Ecodesign implementation and management

Introducing the Ecodesign Maturity Model

Daniela Pigossso
Ecodesign is a pro-active environmental management approach that:

- Minimizes the environmental impact of products across their entire life cycle.
- Incorporates environment into the product development and related processes.
- Creates value in addition to the traditional requirements.
Context
Terminology

- Design for Environment
- Ecodesign
- Environmentally Conscious Design
- Sustainable Design
- Green Design
- Life Cycle Design

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Context
Perspectives for implementation

Little focus to support a sustained implementation

Lack of integration into product development and related processes

Implementation not supported by a roadmap for continuous improvement

Technical perspective

Managerial perspective

Intensive development of new methods and tools

LCA

MECO

MET

E-QFD

Eco-indicator

LIDs Wheel

Ten Golden Rules

Materials lists

...Out of 100+
Ecodesign implementation

Drivers

Companies recognize ecodesign opportunities...

- Corporate responsibility
- Legislation compliance
- Standards
- Innovation potential
- New markets
- Customers’ requirements

... but still face difficulties in systematic ecodesign implementation and management

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Context
Ecodesign implementation

... but still face difficulties in systematic ecodesign implementation and management

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Ecodesign Maturity Model (EcoM2)

**Goal and users**

Support companies in ecodesign implementation and management in a systematic and consistent way based on current maturity profile, strategic drivers and best practices.

**Users**

Managers responsible for ecodesign implementation and management at manufacturing companies.
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Approach

Evolutionary *(step-by-step)* approach

Let's first learn to walk, then start running and, after a lot of training, we will finally be able to win the marathon.

There is a *learning process* to be followed!
Focus on **process improvement** (product development and related processes)
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Application method

Continuous Improvement

Diagnosis of the current maturity profile on ecodesign

Assessment of the capability level of the ecodesign management practices

Definition of strategic goals for ecodesign implementation

Identification of practices, methods and tools

Strategic roadmap for ecodesign implementation

Portfolio management and prioritization based on available resources and drivers

Planning of the ecodesign projects

Project planning: scope, responsible, risks, resources, etc.

Implementation of ecodesign projects

Assessment of the results

Performance indicators

People Change Management

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**Ecodesign Maturity Model (EcoM2)**

**Example 1:**
Low maturity profile, sporadic efforts for ecodesign implementation

**Example 2:**
Higher maturity profile - focus on strategic incorporation, but lack of deployment
Ecodesign Maturity Model (EcoM2)

**Application method**

- Continuous Improvement
  - Diagnosis of the current maturity profile on ecodesign
  - Assessment of the capability level of the ecodesign management practices
- Performance indicators
  - Identification of practices, methods and tools
- People Change Management
  - Portfolio management and prioritization based on available resources and drivers
- Implementation of ecodesign projects
  - Project planning: scope, responsible, risks, resources, etc.
- Strategic roadmap for ecodesign implementation
  - Planning of the ecodesign projects

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Definition of strategic goals
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Ecodesign Management Practices

80004: Analyze and select the suitable ecodesign strategies according to the environmental performance of the product

Ecodesign Operational Practices

c60000: Facilitating Disassembly
c00000, c10000, c20000, c30000, c40000, c50000, c60000

C40000: Product Lifetime Optimization

Ecodesign Methods and Tools

End-of-life

20001: Evaluate the environmental performance of the product

20004: Analyze and select the suitable ecodesign strategies according to the environmental performance of the product

Ecodesign Methods and Tools

LCA
MET
DfE
Matrix

EDIT
ELDA
LCP

448

112
Ecodesign Maturity Model (EcoM2)

Application method

Continuous Improvement

- Diagnosis of the current maturity profile on ecodesign
- Assessment of the capability level of the ecodesign management practices
- Identification of practices, methods and tools
- Portfolio management and prioritization based on available resources and drivers

Performance indicators

- Assessment of the results

People Change Management

- Implementation of ecodesign projects
- Project planning: scope, responsible, risks, resources, etc.

Planning of the ecodesign projects

- Definition of strategic goals for ecodesign implementation
- Strategic roadmap for ecodesign implementation

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Application method

Ecodesign Maturity Model (EcoM2)

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Project planning: scope, responsible, risks, resources, etc.

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Ecodesign Maturity Model (EcoM2)

EcoM2 companies

EMBRAER  
GRUNDFOS  
natura

PHILIPS  
Tecumseh  
LEGO  
Coloplast

Healthcare
Ecodesign Maturity Model (EcoM2)
Benefits for manufacturing companies

Systematic approach for ecodesign implementation and management

- Diagnosis of the current maturity profile
- Evaluation of strengths and improvement opportunities
- Benchmarking of best practices

Basis for setting strategic goals
Deployment of strategic roadmaps for systematic integration

Common language and shared vision
Communication and awareness raising

Framework for continuous improvement
Consistency in the product development and related processes

Systematic way for measuring progress
Long-term perspective for ecodesign implementation
Thank you for your attention!

Eco-M2
Ecodesign Maturity Model

Supporting companies to improve their maturity on ecodesign implementation and management

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