

Figure 2.1 DFE concept, objectives, and characteristics.

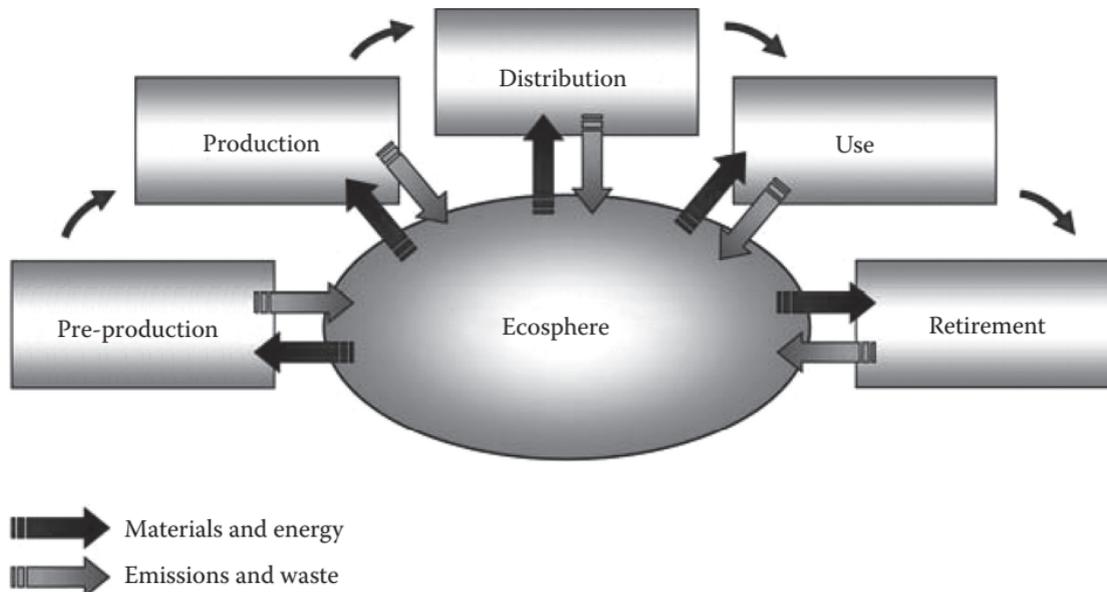


Figure 2.2 Life cycle phases and interactions with ecosphere.

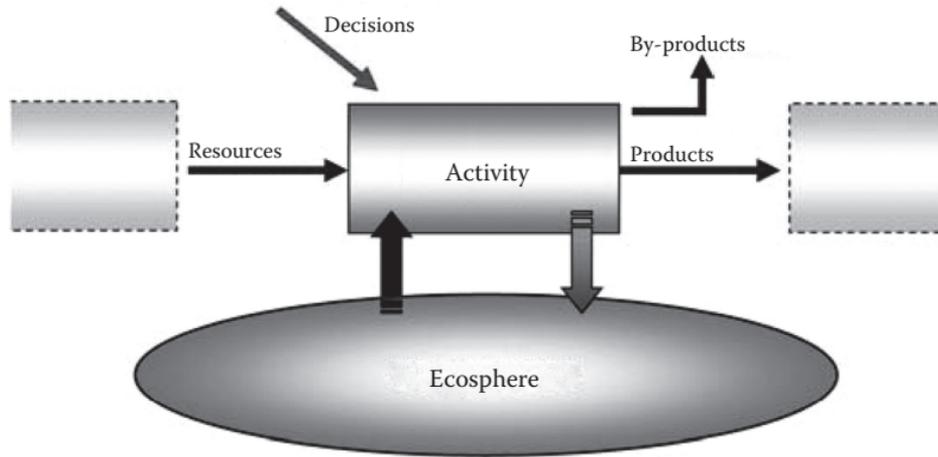


Figure 2.3 Reference activity model.

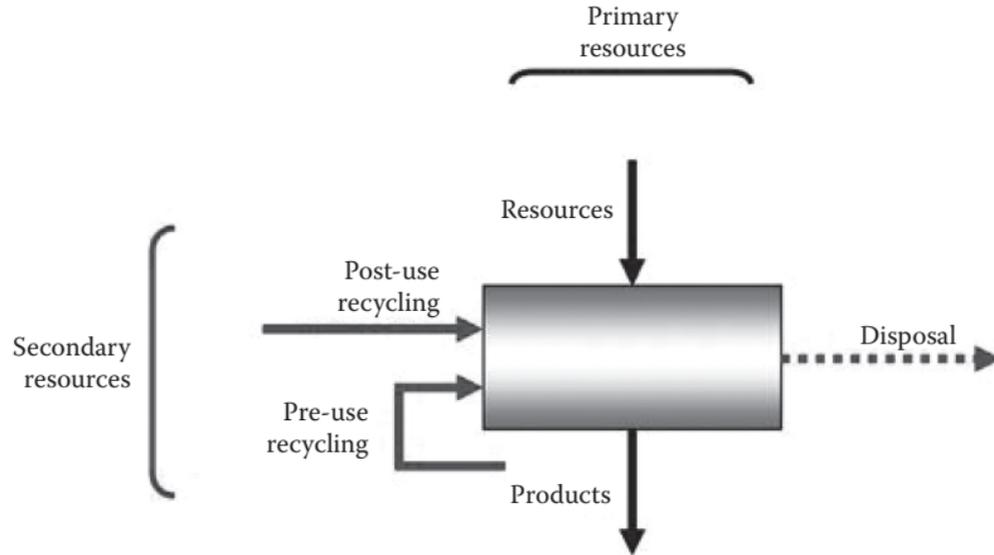


Figure 2.4 Flows of material resources.

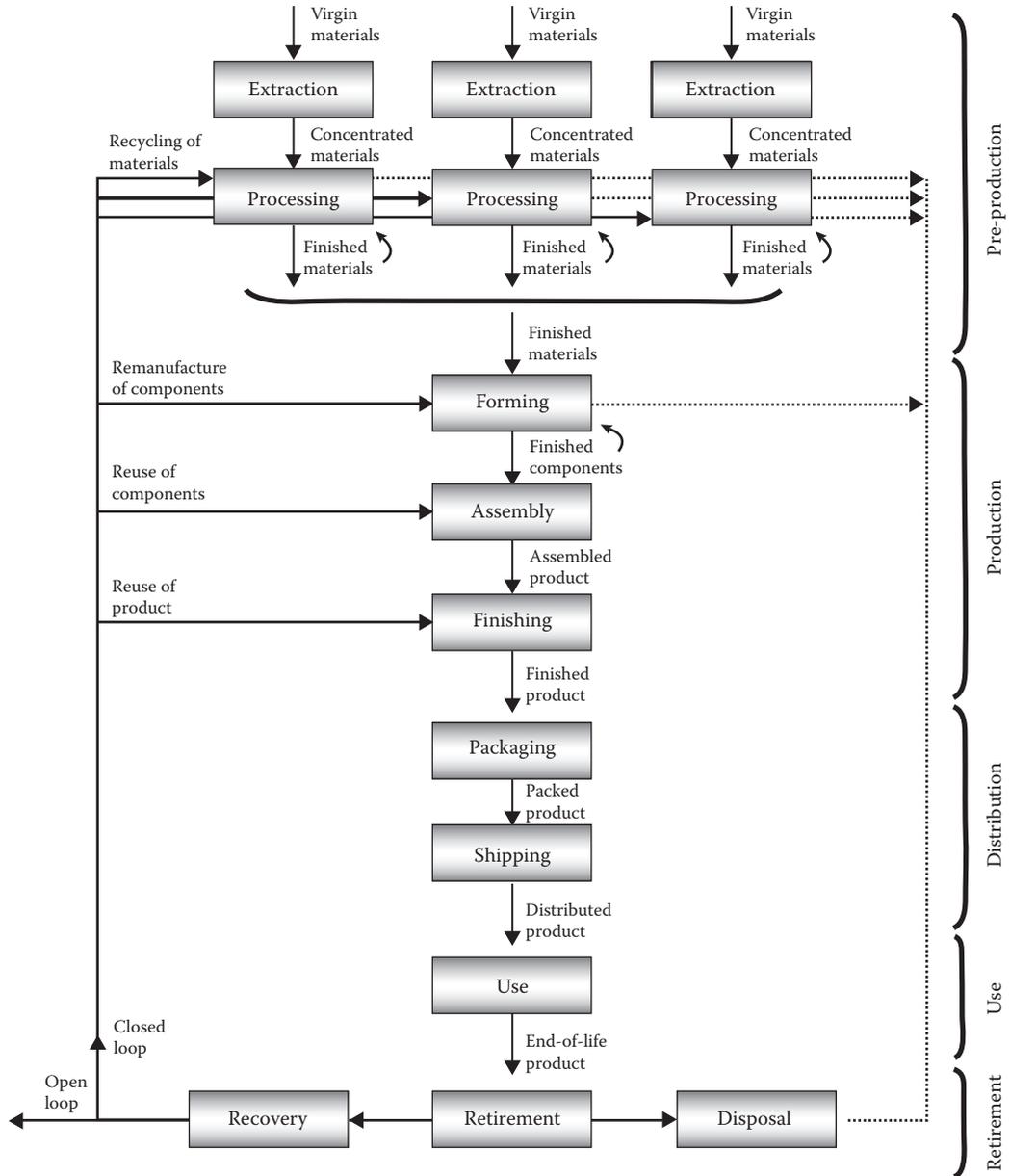


Figure 2.5 Complete life cycle of product and flows of material resources.

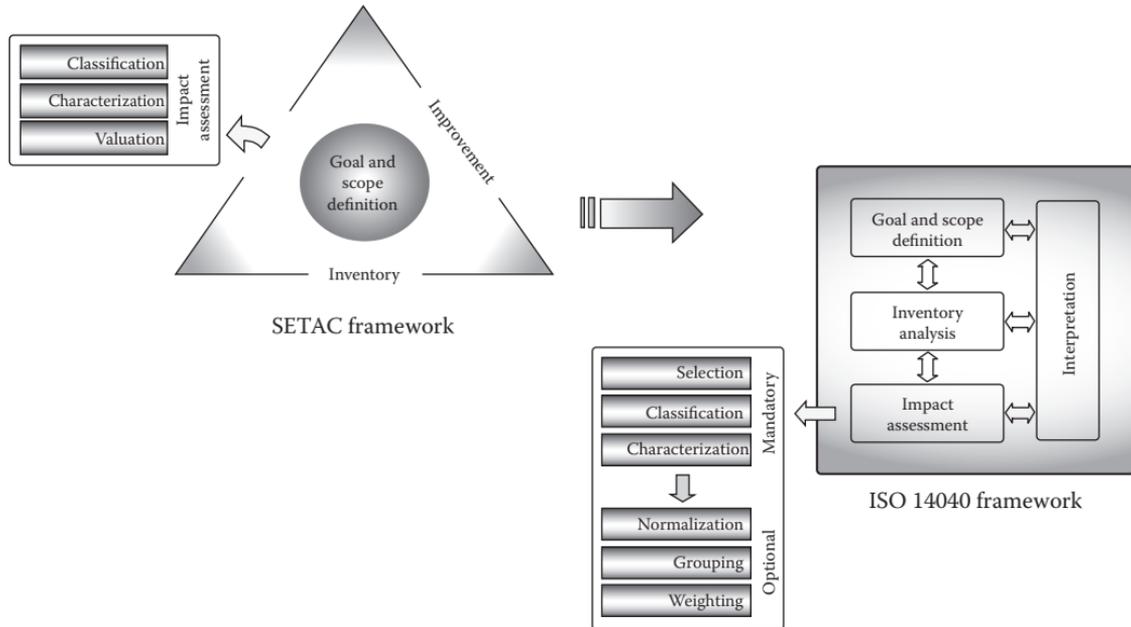


Figure 2.6 LCA framework according to SETAC and ISO 14040.

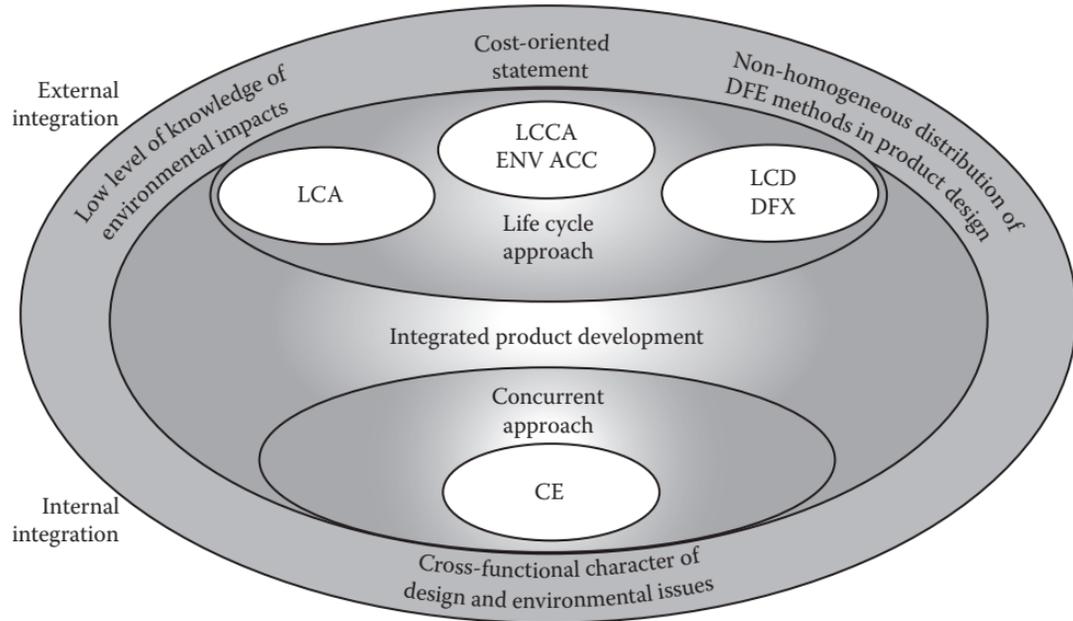


Figure 2.7 Environmentally-oriented integrated product development.

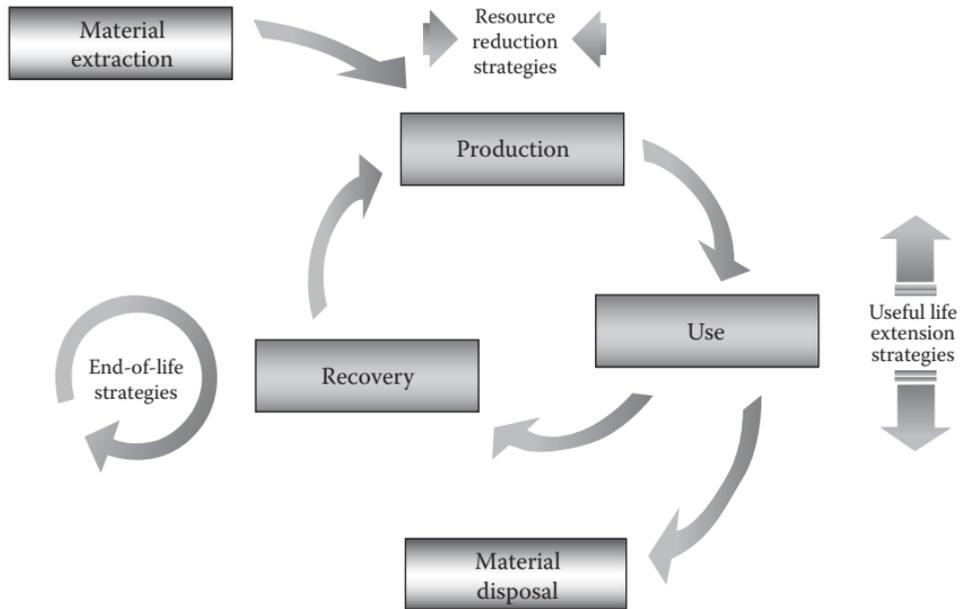


Figure 2.8 Environmental strategies in product life cycle.

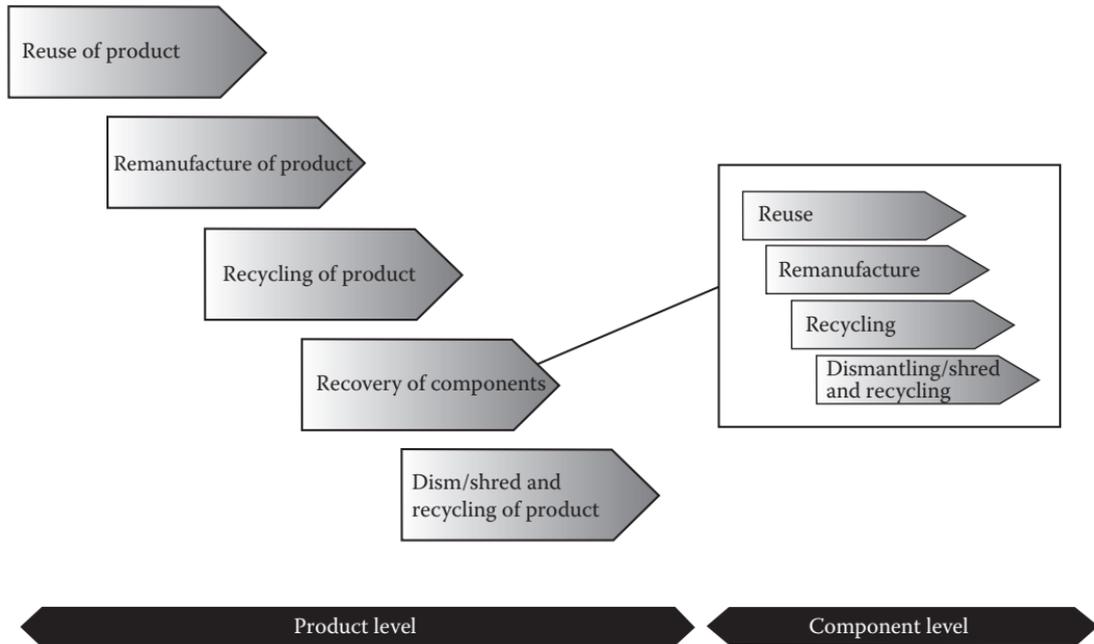


Figure 2.9 End-of-life strategies.

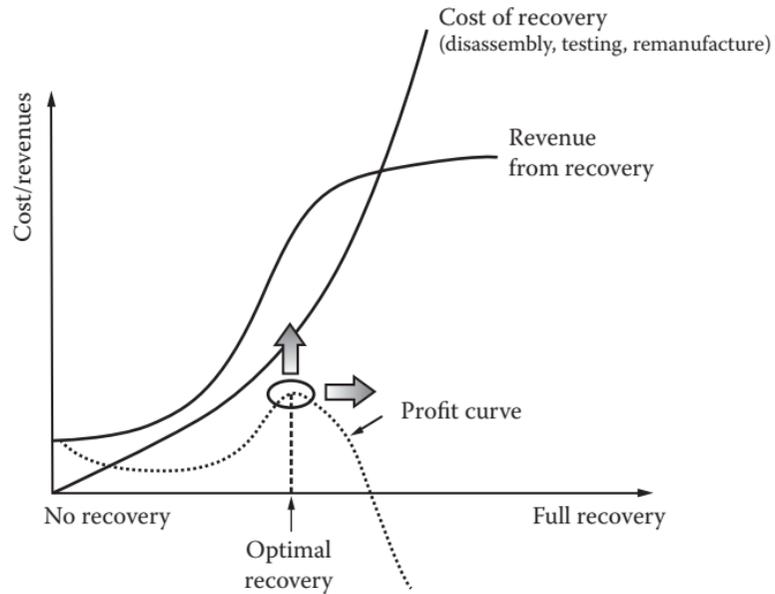


Figure 2.10 Recovery planning optimization.

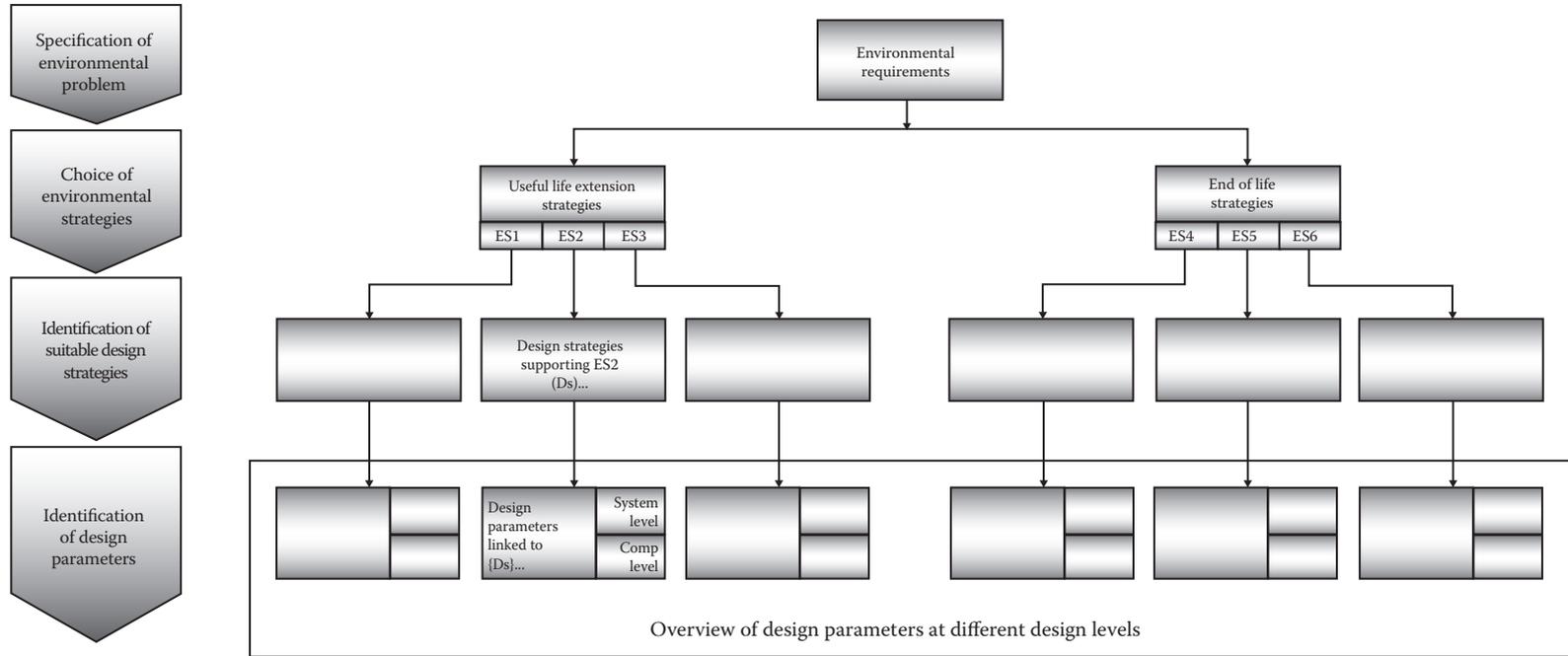


Figure 2.11 Implementing environmental strategies into the design process.

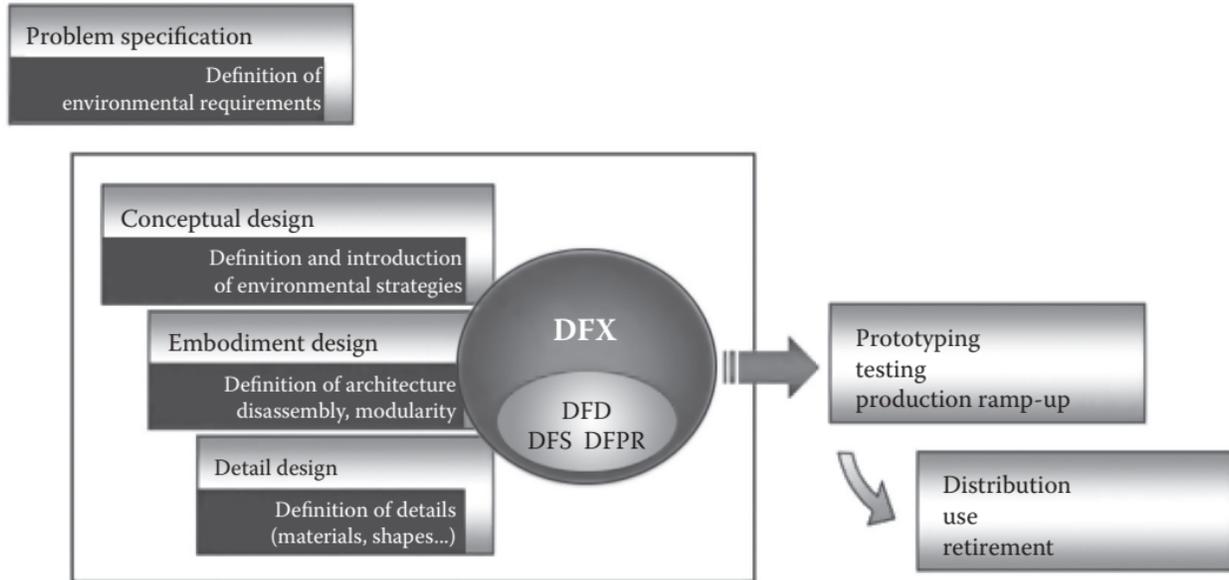
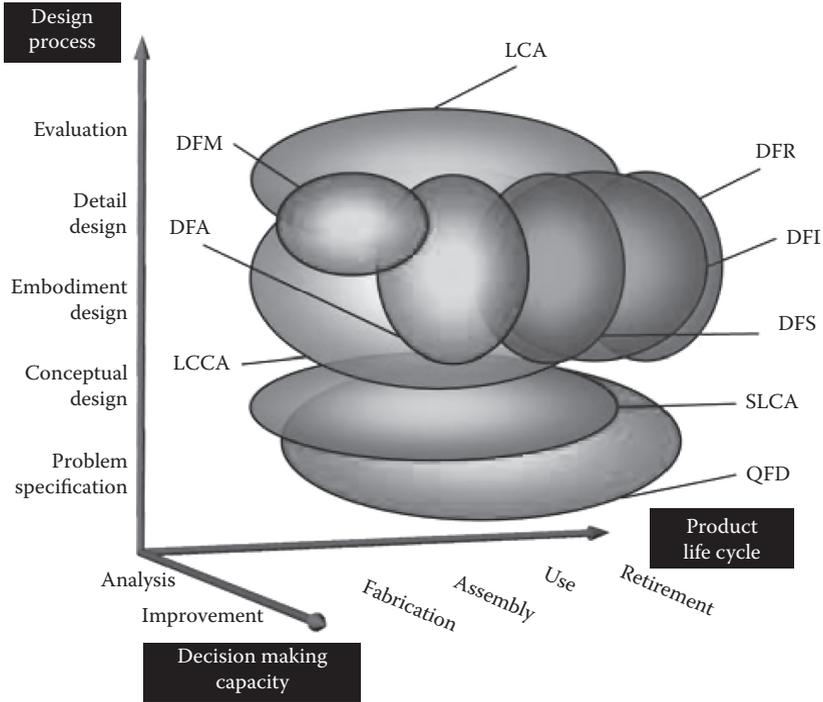


Figure 2.12 Use of DFX tools for integrating the environmental aspects into product development process.



DFD - Design for disassembly  
 DFS - Design for serviceability  
 DFR - Design for recovery  
 DFA - Design for assembly  
 DFM - Design for manufacturing

QFM - Quality function deployment  
 LCA - Life cycle assessment  
 SLCA - Streamline LCA  
 LCCA - Life cycle cost analysis

Figure 2.13 Integrated design: tools and techniques.