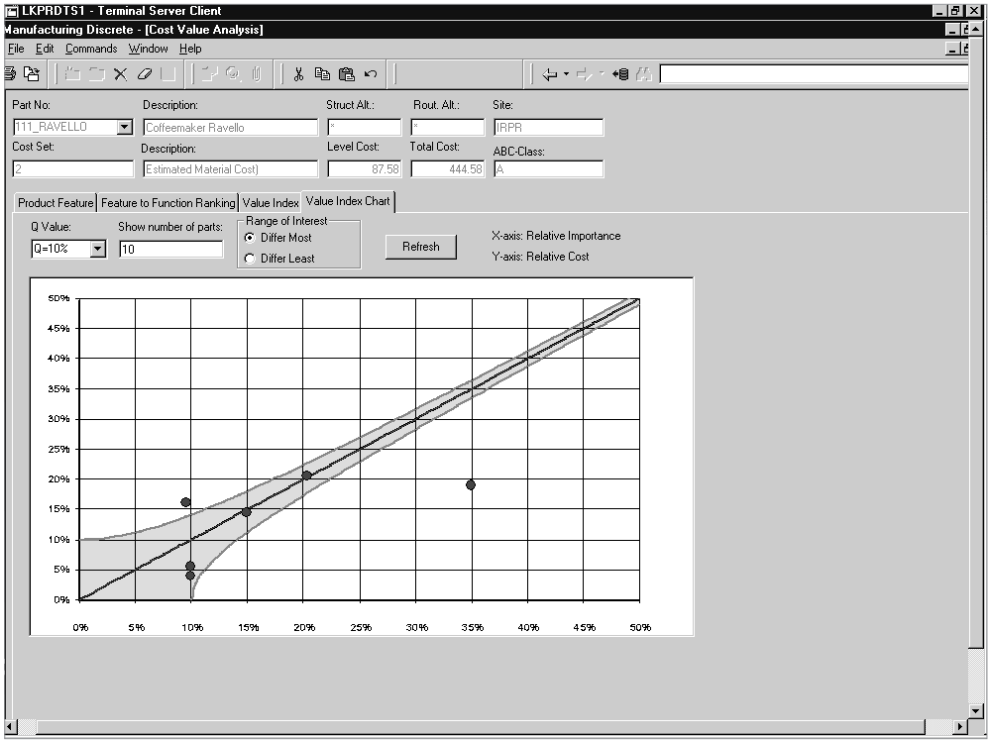

Developing methods for cost rationalization

By establishing ideas and developing them into a method, and then testing the method, knowledge is developed about how different approaches can be applied in order to cut costs. The competence that is developed will have significance for the entire supply chain in which the actor operates. The methods that are generated can be categorized and linked to the activities, which then clearly indicate what direction should be taken. This facilitates communication and training. Different schools will eventually develop concerning how this is best done and be handed down throughout your operations.

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What are the benefits of Kaizen Costing?

Kaizen Costing creates a dialog and respect for those whose task it is to cut costs, which can often be viewed as reactionary and not value adding. The investment estimate is now available since the basis for making the estimate is determined in advance. Therefore it's simply a matter of entering the relevant values, which can be done by the implementing group. Competence development is long-term and is directed toward events that occur earlier in the process. The result generates the ability to survive in the short term.

Within a given framework, the investment estimate is distributed to those who are working with the issues so that they can focus at an earlier stage on the challenges that bear financial fruit. This also provides a solution to the problem of rewarding the group working with cost rationalization. Normally, the question is who contributed to what? The operator develops the idea, the designer implements the changes, and the buyers negotiate the new purchase price. Who has contributed to what? Who should get a bonus? With Kaizen Costing, every activity will be supported by a work team that shares the result.

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About IFS and IFS Applications

IFS develops and supplies component-based business applications for medium and large enterprises. IFS Applications, which is based on web and portal technology, offers 60+ enterprise application components used in manufacturing, supply chain management, customer relationship management, financials, engineering, maintenance and human resource administration. IFS provides customers step-by-step evolution to the extended enterprise with e-business solutions that offer partner, customer, and supplier collaboration.

A top five global business applications supplier, IFS has 3 500 employees, with sales in 43 countries. The company is listed on the Stockholm Stock Exchange (XSSE:IFS).

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