

TARGET COSTING WITH INGENICS FOR INCREASED COMPETITIVENESS

# The key question is: “What should a product be allowed to cost?”

How much should a product or component be allowed to cost – while still remaining competitive and providing an essential profit margin? That’s the central question in establishing a new product’s projected production cost, or target costing, which is a management method designed to support such strategic decisions. This management tool is particularly useful for tier-1 suppliers in the aerospace industry, as well as for subcontracting and small series production operations. Here, whoever wants to control costs, needs to be familiar with target costing either consciously or unconsciously. Ingenics can help, by offering you effective cost management methods and controls.



In the automotive industry which emphasizes large production volumes, the use of target costing methods is commonplace. Here, low or even negative contribution margins for a product following its development phase have resulted in a re-examination of product margin and cost structures. The aerospace industry also uses this approach. Usually, product prices or the prices of work packages are calculated simply – by adding production costs and the profit margin together. However, this approach is not possible when new products, without clear cost-benchmarks, are being developed which can threaten a manufacturer with serious financial losses.

As a leading worldwide supplier for aircraft manufacturers, Diehl Aircabin together with Ingenics recognized early that corrective action would be needed to achieve an acceptable profit margin. Therefore, the traditional question used in cost calculations was asked slightly differently: Rather than asking “What does a product cost?” – the new question becomes “What should a product be allowed to cost?” This approach thereby turns the tables of cost calculation around, by using retroactive cost calculations. Here the final price is based on the allowable production costs for a specific product. And at Diehl Aircabin that is a somewhat complex process.

Diehl Aircabin produces the interior furnishings for aircraft manufacturers such as Airbus, which consist of roughly 100,000 different components. For the total interior package, Diehl established a fixed price with the customer – which is typical in aircraft manufacturing – well in advance of the actual interior’s production. “The reasoning behind this approach was the difference between technical and financial estimates at the time of the original contract bidding, as well as the actual problem solving and production methods used for newly developed components as related to their associated costs. Here, costs are calculated retroactively – after production – rather than in advance,” explains Alexandre Zisa, Director of Ingenics France.

### Serial production costs must remain stable

“By cooperating closely with specialized experts from Diehl, we developed a comprehensive overview of the estimated itemized costs based on the company’s actual production volumes.” Here the recurring costs (RC) after the 100th aircraft in serial production, known as RCt100, play the most important role. These RCt100 costs must remain stable, because they also serve as a decisive control factor to strengthen and increase the company’s margin as well as the efficiency of the entire working organization. Ingenics Expert, Alexandre Zisa adds: “We also needed to create a t100, or serial product definition and evaluation. This was done using a cost-related parts list, which included all modifications and planned product improvements, as well as purchasing prices, with production and assembly costs for primary components throughout the serial production based on lot sizes.” Every week, this parts listing was then examined to determine cost variations. Using this approach, the serial production costs were then regularly recalculated to effectively control the actual and estimated target costs.

“Compared to conventional cost calculations, this approach is entirely different,” says Alexandre Zisa. This becomes especially important when completely new, innovative products are developed, which do not have known costs or



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a recognized competitive market price. If fixed costs were used here – which are only available following the start of construction, engineering and production – the variations in actual product costs would be recognized far too late. Given the fact that significant changes to potential products often occur during the early development and ramping-up phases, serious discrepancies between the actual costs and budgeted costs would occur, which could have disastrous effects once the serial production is begun. To avoid this unnecessary situation, cost estimates that serve a control function, i. e. target costs, are needed in the early development phase. Using Ingenics methods, these estimated target costs are updated on a weekly basis and then synchronized with the actual status of the product development process. Naturally, the monitoring of these estimated target costs throughout the development phase is an essential function. In this way, the RCt100 prognosis can be regularly revalidated to reflect the actual time and effort spent in new product development, rather than accumulating estimated cost overruns with little chance of final reimbursement.

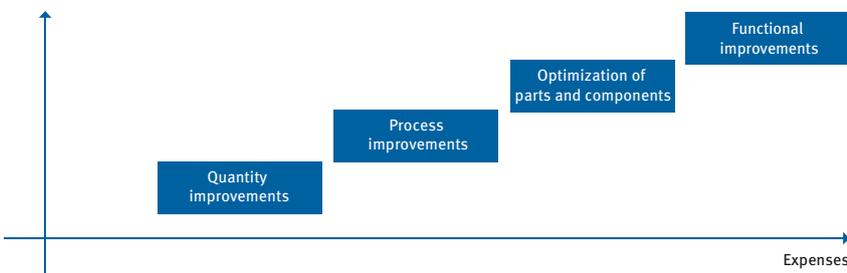
### Summary

When used systematically, target costing can improve competitiveness through cost control monitoring. Target costs then serve an orientation function for the entire product development and manufacturing process: Here working methods, tools and solutions are specifically tailored to individual business goals. With target costing, product margins are no longer a passive result of existing construction and production procedures – on the contrary, product margins and target costs determine the construction and production methods.

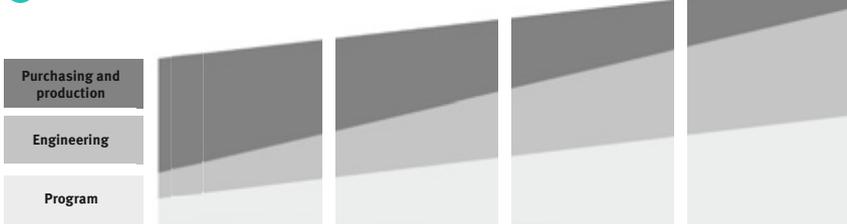
## Controls and expenses for respective target stages

### 1 Controls

Estimated target costs



### 2 Expenses for target stages



### 3 Examples of target stages

<b>Purchasing and production</b>	<ul style="list-style-type: none"> <li>› Scaled prices</li> <li>› Fair Price</li> <li>› Automation</li> <li>› Planning</li> </ul>	<ul style="list-style-type: none"> <li>› Resource management</li> <li>› Make or buy</li> <li>› Process improvement</li> </ul>	<ul style="list-style-type: none"> <li>› Workshop</li> <li>› Action plan follow-up</li> </ul>	<ul style="list-style-type: none"> <li>› New technology inputs</li> </ul>
<b>Engineering</b>	<ul style="list-style-type: none"> <li>› Standardization</li> <li>› Modification risk</li> </ul>	<ul style="list-style-type: none"> <li>› DFM &amp; DFA</li> </ul>	<ul style="list-style-type: none"> <li>› Costs as a design parameter</li> </ul>	<ul style="list-style-type: none"> <li>› Cooperation with customers</li> </ul>
<b>Program</b>	<ul style="list-style-type: none"> <li>› Forecast</li> </ul>	<ul style="list-style-type: none"> <li>› Derived from industrial strategy</li> </ul>	<ul style="list-style-type: none"> <li>› Specification of modifications</li> </ul>	<ul style="list-style-type: none"> <li>› Integration with customer demands</li> <li>› Negotiations</li> </ul>

## In many companies, target costing still faces challenges

- › There is sometimes a tendency to do without any cost information, rather than using inaccurate cost data. Naturally, financial “blindness” is then the unfortunate result.
- › Business margins are poorly discussed and financial data is manipulated by operating departments before it is given to top managers. As a result, target cost estimates are inaccurately calculated. Everything that affects costs, needs to be transparent and routinely updated. Only then is a reliable serial production cost estimate, or RCT100, even possible. ■

## About Diehl

Diehl Aerosystems is one of five subsidiaries within the Diehl Group, which is a German family-owned company having over 13,000 employees, worldwide. Diehl Aerosystems is responsible for all of the group’s aerospace activities and consists of five operating units: Diehl Aerospace, Diehl Aircabin, Diehl Comfort Modules, Diehl Service Modules and AOA Apparatebau Gauting. Diehl Aerosystems offers manufacturers a broad network of aviation experts and has annual revenues of 1 billion euros. As a 1-tier supplier for aircraft avionics and cabin interiors, Diehl Aerosystems is a well-known partner of the international aviation industry with customers that include: Airbus, Boeing, Eurocopter, Bombardier and Embraer.