

Benchmarking Process

Product design tools: Product benchmarking



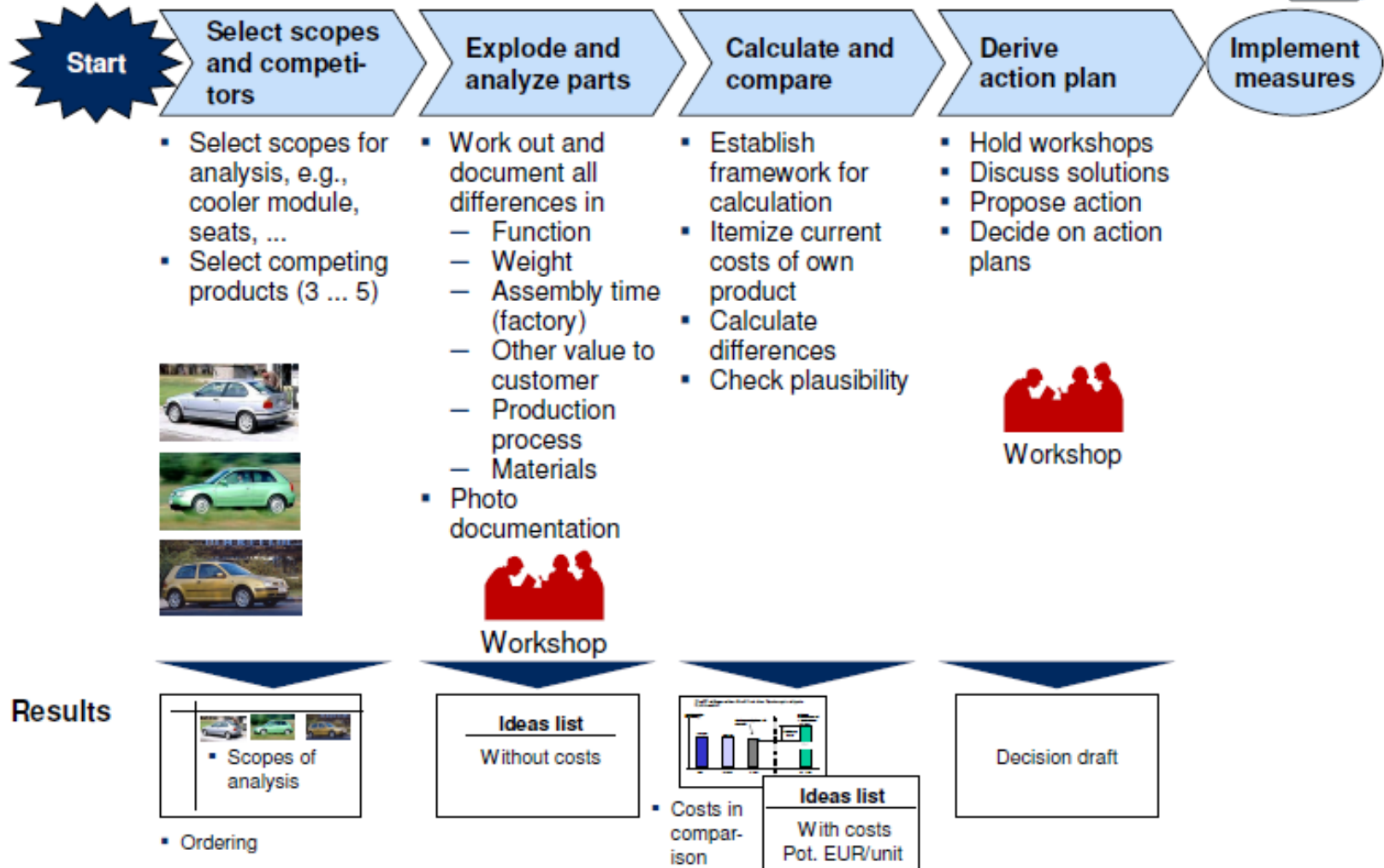
Characteristics of product benchmarking

- Builds a common understanding of differences in design and cost between client's and competitors' product concepts
- Seeks to explain all differences specifically in terms of value-adding ("functional") or cost-reducing design features
- Enables companies/teams to plan a course of action to improve product features to increase value or reduce cost or both

The systematic disassembly and analysis of competitor products, incl. a calculation of their cost position and documentation of technical concepts.

Benchmarking Process

Product benchmarking process



Benchmarking Process

Core questions about benchmark products



- What are the concrete technical differences between the benchmark products and the part or product being analyzed?
- What additional or reduced effort is associated with the technical difference? (estimate)
- For which features is it desirable for the part or product being analyzed to differ from competing products, and at what additional cost?
- What potential cost reduction or other changes can the company derive from eliminating technical differences that are of little or no value to customers?

IDEAS LIST

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Product benchmarking – Examples (1/3)

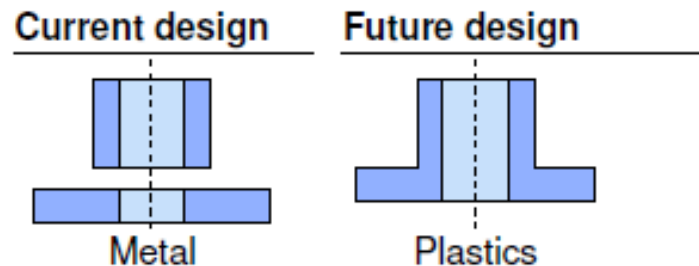
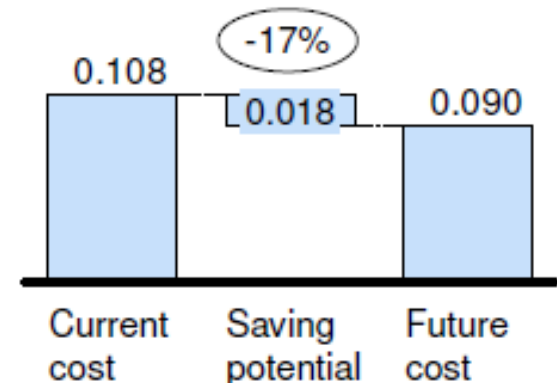
Example: damper
USD/damper



Component	Idea	Savings potential
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Integration of parts and change of material
Integration of sleeve and rebound plate to 1 part, and make new part out of plastics instead of steel



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Product Benchmarking – Examples (2/3)

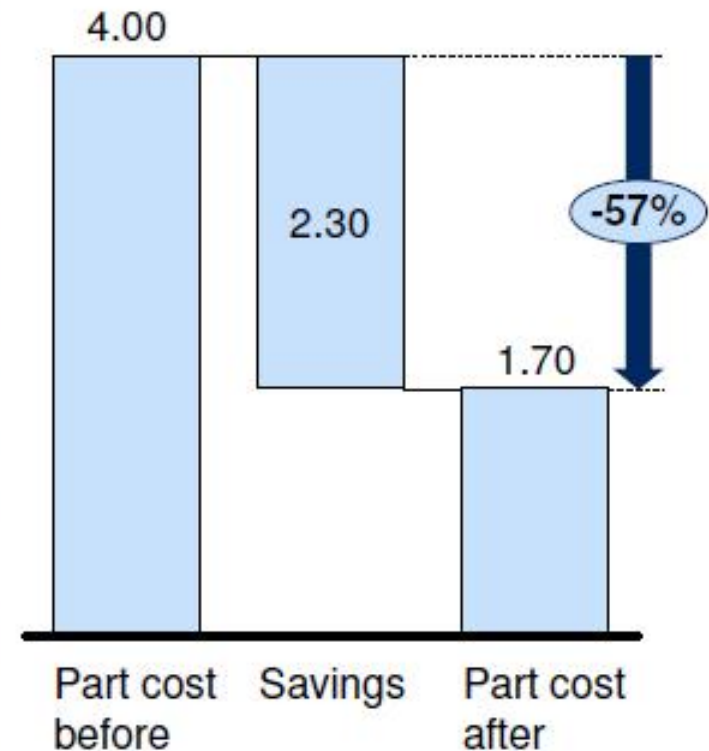
Example elevator: Replace solid round bar by square tube
EUR/unit



Product A
solid round bar,
20 mm,
EUR 4.00 per piece







Competition product
hollow square tube,
30 mm,
EUR 1.70 per piece



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Product Benchmarking – Examples (3/3) - REAR LEAF SPRING – BOGIE

	 AMW 4923	 MAN 4928	 TML 4923	 AL 4923
Width	100 mm	100 mm	89 mm	90 mm
Thickness	20 mm	22 mm	27 mm	20 mm
Span	1350 mm	1400 mm	1400 mm	1400 mm
Leaves	10	11	7	12
Weight	158	194	129	164

There may be a scope to change the parameters like width, thickness and number of leaves to optimize specs

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Product Benchmarking – Applicability and examples



When to use product benchmarking?

- Sourcing products with analogous functionality, but possibly different technical features
- Comparable inhouse or competitor parts are available
- Significant volume per part
- Benchmarking is inappropriate for some components
 - Standardized parts such as fasteners, fluids
 - Electronics
 - Adapted designs that cannot be influenced

Successful examples

- Door trim
- Seat heater
- Seat covering
- Exhaust system baffle
- Mirrors
- Vacuum cleaner
- Telephones
- Washing machines
- ...

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Product benchmarking- Pros and Cons



Pros

- Powerfully convincing "moment of truth"
- Holistic perspective
- Understanding of product design alternatives and product costs

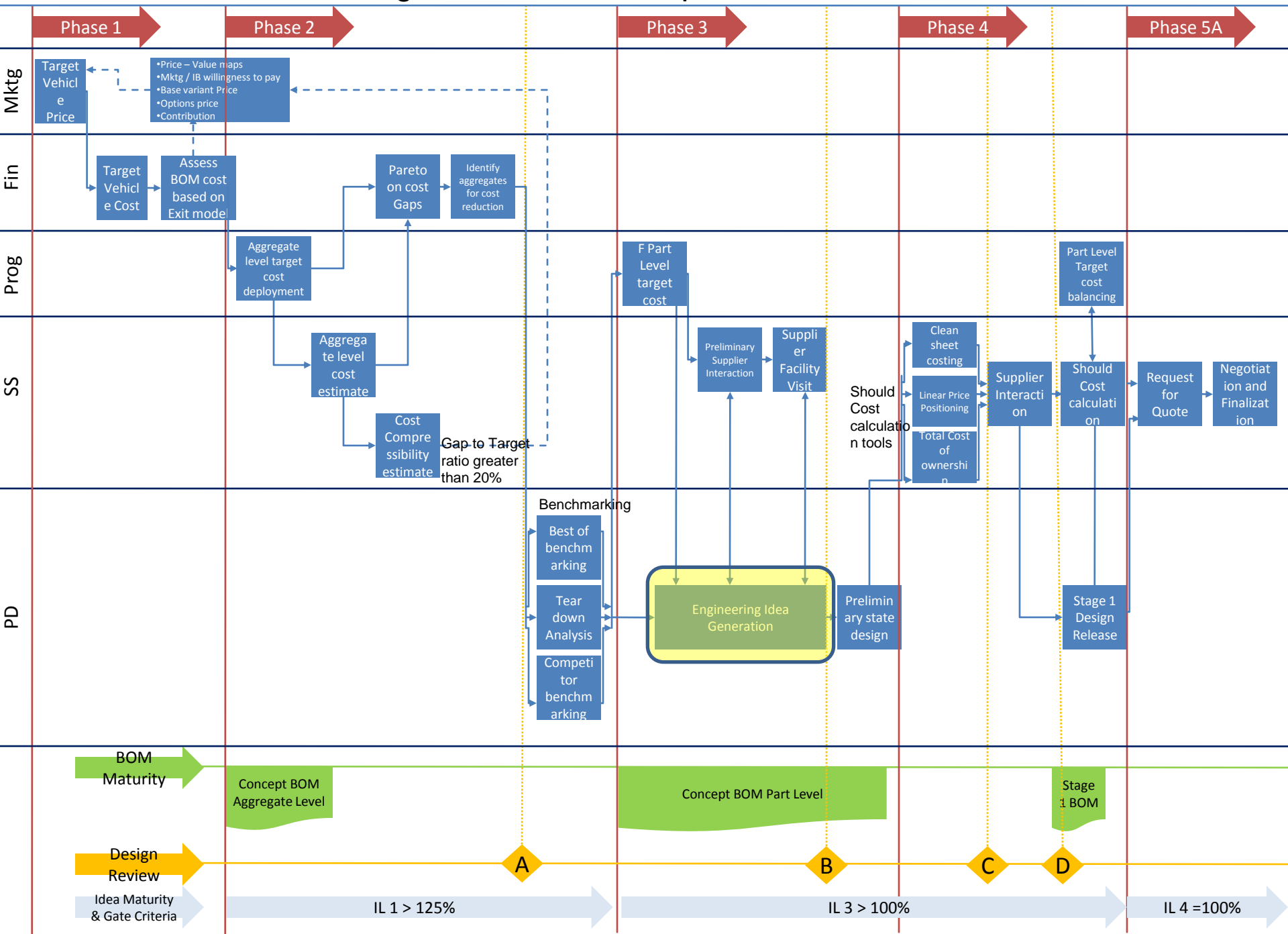
Cons

- Cost evaluation purely internal
- Increased effort for function group
- Planning and lead times required

Tip

- Concentrate on main product design alternatives
- Abridged benchmarking without detailed factory tours can be carried out for current series

Cost Management Process Map - R0V2.1 dt 20-Dec-10



Benchmarking exercise by FVDP-N team



Tear down workshop by NGICV team

