

Definition

Find the right problem to solve

- What problem is most important?
- Is there a deeper root cause?
- What are the problem characteristics?
- What are characteristics of a good solution?
- What are the constraints?

Divergence

Generate solution concepts

- Brainstorming
- Checklists
- Synectics
- Morphological analysis
- Brainwriting
- Wishful thinking
- Idea triggers
 - Functional decomposition
 - Analogies

Transition

Select most likely concept candidates

- Pugh charts
- QFD
- DFX
- Rough prototyping (sketch models)
- Rough analysis
- User feedback (update problem definition)

Convergence

Select final design

- Analysis
- Detailed configuration
- Optimization
- Manufacturing planning
- Rough prototyping
- User feedback
- Testing

Prototyping

Build a working prototype

- Rapid prototyping methods