P^3 Profitable Product Performance

Target Costing inside

In depth one day Target Costing training

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Agenda

- **Objective and structure of the training**
- General Target Costing overview
- The Target Costing toolset
  - Window of Opportunity and Enthusiasm Model
  - Reverse Calculation
  - Product Target Splitting
  - Alternatives Generation
  - Alternatives Evaluation
  - Target Controlling
- Integration of Target Costing toolset into the MD process landscape
- Open questions and discussion
- Conclusion

Objectives of the training

The objective of the training is to understand the Target Costing methodology and use the standard templates in the day to day work

Target group	▪ MD departments that are involved in the product definition and development. ▪ MD departments that are actively supporting the product definition and development
Target benefit	▪ All participants of the training should: • Understand how the structured Target Costing approach supports MD's PLM processes • Understand the Target Costing methodology at MD • Be able to apply Target Costing in their daily work. • Understand and interpret all Target Costing tools' results • Understand the integration of Target Costing in the MD process landscape
Training concept	▪ The Training covers all Target Costing tools ▪ The Training focuses on the key Target Costing templates. ▪ Where possible, the Interpretation of key templates will be conducted in group sessions.

Principal structure of detailed Target Costing training

Morning		Afternoon	
	60 min		
Welcome & Target Costing Overview	45 min	**Alternatives Generation** Key message explained by the use of a case study	75 min
Window of Opportunity and Enthusiasm Model Key message explained by the use of a case study	75 min	**Alternatives Evaluation** Key message explained by the use of a case study	75 min
Break	30 min	**Break**	30 min
Reverse Calculation Key message explained by the use of a case study	75 min	**Target Controlling** Key message explained by the use of a case study	75 min
Product Target Splitting Key message explained by the use of a case study	75 min	**Open questions**	30 min
		Conclusion Target Costing	30 min

Lunch

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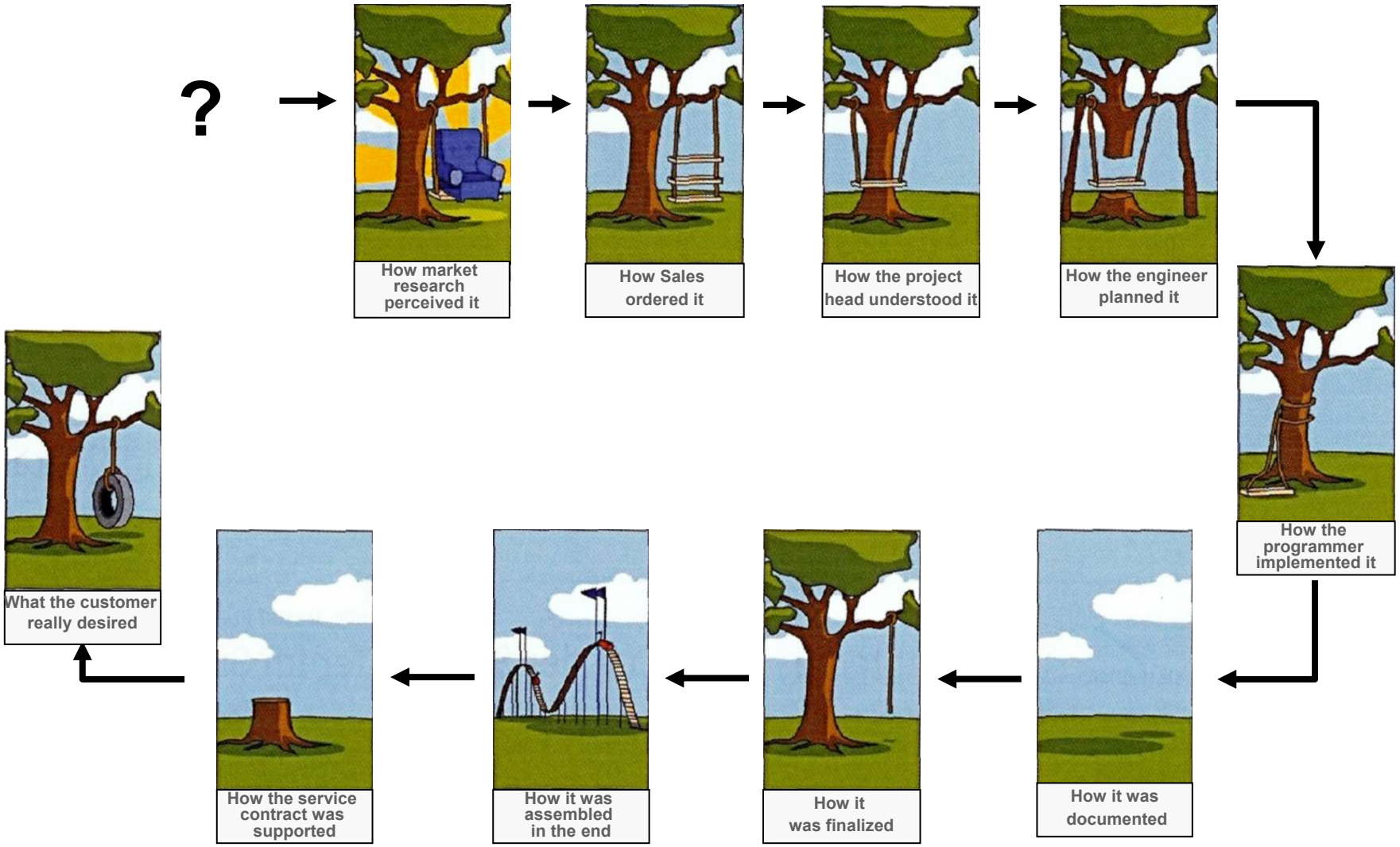
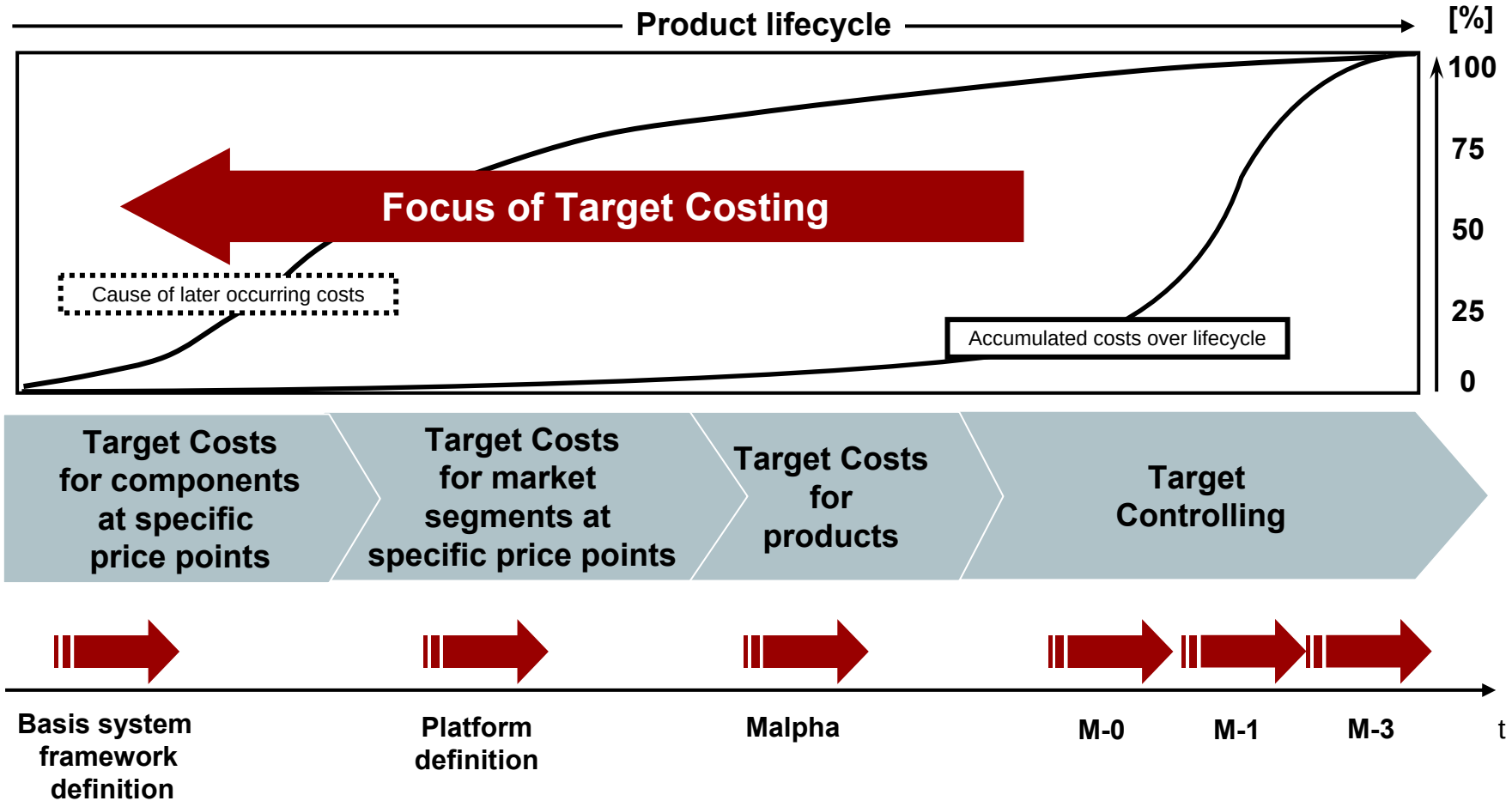
Typical misunderstandings in the product development process

Why a common understanding is so important



Target Costing in relation to costs

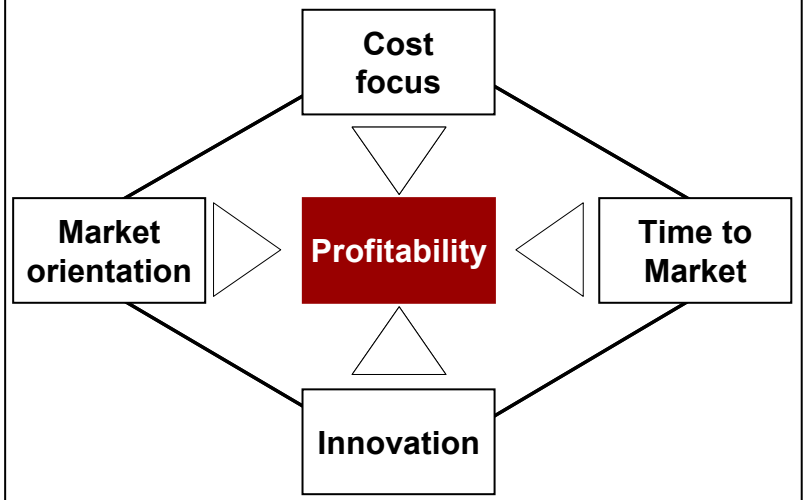
A high cost impact can only be achieved if the Target Costing starts right at the beginning of the product definition process



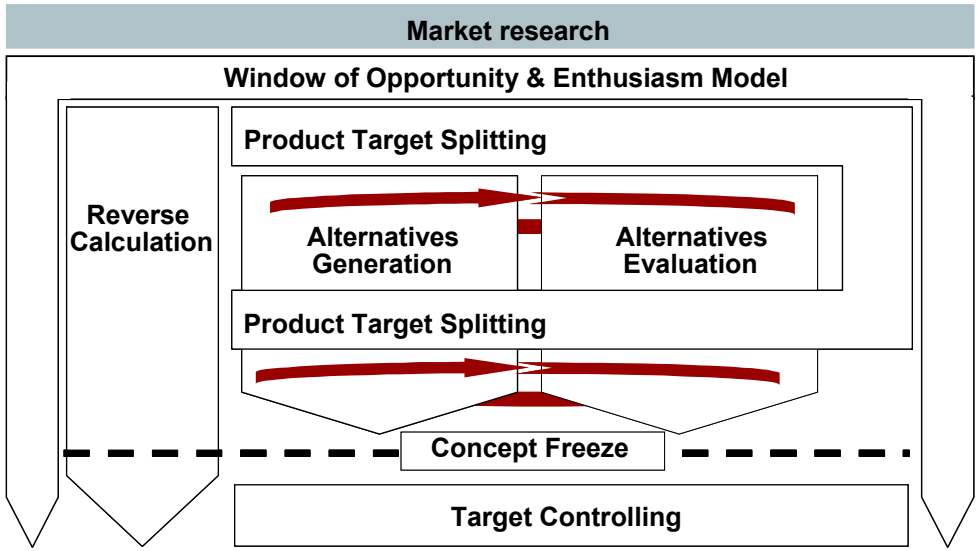
The objectives and benefits of Target Costing

MD aims at increasing its profitability by means of Target Costing – a methodology to define market oriented and cost conscious products

Main objective of Target Costing @ MD



Target Costing toolset



- **The ultimate goal of the Target Costing methodology is to strengthen profitability by:**
  - **Consequently enhancing the market focus of MD's product definition process**
  - **Deriving Target Costs for all products directly from the market**
  - **Constantly securing the targeted time to market of the product**
  - **Pushing intelligent innovation at all times**

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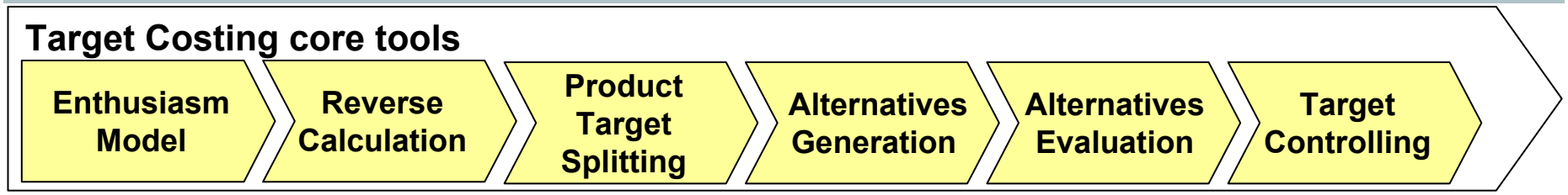
Impact of the application of Target Costing core tools

The application of the Target Costing core tools leads to market oriented and cost conscious products and thus to higher profitability

Target Costing core tools



Market orientation

- Clear definition and focus on customer/ end user demands
- Market oriented product concepts
- High degree of innovation
- Systematic idea generation, evaluation and selection
- Systematic product concept deduction
- Intelligent linkage of market and technology orientation
- Permanent supervision of Target Achievement

Time to market management

- Early identification of innovation potentials and time blockers
- Stable definition of products in early stages
- Strict change request process
- Permanent supervision of target achievement

Product innovation

Profitability

Cost consciousness

- Profit targets as a “holy cow”
- Setting of clear cost targets
- Implementation of tools for cost analysis and cost management
- Permanent supervision of Target Achievement
- Secure process efficiency
- Exploitation of technology synergies
- Efficient usage of resources
- Permanent supervision of Target Achievement

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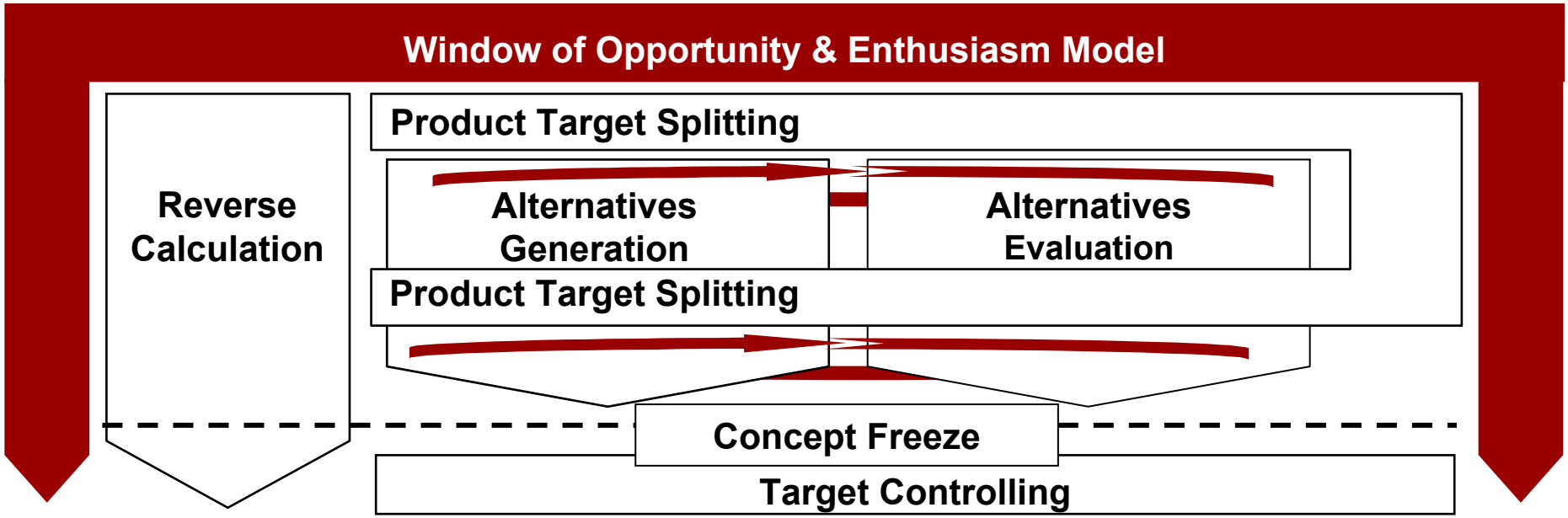
The Target Costing concept

The Enthusiasm Model translates market knowledge into clear objectives for product development and guides the subsequent Target Costing steps

Market Research



The Window of Opportunity:

- provides the framework for a consistent product definition, for a certain point of time.
- defines the proposition of the product, the target market, the target positioning in the portfolio and a first product idea.

The Enthusiasm Model:

- triggers a **sharp product positioning** for a well defined "**Window of Opportunity"**
- **enhances the MD's market focus**.

Visualization of the Enthusiasm Model

To secure market orientation in product development the Enthusiasm Model structures product characteristics and functionalities into the categories Basic, Performance and Enthusiasm

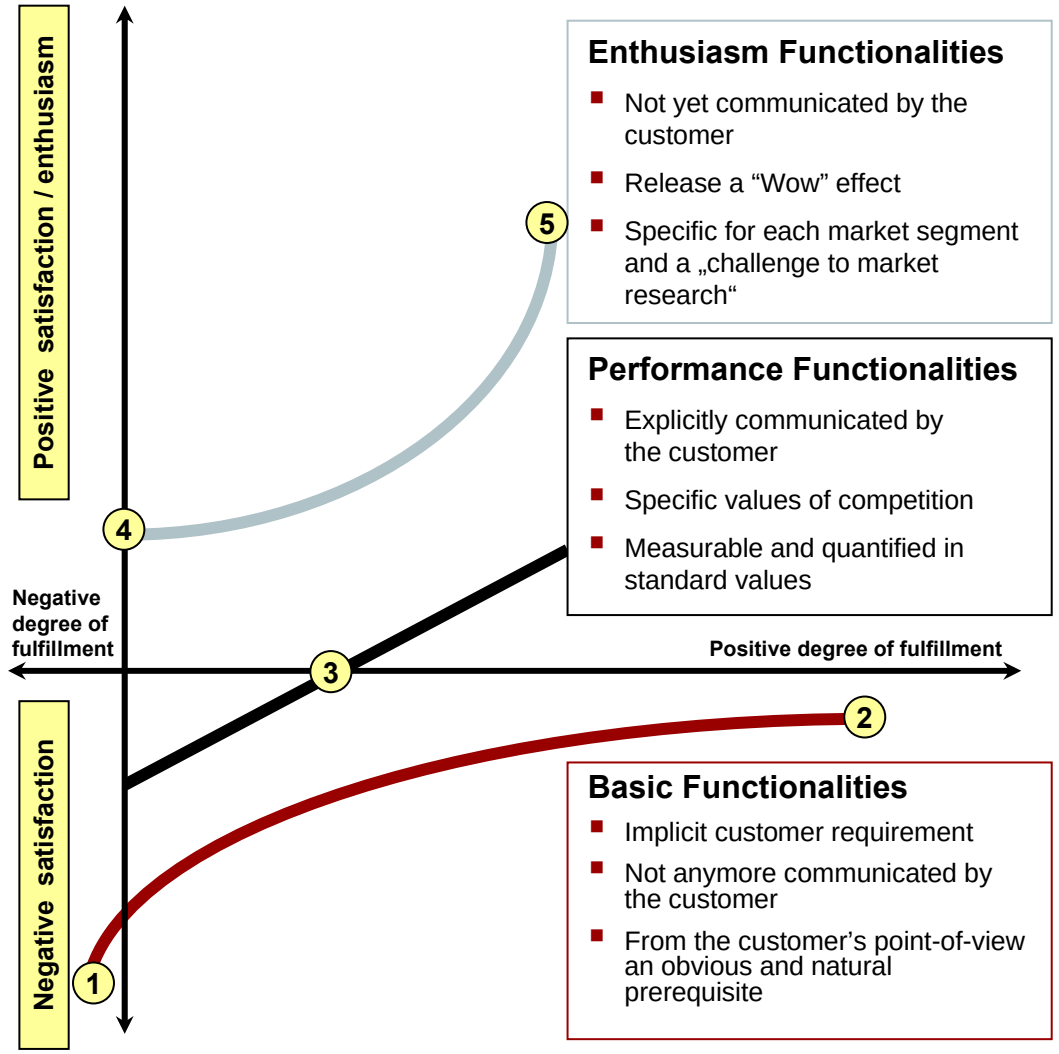
5 An Enthusiasm Functionality that is **precisely fitting** to the Target Group and **perceived by them as innovative and well solved** – plus, is **sold in an emotional way -** outperforms all other functionalities in contribution to satisfaction

4 The **mere existence** of an Enthusiasm Functionality that **fits to the Target Groups' needs** can cause the same degree of satisfaction as a complete fulfillment of all Performance Functionalities does.

3 A partial **existence** of Performance Functionality ensures a **neutral degree of satisfaction**. Only **full compliance** with the market standard of the Performance Functionalities will reach to the **rim of triggering enthusiasm.**

2 Even the **existence** of a **full set of Basic Functionalities** does **not drive positive satisfaction**. Only an **additional combination of Performance Functionalities and an Enthusiasm Functionality** causes the product to take part in the eventual buying decision of the respective customer (with his preferences)

1 The **lack of a Basic Functionality causes negative satisfaction** and even a full set of Basic Functionalties does not yet assure positive satisfaction and market acceptance: "Basic is simply not enough."



Enthusiasm Functionalities

- Not yet communicated by the customer
- Release a "Wow" effect
- Specific for each market segment and a „challenge to market research"

Performance Functionalities

- Explicitly communicated by the customer
- Specific values of competition
- Measurable and quantified in standard values

Basic Functionalities

- Implicit customer requirement
- Not anymore communicated by the customer
- From the customer's point-of-view an obvious and natural prerequisite

Explanation of functionality types

Basic Functionalities are a must, whereas Performance and Enthusiasm Functionalities add value for the customer

Basic Functionalities

- Market **standard** of a product
- Included **in all competitive** products
- **Not expressed, but expected** as a matter of structure by the customers
- If the functionality is **not included** in the product it represents a **strong argument against a purchase**

Typical statement

- ***"Ok, the product has the common characteristics of all these products. But I expected that anyway."***
- ***"Oh, the product is missing something I would have taken for granted. Sorry, but I will therefore not buy it."***

Performance Functionalities

- Directly **comparable to competitive products**
- **Important** influence **factor** on the **buying decision**
- **Exceeds** the characteristics of **Basic Features**
- Typical **"brochure information"**

- ***"Ah, this product is better than the other one I was thinking of buying."***
- ***"Now, let's see if the product has this particular functionality everybody is currently talking about."***
- ***"Evaluating this product, it has advantages in some functionalities and disadvantages in others. Overall however, it meets my needs. But what makes it tick?"***

Enthusiasm Functionalities

- The presence of **Enthusiasm Features** is the unique and sometimes **final trigger for the buying decision (USP)**
- **Enthusiasm Features** are often **innovations** that become evident to the customers for the first time
- Working with **lead users**, identifying definite trends and thinking in "hard-fact" use cases helps identifying **Enthusiasm Features** first
- Enthusiasm Features are a consistent extension of **core competences into product solutions**

- ***"Oh, what a surprising solution for a problem I had but did not expect a solution for!"***

Predefined template of the Window of Opportunity at MD

The Window of Opportunity sets clear and understandable guidelines for the following product definition process by supplying the definition team with all relevant information at the first glance

Propo-sition

- Describe market objective (e.g. top 3 product), market opportunity (e.g. first phone with…) and MD motivation to launch this product (e.g. continue successful product story of…,demonstrate technology leadership in…)

Target market (End-user and operator)

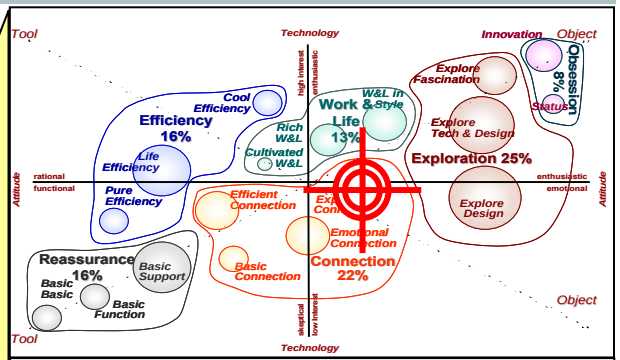
- **End-user (Sub-)segment:** Core subsegment and additional relevant subsegments in product focus (Expressive Connection: 100%, Emotional Connection: 80%, Explore Design: 40%, etc.)
- **Regional market focus:** Provide calculated sales split between regions*
- **Sales channel split:** Provide expected split of sales channels (e.g. operator: 20%, end-user:80%)
- **Key operators addressed:** Name most important operators for product
- **Competitor products:** a) Competitor products that will fall in the price class of the planned product, b) Competitor products of similar theme incl. launch price

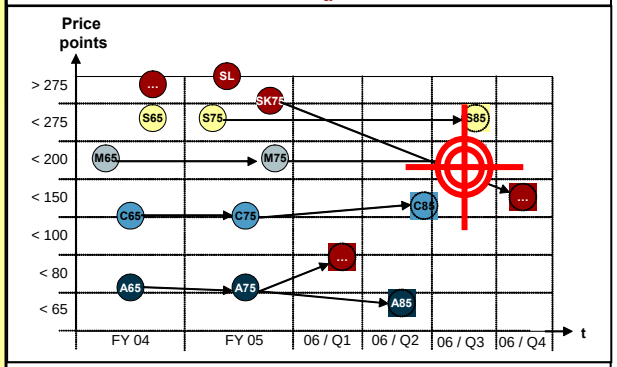
Target positioning in Portfolio

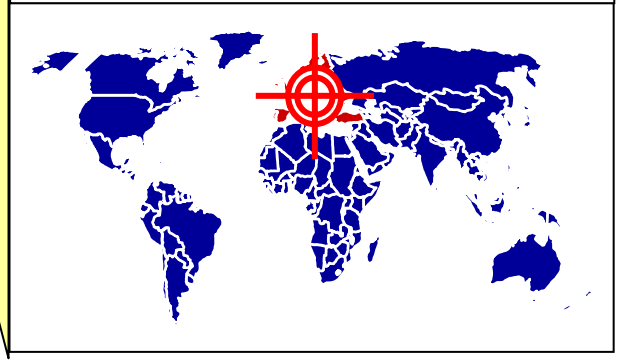
- **Story successor to:** Continuation of market story of…
- **Price point:** Launch price, ASP
- **Launch date/ Lifecycle**: Start and end of lifecycle, duration in month
- **Addressable market:** Units related to the target market defined by End-user (Sub-)Segments, countries and price classes*
- **Planned market share / Vol.:** Planned market share in total and per region*, total Target Volume*
- **Target Profit:** Target Profit (related product class, e.g. “Reference Class”)

Product idea

- **Product idea:** Marketing slogan and its explanation (e.g. “The multimedia jukebox”, Introduction of MP3 player in price class below 100 EUR)
- **Key theme:** Describe product focus (e.g. video and imaging)
- **Key use cases:**
  Describe most important use cases of the device
- **Innovation:** Technical innovation (e.g. first TV out phone) and market innovation (e.g. first QVGA display in price class)







Predefined standard template for the Enthusiasm Model at MD

To secure comparable Enthusiasm Models throughout MD a standard template with predefined functional categories has been defined

Required air interface: [X] GSM [X] GPRS [ ] EDGE [ ] UMTS [X] WLAN [ ] VoIP (WLAN) [ ] other: "…"

Preferred form factor: [ ] Bar [ ] Slider [ ] Clam [X] New/ others: "… e.g. swivel-clam"

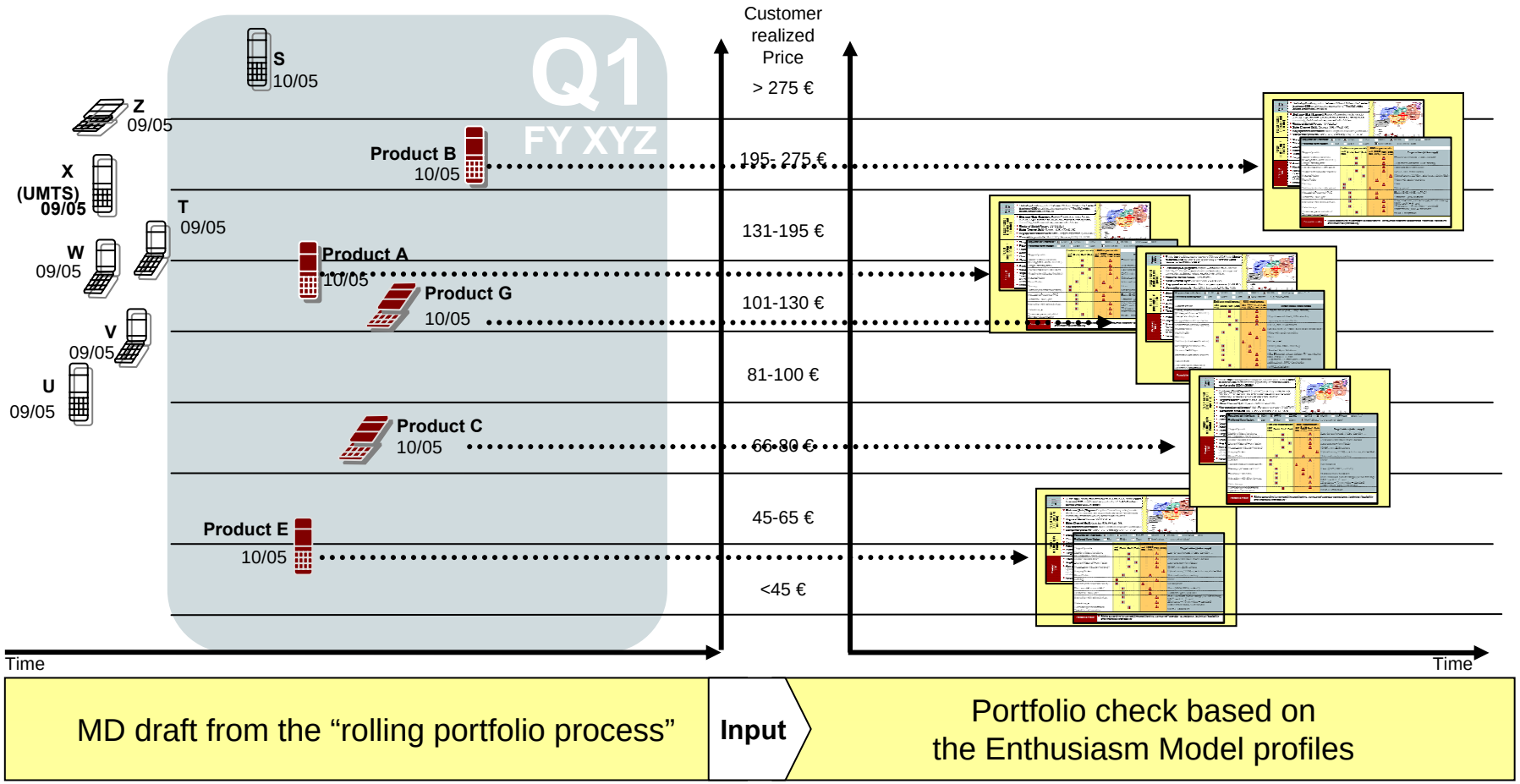
	End-user requirements				MNO requirements				
	not req.	Basic	Perf.	Enth.	not req.	Basic (under fulfilled)	Perf. (meet)	Enth. (exceed)	Target values (value range)
Make and receive calls			■				△		Easy to use keypad
Appeal to user				■			△		Surprising new form factor
Support imaging				■				△	Optical zoom, 3.2 Mpix, auto focus, strobe flash
Support music		■				△			Video with audio recording
Provide gaming	■					△			Basic
Provide outdoor/leisure features	■				△				
Enable messaging		■				△			Basic
Support PIM/business applications		■				△			Standard Sync-solution
Offer additional services		■				△			Basic (SMS, MMS, no PoC)
Provide visualization		■				△			QVGA display, min. 256k colors
Interaction with other devices		■				△			200 pictures in medium quality
Store data		■					△		20 pictures, 15 min. video, MMC card-holder, Standard address book
Consumer personalization/ operator customization		■					△		Main operator UI suppported
Provide usage and standby time			■				△		300h standby, 300 min. talktime

Possible risks

- **Risks according to competitive positioning, consumer/ operator acceptance, technical feasibility and financial/ profitability**

The link between Enthusiasm Model and portfolio draft

For every envisaged phone in the portfolio draft, a dedicated Window of Opportunity and an Enthusiasm Model have to be completed



MD draft from the "rolling portfolio process" | **Input** | Portfolio check based on the Enthusiasm Model profiles

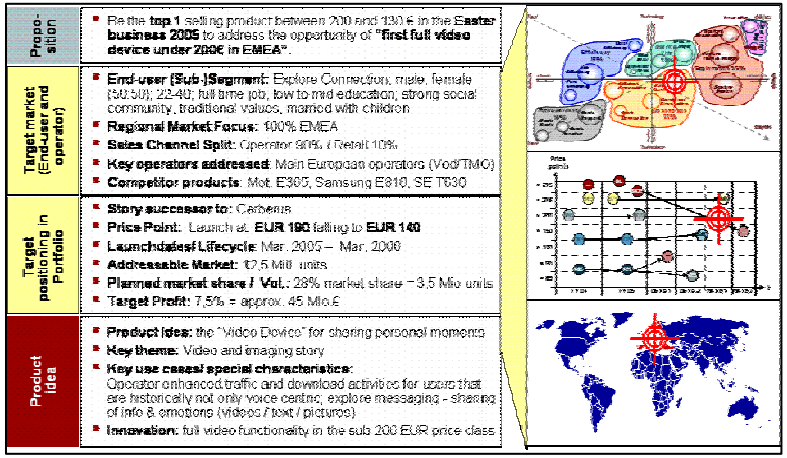
*) Customer Realized Price

Identification of customer demands and usage of information

The reliability of the Enthusiasm Model depends on a clear strategy input and a high quality of market and technology information

- MD Business strategy
- Latest portfolio status
- Regional product roadmaps
- Themes strategies/ roadmaps
- Innovation roadmap
- PD-budget classification
- Price/ Volume planning
- Projected minimal phone requirements

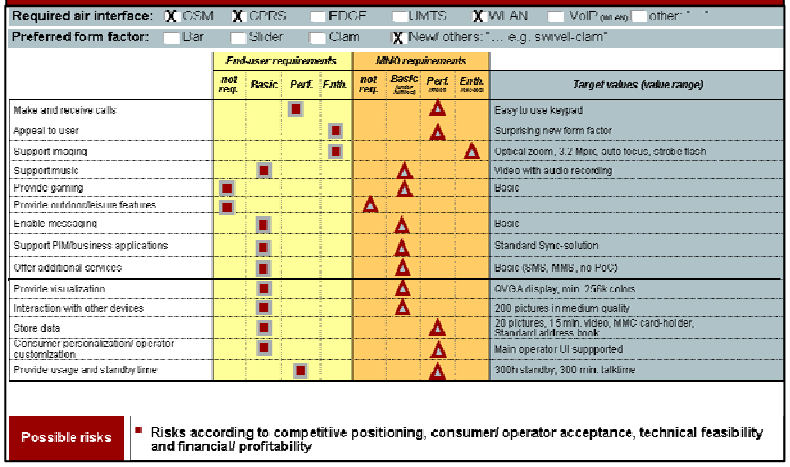
Window of Opportunity



- Product proposition
- Target market
- Target positioning
- Product idea

- Targets from WoO
- Concept ideas
- Detailed customer and consumer requirements
- Dedicated competitor analysis
- Functional/ themes roadmaps
- Platform and components roadmaps

Enthusiasm Model

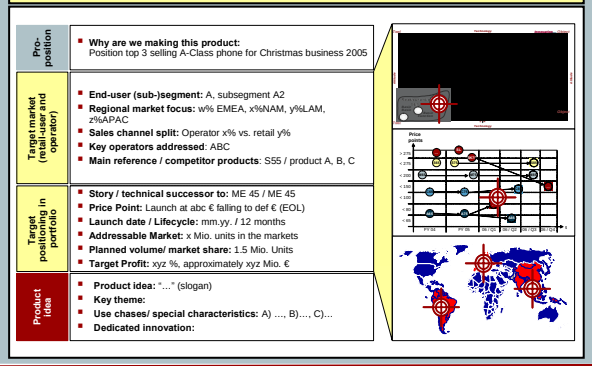


- Final Enthusiasm Model with functional targets
- Draft "Steckbrief"
- Functional options for Alternatives Generation

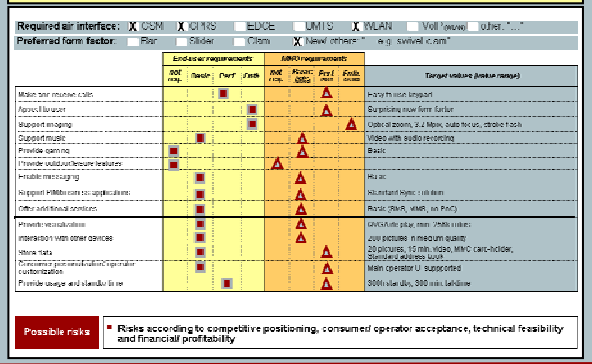
Standard templates: Window of Opportunity and the Enthusiasm Model

The defined templates that are used in the Enthusiasm Model process are documenting the final results.

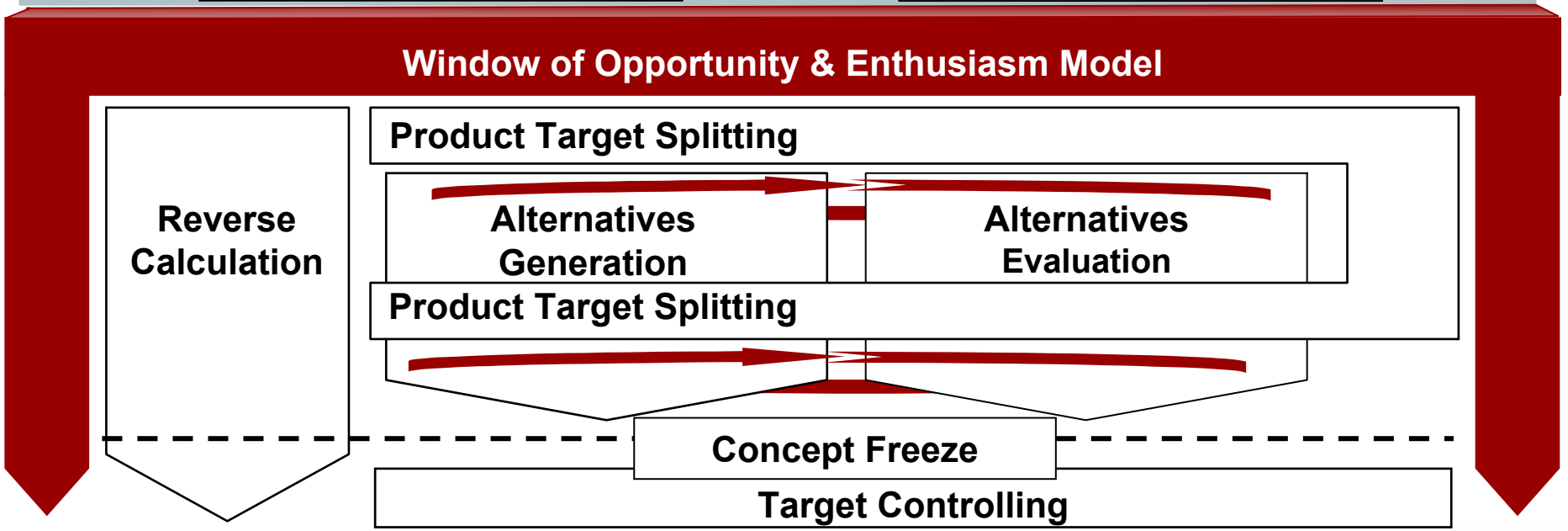
Window of Opportunity



Enthusiasm Model



Window of Opportunity & Enthusiasm Model



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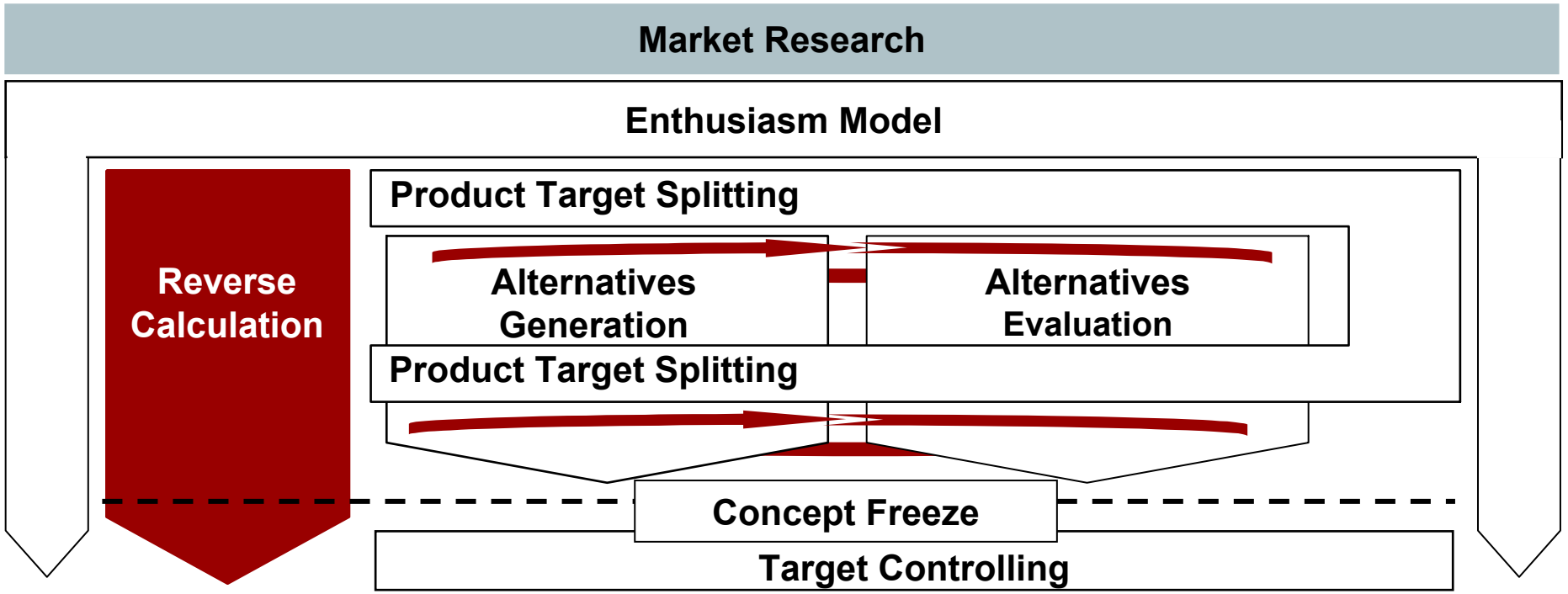
The Target Costing concept

The Reverse Calculation provides key financial data for all other Target Costing core tools

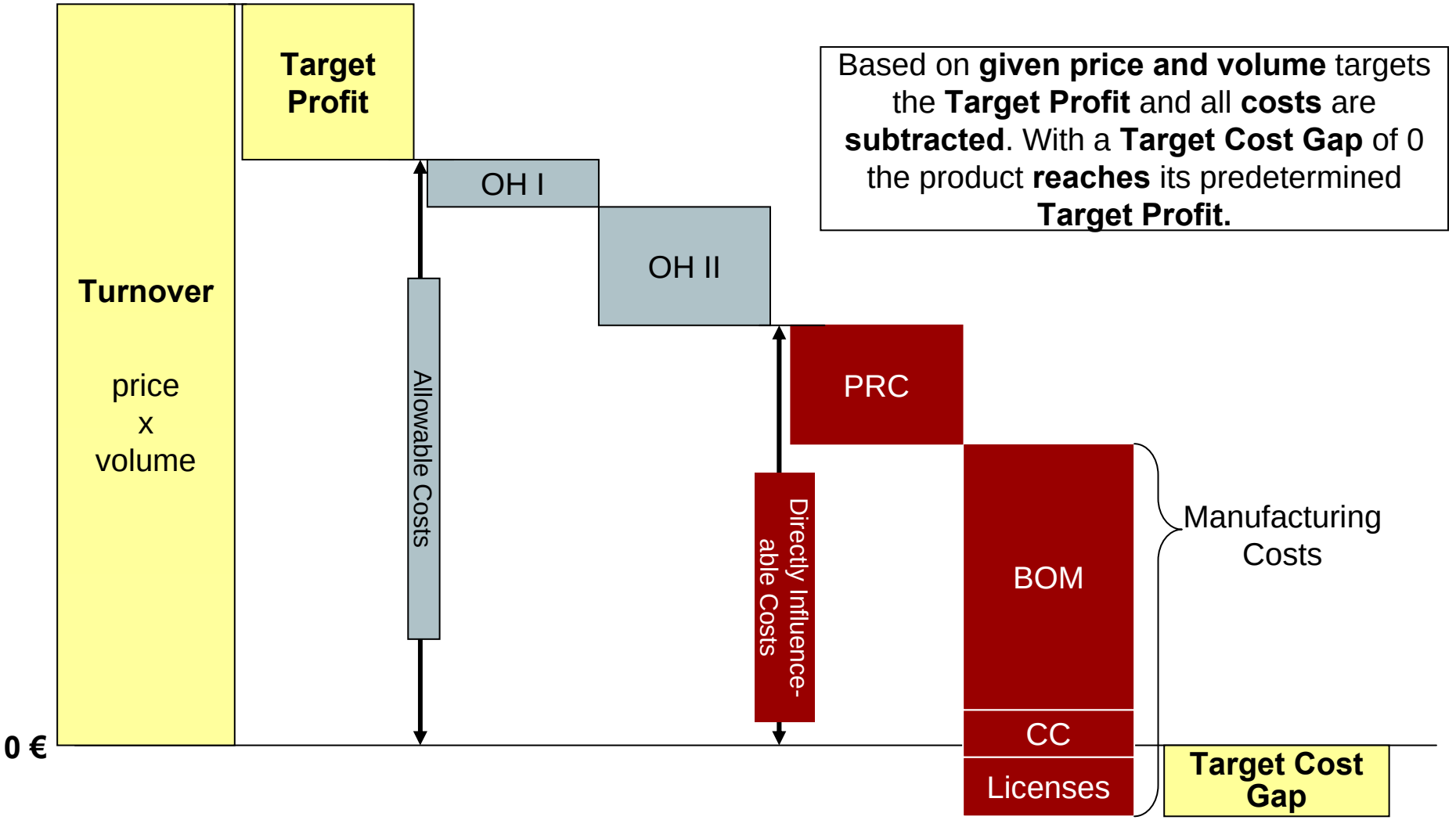


The Reverse Calculation:

- allows a **market-oriented product calculation**.
- starts with the relevant market data and profit targets to **derive the Allowable Costs**. This overall cost target is then **split into costs categories** which are structured according to their influenceability.

MD Reverse Calculation overview

The cost target (Target Cost Gap) reflects the gap between realizable turnover and expected costs



The overall structure of the Reverse Calculation at MD

All cost positions of the Reverse Calculation at MD have been structured taking their ability to influence the respective cost positions into account

	Target Turnover **./. Target Profit**	▪ With an efficient time to market and lifecycle management the product teams can influence volume developments and the price erosion of a product with the help of Marketing and Sales.
=	**Allowable Costs**	
./.	**Overhead I**	▪ Cannot be influenced by MD
./.	**Overhead II**	▪ MD management can influence the OH II costs by infrastructural changes
=	**Directly Influenceable Costs**	▪ **Direct R&D** costs can be influenced by the technical product concept (e.g. reuse of components) ▪ **Service costs** can be influenced by the product specifications & warranty ▪ **Marketing costs** can be influenced by the advertising approach
./.	**Product Related Costs (PRC)**	
./.	**Manufacturing Costs** Bill of Material (BOM) Conversion Costs (CC) Licenses Costs	▪ **BOM** can be influenced by component specifications (e.g. display brilliance guarantee) ▪ **Conversion Costs** can be influenced by the product construction concept (e.g. number of components) ▪ **Licenses** can be influenced by feature changes
=	**TARGET COST GAP**	

The overall RC cost structure I: Pre-defined cost settings

In general Costs are divided up in two categories. Costs which are independent of the product class and which are relating to a fixed basis and costs relating to product classes.

				A	C	CX	M	S	SL	SX
	Target Turnover									
./.	**Target Profit**		% T/O	4 %	7,5 %	7,5 %	7,5 %	10 %	20 %	15 %
=	Allowable Costs									
./.	**Overhead I**		% T/O	1,2 %						
./.	**Overhead II**	Selling expenses	% T/O	5 %						
		SCM cost	% T/O	2%						
		Other COGS	% T/O	1,3 %						
		Marketing	Class % T/O	1 %	4 %	4 %	5 %	7 %	7 %	7 %
		Development ind.	% dir R&D	110%						
=	Directly Influenceable Costs									
./.	Product Related Costs									
./.	Manufacturing Costs									
=	TARGET COST GAP									

Costs per product class	Fixed percentage

Overhead I/II are derived from the overall MD budget planning and therefore predefined values that can not be influence by PBM!

The overall RC costs structure II: Team related influenceable costs settings

In general Costs are divided up in two categories. Costs which are independent of the product class and which are relating to a fixed basis and costs relating to product classes.

				A	C	CX	M	S	SL	SX
	Target Turnover									
./.	Target Profit									
=	Allowable Costs									
./.	Overhead I									
./.	Overhead II									
=	**Directly Influenceable Costs**									
./.	**Product Related Costs (PRC)**	Development dir.	Per class	4'0	7'2	13'5	9'0	18'8	18'3	15'4
		Marketing HQ	Fix per product	2'0						
		Marketing push	Per product class	2,00	3,50	5,50	5,50	5,50	5,50	5,50
		Service Costs	Per product class	2,38	3,80	4,87	4,39	5,95	6,58	6,58
./.	**Manufac-turing Costs**	Conversion Costs	Per product class	13,6%	12,6 %	12,6 %	11,6 %	10,7 %	10,7 %	10,7 %
		Licences	Per product class	0,04	1,80	4,00	4,00	4,23	4,23	4,23
		Variant adder	% of BOM	2 %						
		BOM								
=	**TARGET COST GAP**									

Costs per product class | **Fixed percentage**

Product Related Costs and Manufacturing Costs have to be checked and should be management by PBM!

Transition of the Business Case into the Reverse Calculation

By rearranging the cost categories and considering a Target Profit, the Reverse Calculation provides a clear cost reduction target

Business Case tool structure

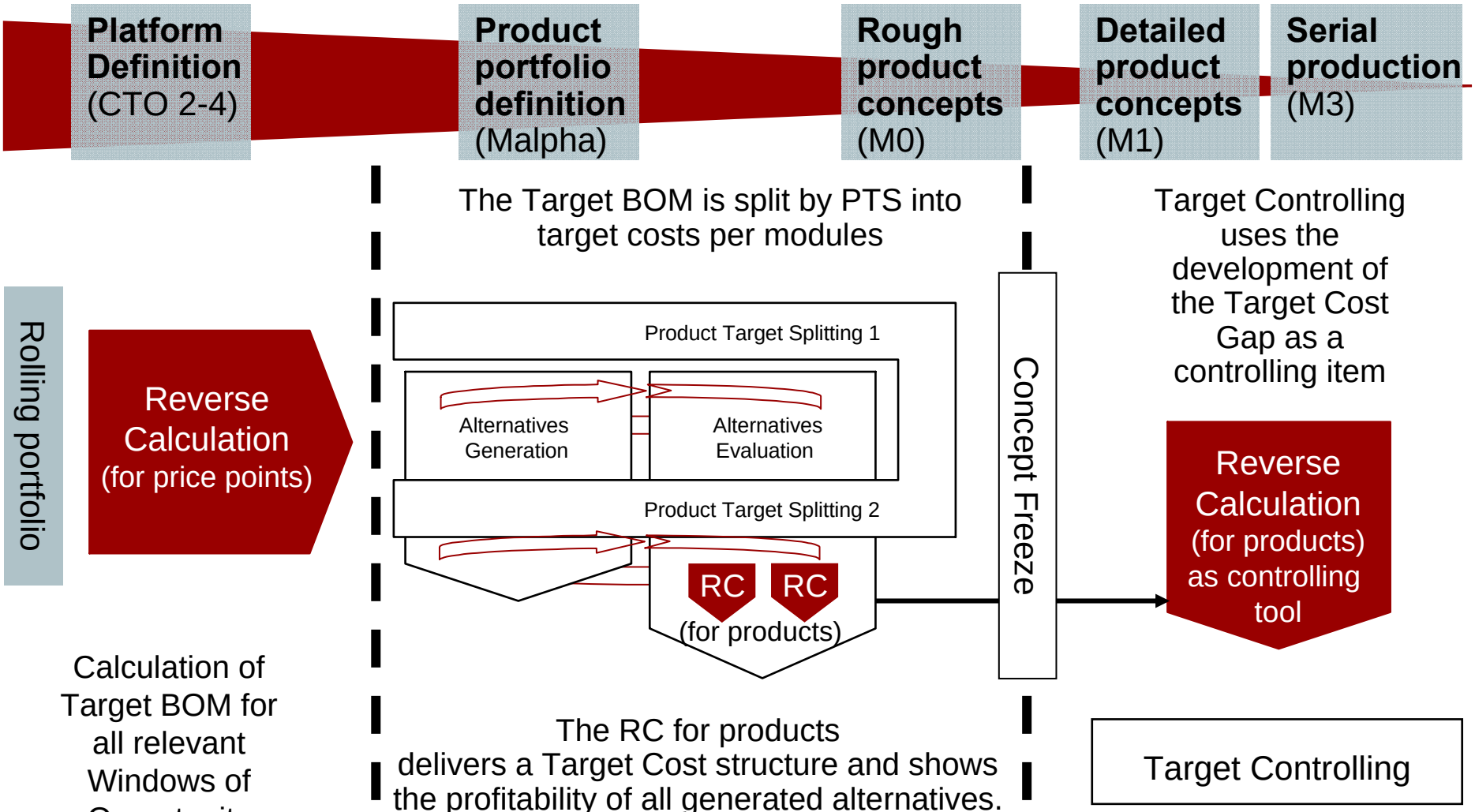
Units	2.000.000
Units cumulated	2.000.000
Turn Over	200.000.000
Turn Over per unit	100,00
Manufacturing Costs	130.000.000
Manufacturing Costs per Unit	65,00
Sales Margin	70.000.000
Sales Margin %	35,00%
Sales Margin per Unit	35,00
COGS	14.000.000
Other COGS	2.000.000
SCM Costs	4.000.000
Service Costs	8.000.000
COGS %	7,00%
COGS per Unit	7,00
Gross Margin	56.000.000
Gross Margin %	28,00%
Gross Margin per unit	28,00
Overhead	45.600.000
Administration	2.600.000
Development (direct)	7.000.000
Development (indirect)	6.000.000
Marketing (Push & HQ)	10.000.000
Marketing (Pull & SF)	8.000.000
Selling Expenses	12.000.000
Overhead %	22,80%
Overhead per unit	22,80
EBIT	10.400.000
EBIT Cumulated	10.400.000
EBIT%	5,20%
EBIT per unit	5,20

MD Reverse Calculation

Units	2.000.000
Target Turnover	200.000.000
Price (average)	100
Target Profit Total	15.000.000
Allowable Costs	185.000.000
Overhead I	2.600.000
Administration	2.600.000
Overhead II	32.000.000
Development (indirect)	6.000.000
Marketing (Pull & SF)	8.000.000
Selling Expense	12.000.000
SCM Costs	4.000.000
Other COGS	2.000.000
Directly Influenceable Costs (DIC)	150.400.000
Product Related Costs (PRC)	25.000.000
Development (direct)	7.000.000
Marketing (Push & HQ)	10.000.000
Service Costs	8.000.000
Manufacturing Costs	130.000.000
Manufacturing Costs per unit	65,00
BOM per unit	50,00
Variant Adder per unit	0,00
CC per unit	10,00
Licences per unit	5,00
Target Cost Gap	-4.600.000
Target Cost Gap per unit	-2,30
EBIT (for comparison purpose)	10.400.000

The Reverse Calculation in the product development process

With the Target BOM and the Target Cost Gap the Reverse Calculation supports all phases of product development



Uses of the Reverse Calculation

The Reverse Calculation serves two basic causes during the product definition process – it calculates a Target BOM and determines a Target Cost Gap

- In order to give a first assessment of the allowable BOM, the Reverse Calculation offers the possibility to deduce a Target BOM.
- This Target BOM is calculated using the targeted sales volume and price as well as overhead percentages which are based on experiences with historic products and crosschecked with MD planning
- The Target BOM is used as input for Product Target Splitting (market view II) in order to calculate Target Cost corridors for main modules

Target BOM ← Reverse Calculation → **Target Cost Gap**

2.000.000	Units	2.000.000
200.000.000	Target Turnover	200.000.000
100	Price (average)	100
./. 15.000.000	Target Profit Total	./. 15.000.000
= 185.000.000	Allowable Costs	= 185.000.000
2.600.000	Overhead I	2.600.000
2.600.000	Administration	2.600.000
32.000.000	Overhead II	32.000.000
6.000.000	Development (indirect)	6.000.000
8.000.000	Marketing (indirect)	8.000.000
12.000.000	Selling Expense	12.000.000
4.000.000	SCM Costs	4.000.000
2.000.000	Other COGS	2.000.000
./. 150.400.000	Directly Influenceable Costs (DIC)	./. 150.400.000
25.000.000	Product Related Costs (PRC)	25.000.000
7.000.000	Development (direct)	7.000.000
10.000.000	Marketing (direct)	10.000.000
8.000.000	Service Costs	8.000.000
62,70	Manufacturing Costs per unit	65,00
= 48,08	BOM per unit	50,00
0,00	Variant Adder per unit	0,00
9,62	CC per unit	10,00
5,00	Licences per unit	5,00
0	Target Cost Gap	-4.600.000 =
./. 0,00	Target Cost Gap per unit	-2,30
15.000.000	EBIT (for comparison purpose)	10.400.000

- In order to give a first indication about the conformity of the envisaged product to the costs derived from the market, a Target Cost Gap is calculated.
- The Target Costs Gap is used as the primary indicator of the degree of financial target compliance of the product

Results of the Reverse Calculation for products including sensitivities

Apart from calculating the Target Cost Gap, the Reverse Calculation offers a wide variety of possibilities to conduct a sensitivity analysis

Reverse Calculation - Standard Simulations -	Base Case Nestor	TCG = 0	EBIT = 0	Hist. ASP 165 €	TTM delay 1 month	Volume -10%	Volume +10%	Volume -30%	Volume +30%
	Lifecycle Total	Lifecycle Total	Lifecycle Total	Lifecycle Total	Lifecycle Total	Lifecycle Total	Lifecycle Total	Lifecycle Total	Lifecycle Total
Units	**3.500.000**	**3.500.000**	**3.500.000**	**3.500.000**	**3.200.000**	**3.150.000**	**3.850.000**	**2.450.000**	**4.550.000**
Target Turnover	**603.000.000**	**584.642.848**	**533.745.328**	**577.500.000**	**546.000.000**	**542.700.000**	**663.300.000**	**422.100.000**	**783.900.000**
Price (average)	**172,29**	**167,04**	**152,50**	**165,00**	**170,63**	**172,29**	**172,29**	**172,29**	**172,29**
Target Profit Total	**45.225.000**	**43.848.214**	**40.030.900**	**43.312.500**	**40.950.000**	**40.702.500**	**49.747.500**	**31.657.500**	**58.792.500**
Allowable Costs	**557.775.000**	**540.794.634**	**493.714.428**	**534.187.500**	**505.050.000**	**501.997.500**	**613.552.500**	**390.442.500**	**725.107.500**
Overhead I	**7.839.000**	**7.600.357**	**6.938.689**	**7.507.500**	**7.098.000**	**7.055.100**	**8.622.900**	**5.487.300**	**10.190.700**
Administration	7.839.000	7.600.357	6.938.689	7.507.500	7.098.000	7.055.100	8.622.900	5.487.300	10.190.700
Overhead II	**83.376.500**	**81.072.677**	**74.685.039**	**80.176.250**	**76.223.000**	**75.808.850**	**90.944.150**	**60.673.550**	**106.079.450**
Development (indirect)	7.700.000	7.700.000	7.700.000	7.700.000	7.700.000	7.700.000	7.700.000	7.700.000	7.700.000
Marketing (indirect)	24.662.700	23.911.892	21.830.184	23.619.750	22.331.400	22.196.430	27.128.970	17.263.890	32.061.510
Selling Expense	28.160.100	27.302.821	24.925.907	26.969.250	25.498.200	25.344.090	30.976.110	19.712.070	36.608.130
SCM Costs	16.642.800	16.136.143	14.731.371	15.939.000	15.069.600	14.978.520	18.307.080	11.649.960	21.635.640
Other COGS	6.210.900	6.021.821	5.497.577	5.948.250	5.623.800	5.589.810	6.831.990	4.347.630	8.074.170
Directly Influenceable Costs (DIC)	**466.559.500**	**452.121.600**	**412.090.700**	**446.503.750**	**421.729.000**	**419.133.550**	**513.985.450**	**324.281.650**	**608.837.350**
Product Related Costs (PRC)	**30.870.000**	**30.870.000**	**30.870.000**	**30.870.000**	**28.824.000**	**28.483.000**	**33.257.000**	**23.709.000**	**38.031.000**
Development (direct)	7.000.000	7.000.000	7.000.000	7.000.000	7.000.000	7.000.000	7.000.000	7.000.000	7.000.000
Marketing (direct)	8.575.000	8.575.000	8.575.000	8.575.000	7.840.000	7.717.500	9.432.500	6.002.500	11.147.500
Service Costs	15.295.000	15.295.000	15.295.000	15.295.000	13.984.000	13.765.500	16.824.500	10.706.500	19.883.500
Manufacturing Costs	**421.251.600**	**421.251.600**	**421.251.600**	**421.251.600**	**385.144.320**	**379.126.440**	**463.376.760**	**294.876.120**	**547.627.080**
Manufacturing Costs per unit	**120,36**	**120,36**	**120,36**	**120,36**	**120,36**	**120,36**	**120,36**	**120,36**	**120,36**
BOM per unit	95,56	95,56	95,56	95,56	95,56	95,56	95,56	95,56	95,56
Variant Adder per unit	4,78	4,78	4,78	4,78	4,78	4,78	4,78	4,78	4,78
CC per unit	15,29	15,29	15,29	15,29	15,29	15,29	15,29	15,29	15,29
Licences per unit	4,73	4,73	4,73	4,73	4,73	4,73	4,73	4,73	4,73
Target Cost Gap	**14.437.900**	**0**	**-40.030.900**	**-5.617.850**	**7.760.680**	**11.524.110**	**17.351.690**	**5.696.530**	**23.179.270**
Target Cost Gap per unit	**4,13**	**0,00**	**-11,44**	**-1,61**	**2,43**	**3,66**	**4,51**	**2,33**	**5,09**
EBIT (for comparison purpose)	**59.662.900**	**43.848.214**	**0**	**37.694.650**	**48.710.680**	**52.226.610**	**67.099.190**	**37.354.030**	**81.971.770**

Information frontload and supply of the Reverse Calculation

The reliability of the Reverse Calculation depends on a clear cost, price and volume input

- WoO with
  - Target Volume (PLC)
  - Target Price
  - Target Profit
- Cost Targets (Overhead I/II, PRC, Manufacturing Costs (all categories excl. Target BOM))

Calculation of Target BOM

Reverse Calculation - Targtet BOM -	Base Case Product name Lifecycle Total
Units	3.500.000
Target Turnover	603.000.000
Price (average)	172,29
Target Profit Total	45.225.000
Allowable Costs	557.775.000
Overhead I	7.839.000
Administration	7.839.000
Overhead II	83.376.500
Development (indirect)	7.700.000
Marketing (Pull + SP)	24.662.700
Selling Expense	28.160.100
SCM Costs	16.642.800
Other COGS	6.210.900
Directly Influenceable Costs (DIC)	466.559.500
Product Related Costs (PRC)	30.870.000
Development (direct)	7.000.000
Marketing (Push + HQ)	8.575.000
Service Costs	15.295.000
Manufacturing Costs	435.689.500
Manufacturing Costs per unit	124,48
Target BOM per unit	98,97
Variant Adder per unit	4,95
CC per unit	15,84
Licences per unit	4,73
Target Cost Gap	0
Target Cost Gap per unit	0,00
EBIT (for comparison purpose)	45.225.000
EBIT in % of T/O	7,50%

- Target BOM
- Target Costs for cost categories (Overhead I and II, PRC)

- Target Values for cost categories
- First BOM estimation
- First conversion cost estimation
- First license cost estimation

Calculation of Target Cost Gap

Reverse Calculation - Standard Simulations -	Base Case Product name Lifecycle Total
Units	3.500.000
Target Turnover	603.000.000
Price (average)	172,29
Target Profit Total 7,5%	45.225.000
Allowable Costs	557.775.000
Overhead I	7.839.000
Administration	7.839.000
Overhead II	83.376.500
Development (indirect)	7.700.000
Marketing (Pull + SP)	24.662.700
Selling Expense	28.160.100
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Service Costs	15.295.000
Manufacturing Costs	421.251.600
Manufacturing Costs per unit	120,36
BOM per unit	95,56
Variant Adder per unit	4,78
CC per unit	15,29
Licences per unit	4,73
Target Cost Gap	14.437.900
Target Cost Gap per unit	4,13
EBIT (for comparison purpose)	59.662.900
EBIT in % of T/O	9,89%

- Target Cost Gap for Base Case
- Deviation from Target Profit
- Standard analysis Reverse Calculation

Standard templates for the Reverse Calculation

The defined templates that are used in the Reverse Calculation process are documenting the final results.

Calculation Target BOM

Reverse Calculation
- Targtet BOM -

	Base Case Product name Lifecycle Total
Units	**3.500.000**
Target Turnover	**603.000.000**
Price (average)	**172,29**
Target Profit Total	**45.225.000**
Allowable Costs	**557.775.000**
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Licences per unit	4,73
Target Cost Gap	**0**
Target Cost Gap per unit	**0,00**
EBIT (for comparison purpose)	**45.225.000**
EBIT in % of T/O	**7,50%**

Calculation Target Cost Gap

Reverse Calculation
- Standard Simulations -

		Base Case Product name Lifecycle Total
Units		**3.500.000**
Target Turnover		**603.000.000**
Price (average)		**172,29**
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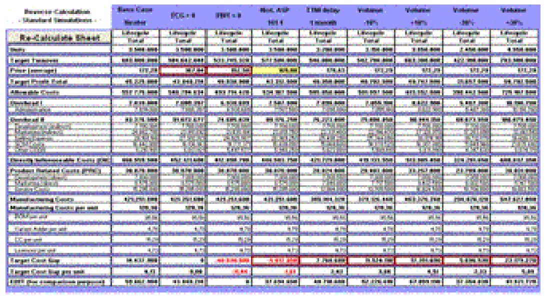
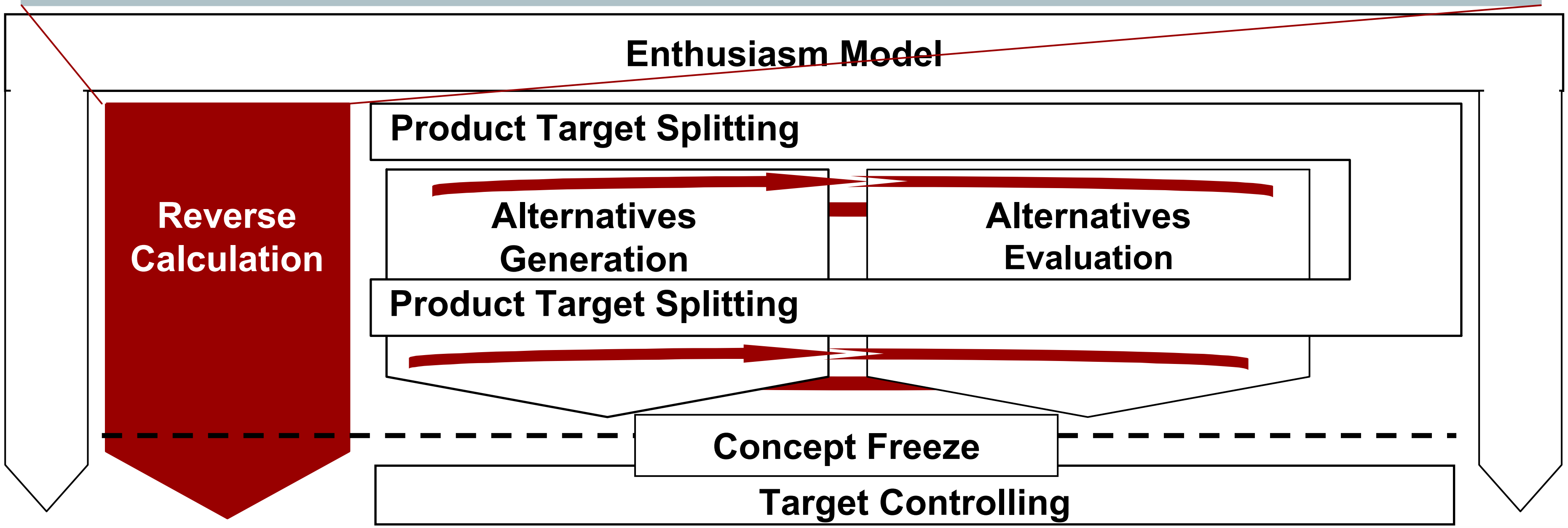
Target Cost Gap per unit		**4,13**
EBIT (for comparison purpose)		**59.662.900**
EBIT in % of T/O		**9,89%**

Development of scenarios





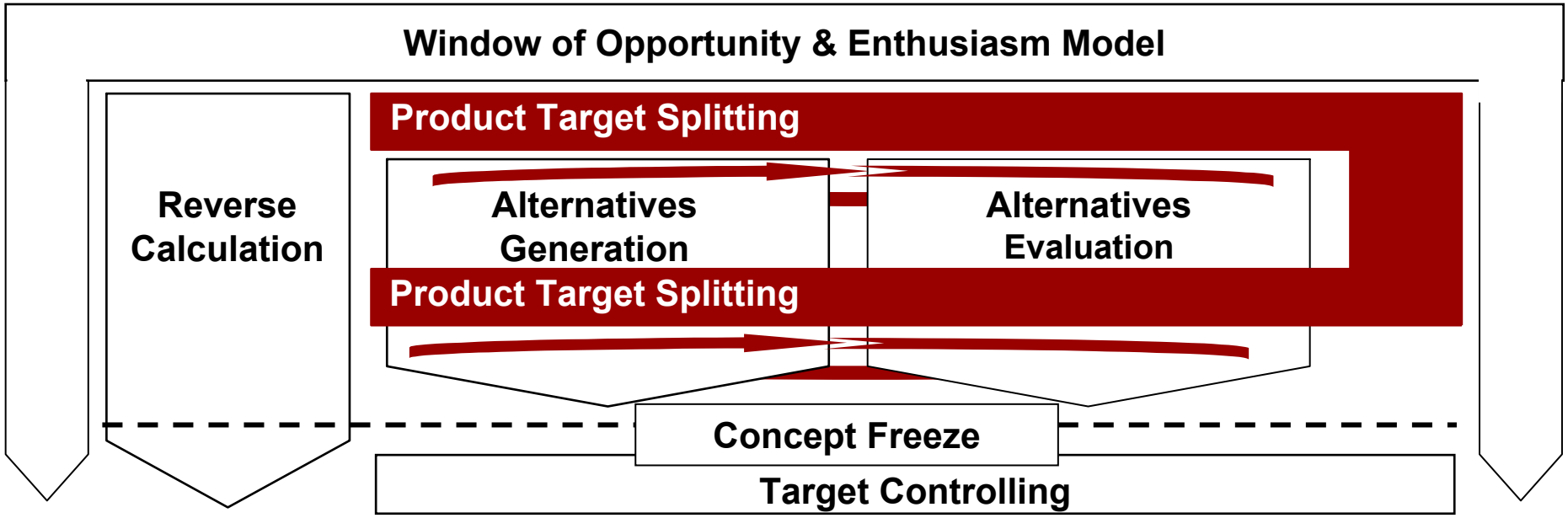
Agenda

- Objective and structure of the training
- General Target Costing overview
- The Target Costing toolset
  - Window of Opportunity and Enthusiasm Model
  - Reverse Calculation
  - **Product Target Splitting**
  - Alternatives Generation
  - Alternatives Evaluation
  - Target Controlling
- Integration of Target Costing toolset into the MD process landscape
- Open questions and discussion
- Conclusion

The Target Costing concept

Based on the results of Reverse Calculation and Enthusiasm Model, Product Target Splitting provides Target Cost corridors for all relevant product modules

Market Research



The Product Target Splitting:

- provides a methodology to **break down a Target BOM for a product at a given Window of Opportunity** into **Target Cost corridors for product modules** according to **operator and end-user requirements.**
- gives **clear cost guidelines** for the Alternatives Generation and Evaluation on a module basis

Overall concept of Product Target Splitting

Three different methodologies complement each other to derive detailed cost information for modules during the product and module definition process.

Market view

- The Target Costs per module are developed by translating the requirements of the customer (end-user and operator) first into product functions and then into Target Costs for product modules

Accepted Target Cost corridors for modules

Internal products view

- Cost structures for each product segment/class are derived from current product data and predicted into the future.

Competitor / supplier view

- Trend analysis and extrapolation derived from supplier information.
- Competitor cost structures derived from Product Reverse Engineering.

Internal and **competitor information supplement** the market-oriented view of Product Target Splitting and serves as **benchmark**. The internal and competitor / supplier view defines Target Costs for modules that have long development lead times when market information is not available.

Procedure of Product Target Splitting

The costs for the so called Basic Model are subtracted from the Target BOM resulting in the Distributable Costs. These costs are split into modules according to the customer requirements

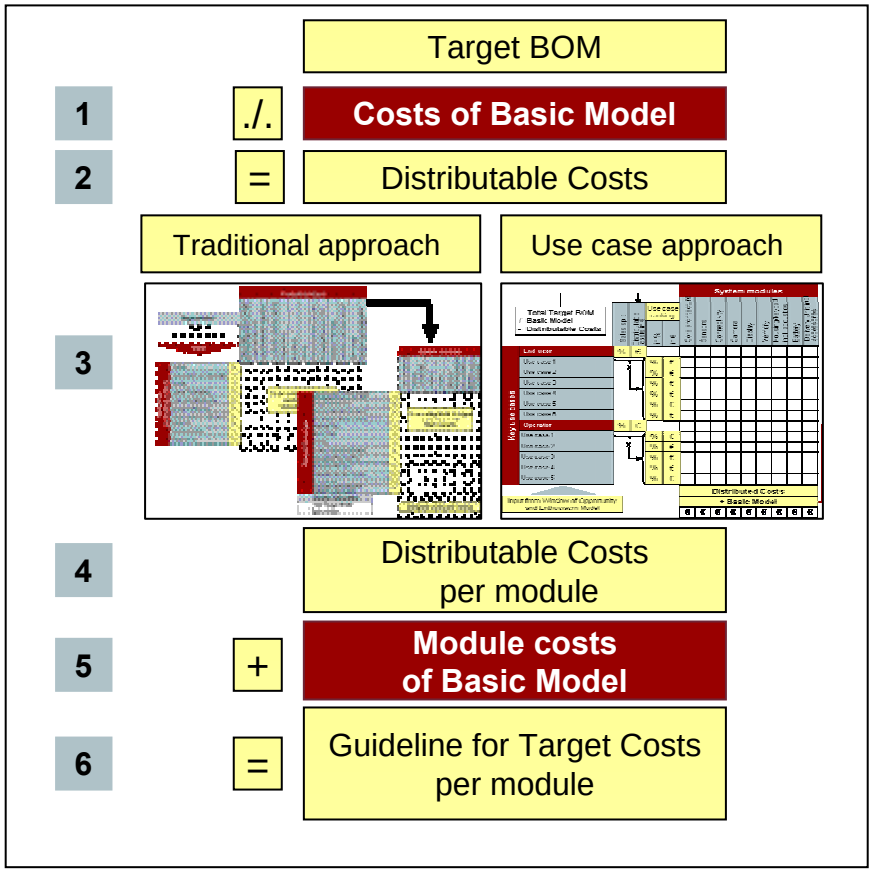
1
A Basic Model is defined and the costs for the modules established (predefined costs)

2
The total costs for the Basic Model is subtracted from the Target BOM leading to Distributable Costs that is fed into Product Target Splitting.

3
Product Target Splitting weighs the Distributable Costs according to customer requirements.

4 **5**
The module costs of the Basic Model are added to the Distributed Costs.

6
The result is the guideline for the Target Costs per module.



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The Basic Model

To ensure accurate Target Costs, a Basic Model has to be defined for each price point

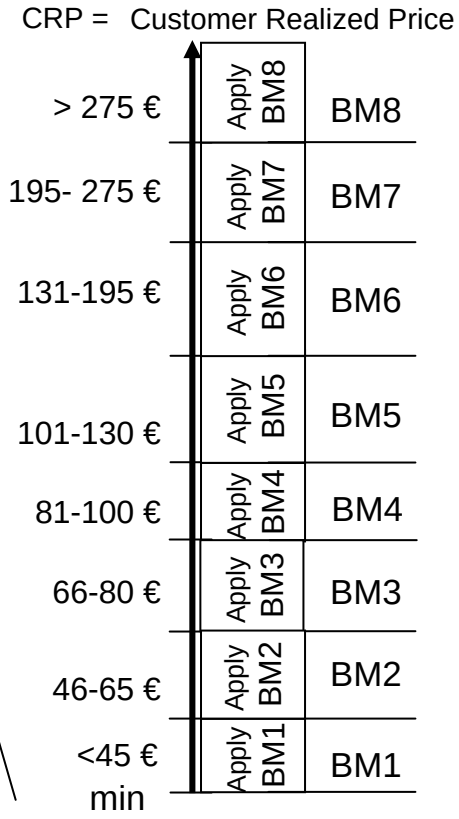
Definition:
The Basic Model defines the **minimum set of features** of a mobile device for a **given price point** at a **given point in time**. This feature set is realized through the use of the **most cost effective components** on the market.

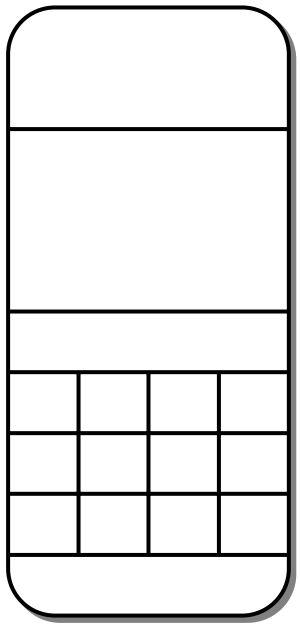
Basic Models are price dependant:

The **set of features** that are considered to be basic **depends on the price** of the mobile device.
For this reason **8 Basic Models** for the **various price points** are **defined**.

Basic Models change over time:

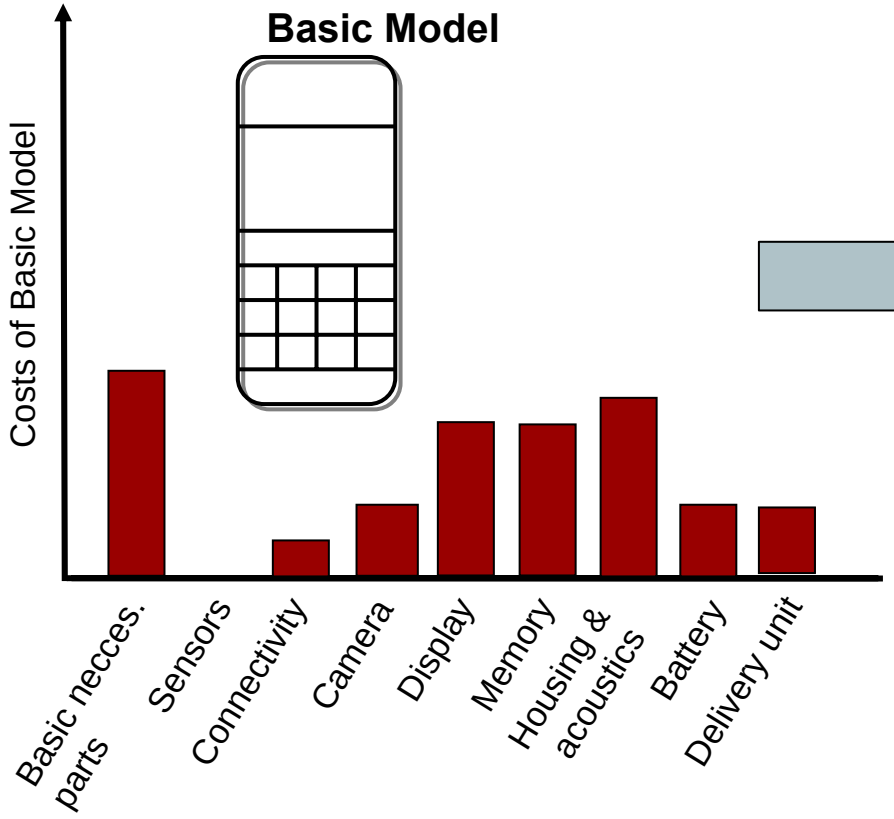
What is being considered basic, changes over time as the expectations of the market change.
Thus the **Basic Model needs** to be **revised** on a **regular** basis.

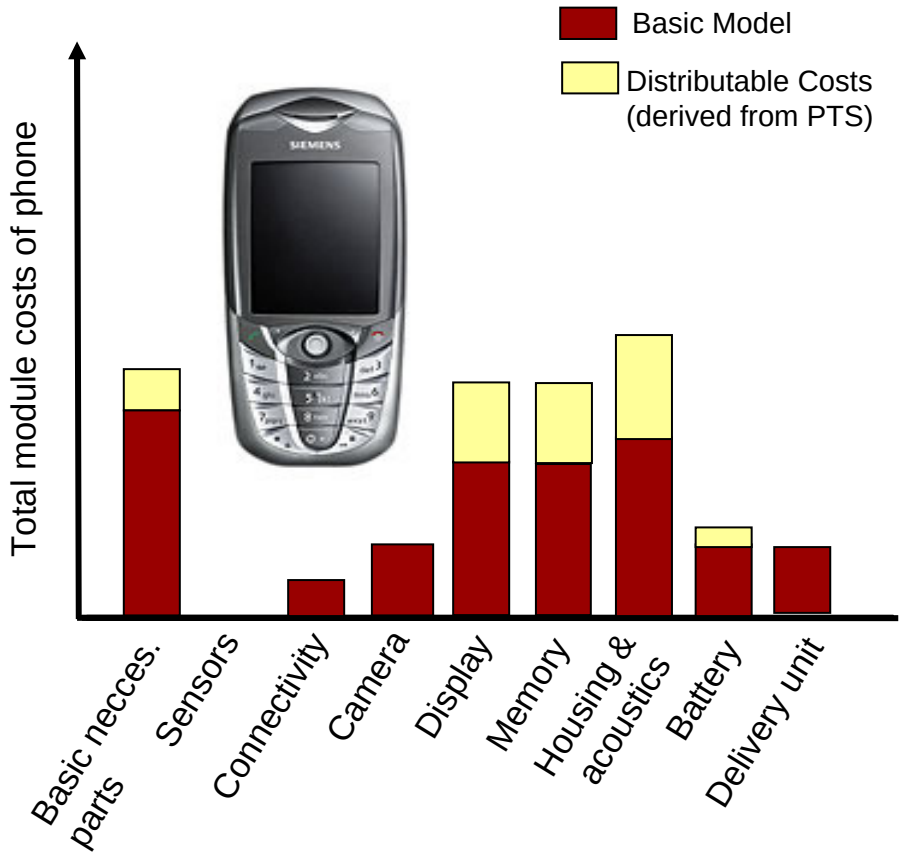




From Basic Model to customer specific product

Additional expenditures have to be conducted to support Performance and Enthusiasm Features





As the Basic Model only satisfies minimum requirements, the costs for the used modules should be constantly decreased (cost-down approach)

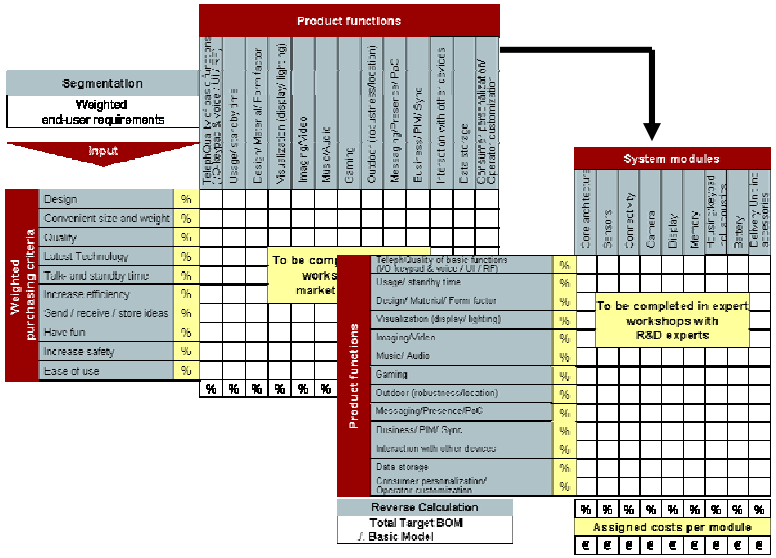
As the distributable cost is used to obtain models for differentiation, the value for those parts should be constantly increased (value-up approach)

Two alternatives have been created to conduct the PTS market view at MD

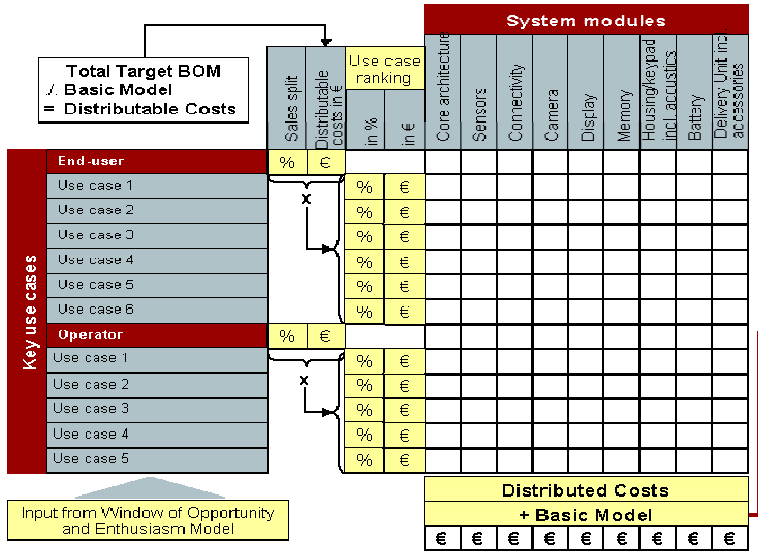
In case no PPA results (evaluation of purchasing criteria) is available, a use case approach offers an effective alternative calculation method

Product Target Splitting market view

Traditional two step approach

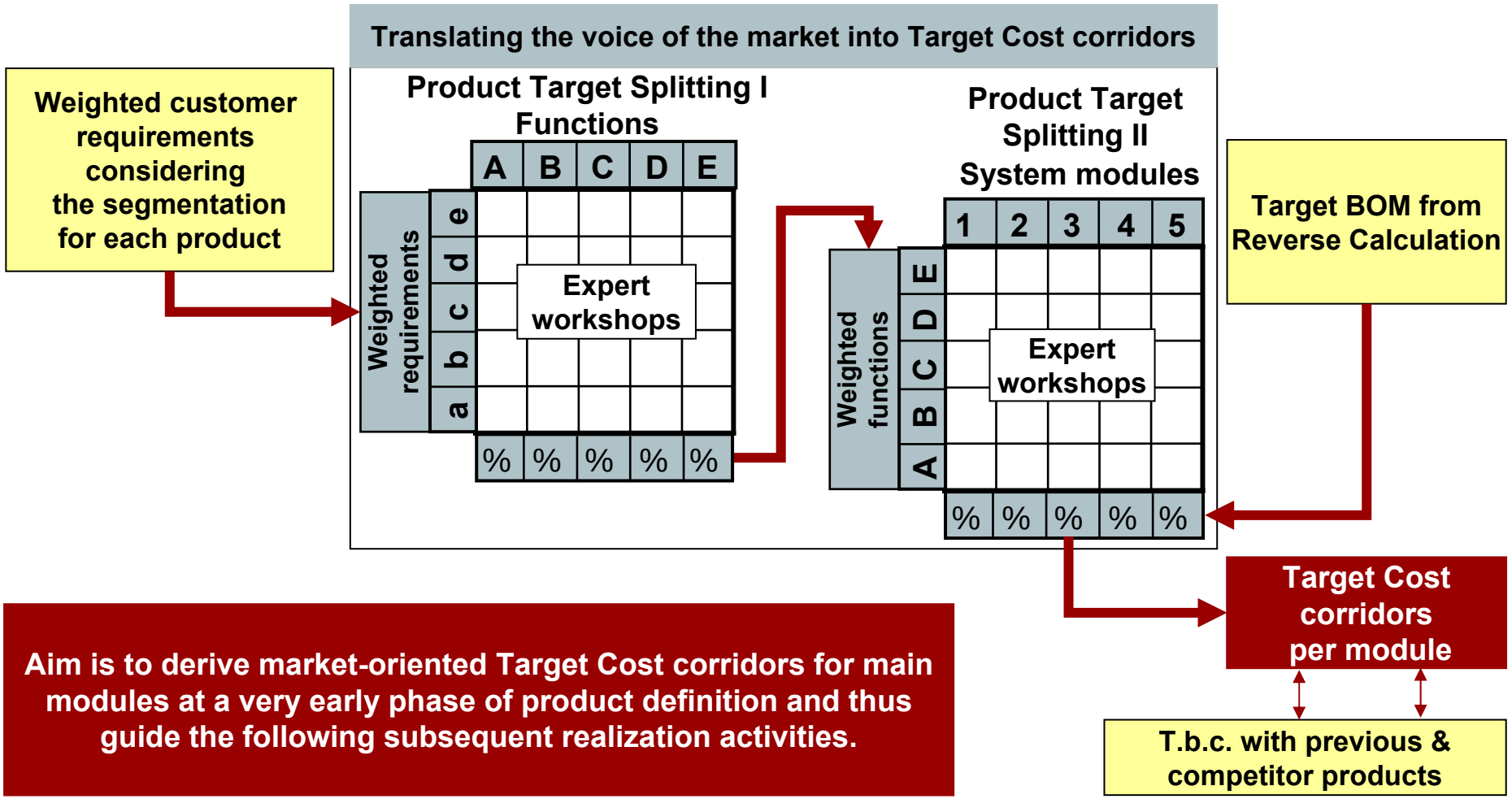


Adapted use case approach



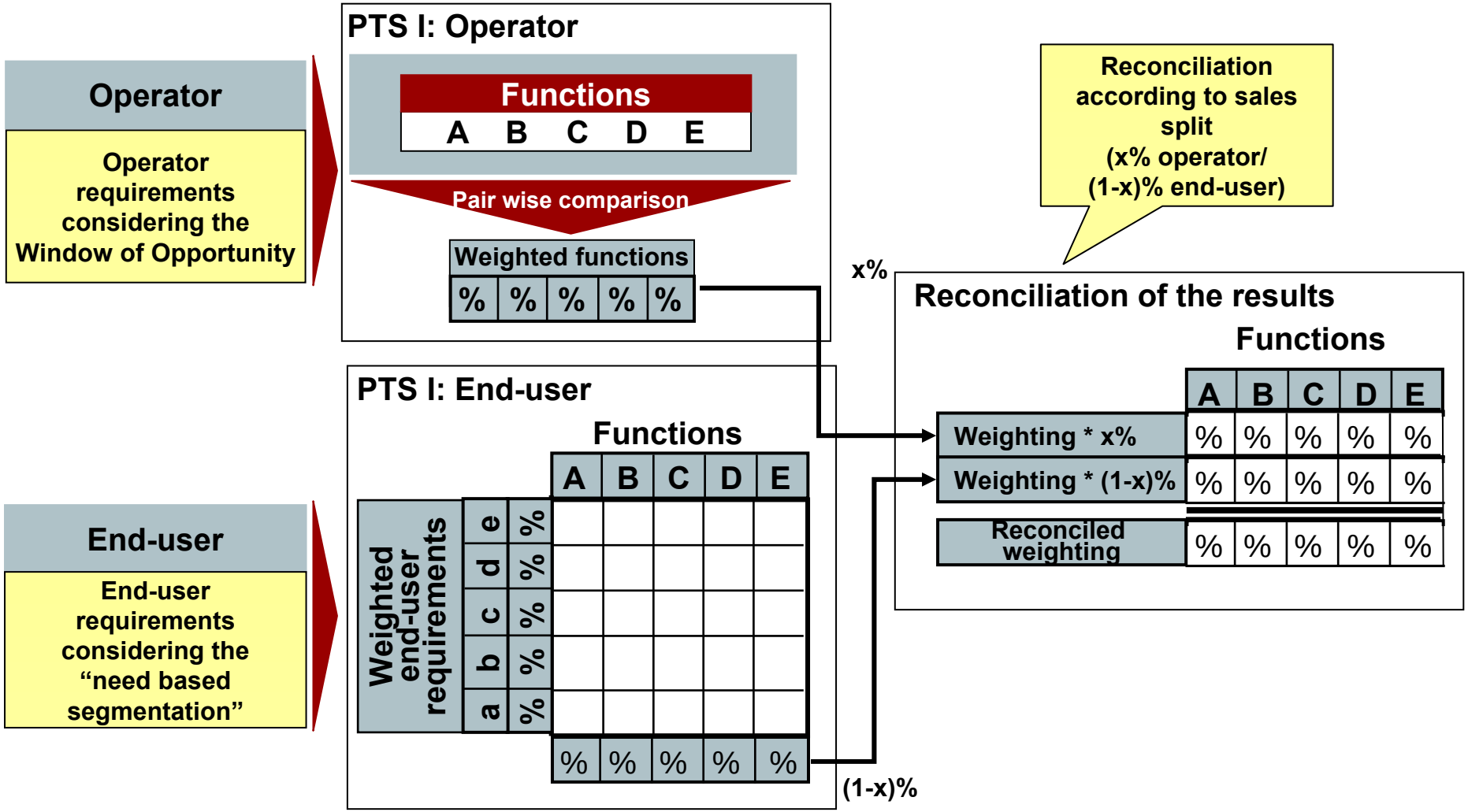
Visualization of Product Target Splitting (market view)

To calculate Target Cost corridors for modules the Product Target Splitting uses a two step approach



Reconciliation of Product Target Splitting for operators and end-users

To consider the relative importance of operator and end-user weighting, the sales split determined in the Enthusiasm Model is used for reconciliation of the results



Traditional Product Target Splitting (market view) I for end-users

The Product Target Splitting (market view) I for end-users translates the relative importance of purchasing criteria into the relative importance of product functions

End user research (e.g. PPA)

Weighted
end-user requirements

Input

Weighted purchasing criteria		Product functions: Make and receive calls	Appeal to user	Support imaging	Support music	Provide gaming	Provide outdoor and leisure features	Enable messaging	Support PIM and business applications	Offer additional services
Design	%									
Convenient size and weight	%									
Quality	%									
Latest Technology	%		**To be completed in expert workshops with marketing experts**							
Talk- and standby time	%									
Increase efficiency	%									
Send / receive / store ideas	%									
Have fun	%									
Increase safety	%									
Ease of use	%									
		%	%	%	%	%	%	%	%	%

Weights for importance of product functions

Percentages to be estimated

Output

Input for PTS II

Relative importance of product functions

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Product Target Splitting (Market view) II

Based on the relative importance of functional groups Target Costs for modules are assessed in a second step

Input from reconciled PTS I

Definition system modules

Comprehensive list of the physical entities that constitute a mobile phone

Product functions		System modules: Basic Necessary Parts	Sensors	Connectivity	Camera	Display	Memory	Housing/keypad incl. acoustics	Battery	Delivery Unit incl. accessories
	Make and receive calls	%								
	Appeal to user	%								
	Support imaging	%	To be completed in expert workshops with technical experts							
	Support music	%								
	Provide gaming	%								
	Provide outdoor and leisure features	%								
	Enable messaging	%								
	Support PIM and business applications	%								
	Offer additional services	%								
		%	%	%	%	%	%	%	%	%
	Assigned costs per module	€	€	€	€	€	€	€	€	€

Reverse Calculation

Distributable Costs

Input

Target Costs for modules

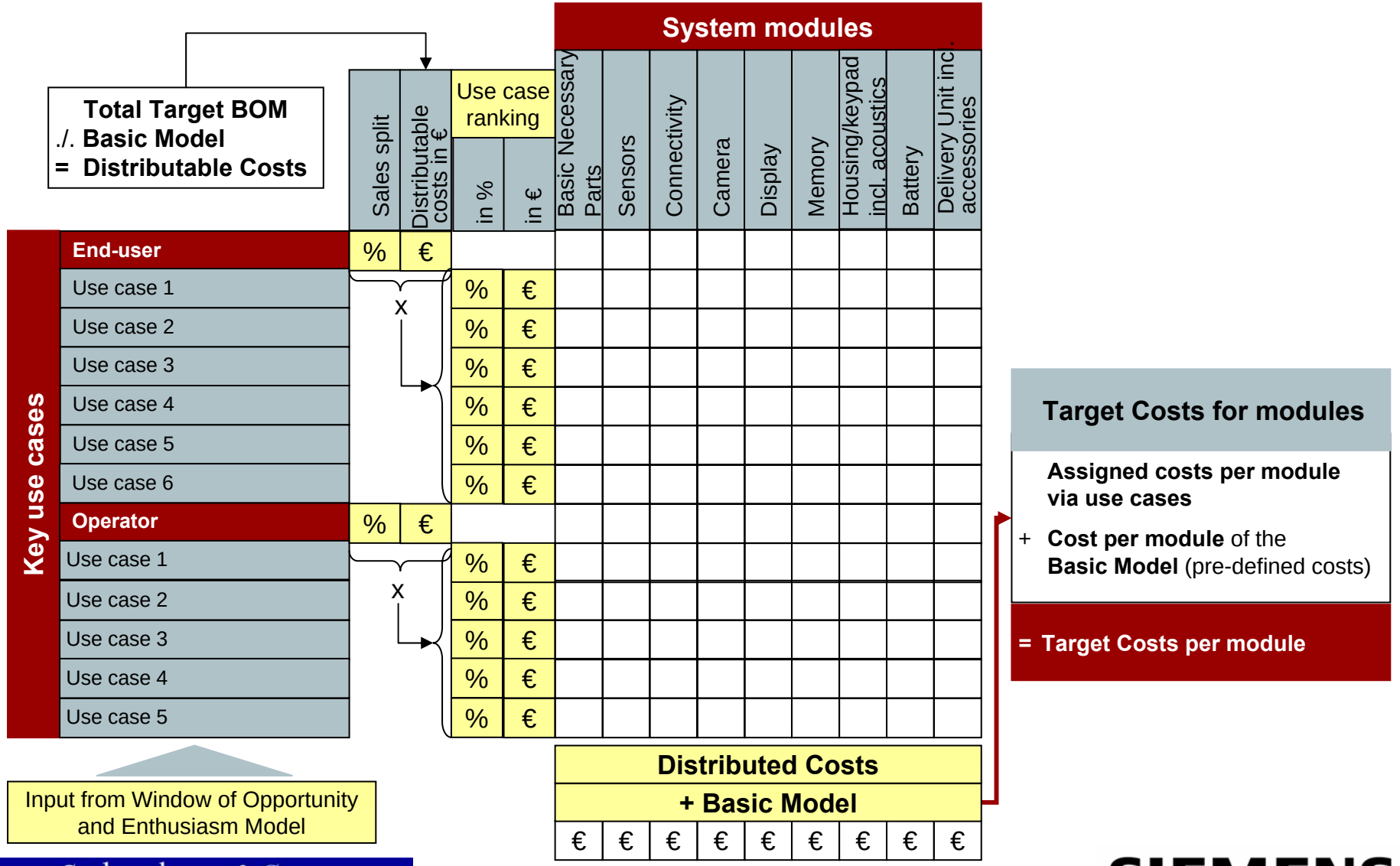
Assigned costs per module

\+ **Cost per module** of the **Basic Model** (pre-defined costs)

= Target Costs per module

Modified Product Target Splitting using a use case approach

Based on the identified use cases from the WoO, the Distributable Cost are assigned to the cost share of the Basic Model per module to determine the Target Costs for every single module



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Product Target Splitting calculation of results

Target Costs are determined for modules, through applying the relative importance of the functions on the distributable costs

Results from PTS

Relative Importance from PTS II		**15,8%**	**0,0%**	**13,0%**	**12,3%**	**18,4%**	**17,7%**	**21,1%**	**0,0%**	**1,7%**
		BNP (BSF + PCB + B-components)	**Sensor & other additional processor**	**Connectivity**	**Camera**	**Display**	**Memory**	**Housing incl. Accoustics**	**Battery**	**Delivery Unit**
Target BOM from RC	**98,97 €**									
BM 6	**59,72 €**	**18,60 €**	**0,00 €**	**3,20 €**	**4,42 €**	**16,45 €**	**4,88 €**	**8,27 €**	**1,97 €**	**1,93 €**
Results from PTS	39,25 €	6,20 €	0,00 €	5,11 €	4,84 €	7,22 €	6,93 €	8,28 €	0,00 €	0,68 €
Target Costs per module	**98,97 €**	**24,80 €**	**0,00 €**	**8,31 €**	**9,26 €**	**23,67 €**	**11,81 €**	**16,55 €**	**1,97 €**	**2,61 €**
Target Cost Range (min.)		**22,54 €**	**0,00 €**	**7,25 €**	**8,11 €**	**21,47 €**	**10,41 €**	**14,77 €**	**1,69 €**	**2,24 €**
Target Cost Range (max.)		**27,05 €**	**0,00 €**	**9,36 €**	**10,41 €**	**25,87 €**	**13,21 €**	**18,33 €**	**2,25 €**	**2,98 €**

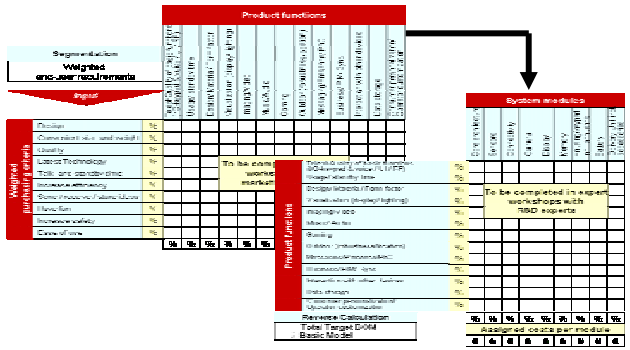
The Target Cost corridors determined by Product Target Splitting are used to determine the upper and lower limits of the Value Control Chart

Information frontload and supply of Product Target Splitting

The reliability of Product Target Splitting depends on transparent and dependable market input

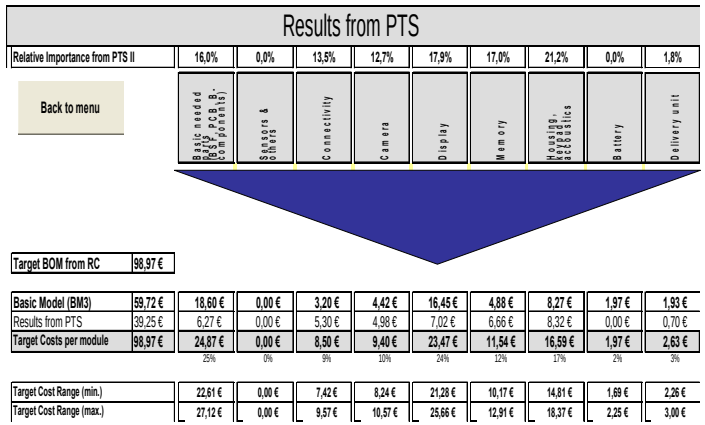
- Target group, key operators and sales split
- Weighted purchasing criteria
- Weighted functional operator requirements
- Functional target profile
- Basic Model
- Target BOM

Product Target Splitting I + II (market view)



- Relative importance weighting of product functions
- Crosscheck of Enthusiasm Model's functional target profile
- Target Costs for modules

Calculation of Target Costs Corridors per module



Relative Importance from PTS II		16,0%	0,0%	13,5%	12,7%	17,9%	17,0%	21,2%	0,0%	1,8%
Target BOM from RC	98,97 €									
Basic Model (BM3)	59,72 €	18,60 €	0,00 €	3,20 €	4,42 €	16,45 €	4,88 €	8,27 €	1,97 €	1,93 €
Results from PTS	39,25 €	6,27 €	0,00 €	5,30 €	4,98 €	7,02 €	6,66 €	8,32 €	0,00 €	0,70 €
Target Costs per module	98,97 €	24,87 €	0,00 €	8,50 €	9,40 €	23,47 €	11,54 €	16,59 €	1,97 €	2,63 €
		25%	0%	9%	10%	24%	12%	17%	2%	3%
Target Cost Range (min.)		22,61 €	0,00 €	7,42 €	8,24 €	21,28 €	10,17 €	14,81 €	1,69 €	2,26 €
Target Cost Range (max.)		27,12 €	0,00 €	9,57 €	10,57 €	25,66 €	12,91 €	18,37 €	2,25 €	3,00 €

- Target Costs for modules

- Target Cost corridors for modules

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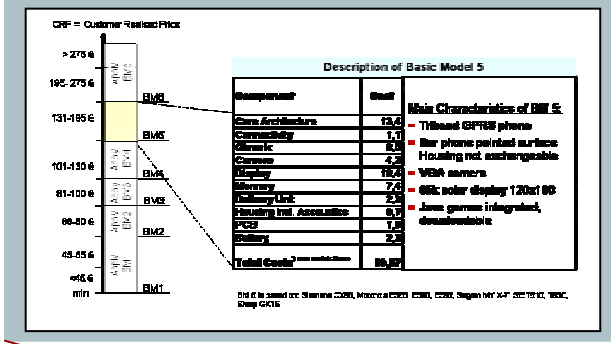
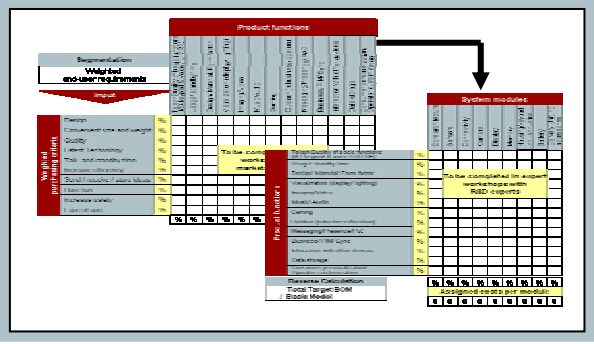
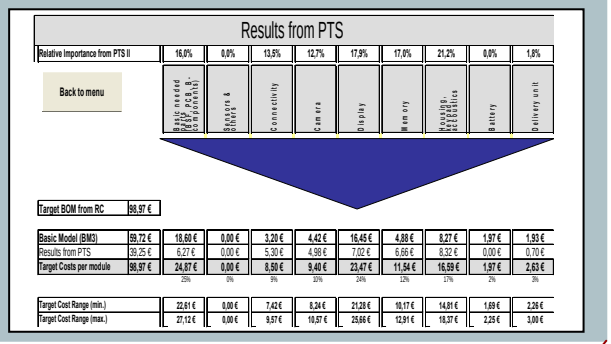
Key templates for Product Target Splitting

The defined templates that are used in the Enthusiasm Model process are documenting the final results.

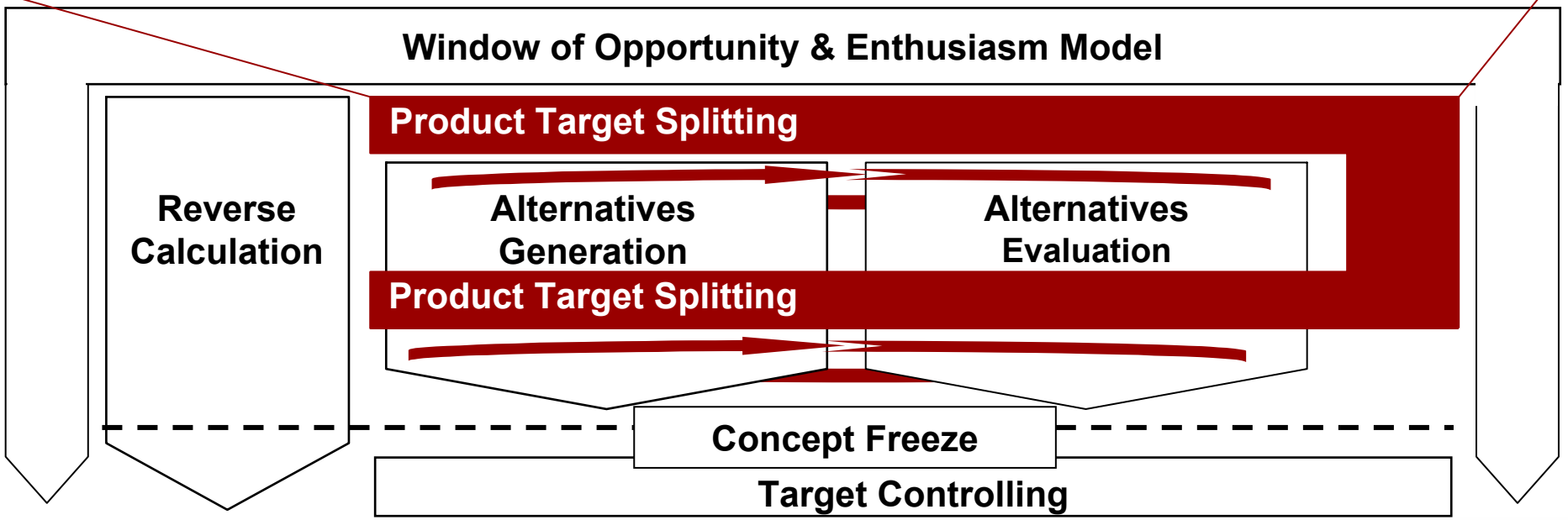
Basic Model	Product Target Splitting I + II (market view)	Calculation of Target Costs per module







Window of Opportunity & Enthusiasm Model



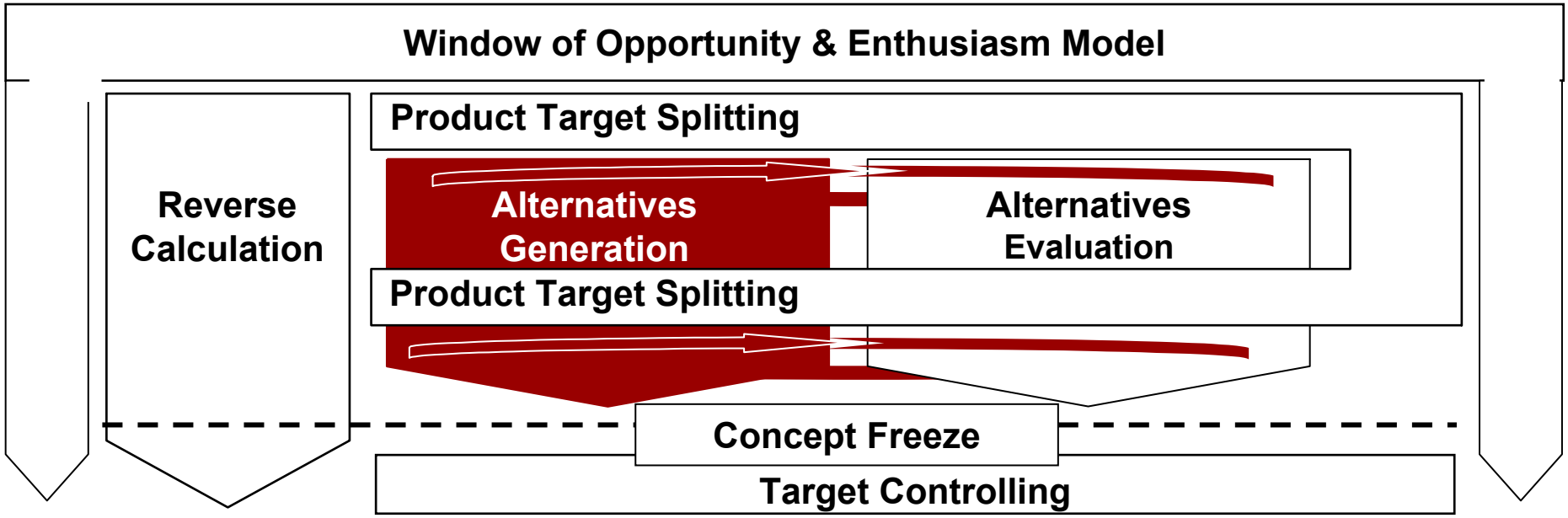
Agenda

- Objective and structure of the training
- General Target Costing overview
- The Target Costing toolset
  - Window of Opportunity and Enthusiasm Model
  - Reverse Calculation
  - Product Target Splitting
  - **Alternatives Generation**
  - Alternatives Evaluation
  - Target Controlling
- Integration of Target Costing toolset into the MD process landscape
- Open questions and discussion
- Conclusion

The Target Costing concept

Based on results of the Enthusiasm Model, indications of the Reverse Calculation and the Product Target Splitting, the Alternatives Generation supplies input for the Alternatives Evaluation

Market Research



The **Alternatives Generation**:

- aims at **identifying favorable product, module and component alternatives** which not only **satisfy the requirements** set by the predefined **Window of Opportunity** but also **meet** the **cost guidelines** set by the Reverse Calculation and Product Target Splitting.

Alternatives Generation at MD between technology push and market pull

Generating alternatives for MD means balancing technological developments and feasibility versus end-user / operator desires while meeting the targeted Window of Opportunity

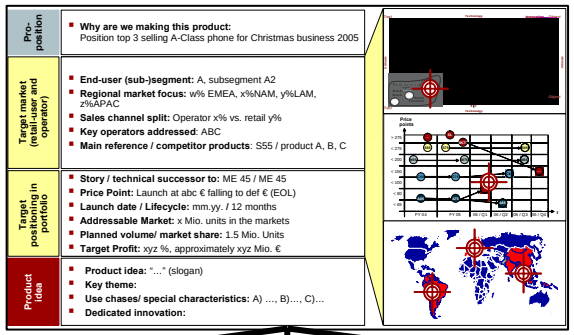
Technology Push

- Form the market through innovation leadership
- State-of-the-art technical feasibility
- The technical feasible translated into real end-user and operator value drives future usage

Market Pull

- "Customer value-orientated innovation" in rapidly changing preferences environment
- Trends from investment- and consumer goods influence mobile phone market at the rim between both "worlds"

Alternatives Generation



Alternative 1 | **Alternative 2** | **Alternative n**

Alternatives Generation throughout the product development process

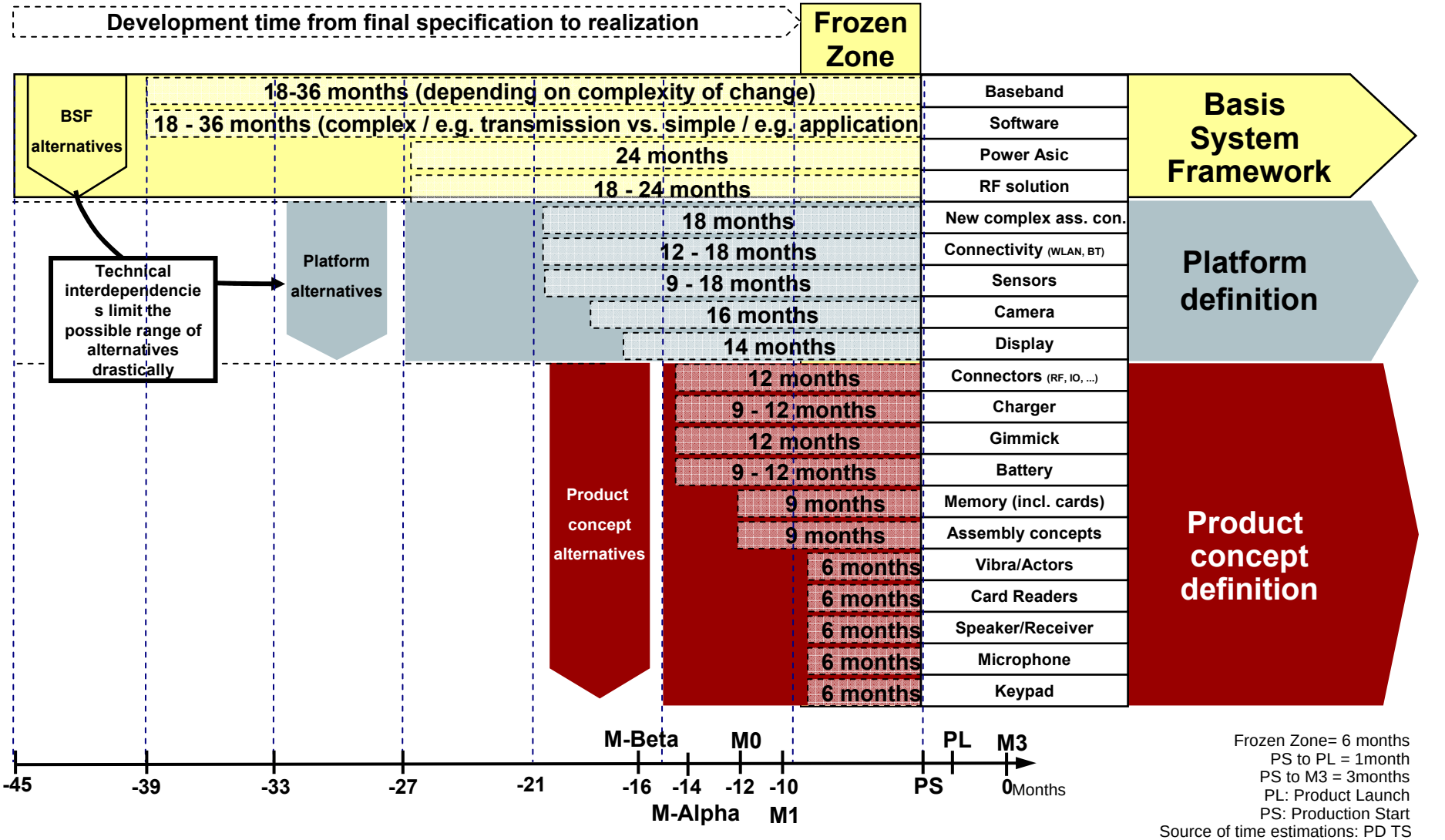
As the level of detail along the product development process increases, the Alternatives Generation has to be conducted for each stage with a different scope

CTO process	Roadmapping / Malpha process	
		
The CTO processes are supported with AG/AE regarding: ■ **Innovation** alternatives ■ **Platform** alternatives	■ Generation and evaluation of **product concept** alternatives ■ Supported by **Target Costing**	■ Generation and evaluation of **module/component** alternatives

After each generation and evaluation the decision is **frozen and handed over** to the next decision process.

Development lead times relation to TTM set the range of alternatives

The different development lead times, time to market and platform thinking at MD set the restriction of Alternatives Generation and Evaluation



Frozen Zone= 6 months
PS to PL = 1month
PS to M3 = 3months
PL: Product Launch
PS: Production Start
Source of time estimations: PD TS

Steps of Alternatives Generation for product concepts

Alternatives Generation as a methodology of triggering and controlling creativity and future-bound thinking needs to be well organized, prepared and executed in order to present feasible results

Input/ preparation

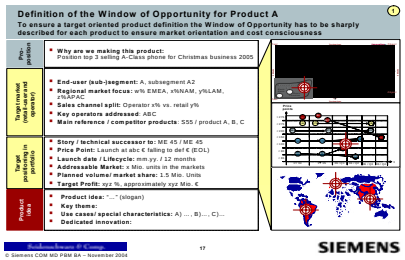
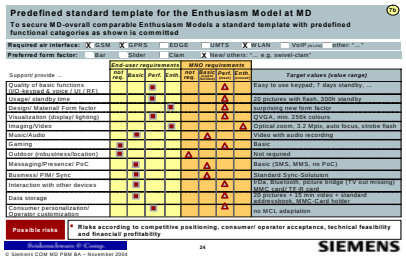
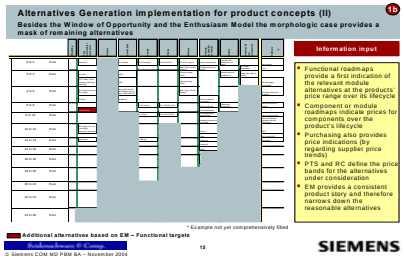
Tool application/ procedure

Output/ results

1	**Setting of framework by** - Window of Opportunity - Enthusiasm Model - Cost Module Matrix (incl. target cost setting) **and definition of precise objectives**	▪ What product themes will not be in focus? ▪ Which are the critical market requirements and respective technical values? ▪ What is the defined cost frame to generate profitable product concepts (value driven development)? ▪ What are the key questions and “knock-out criteria”
2	**Brainstorming to determine alternative product concepts**	▪ Which new functional topics do we want to address? ▪ Are there operator requirements really mandatory? ▪ Are their different solutions to address the key theme? ▪ What is happening in adjacent industries (trends)?
3	**Discussion and clustering of generated alternative product concepts ideas**	▪ Which ideas can be merged or clustered to overall product concepts? ▪ Are there aspect missing to define competitive product concepts?
4	**Selection of feasible product concepts by ranking at least top 3 alternatives**	▪ Do the alternatives fit the precise objektives? ▪ Based on a cross-functional discussion of the whole product team which alternatives are perceived to be the most interesting?
5	**Specification of selected product concept alternatives**	▪ What product themes will not be in focus of product development? ▪ What financial guidelines do we have? ▪ Is the Window of Opportunity/ TTM matched?

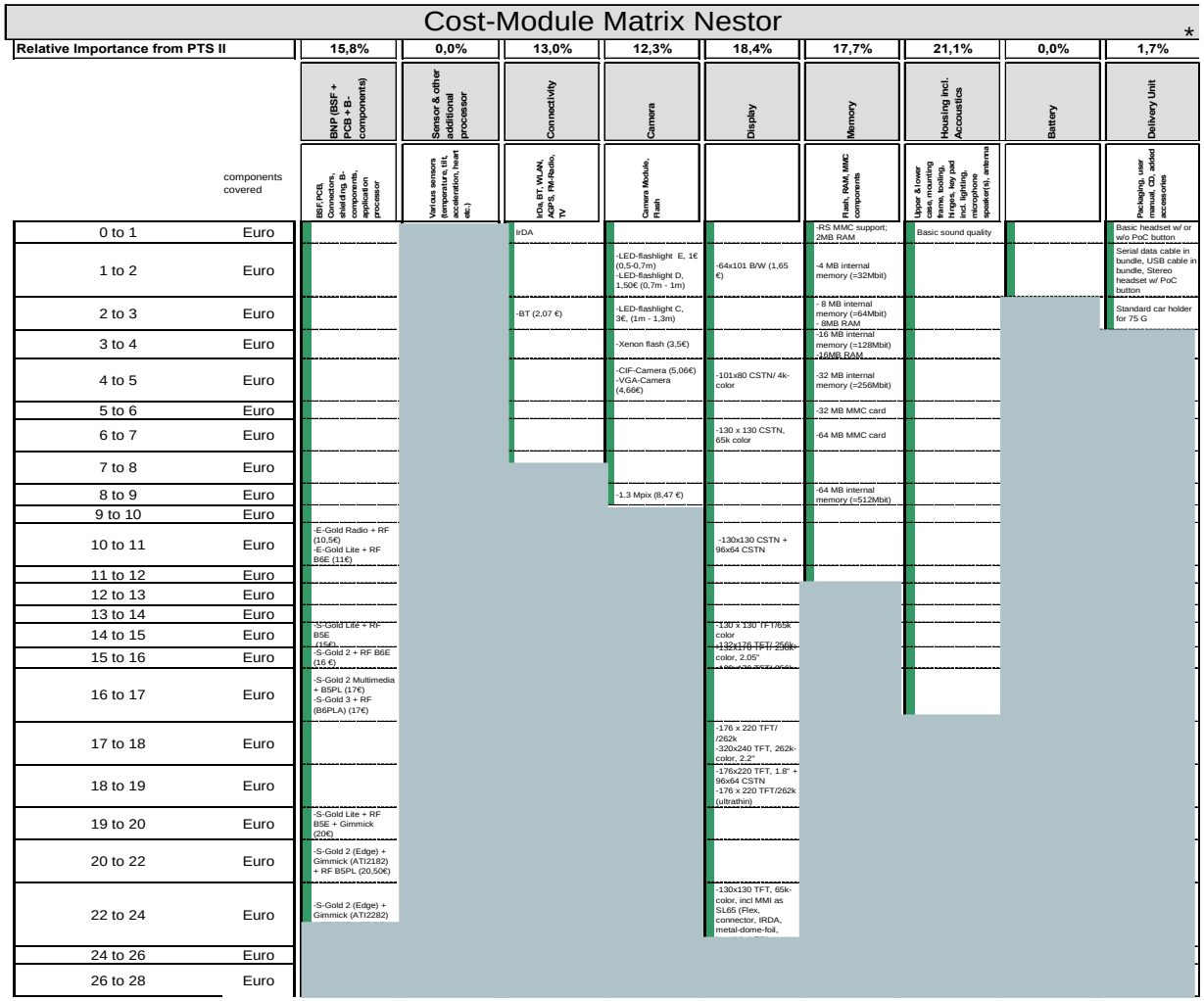
Alternatives Generation implementation for product concepts (I)

Besides the Window of Opportunity and the Enthusiasm Model the Cost Module Matrix provides a mask of remaining alternatives

Setting of framework		Definition of precise objectives
Window of Opportunity		Definition of precise objectives concerning ▪ the target market, ▪ the target portfolio positioning and ▪ the product idea.
Enthusiasm Model		Definition of precise objectives concerning ▪ the innovation and themes roadmaps, ▪ the real mandatory operator requirements, ▪ etc.
Cost Module Martix		Definition of precise objectives concerning ▪ the defined target costs on module level, ▪ possible cost reduction issues, ▪ etc.
“Knock-out criteria”		▪ Technological aspects: ▪ others:

Alternatives Generation implementation for product concepts (II)

The Cost-Module Matrix defines the range of possible features and components for the creation of product concept alternatives



Cost-Module Matrix Nestor

Relative Importance from PTS II		15,8%	0,0%	13,0%	12,3%	18,4%	17,7%	21,1%	0,0%	1,7%
		BNP (BSF + PCB + B-components)	Sensor & other additional processor	Connectivity	Camera	Display	Memory	Housing incl. Accoustics	Battery	Delivery Unit
components covered		BSF,PCB, Connectors, shielding, B-components, application processor	Various sensors (temperature, tilt, acceleration, heart etc.)	IrDa, BT, WLAN, AGPS, FM-Radio, TV	Camera Module, Flash		Flash, RAM, MMC components	Upper & lower case, mounting frame, hinges, key pad incl. lighting, microphone speaker(s), antenna		Packaging, user manual, CD, added accessories
0 to 1	Euro			IrDA			-RS MMC support; 2MB RAM	Basic sound quality		Basic headset w/ or w/o PoC button
1 to 2	Euro				-LED-flashlight E, 1€ (0,5-0,7m) -LED-flashlight D, 1,50€ (0,7m - 1m)	-64x101 B/W (1,65 €)	-4 MB internal memory (=32Mbit)			Serial data cable in bundle, USB cable in bundle, Stereo headset w/ PoC button
2 to 3	Euro			-BT (2,07 €)	-LED-flashlight C, 3€, (1m - 1,3m)		- 8 MB internal memory (=64Mbit) - 8MB RAM			Standard car holder for 75 G
3 to 4	Euro				-Xenon flash (3,5€)		-16 MB internal memory (=128Mbit) -16MB RAM			
4 to 5	Euro				-CIF-Camera (5,06€) -VGA-Camera (4,66€)	-101x80 CSTN/ 4k-color	-32 MB internal memory (=256Mbit)			
5 to 6	Euro						-32 MB MMC card			
6 to 7	Euro					-130 x 130 CSTN, 65k color	-64 MB MMC card			
7 to 8	Euro									
8 to 9	Euro				-1.3 Mpix (8,47 €)		-64 MB internal memory (=512Mbit)			
9 to 10	Euro									
10 to 11	Euro	-E-Gold Radio + RF (10,5€) -E-Gold Lite + RF B6E (11€)				-130x130 CSTN + 96x64 CSTN				
11 to 12	Euro									
12 to 13	Euro									
13 to 14	Euro									
14 to 15	Euro	-S-Gold Lite + RF B5E (15€)				-130 x 130 TFT/65k color -132x176 TFT/ 256k-color, 2.05"				
15 to 16	Euro	-S-Gold 2 + RF B6E (16 €)								
16 to 17	Euro	-S-Gold 2 Multimedia + B5PL (17€) -S-Gold 3 + RF (B6PLA) (17€)				-176 x 220 TFT/ /262k -320x240 TFT, 262k-color, 2.2"				
17 to 18	Euro					-176x220 TFT, 1.8" + 96x64 CSTN -176 x 220 TFT/262k (ultrathin)				
18 to 19	Euro									
19 to 20	Euro	-S-Gold Lite + RF B5E + Gimmick (20€)								
20 to 22	Euro	-S-Gold 2 (Edge) + Gimmick (ATI2182) + RF B5PL (20,50€)				-130x130 TFT, 65k-color, incl MMI as SL65 (Flex, connector, IRDA, metal-dome-foil,				
22 to 24	Euro	-S-Gold 2 (Edge) + Gimmick (ATI2282)								
24 to 26	Euro									
26 to 28	Euro									

Information input

- **Functional roadmaps** provide a first **indication** of the relevant **module alternatives** at the products' price range over its lifecycle
- **Component** or module **roadmaps indicate prices** for components over the product's lifecycle
- **Purchasing** also **provides price indications** (by regarding supplier price trends)
- **PTS** and **RC define** the **price bands** for the alternatives under consideration
- **EM provides** a consistent product story and therefore **narrows** down the **reasonable alternatives**

Alternatives Generation implementation for product concepts (III)

After review of the relevant material various conceptual alternatives have to be generated, selected and specified during an AG workshop

Concept brainstorming	Concept Discussion & Clustering	Concept ranking	Concept detailing
Objective ▪ Pool of creative ideas for product concepts	**Objective** ▪ Structuring of concept ideas in clusters ▪ Slogan for each cluster	**Objective** ▪ Pre-selection of concept ideas for in-depth evaluation	**Objective** ▪ Description of functional characteristics for each alternative
Success factors ▪ Good preparation and clear objectives ▪ No discussions ▪ Big picture thinking in concepts, not in details ▪ Experienced cross-functional teams	**Success factors** ▪ Stay open-minded even if concepts do not seem feasible on the first sight ▪ Set up alternatives clusters that base on market needs and/ or technical reach	**Success factors** ▪ Encourage diversity of selected alternatives ▪ Mix of common and exceptional ideas ▪ Rational-based selection	**Success factors** ▪ Availability of experts ▪ Detailed documentation of results

PDM as facilitator
(Structured approach of workshop)

Alternatives Generation implementation for product concepts (IV)

The results of the Alternatives Generation have to be specified in a structured way to allow a feasible Alternatives Evaluation

Product functions support/ provide …	Nestor Base Case	Nestor Design Phone	Nestor Connector Phone	Nestor Camera Phone
Make and receive calls (Quality of basic function – I/O/ UI/ RF)	Tri band / high talk & standby time			
Appeal to user (Design/ Material / Form factor)	classic & elegant metal housing	Thinnest (17mm) metal housing & leather/ rubber		Thicker housing than base case (21 mm)
Imaging and video	VGA camera, no Flash, 2x digital zoom			1.3 Mpix camera with 3x optical zoom
Music and audio	Common music files supported	MP3 ringtones supported	Surround sound speaker system	
Gaming	Provide gaming			
Outdoor and leisure features (e.g. sensors)	Not wanted			
Enable messaging	Enable messaging			
Business applications (incl. PIM and Sync)	Standard organizer functionality			
Additional services (e.g. location services)	Not wanted			
Visualization (Display)	176x220, TFT 2,1', 256k	132x176, TFT, 1,8', 265k	176x220, TFT 2,1', 256k	176x220, TFT 2,1', 256k
Usage- and standby time	300 h (Li-Ion 750 mAh)			400 h (Li-ion 900 mAh)
Interaction with devices	Slim Lumberg, IrDa	New Lumberg solution		
Store data	32MB, MMC slot		MMC card 32MB bundled	MMC card 32MB bundled
Consumer personalization/ Operator customization	Main operator UI supported			clubbers wristband

Responsibles for Alternatives Evaluation

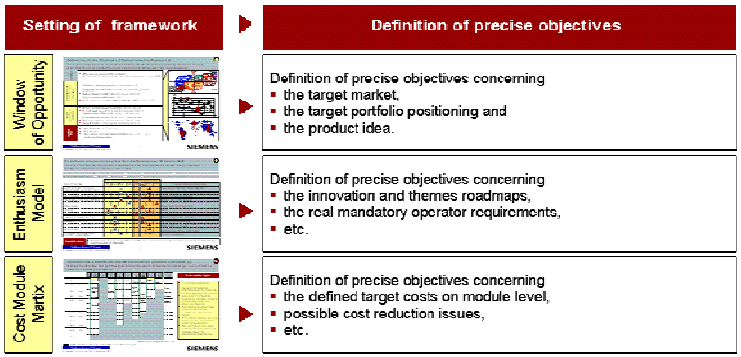
Strategic and Portfolio fit	Financial fit	Competitiveness Operators	Competitiveness End-Users	Technical Feasibility	Resource fit	Time to Market fit

Information frontload and supply of the Alternatives Generation

The reliability of the Alternatives Generation depends on the quality of market input, and the scope of the set framework

- Functional roadmaps
- Cost (BOM) for all modules and components
- Target Cost corridors for modules
- Generated options for features and functional targets

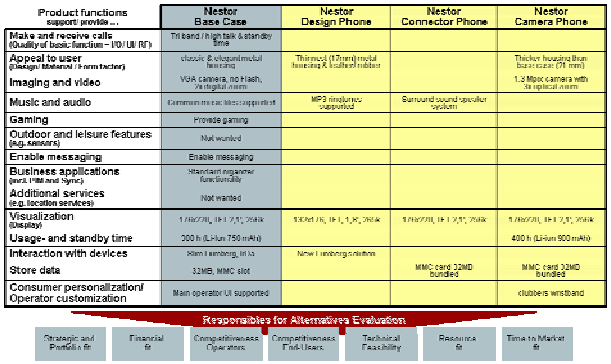
Framework and objectives of the AG



- Alternatives for product concepts (incl. fixed alternatives for A priority modules)
- Cost (BOM) estimation per module
- Discrepancies in “Steckbrief” per alternative

- Combination of modules and components constituting the generated alternatives

In depth description of the generated alternatives

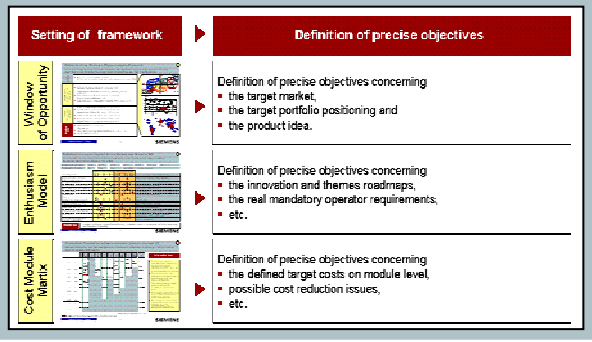


- In depth description of the generated alternatives incl. respective responsibles

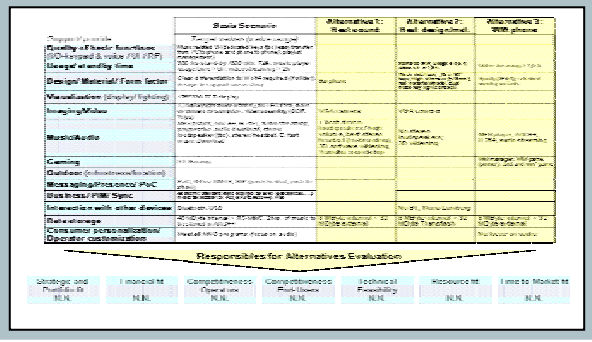
Key templates for the Alternatives Generation

A set of standard templates is used to ensure a consistent quality of the results' structure

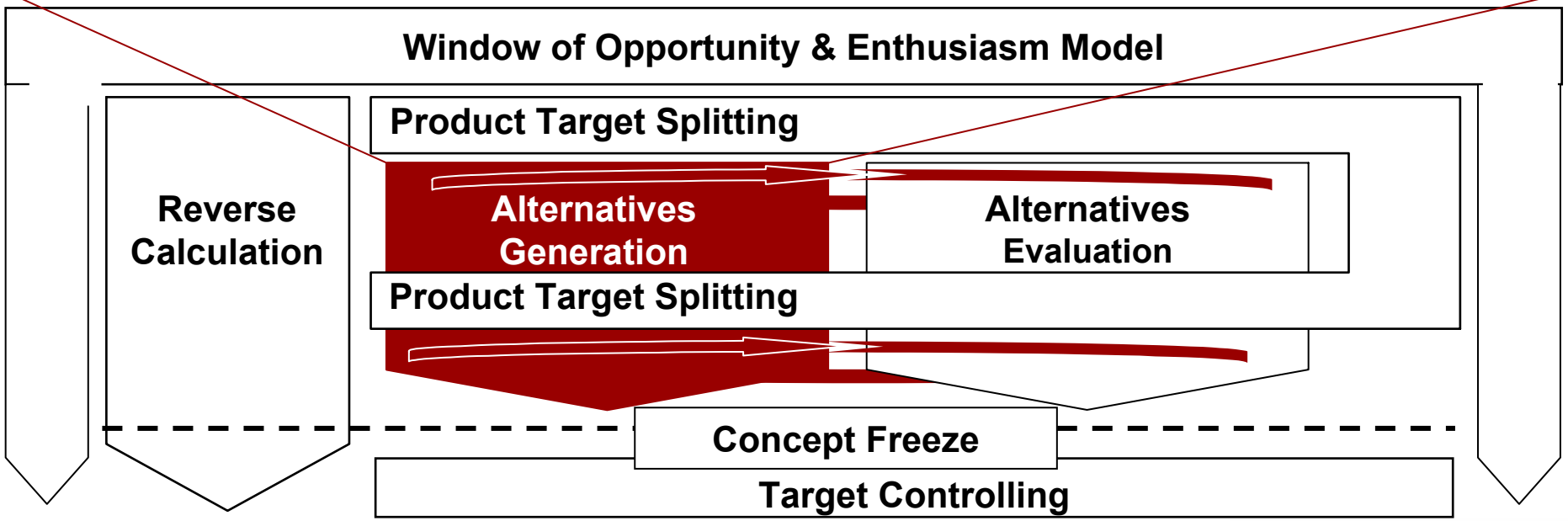
Framework and objectives of the AG



In depth description of the generated alternatives



Window of Opportunity & Enthusiasm Model



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- Objective and structure of the training
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  - **Alternatives Evaluation**
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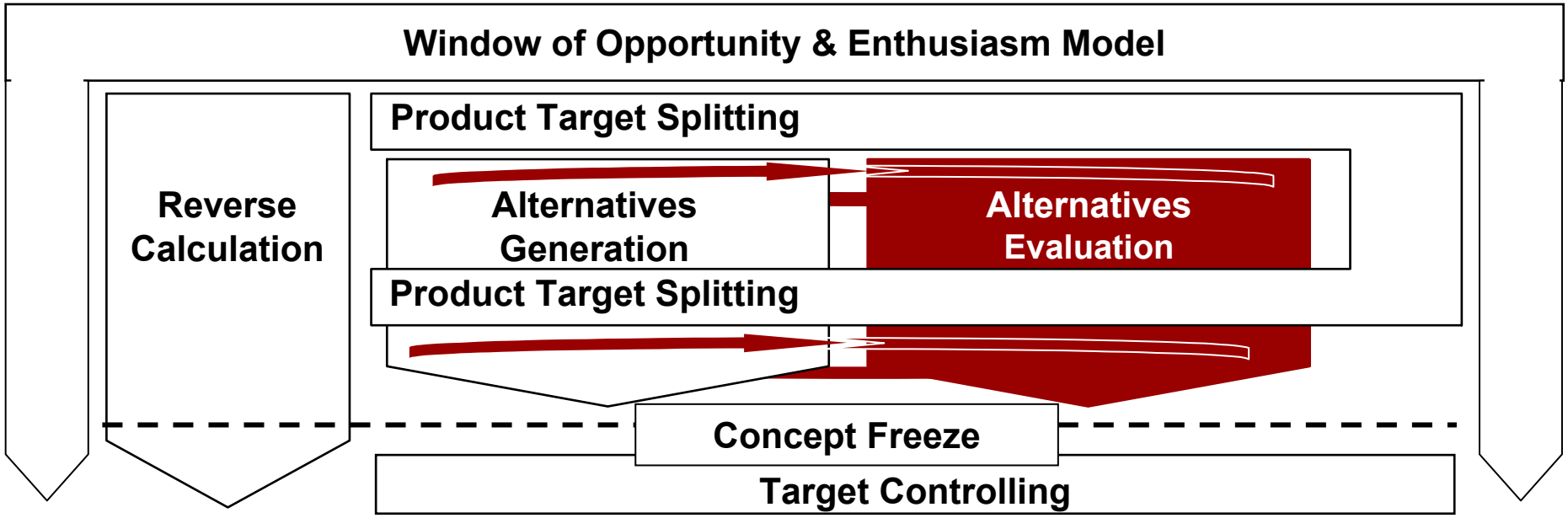
The Target Costing concept

The Alternatives Evaluation uses the input of the Alternatives Generation to identify the best alternative

Market Research

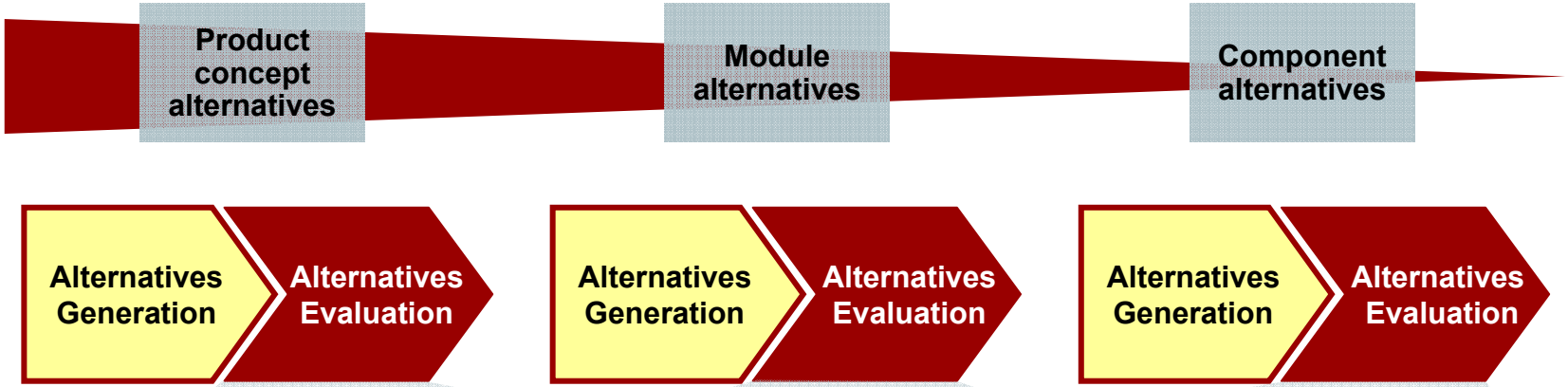


The Alternatives Evaluation:

- performs a **standardized analysis** of generated alternatives.
- bases the evaluation on **measurable criteria** according to which different alternatives are **evaluated** and ranked by the use of a scoring model.

Methodology of the Alternatives Evaluation (I)

Each Alternatives Evaluation comprises 5 working steps, starting with the criteria selection and concluding with the decision making

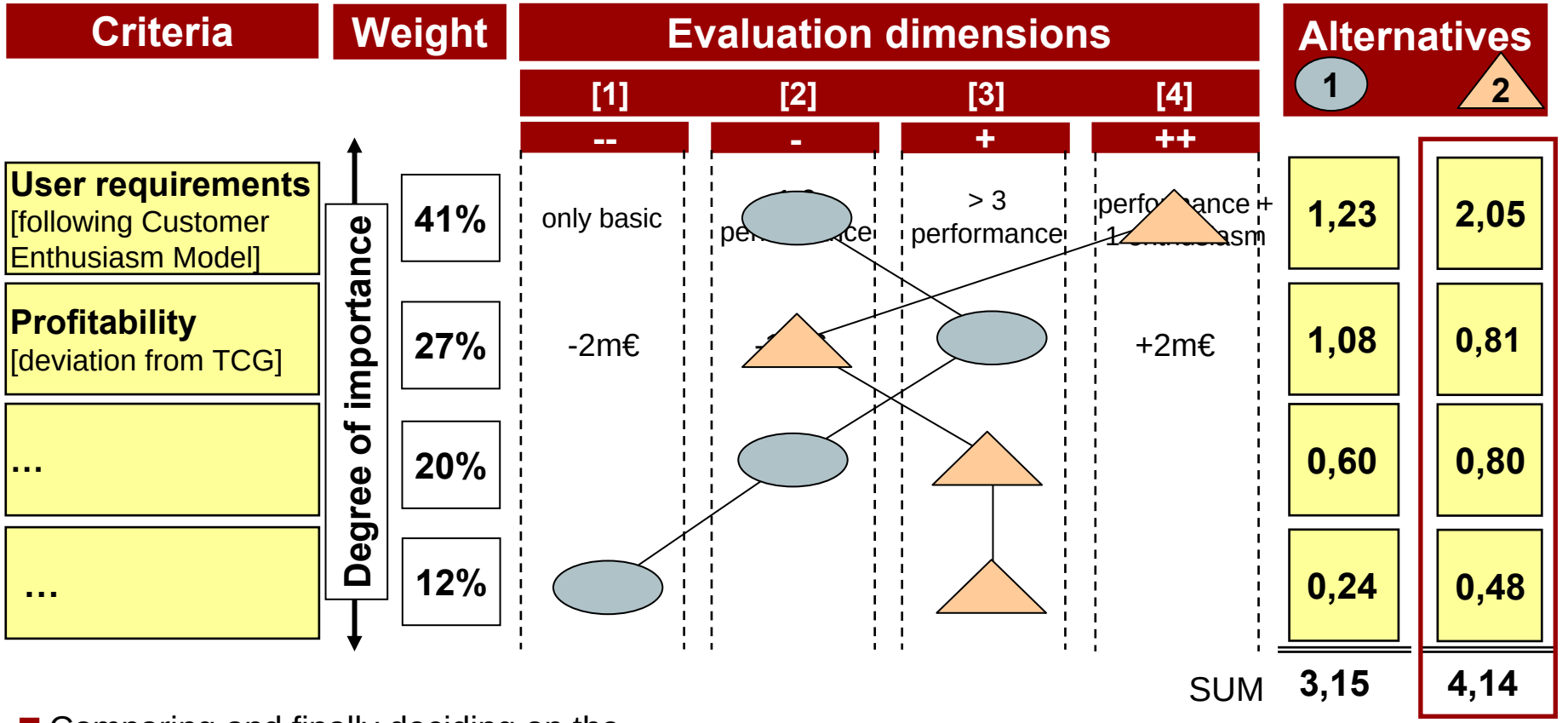


Steps

1	**Selection** & description of a set of evaluation criteria
2	Definition of **dimensions** with corresponding explanation
3	**Evaluation** of all alternatives including explanation
4	**Weighting** of the criteria
5	**Decision** making

Methodology of the Alternatives Evaluation

All alternatives are mapped into one chart, scored and ranked, to determine the most favorable one



- Comparing and finally deciding on the alternative with highest ranking.
- When various alternatives are closely scored, the fiber curve can help in the decision process.
- Scoring by **multiplying dimensions** (-- =1 to ++ =4) with **weights** (0 to 100%)
- Ranking by **summing all scores** per alternative

Criteria catalogue at MD

Predefined sets of criteria guarantee a more transparent evaluation process and a better comparability of different evaluated alternatives

Main criteria	Sub-criteria (example)	Dimensions (example)
Financial fit	Development manpower	- - New, not yet available
Strategic fit	**Technology / competences available**	- Externally available
Market requirements' fit	Production capacity	+ In-house pre-development experience
Resource feasibility fit	Development incl. production preparation time	+ + In-house production experience
Technical solutions' fit	External resources	
Time To Market fit		

For each type of Alternatives Evaluation a pre-defined criteria catalogue is available. The **6 main criteria are fixed**. The **sub-criteria can be adapted,** but only **prior** to evaluation. Once the evaluation started, the criteria are **not allowed** to be changed.

Alternatives Evaluation: Main criteria and respective sub-criteria

To conduct the evaluation of the defined alternatives every single relevant sub-criterion has to be evaluated for every singe alternative

Alternatives Evaluation for Product Concepts

to be filled in

contains wrong value

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	Criteria	Weight	Alternative 1	Alternative 2	Alternative 3	Alternative 4
1	**Financial fit**					
	Overall score / weight	**24%**	**3,2**	**2,6**	**2,0**	**3,0**
1.1	Target Cost Gap per unit (% deviation of average)	100%	4	3	2	3
-- = 1	TCG < 0 and |TCG| > Target Profit		Target profit 44,5 Mio Eur; TCG -18 Mio Eur = 40%	-1 mio dev. Costs, 0 Eur licence costs, -2 Eur display and -0,5 inductive attena and -0,3 for IRDA and 0,5 for speaker and +7 design	-0 mio dev. Costs, 1 Eur licence costs for souround sound, + 1,5 speaker and 4 Eur memory and + 2,5 USB cable + 1,9 BT	+1 mio dev. Costs, 0 Eur licence costs, + 4,5 camera Eur
- = 2	TCG < 0 and |TCG| b/w 30%-80% of Target Profit					
+ = 3	TCG < 0 and |TCG| > 80% of Target Profit					
++ = 4	TCG ± 0 or TCG > 0					
1.2	Target volume achievement (from WoO)	70%	2	2	2	3
-- = 1	volume not achievable		high volume pressure through missing enthusiasm feature: -15%	some volume pressure through portfolio canabilization: -5%	high volume pressure through low enthusiasm feature: -10%	no volume pressure: + 5,5%
- = 2	volume at risk					
+ = 3	volume achievable					
++ = 4	volume exceeded					
2	**Strategic portfolio fit**					
	Overall score / weight	**14%**	**2,5**	**1,8**	**2,5**	**2,8**
2.1.	Fit to selected price point (from WoO)	100%	4	4	4	4
-- = 1	more than 10% off		CX price point is at the upper mid class range of operators of 100-200 EUR			
- = 2	up to ±5% off					
+ = 3	up to ±5% off					
++ = 4	exact fit					
2.2	Fit of product story/theme to segment (from WoO)	100%	3	2	3	3

Alternatives Evaluation: Financial evaluation of alternatives

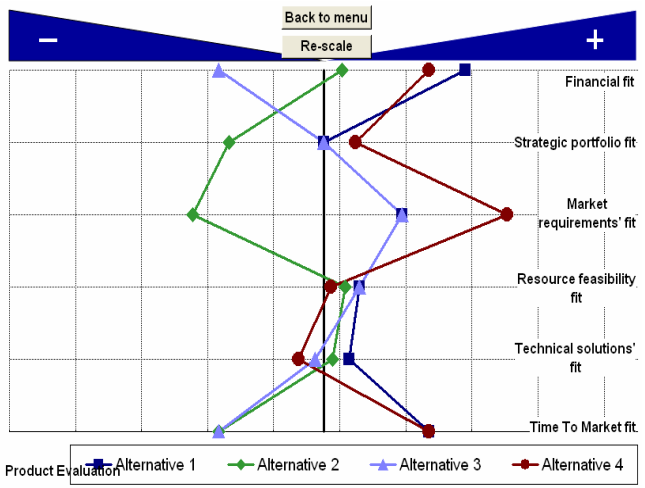
The evaluation of the criterion financial fit is supported by a dedicated calculation by the Reverse Calculation tool

Reverse Calculation - Alternatives Evaluation -	Nestor Base Case	Nestor Design Phone	Nestor Connector Phone	Nestor Camera Phone
	Lifecycle Total	Lifecycle Total	Lifecycle Total	Lifecycle Total
Units	**3.500.000**	**3.400.000**	**3.500.000**	**3.700.000**
Target Turnover	**603.000.000**	**585.771.429**	**603.000.000**	**637.457.143**
Price (average)	**172,29**	**172,29**	**172,29**	**172,29**
Target Profit Total	**45.225.000**	**43.932.857**	**45.225.000**	**47.809.286**
Allowable Costs	**557.775.000**	**541.838.571**	**557.775.000**	**589.647.857**
Overhead I	**7.839.000**	**7.615.029**	**7.839.000**	**8.286.943**
Administration	7.839.000	7.615.029	7.839.000	8.286.943
Overhead II	**83.376.500**	**80.114.314**	**83.376.500**	**88.800.871**
Development (indirect)	7.700.000	6.600.000	7.700.000	8.800.000
Marketing (Pull + SF)	24.662.700	23.958.051	24.662.700	26.071.997
Selling Expense	28.160.100	27.355.526	28.160.100	29.769.249
SCM Costs	16.642.800	16.167.291	16.642.800	17.593.817
Other COGS	6.210.900	6.033.446	6.210.900	6.565.809
Directly Influenceable Costs (DIC)	**466.559.500**	**454.109.229**	**466.559.500**	**492.560.043**
Development (direct)	7.000.000	6.000.000	7.000.000	8.000.000
Marketing (Push + HQ)	8.575.000	8.575.000	8.575.000	8.575.000
Service Costs	15.295.000	15.295.000	15.295.000	15.295.000
Manufacturing Costs	**421.251.600**	**425.195.840**	**452.751.600**	**461.973.120**
Manufacturing Costs per unit	**120,36**	**125,06**	**129,36**	**124,86**
BOM per unit	95,56	100,26	103,56	100,06
Variant Adder per unit	4,78	4,78	4,78	4,78
CC per unit	15,29	15,29	15,29	15,29
Licences per unit	4,73	4,73	5,73	4,73
Target Cost Gap	**14.437.900**	**-956.611**	**-17.062.100**	**-1.283.077**
Target Cost Gap per unit	**4,13**	**-0,28**	**-4,87**	**-0,35**
EBIT (for comparison purpose)	**59.662.900**	**42.976.246**	**28.162.900**	**46.526.209**
EBIT in % of T/O	**9,89%**	**7,34%**	**4,67%**	**7,30%**

Results of the Alternatives Evaluation

The Alternative evaluation results of the most favorable alternatives should be communicated in a standard template

Criteria	Weighting	Nestor Base Case	Nestor Design Phone	Nestor Connector Phone	Nestor Camera Phone
Financial fit	24%	+	-	-	+
Strategic portfolio fit	14%	+	-	+	+
Market requirements' fit	24%	+	-	+	++
Resource feasibility fit	5%	++	+	++	+
Technical solutions' fit	10%	+	+	-	-
Time To Market fit	24%	+	-	+	+
Sum	100%	2,67	2,18	2,51	2,72
Ranking		2	4	3	1



Strengths/ Opportunities

- With the **1,3 Mpix camera** (optical zoom), the product provides a **clear Enthusiasm Feature** for the price category below 200 EUR.
- The camera **enhances the video story even more**.
- **Better re-use possibilities** for future generations / other products

Weaknesses/ Threats

- **Less profitable** than Nestor Base Case.
- The **1,3 Mpix camera** (optical zoom) was **only used in the pre-development**, but well known supplier offers same standards like already used cameras.

Results of the Alternatives Evaluation

In order to communicate the chosen alternative a detailed description and reasoning have to be delivered

Sum	100%	2,67	2,18	2,51	2,72
Ranking		2	4	3	1

Product functions	Camera Phone
Make and receive calls (Quality of basic function – I/O/ UI/ RF)	Tri band / high talk & standby time
Appeal to user (Design/ Material / Form factor)	Thicker housing than base case (21 mm)
Support imaging and video	1.3 Mpix camera with 3x optical zoom
Suppoprt music and audio	As base case
Provide gaming	Standard Gaming
Provide outdoor and leisure features (e.g. sensors)	Not required
Enable messaging	Standard messaging MMS EMS
Provide business applications (incl. PIM and Sync)	Standard organizer functionality
Provide additional services (e.g. location services)	Not required
Provide visualization (Display)	176x220, TFT 2,1', 256k
Provide usage-/standby time	400 h (Li-ion 900 mAh)
Interaction with devices	As base case
Store data	MMC card 32MB bundled
Consumer personalization/ Operator customization	clubbers wristband

Description of the recommended alternative

- The “Camera Phone” follows the idea of a classical CX phone that addresses a mass market, but with a focus on more technically oriented users who prefer to have a high end camera included.
- It succeeds the predecessor “Cerberus” and additionally creates customer enthusiasm by enlarging the multi-media functionalities with a higher camera resolution and enlarged video functions.

Reasoning

- The 1,3 Mpix camera (optical zoom) offers a clear USP in the targeted price segment and thus allows additional market differentiation and reduces the price pressure risk.
- Camera and video functionalities complement each other very well.
- The technical risk due to the new camera should be minimized by increasing the development budget for the camera integration.
- The “Nestor Camera Phone” still has a Target Cost Gap of -1 EUR that should be closed by cost management measures.

Risk

- The standard video functionality / camera limits the potential for differentiation and risks to offer a “me too” product and thus expose it to high price pressure in the Christmas period.

Information frontload and supply of the Alternatives Evaluation

The reliability of the Alternatives Evaluation depends on a sufficient quality of the input information and a stringent conduction of the process

- Reverse Calculation for Base Case
- Per alternative:
  - BOM changes
  - CC changes
  - License changes
  - Service Costs
  - Marketing Costs
  - Development Costs

Financial evaluation of alternatives

Reverse Calculation - Alternatives Evaluation -	Nestor Base Case	Nestor Design Phone	Nestor Connector Phone	Nestor Camera Phone
	Lifecycle Total	Lifecycle Total	Lifecycle Total	Lifecycle Total
Units	3.500.000	3.400.000	3.500.000	3.700.000
Target Turnover	603.000.000	588.771.429	603.000.000	637.467.143
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EBIT in % of T/O	9,89%	7,34%	4,67%	7,30%

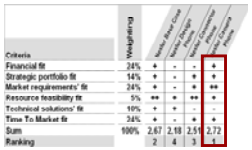
- Target Cost Gaps for generated alternatives
- Financial preferability of alternatives

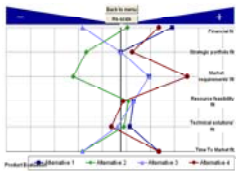
Information frontload and supply of the Alternatives Evaluation

The reliability of the Alternatives Evaluation depends on a sufficient quality of the input information and a stringent conduction of the process

- Criteria catalogue incl. sub-criteria
- Bundle of alternative product concepts
- Financial evaluation of alternatives from RC
- Targets set in the WoO, RC and PTS

Overall results of the Alternatives Evaluation (optional)





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Weaknesses/ Threats

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- The **1,3 Mpix camera** (optical zoom) was **only used in the pre-development**, but well known supplier offers same standards like already used cameras.

Detailed description and reasoning of the chosen alternative

Sum	100%	2,67	2,18	2,51	2,72
Ranking		2	4	3	1

Product functions	Camera Phone
Make and receive calls	Tri band / high talk & standby time
Appeal to user	Thicker housing than base case (21 mm)
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Risk

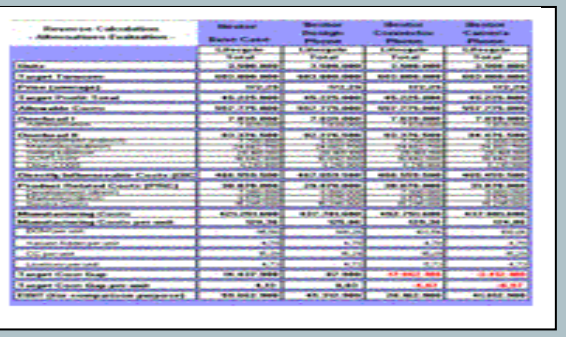
- The standard video functionality / camera limits the potential for differentiation a lot make to offer a "me too" product and thus exposes it to high price pressure in the Christmas period.

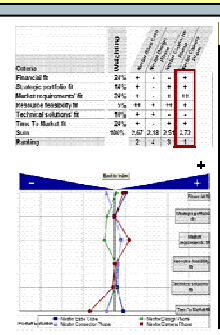
- Decision on best fitting product concept alternative
- Documentation of results

Translation of the EM goals into precise maxims for all TC-tools

The defined templates that are used in the Enthusiasm Model process are documenting the final results.

Financial evaluation of alternatives	Results of the evaluation of Alternatives	Description and reasoning





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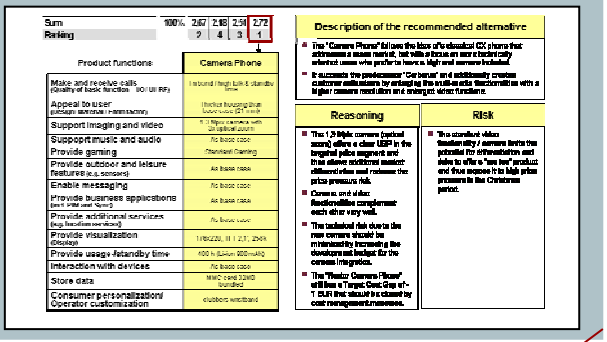
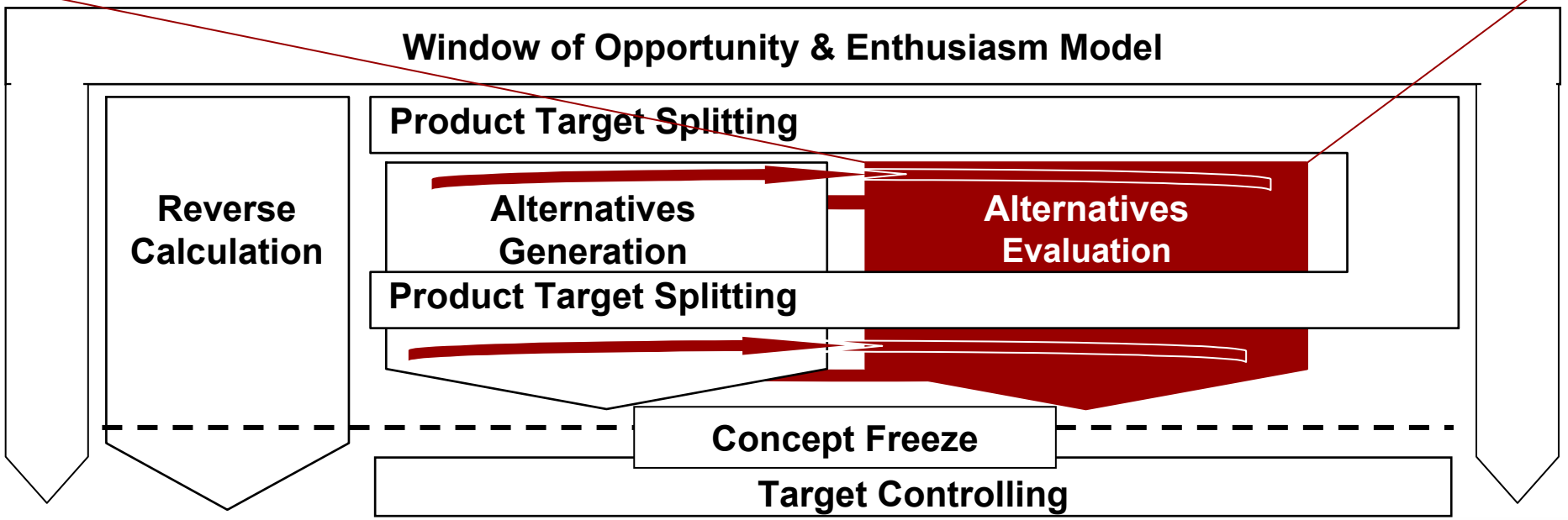


Description of the recommended alternative

Reasoning

Risk

Window of Opportunity & Enthusiasm Model



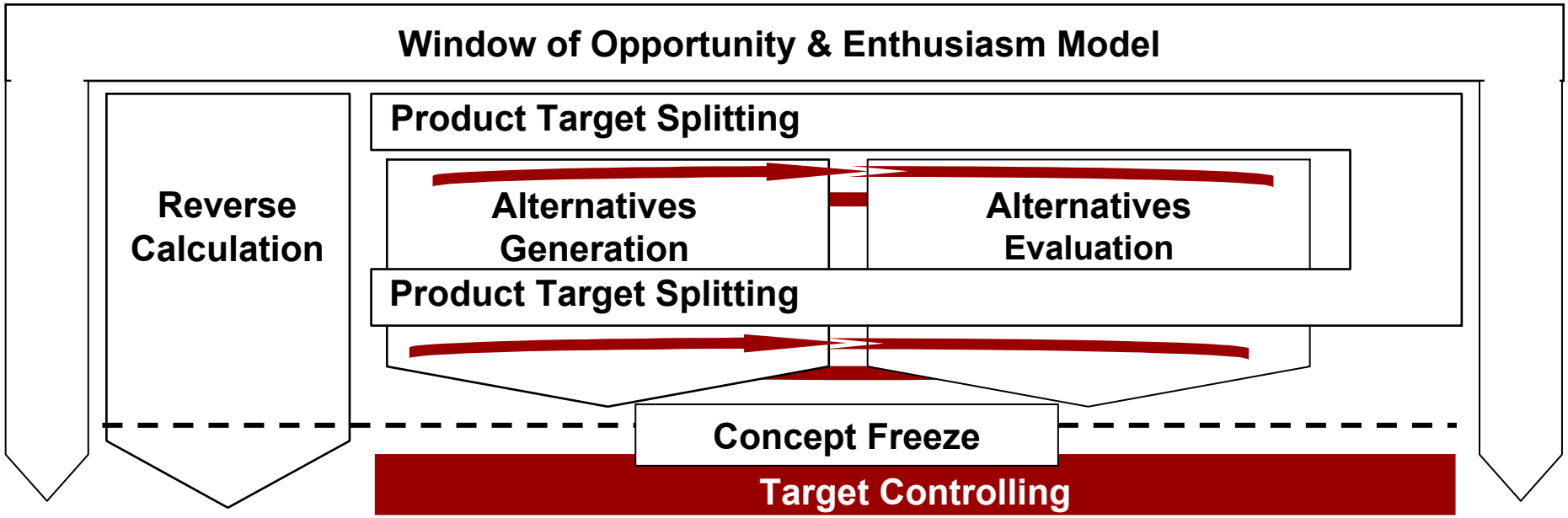
Agenda

- Objective and structure of the training
- General Target Costing overview
- The Target Costing toolset
  - Window of Opportunity and Enthusiasm Model
  - Reverse Calculation
  - Product Target Splitting
  - Alternatives Generation
  - Alternatives Evaluation
  - **Target Controlling**
- Integration of Target Costing toolset into the MD process landscape
- Open questions and discussion
- Conclusion

The Target Costing concept

Target Controlling aims at securing product performance, profit, cost as well as time to market goals after the concept freeze

Market Research

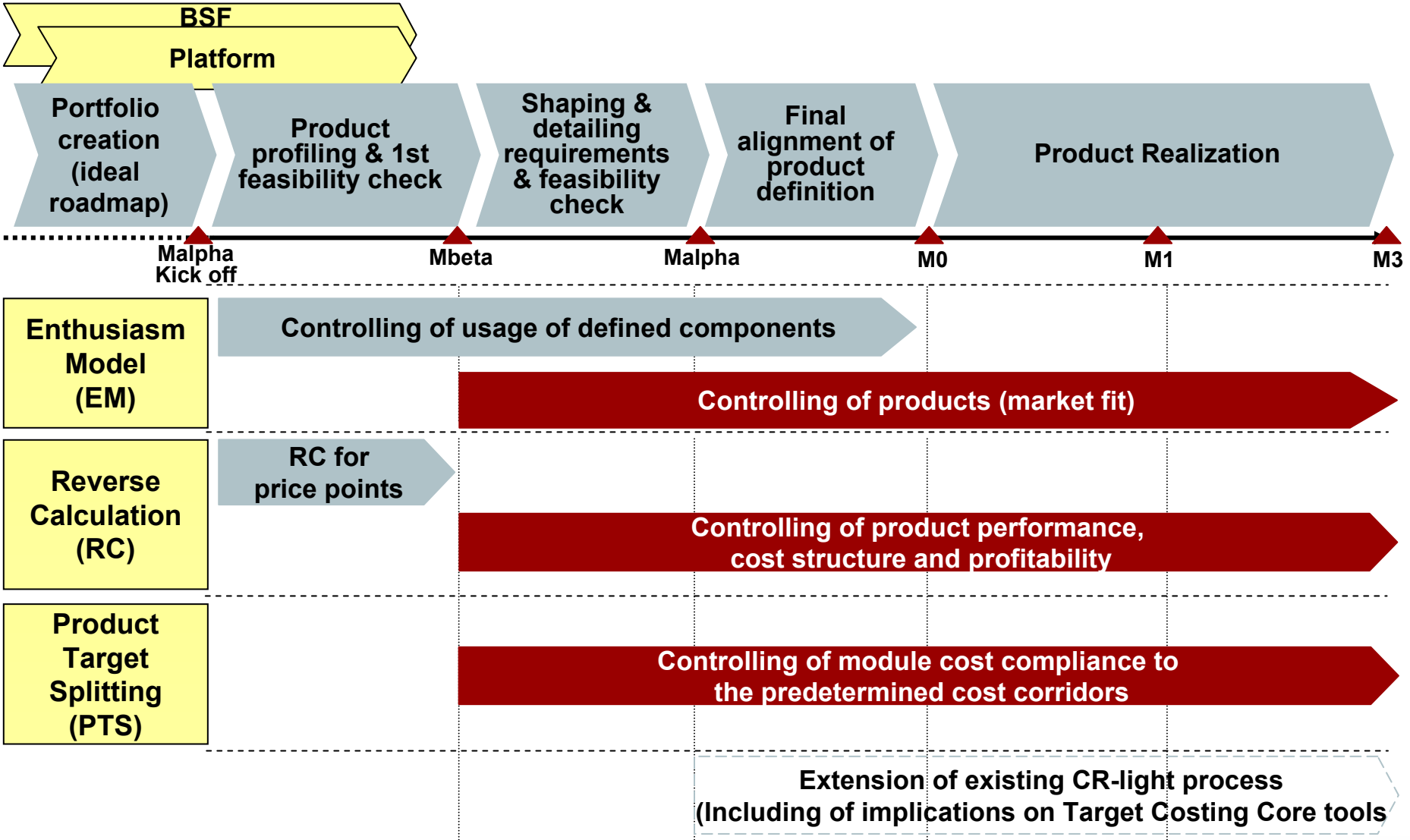


The Target Controlling:

- ensures an **adequate implementation of product concepts** – defined by the use of the Target Costing methodology – **after concept freeze**.
- **controls the defined market fit of the product concepts**,
- **monitors key business data** at predefined intervals
- **crosscheck of the congruence between module valuation with market demands**.

Extension of current activities to Target Controlling

The current controlling activities will be extended by the usage of the Target Costing tools Enthusiasm Model and Reverse Calculation as well as a dedicated change request process



Methodology of Target Controlling

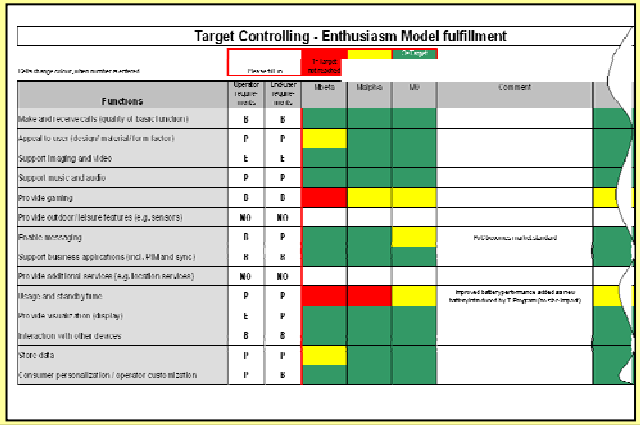
Target Controlling is based on the Target Costing tools Enthusiasm Model, Reverse Calculation and Value Control Chart as well as a dedicated change request process

	Controlling objectives	Tasks in Target Controlling
Enthusiasm Model	■ Implementation of the defined product concept ■ Fit to market requirements if changes in market demands or competitive environment occur	■ Frequent check of operator requirements ■ Frequent and standardized check of end-user requirements ■ Continuous monitoring of competitor activities
Reverse Calculation	■ Monitoring of the set profit targets after concept freeze	■ Update of business cases to evaluate the financial impact of product modifications and market changes ■ Evaluation of possible changes of the product concept after the concept freeze
Value Control Chart	■ Securing the compliance of modules/core components to predefined cost corridors and thus to market requirements	■ Compare products' actual module cost structure to the defined targeted module cost structure according to market requirements

Target Controlling: The management cockpit per product

To facilitate the communication with the management, Nestor's key controlling implications (shown for M3) are aggregated into a management cockpit

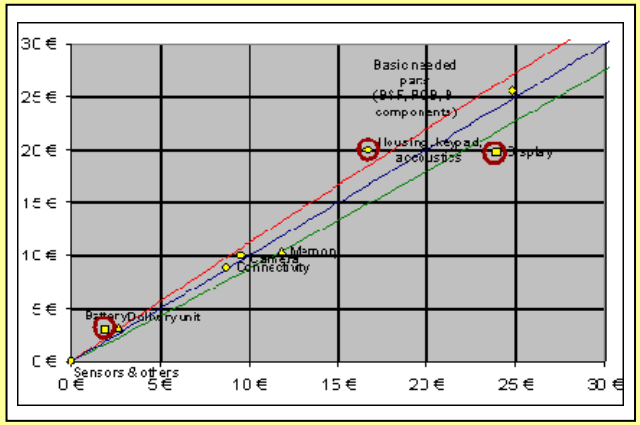
Enthusiasm Model



Reverse Calculation

Target Controlling RC Nestor	Mbeta	Malpha	M0			S0	M1	M3
	Lifecycle Total	Lifecycle Total	Lifecycle Total	Deviation to Mbeta	Description deviations	Lifecycle Total	Lifecycle Total	Lifecycle Total
Units	3.500.000	3.500.000	3.500.000	0		3.500.000	3.500.000	3.500.000
Target Turnover	603.000.000	603.000.000	603.000.000	0		603.000.000	603.000.000	603.000.000
Price (average)	172,29	172,29	172,29	0,00		172,29	172,29	172,29
Target Profit Total	45.225.000	45.225.000	45.225.000	0		45.225.000	45.225.000	45.225.000
Allowable Costs	557.775.000	557.775.000	557.775.000	0		557.775.000	557.775.000	557.775.000
Overhead I	7.839.000	7.839.000	7.839.000	0		7.839.000	7.839.000	7.839.000
Administration	7.839.000	7.839.000	7.839.000	0		7.839.000	7.839.000	7.839.000
Overhead II	84.476.500	84.476.500	84.520.500	44.000		84.548.000	84.548.000	84.548.000
Development (indirect)	8.800.000	8.800.000	8.844.000	44.000	Changes in direct R&D	8.871.500	8.871.500	8.871.500
Marketing (Pull + SF)	24.662.700	24.662.700	24.662.700	0		24.662.700	24.662.700	24.662.700
Selling Expense	28.160.100	28.160.100	28.160.100	0		28.160.100	28.160.100	28.160.100
SCM Costs	16.642.800	16.642.800	16.642.800	0		16.642.800	16.642.800	16.642.800
Other COGS	6.210.900	6.210.900	6.210.900	0		6.210.900	6.210.900	6.210.900
Directly Influenceable Costs (DIC)	465.459.500	465.459.500	465.415.500	-44.000		465.388.000	465.388.000	465.388.000
Product Related Costs (PRC)	31.870.000	31.870.000	31.443.000	-427.000		31.113.000	31.113.000	31.113.000
Development (direct)	8.000.000	8.000.000	8.040.000	40.000	40.000 EUR extra expenditure to enable JAVA gaming	8.065.000	8.065.000	8.065.000
Marketing (Push + HO)	8.575.000	8.575.000	8.108.000	-467.000	467.000 EUR less marketing push expenditure because of joint campaign with operator	8.108.000	8.108.000	8.108.000
Service Costs	15.295.000	15.295.000	15.295.000	0		14.940.000	14.940.000	14.940.000
Manufacturing Costs	437.010.000	445.165.000	448.755.000	3.745.000		432.460.000	429.765.000	429.765.000
Manufacturing Costs per unit	124,86	127,19	128,93	1,07		123,56	122,78	122,78
BOM per unit	100,69	102,14	100,88	0,83	Bigger battery and price decline in chipset	100,31	99,44	99,44
Variant Adder per unit	4,78	4,78	4,78	0,00		4,78	4,78	4,78
CC per unit	15,29	15,29	15,29	0,00		13,74	13,74	13,74
Licences per unit	4,72	4,68	4,96	0,25		4,72	4,82	4,82
Target Cost Gap	-3.420.500	-11.575.500	-8.782.500	-3.362.000		1.910.000	4.510.000	4.510.000
Target Cost Gap per unit	-0,98	-3,31	-1,94	-0,96		0,52	1,29	1,29
EBIT (for comparison purpose)	41.804.500	33.649.500	36.442.500	-3.362.000		47.040.000	49.735.000	49.735.000
EBIT in % of T/O	6,93%	5,58%	6,38%			7,80%	8,25%	8,25%

Value Control Chart



Comments / Change Requests

- For M3 the product concept meets its functional requirements
- All Enthusiasm Features are in line with the market environment
- No change requests since the last status report
- Ramp-up volumes will be met

Target Controlling: The Enthusiasm Model as controlling tool

In order to evaluate the degree of fulfillment between the targeted functional profile and the current phone concept, the Enthusiasm Model is used as controlling tool for Nestor

Target Controlling - Enthusiasm Model fulfillment

Cells change colour, when number is entered

Please fill in	1=Target not reached	2=Target nearly reached	3=Target reached or exceeded

Functions	Operator require-ments	End-user require-ments	Mbeta	Malpha	M0	Comment	
Make and receive calls (quality of basic function)	B	B					
Appeal to user (design/ material/ form factor)	P	P					
Support imaging and video	E	E					
Support music and audio	P	P					
Provide gaming	B	B					
Provide outdoor/ leisure features (e.g. sensors)	NO	NO					
Enable messaging	B	P				PoC becomes market standard	
Support business applications (incl. PIM and sync)	B	B					
Provide additional services (e.g. location services)	NO	NO					
Usage and standby time	P	P				Improved battery performance added as new battery introduced by T-Program (no size impact)	
Provide visualization (display)	E	P					
Interaction with other devices	B	B					
Store data	P	P					
Consumer personalization / operator customization	P	B					

Target Controlling: The Reverse Calculation as controlling tool

The IT-tool does not only calculate deviations from the original Business Case but also requires additional explanations in case any deviations occur

Target Controlling RC Nestor	Mbeta	Malpha	M0			S0	M1	M3
	Lifecycle Total	Lifecycle Total	Lifecycle Total	Deviation to Mbeta	Description deviations	Lifecycle Total	Lifecycle Total	Lifecycle Total
Units	**3.500.000,00**	**3.500.000**	**3.500.000**	0		**3.500.000**	**3.500.000**	**3.500.000**
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Administration	7.839.000	7.839.000	7.839.000	0		7.839.000	7.839.000	7.839.000
Overhead II	**84.476.500**	**84.476.500**	**84.520.500**	44.000		**84.548.000**	**84.548.000**	**84.548.000**
Development (indirect)	8.800.000	8.800.000	8.844.000	44.000	Changes in direct R&D	8.871.500	8.871.500	8.871.500
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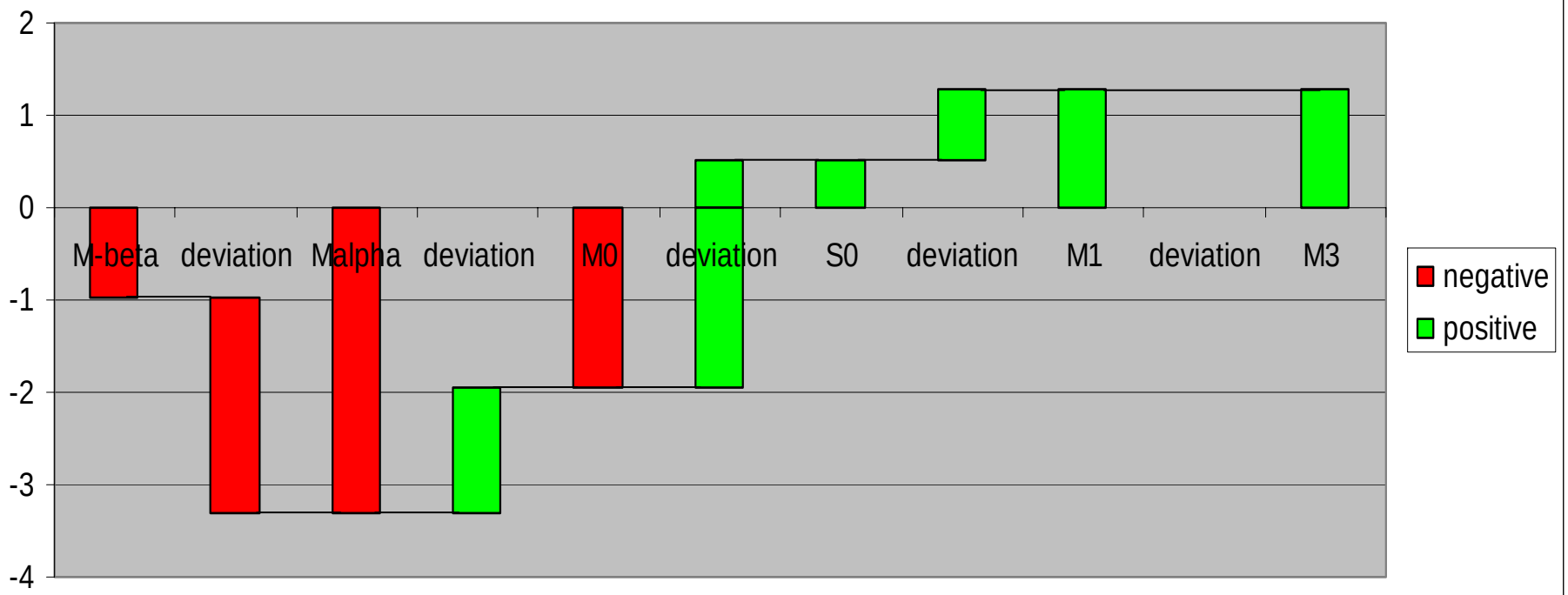
SCM Costs	16.642.800	16.642.800	16.642.800	0		16.642.800	16.642.800	16.642.800
Other COGS	6.210.900	6.210.900	6.210.900	0		6.210.900	6.210.900	6.210.900
Directly Influenceable Costs (DIC)	**465.459.500**	**465.459.500**	**465.415.500**	-44.000		**465.388.000**	**465.388.000**	**465.388.000**
Product Related Costs (PRC)	**31.870.000**	**31.870.000**	**31.443.000**	-427.000		**31.113.000**	**31.113.000**	**31.113.000**
Development (direct)	8.000.000	8.000.000	8.040.000	40.000	40.000 EUR extra expenditure to enable JAVA gaming	8.065.000	8.065.000	8.065.000
Marketing (Push + HQ)	8.575.000	8.575.000	8.108.000	-467.000	467.000 EUR less marketing push expenditure because of joint campaign with operator	8.108.000	8.108.000	8.108.000
Service Costs	15.295.000	15.295.000	15.295.000	0		14.940.000	14.940.000	14.940.000
Manufacturing Costs	**437.010.000**	**445.165.000**	**440.755.000**	3.745.000		**432.460.000**	**429.765.000**	**429.765.000**
Manufacturing Costs per unit	**124,86**	**127,19**	**125,93**	1,07		**123,56**	**122,79**	**122,79**
BOM per unit	100,06	102,14	100,88	0,82	Bigger battery and price decline in chipset	100,31	99,44	99,44
Variant Adder per unit	4,78	4,78	4,78	0,00		4,78	4,78	4,78
CC per unit	15,29	15,29	15,29	0,00		13,74	13,74	13,74
Licences per unit	4,73	4,98	4,98	0,25		4,73	4,83	4,83
Target Cost Gap	**-3.420.500**	**-11.575.500**	**-6.782.500**	-3.362.000		**1.815.000**	**4.510.000**	**4.510.000**
Target Cost Gap per unit	**-0,98**	**-3,31**	**-1,94**	**-0,96**		**0,52**	**1,29**	**1,29**
EBIT (for comparison purpose)	**41.804.500**	**33.649.500**	**38.442.500**	-3.362.000		**47.040.000**	**49.735.000**	**49.735.000**
EBIT in % of T/O	**6,93%**	**5,58%**	**6,38%**			**7,80%**	**8,25%**	**8,25%**

Target Controlling: Development of the Target Cost Gap

A dedicated Graphic provides an easy to understand overview about the development of the Target Cost Gap

Development of the total TCG over time



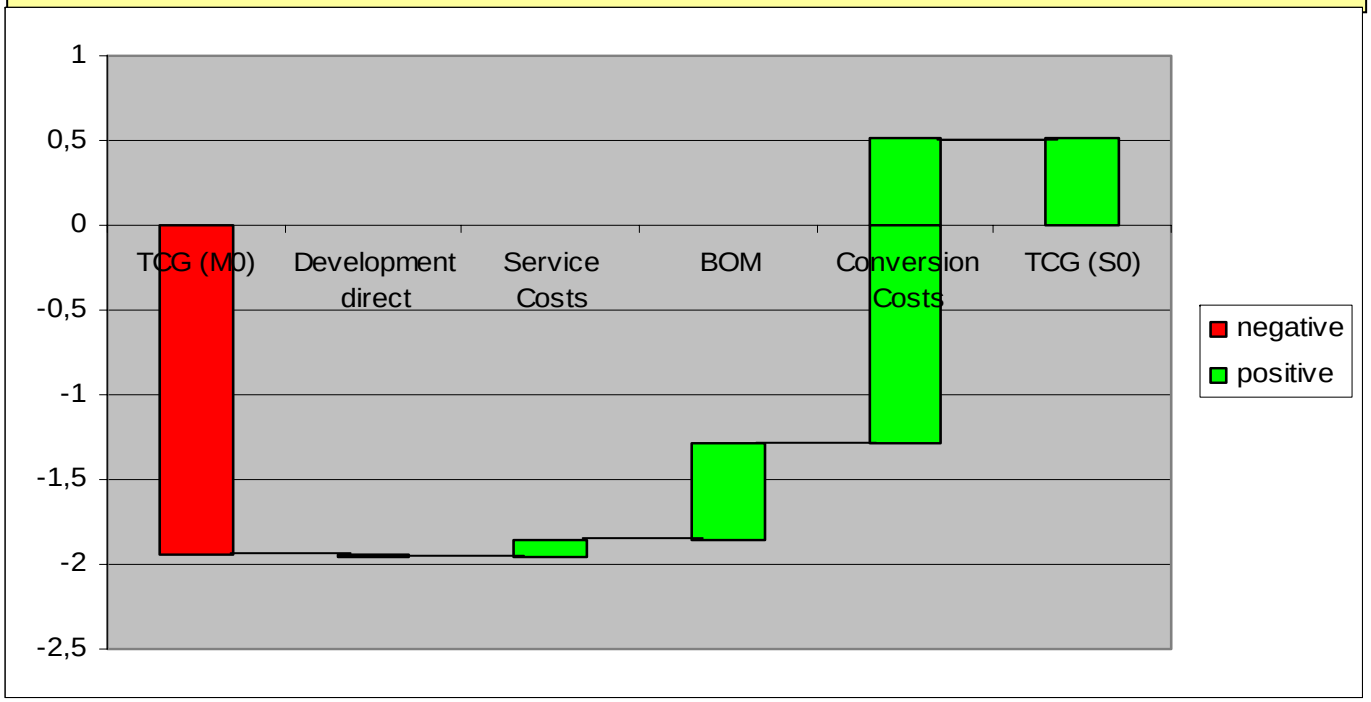
Explanation

- The team should give a detailed reasoning for changes in the Target Cost Gap over time.

The Reverse Calculation as controlling tool at MD II

In case deviations in the Target Cost Gap per unit occur between the relevant milestones, a detailed graphical explanation is required

Development of Target Cost Gap per unit between M0 and S0



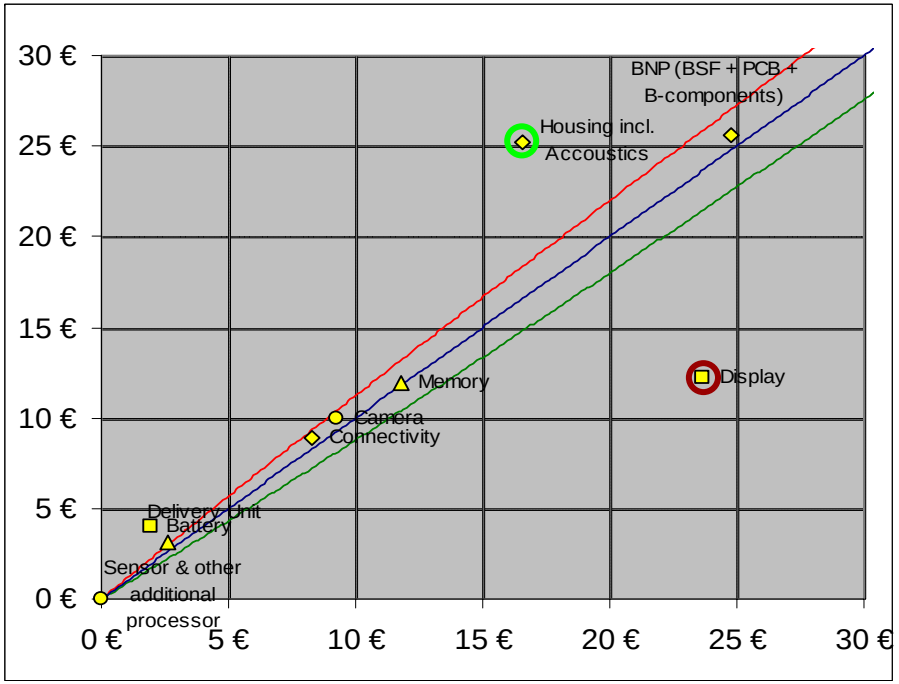
Explanation

- Slightly increase of development costs due to higher hardware testing
- Service costs could be decreased due to optimized service process
- BOM decrease through introduction of a new battery and a price decline in the core architecture of the phone
- Through optimization of the phone concept, the conversion costs could be minimized

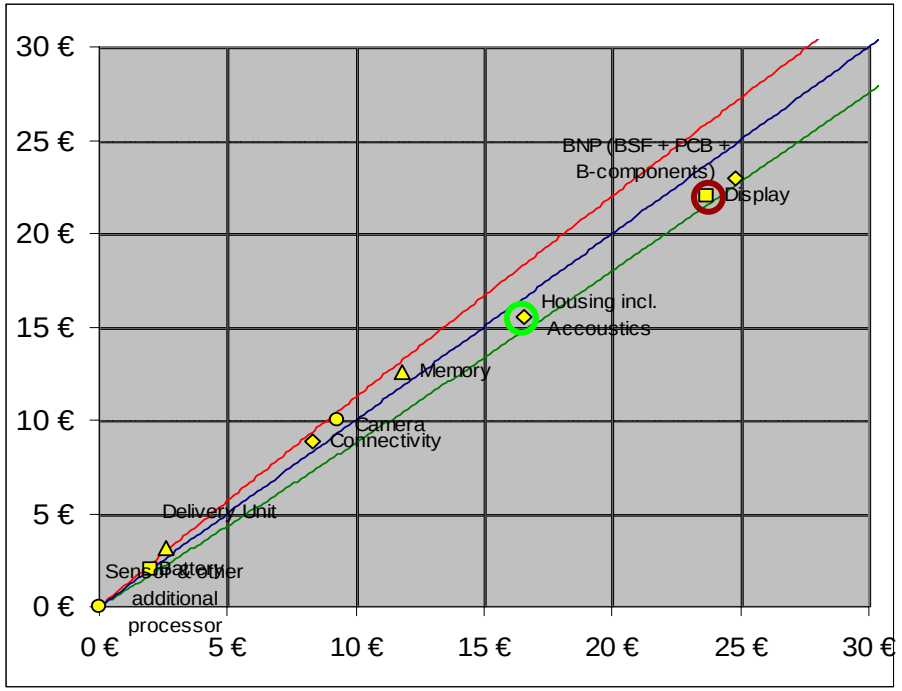
The Value Control Chart as controlling tool at MD

Designated graphics clearly indicate the compliance of the individual modules to the designated Target Cost corridors

Malpha



M0



Explanation

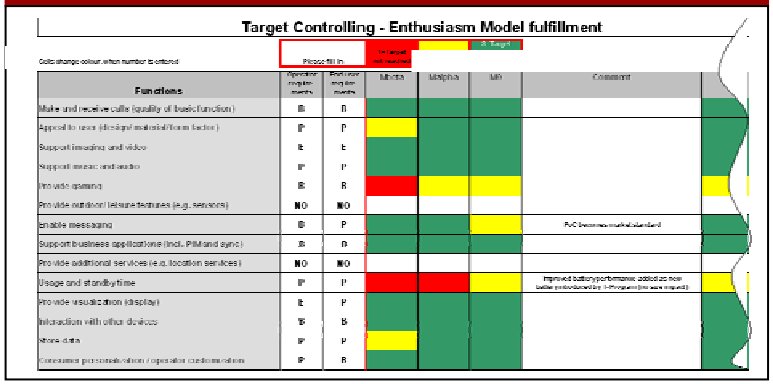
- As display prices are still low for MD due to scale effects in procurement the value share of this module is still below market requirements, whereas the display specifications meet market demands

Information frontload and supply of Target Controlling

The reliability of Target Controlling depends on the quality of its information input

- Final Enthusiasm Model and Window of Opportunity
- Competitor information
- Actual phone concept

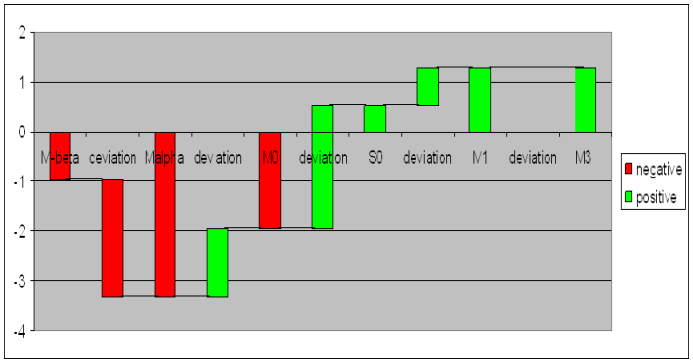
Target Controlling Enthusiasm Model



- Check of the degree of fulfillment of functional target profile
- Management Cockpit contribution

- Financial impact of change requests
  - Volume, Price(-line)
  - Overhead I/II, PRC
- Regular updates of:
  - Manufacturing Costs, PRC
- Reverse Calculation of last Milestone

Target Controlling development of Target Cost Gap



- Updated Reverse Calculation
- Explanation of changes in the Reverse Calculation between milestones
- Graphical description of the impact of cost/volume/price changes

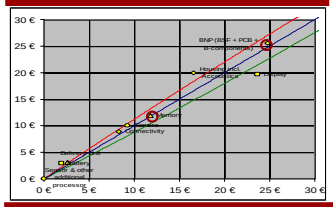
Information frontload and supply of Target Controlling

The reliability of Target Controlling depends on the quality of its information input

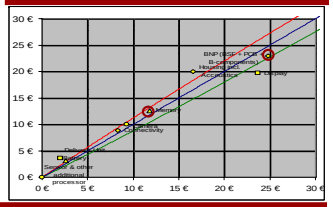
- Value Control Chart (Target Cost corridors for modules)
- Actual costs for main modules in defined module structure

Target Controlling
Value Control Chart

S0



M1



Explanation

- As display prices are still low for MD due to scale effects in procurement the value share of this module is still below market requirements, whereas the display specifications meet market demands

- Value Control Chart showing the compliance of actual module costs to Target Cost corridors

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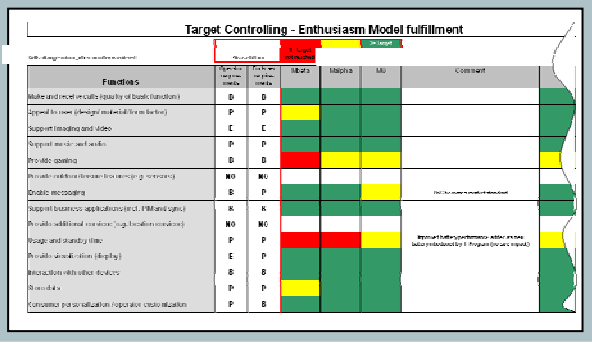
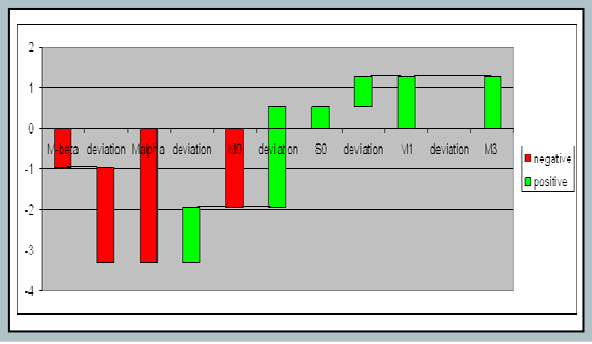
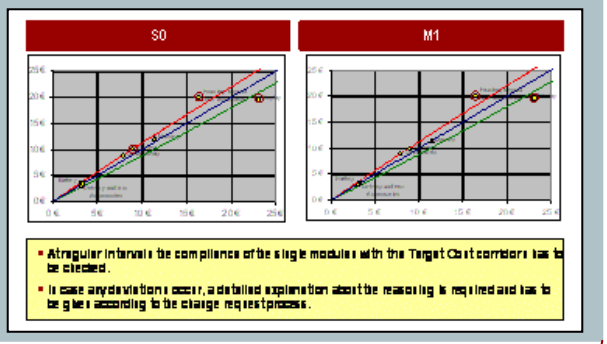
Translation of the EM goals into precise maxims for all TC-tools

The defined templates that are used in the Enthusiasm Model process are documenting the final results.

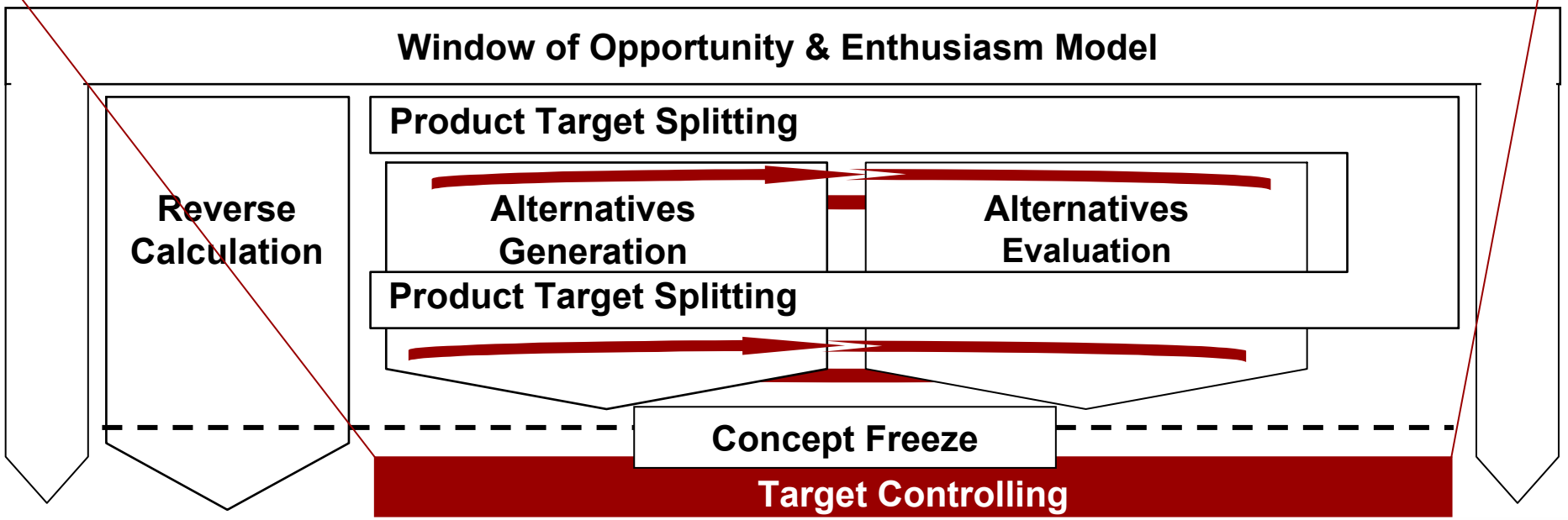
Compliance control EM	Change in Target Cost Gap	Value Control Chart







Window of Opportunity & Enthusiasm Model

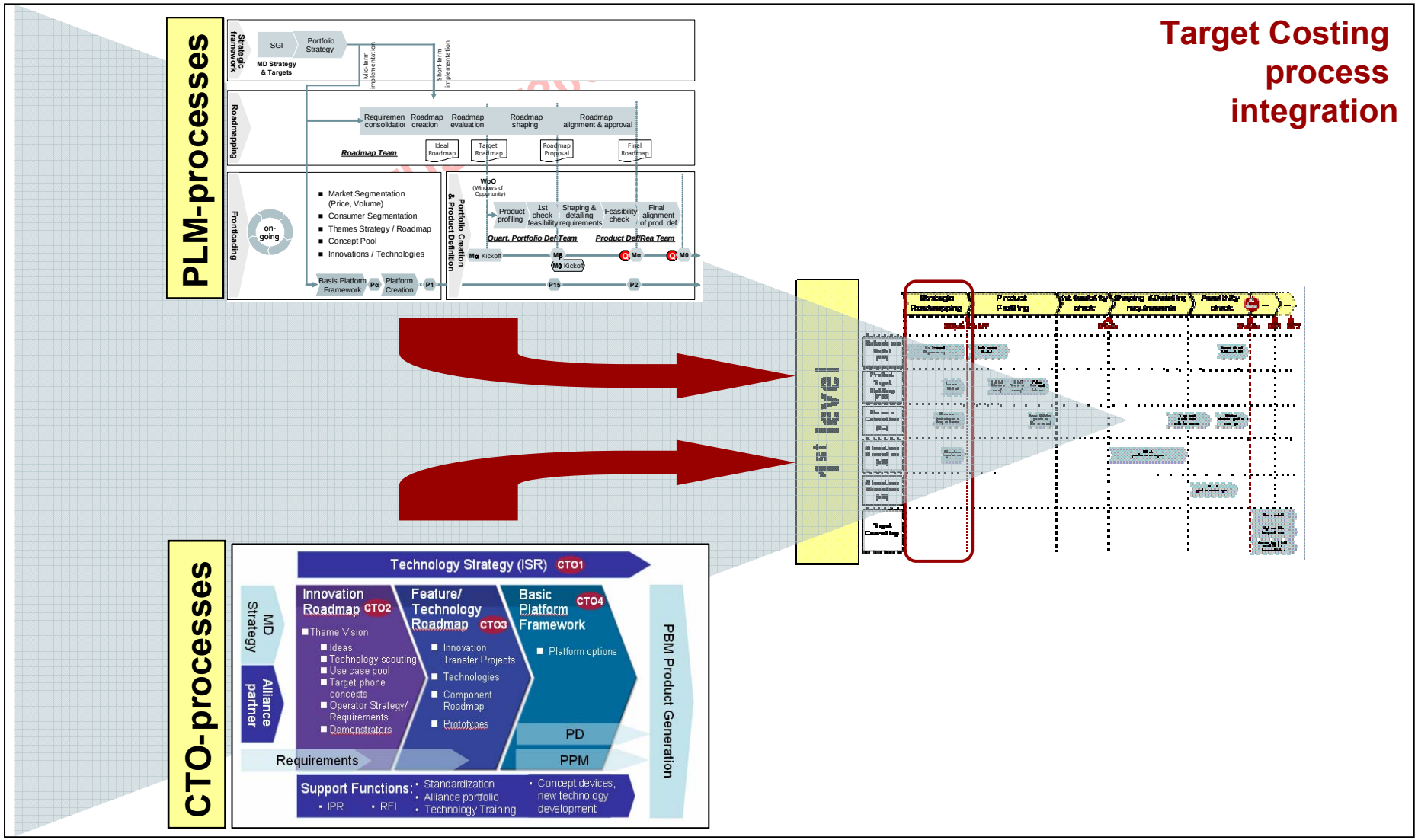


Agenda

- Objective and structure of the training
- General Target Costing overview
- The Target Costing toolset
  - Window of Opportunity and Enthusiasm Model
  - Reverse Calculation
  - Product Target Splitting
  - Alternatives Generation
  - Alternatives Evaluation
  - Target Controlling
- **Integration of Target Costing toolset into the MD process landscape**
- Open questions and discussion
- Conclusion

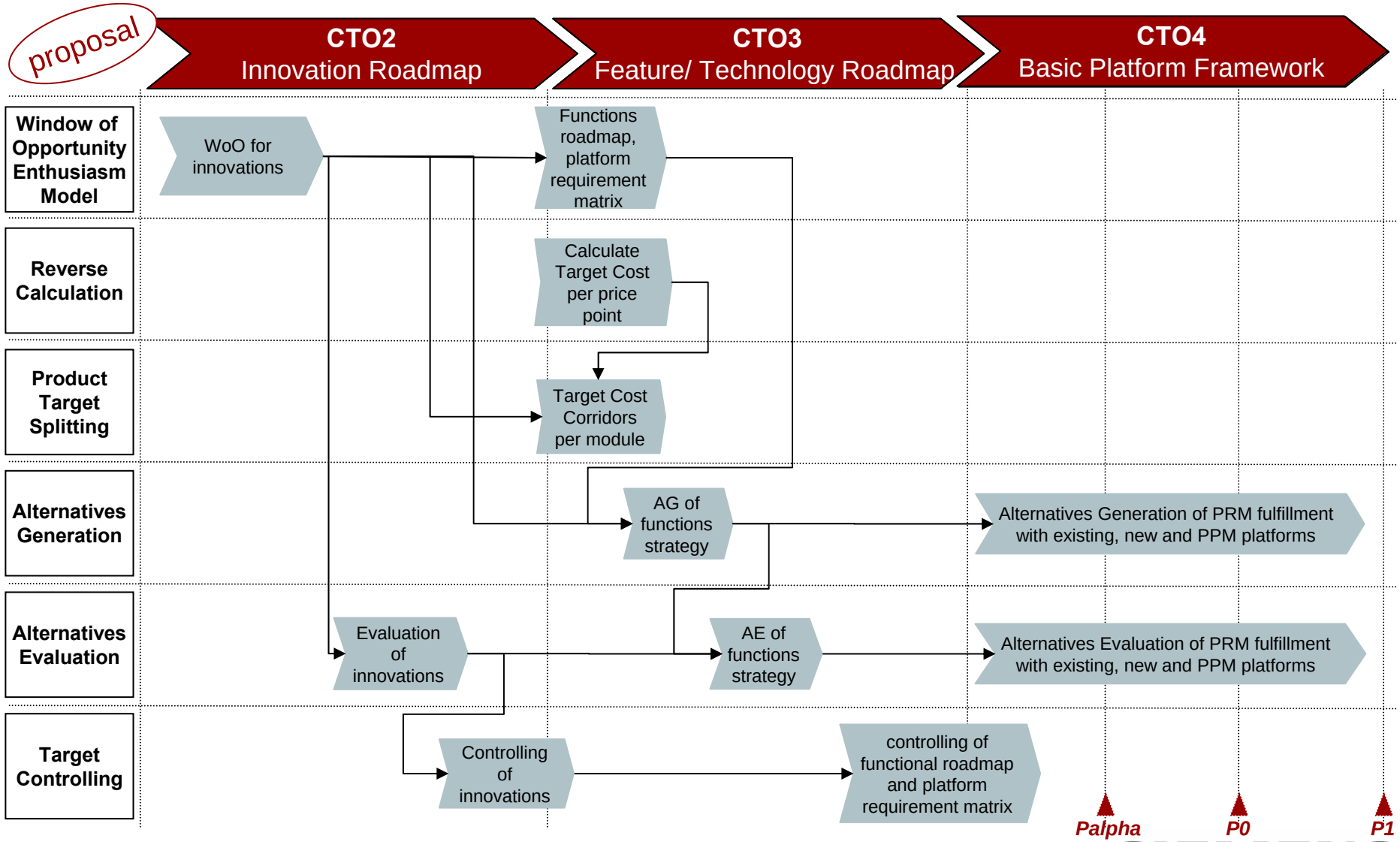
Target Costing process integration at MD

To implement the Target Costing tools at MD the integration of all these tools into the relevant MD processes has to be described



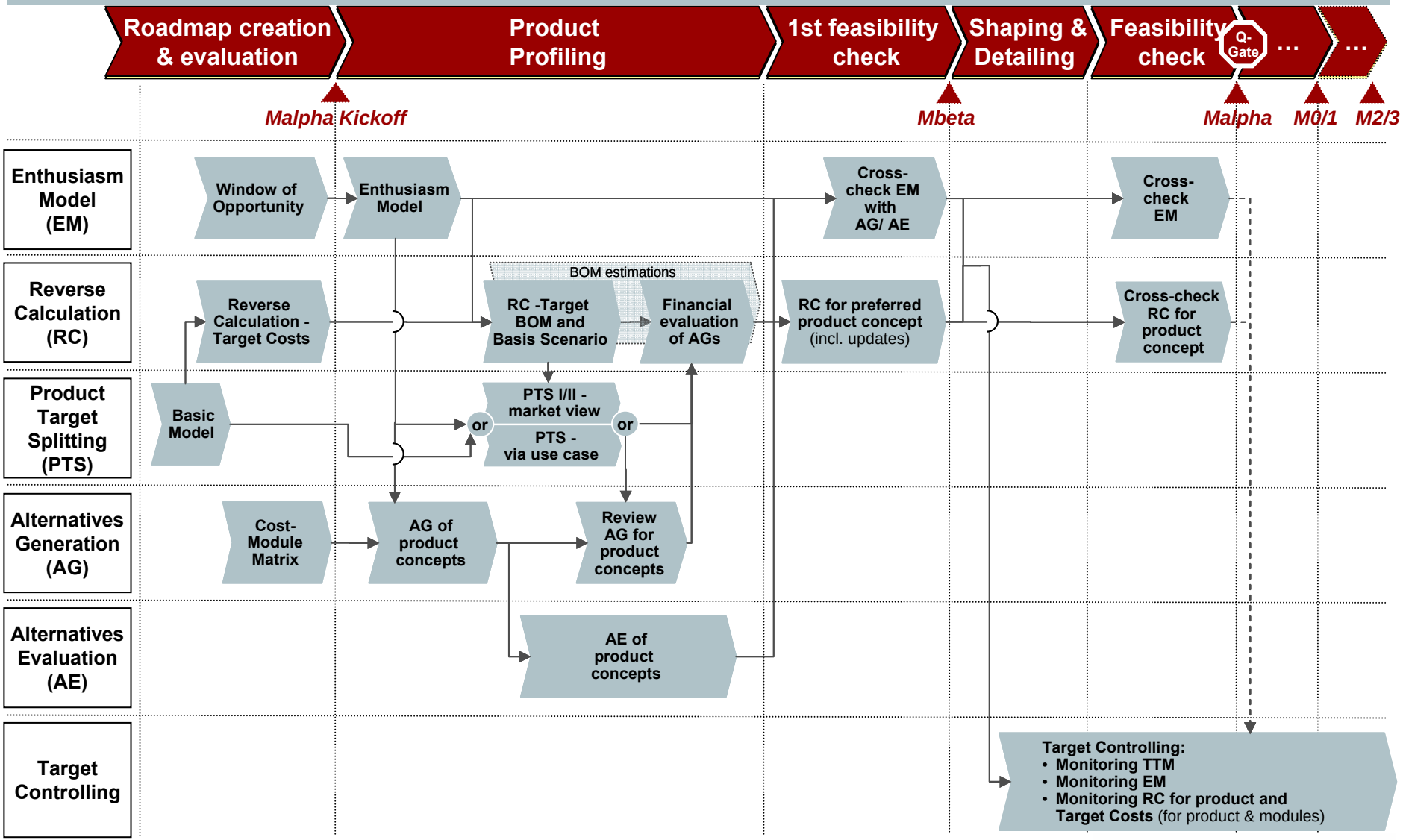
Integration of Target Costing tools into the CTO processes

This aggregated level shows all relevant Target Costing core tools adapted to the CTO process landscape



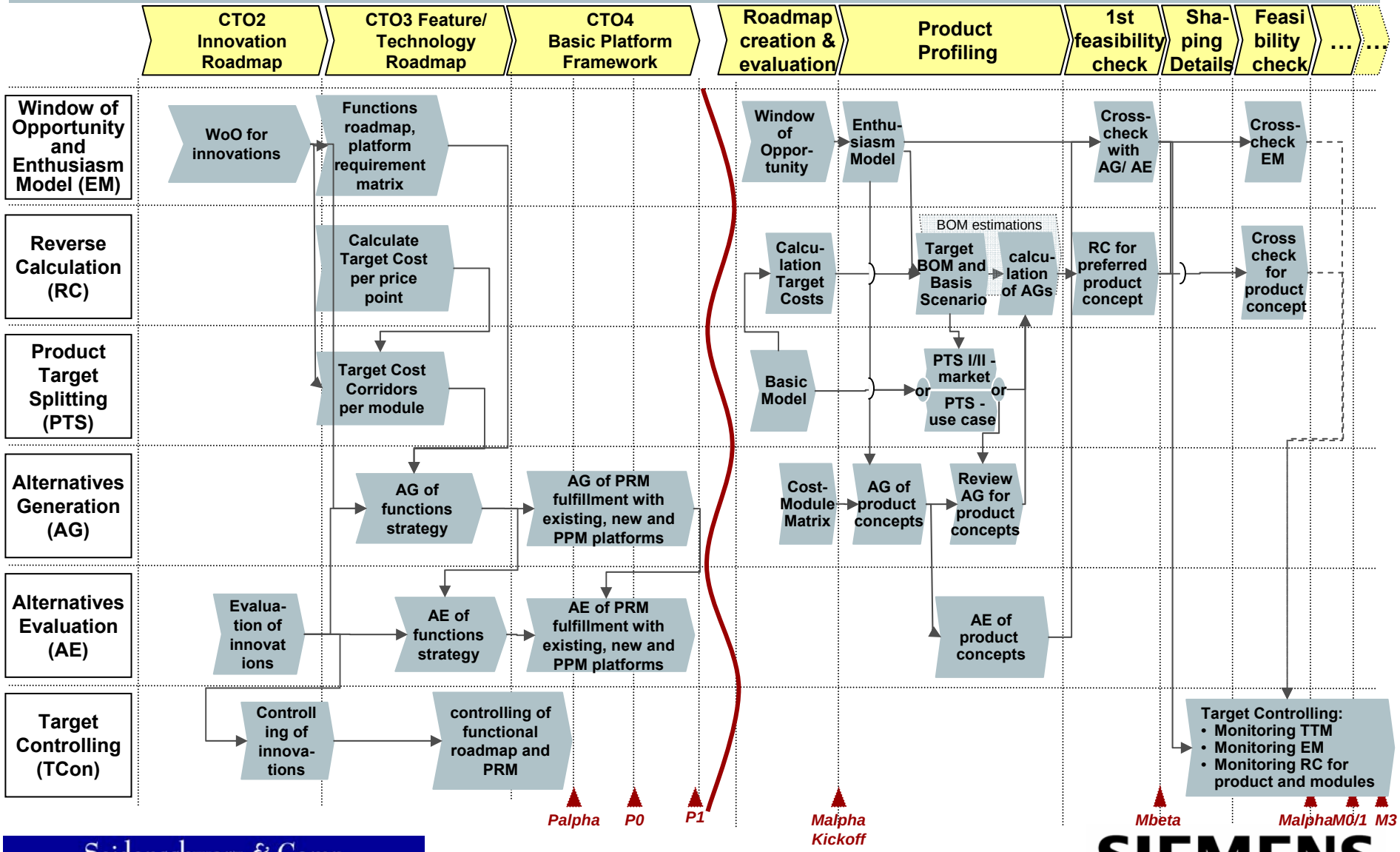
Integration of Target Costing tools at MD

This aggregated level shows how the Target Costing core tools are adapted to the "Roadmapping process" as well as the "Portfolio creation & Product definition process"



Integration of Target Costing tools at MD

This aggregated level shows all relevant Target Costing core tools adapted to the CTO processes, the "Roadmapping process and the portfolio creation and definition process



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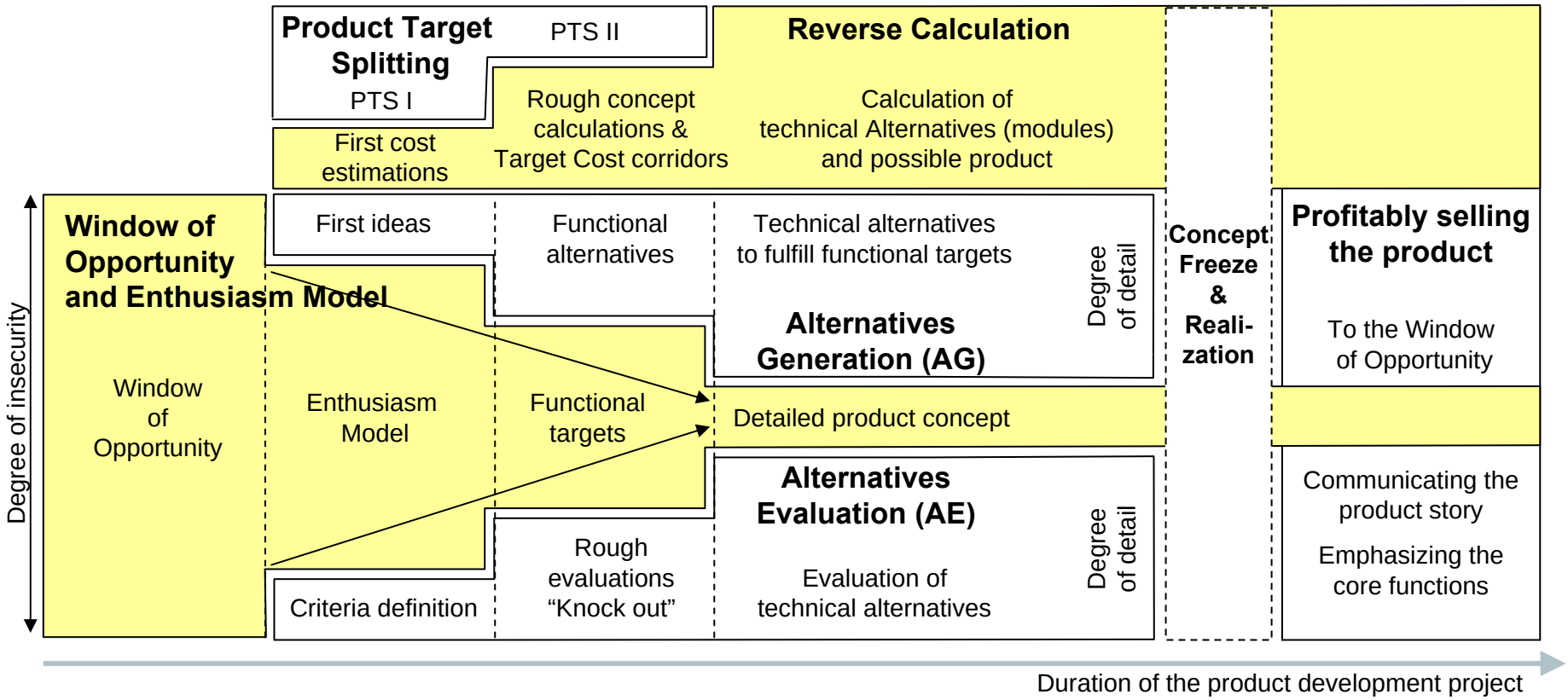
Linkage of the Target Costing tools

All Target Costing core tools are interlinked and are to be applied at different stages of the product development process



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Conclusion Target Costing

Target Costing is a key methodology to secure the profitability by focusing to the four elements market innovation cost and time to market in an structured and process oriented way

Why Target Costing?

- **The ultimate goal is to strengthen profitability**
- **To achieve this Target Costing combines the four relevant elements**
  - **Strict market orientation**
  - **Driving necessary innovations**
  - **Assuring a best in class cost position**
  - **Securing Time to market**

How Target Costing achieves this goal?

- **Target Costing provides a state of the art toolset to define attractive and successful products**
- **The Target costing toolset is integrated in a structured and goal oriented Target Costing process**
- **This process is well aligned with the general product development process at MD and helps to streamline, focus and speed up the development time**