

# CALCULATING PRODUCT COSTS PROFESSIONALLY: POLARIXCOSTING TOOL.

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With the prevalence of outsourcing and the increasing trend towards concentrating on core business activities, in recent decades many companies have lost their in-detail knowledge of product costing; and while controlling and finance auditing departments themselves were kept active, they became in many cases little more than “number managers”.

The large automotive OEMs, however, have long been aware that the popular doctrine by which supply and demand alone set prices and ensuring sufficient competition is enough to obtain optimum savings is not the whole story. Outside of the automotive sector, too, the realisation that value-for-money products can only be developed when there is detailed knowledge about their costs is encouraging more and more companies to try and reacquire this in-depth understanding of their components. Classical mechanical engineering; aerospace; medical technology – there are many sectors in which costs are once again being analysed, simulated, and optimized in detail. These costs are then compared to benchmarks set by competitors’ products or they are part of an open-book product philosophy.

This is an area in which many of the consultants at POLARIXPARTNER have more than 10 years experience, with a list of world-renowned, globally-active clients whom they have supported in setting up costs management. As well as structures, training and coaching are important elements for implementing successful costs management, as is choosing the right costing tool. At POLARIPARTNER, we have developed a software tool which analyses costs rapidly, efficiently, and – if required – to a high degree of detail. Our tool is used in both large and medium-sized companies who are aiming to understand their costs and gain transparency about them.

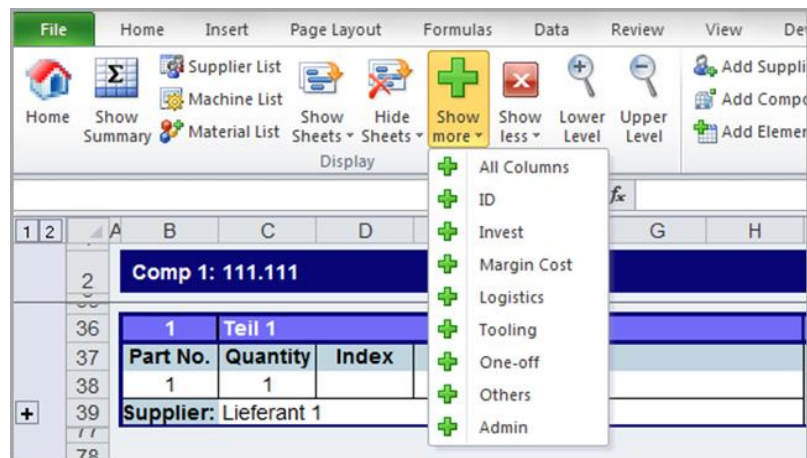
The POLARIXCOSTING (PXC) software was designed to make costs clear in detail, and is based on the standard Microsoft Office package, using a COM add-in to make all of its calculation functions available in Excel; the data sets needed to produce a bottom-up calculation are taken from an easy-to-use database. This means that PXC is a simple, clear solution, but able to offer a high degree of costing transparency. Since Excel is familiar to most people, operating the tool is easy to learn and popular amongst those who use it.

## THE POLARIXCOSTING TOOL (PXC)

Costs analysis, bottom-up costing, pricing... There is no shortage of words to describe the common goal of making costs transparent and showing them in detail. POLARIPARTNER is pleased to offer its POLARIXCOSTING (PXC) software to help analyse product costs.

### | > BOTTOM-UP COSTING

In top-down costing processes, target costs and prices are set for each item down to the bottom level of component detail. This method is at its most useful in preliminary planning, when it can generate a target price for single modules. As soon as it is a matter of listing and analysing detailed costs, however, the bottom-up method is the one to use. Bottom-up costing does not require that the product being costed actually exist or



that all of the product and process details be already known: if necessary, the bottom-up method can use estimated prices for individual components, which can then be detailed at a later date based on process costs or raw materials prices as these become known.

When products are in development, this is certainly a challenging task which needs an experienced costs analyst; but there is no better phase of a project during which to make real savings as, at this stage, the design can be costs-optimised to the point where it can easily stand up to competition benchmarks. In this kind of design-to-cost processes, POLARIXPARTNER comes into its own with its range of pre-calculated costs templates and stable of highly experienced consultants which can be applied to the whole technology spectrum.

## | &gt; BASE DATA




Every calculation is only as good as the data on which it is based. The best way for costs analysts to work is for data to be automatically provided by the system so that they can concentrate entirely on producing a complete picture of the processes and choosing the right materials and weight. With PXC, country-data such as wage costs, interest rates, rents, exchange rates, and utilities costs are drawn from a database which can be updated once a year; PXC also provides machine and materials data which can be added to and extended at will.

## | &gt; CO2-ANALYSIS

The high degree of detail which can be reached using bottom-up costing does not only produce full costs transparency, but also allows analysts to calculate CO2 emissions produced during manufacturing processes. When combined with a CO2 analysis of the logistics chain, this offers companies the opportunity to compile holistic carbon footprints for their products.

## | &gt; SIMULATION

PXC can also simulate a range of production locations using a fully extendable supplier base



Name	Production location	Reference location	Overhead Reference	Logistics Reference
Supplier 1	Finland-Helsinki	Finland-Helsinki	Overhead Set 01	Logistic Set 01
Supplier 2	Japan-Tokyo	Japan-Tokyo	Overhead Set 02	Logistic Set 02
Supplier 3	Slovakia-Bratislava	Slovakia-Bratislava	Overhead Set 03	Logistic Set 03

combined with a dynamic machine costs per-hour calculation, which the program produces without reference to pre-defined machine costs data; instead, it uses per-hour rates generated

live during the calculation itself based on the suppliers and shift-structure chosen. These rates use some fixed parameters such as space requirements for machines and country-specific values such as rental costs per m<sup>2</sup> to produce data automatically. During the first step, the calculations are based on given or planned supply chains, meaning that the price produced is a reflection of the current situation; in the next step, optimisation potential is shown by simulating alternative supply chain structures, with the option to select other suppliers for individual deliverables or to completely replace suppliers. The software can even simulate the effects of outsourcing the production site of an existing supplier across the globe at the click of a mouse.

## | > DATA EXPORT

Costing calculations compiled using PXC can be converted into a standard Excel file or, if the customer's system does not have Excel, into a PDF. When exporting data, there are several degrees of detail which can be selected, from a simple summary through to a full-detail costing which can even include links and formula for further adjustment.

Customers can also request import functionality or specialised export functions; we work with the client to define the interfaces required and integrate a tailor-made function to provide them.

## | > TRAINING & COACHING

During a two-day training module, POLARIXPARTNER coaches offer a thorough introduction to

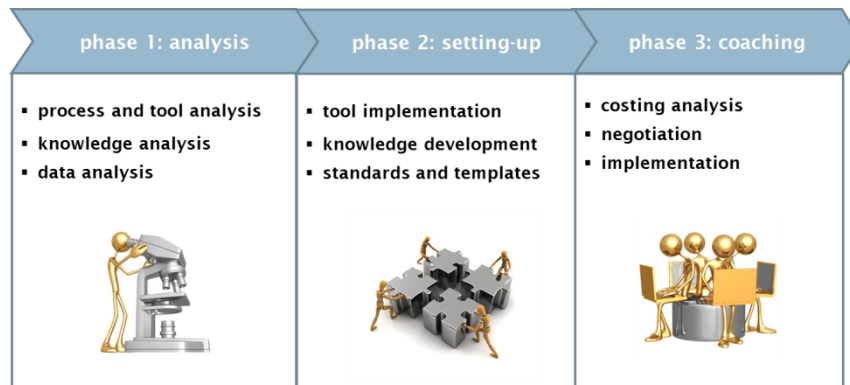
1	Unit materials costs
2	Material overhead costs
3	Materials (1+2)
4	Unit Process costs
5	Process overhead costs
6	Process costs (4+5)
7	Prime costs (3+6)
8	Administration, sales, R&D (Basis 7)
9	Profit (Basis 7)
10	Total overheads (8+9)
	Sales price (7+10)

the PXC system, and after a short prelude about general costs analysis, the participants (max. 10 to 12) are trained to use the program with a range of hands-on examples. Each example is preceded by a theory lesson before the participants themselves practice using it. Ideally, the participants take part in a one-day

refresher course 6-8 weeks later in which the program functionality can be explained in more detail and any questions which may have arisen can be answered.

Regardless of the calculation system used, POLARIXPARTNER also offers negotiation training focussed on transferring a basic understanding of costs structures and various factors which influence product costs; the seminars then show how this understanding can best be deployed during negotiations.

As well as the training topics themselves, the team-coaching approach is the most effective way to establish a new costs management team within a company structure. The POLARIXPARTNER



experts are available to the customers over a given period of time to develop costing calculations – either on their own or, ideally, working together with the new costs management team - which

produce results for use in design-to-cost or negotiation workshops. This way of working does not only support work with the PXC costing tool itself, but also implements the whole costs management process with all of its interfaces and activities across the complete company environment.

## | > PROSPECTS OF SUCCESS

In In the vast majority of projects in which POLARIXPARTNER supported the implementation of the PXC with its coaching programme, the outlay for both the tool and the consultancy services was recouped in savings achieved within the year, sometimes before the project itself was over.

THE GUIDING STAR FOR THE  
MANUFACTURING INDUSTRY



## YOUR EXPERIENCED CONTACT AT POLARIXPARTNER.



### Jürgen Baumann – Partner

- Several years' experience in software and hardware development for microprocessor devices and electronic components manufacture
- More than 10 years' experience as a consultant to the manufacturing industry, mainly in automotive, medicine, and telecoms
- Managing and implementing cost-reduction and efficiency initiatives at a range of international OEMs and first-tier suppliers
- Building up and coaching customer teams to establish design-to-cost processes

### JÜRGEN BAUMANN

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## ABOUT POLARIXPARTNER.

**MANAGEMENT. CONSULTANCY. IMPLEMENTATION.** POLARIXPARTNER is the management consultancy for the manufacturing industry. As industry insiders with many years of experience, we guide you on your way to success, just as the North Star, Polaris, has offered generations of seafarers orientation. Our approach is holistic, our philosophy focussed on implementation: we analyse and strategically evaluate your core processes while remaining active on your shop floor to make sure that optimal improvements are implemented up and down your value creation chain. **THINKING AHEAD. OPTIMISING. IMPLEMENTING.**