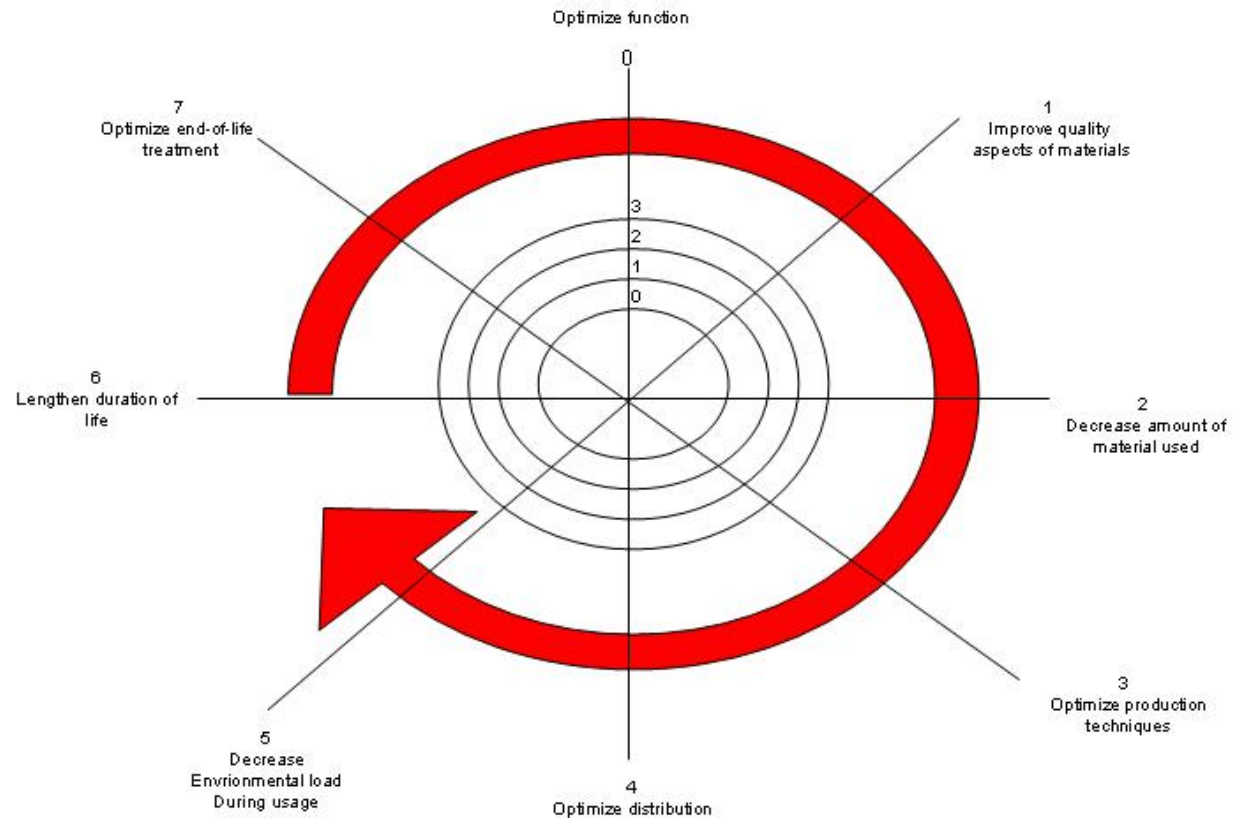


Design and Sustainable Development



Karel Mulder

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Design and Sustainable Development

Engineers Design Products Processes and Systems

Traditionally: 3 phases

Assignment

Design

Application

Responsibilities

Company

Engineer

Company/customer/government

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Engineers are not only responsible for completing the design but also for:

- Analyzing the situation

- Looking into suggestions

- Feedback

- Evaluation

Sustainable Development is part of the whole design/innovation cycle

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Focus on functionality, not on the technology

Not just improving technology but also thinking of entirely different solutions:

e.g. Cars: Need for transport → greenwheels
 Packaging: Need to protect products



<http://www.consumentenkracht.nl/images/greenwheels.jpg>

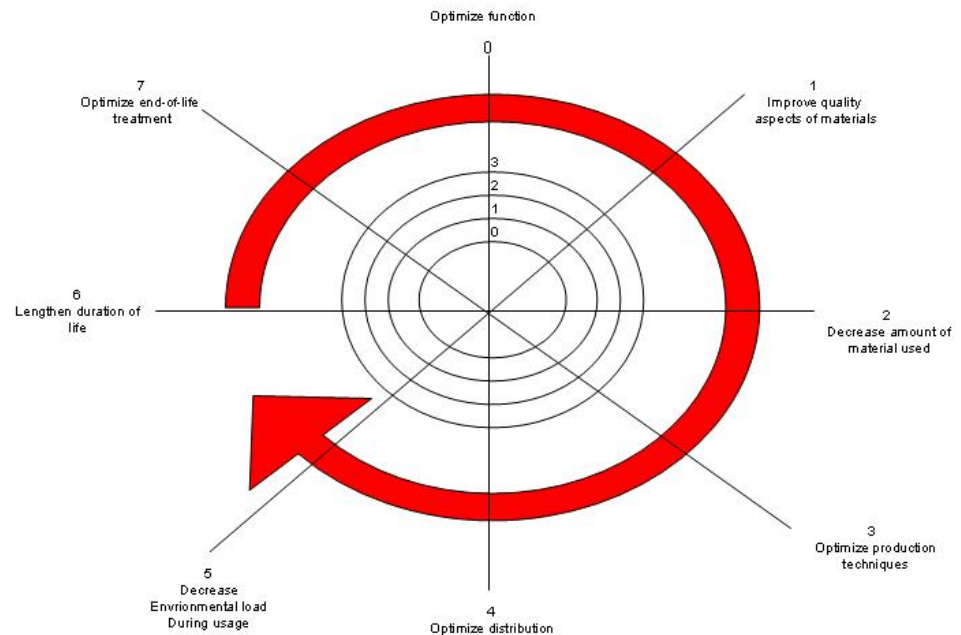
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Tools – e.g. LiDS wheel

There are many strategies to compare the eco-efficiency of designs.

LiDS wheel

Graphical representation to compare different environmental strategies for similar designs.



Design and Sustainable Development

From Design to Technical Innovation

Introducing new ideas:

products/processes/systems in society

What drives innovation?

Technological system

Product/process