
SYSTEMS THINKING: FOSTERING INNOVATION IN NEW PRODUCT DEVELOPMENT

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...innovation is a vital ingredient of business success. Free market economics depend upon companies competing with each other in the market place and trying to close any lead established by another company.

In terms of selling products, companies must continually introduces new products to prevent their more innovative competitors eating away at their market share...

Product Design – M. Baxter



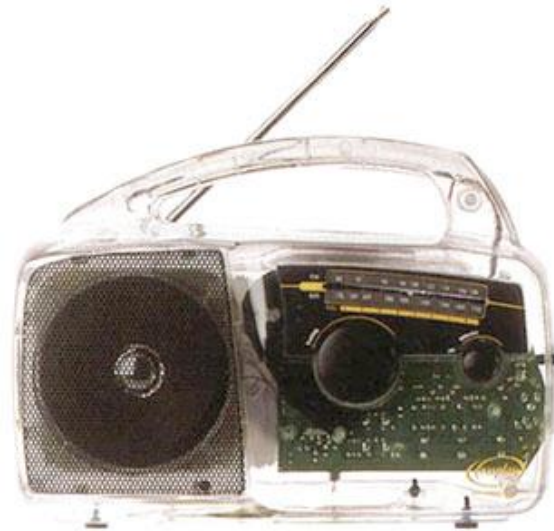
telecommunications



health and medical



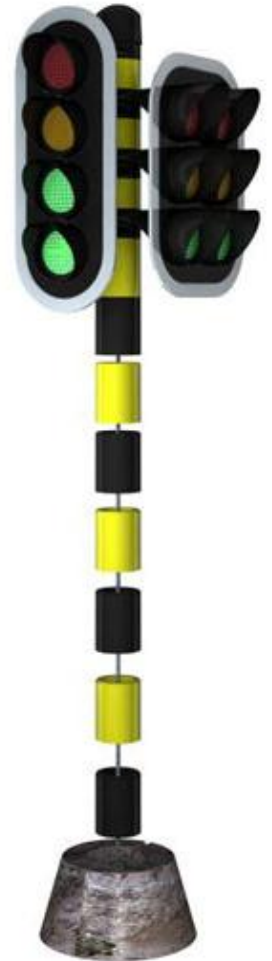
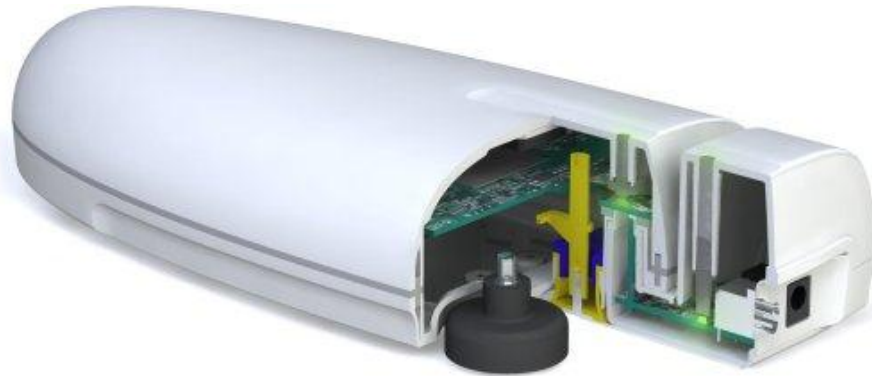
brand design



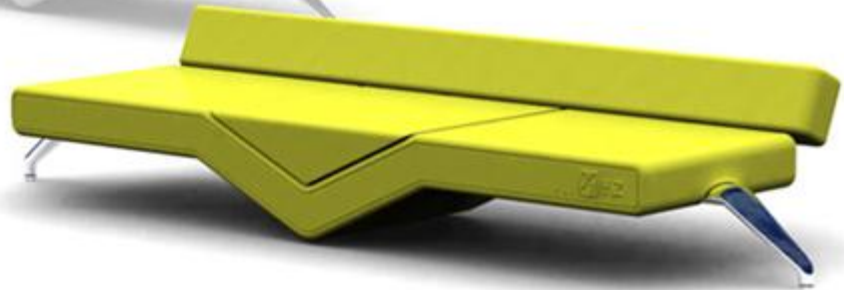
design with africa (DWA)



kiosk and GUI design



industrial goods



furniture design

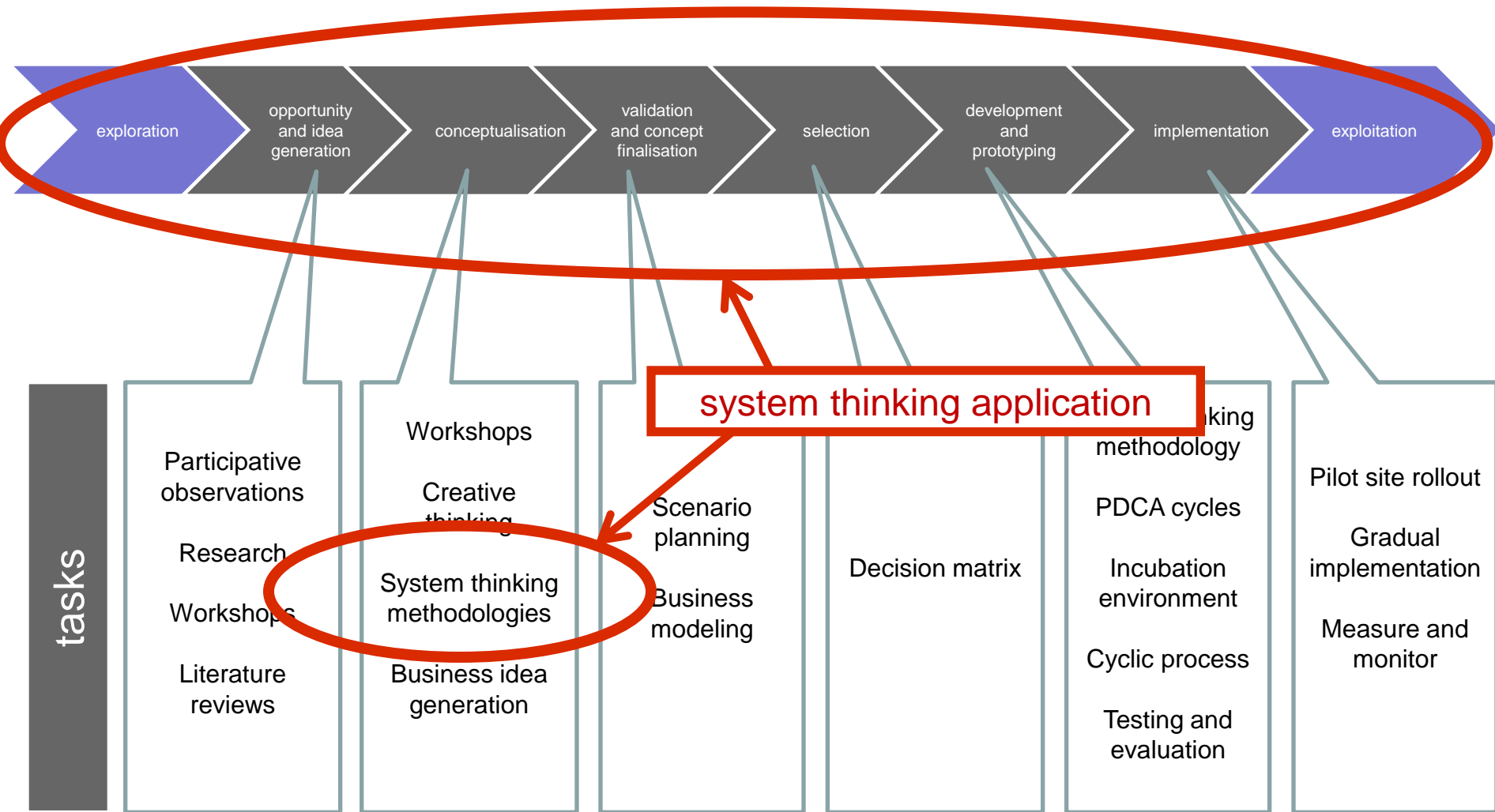


conceptual design

... innovation...

- involves exploration and discovery
 - requires divergent thinking as opposed to convergent thinking
 - needs diversity within the team (different perspectives and world views)
 - exhibits relational complexities
 - uncertain and risky process (uncertainty management)
 - difficult to benchmark and measure
 - requires abductive logic compared to deductive/ inductive logic
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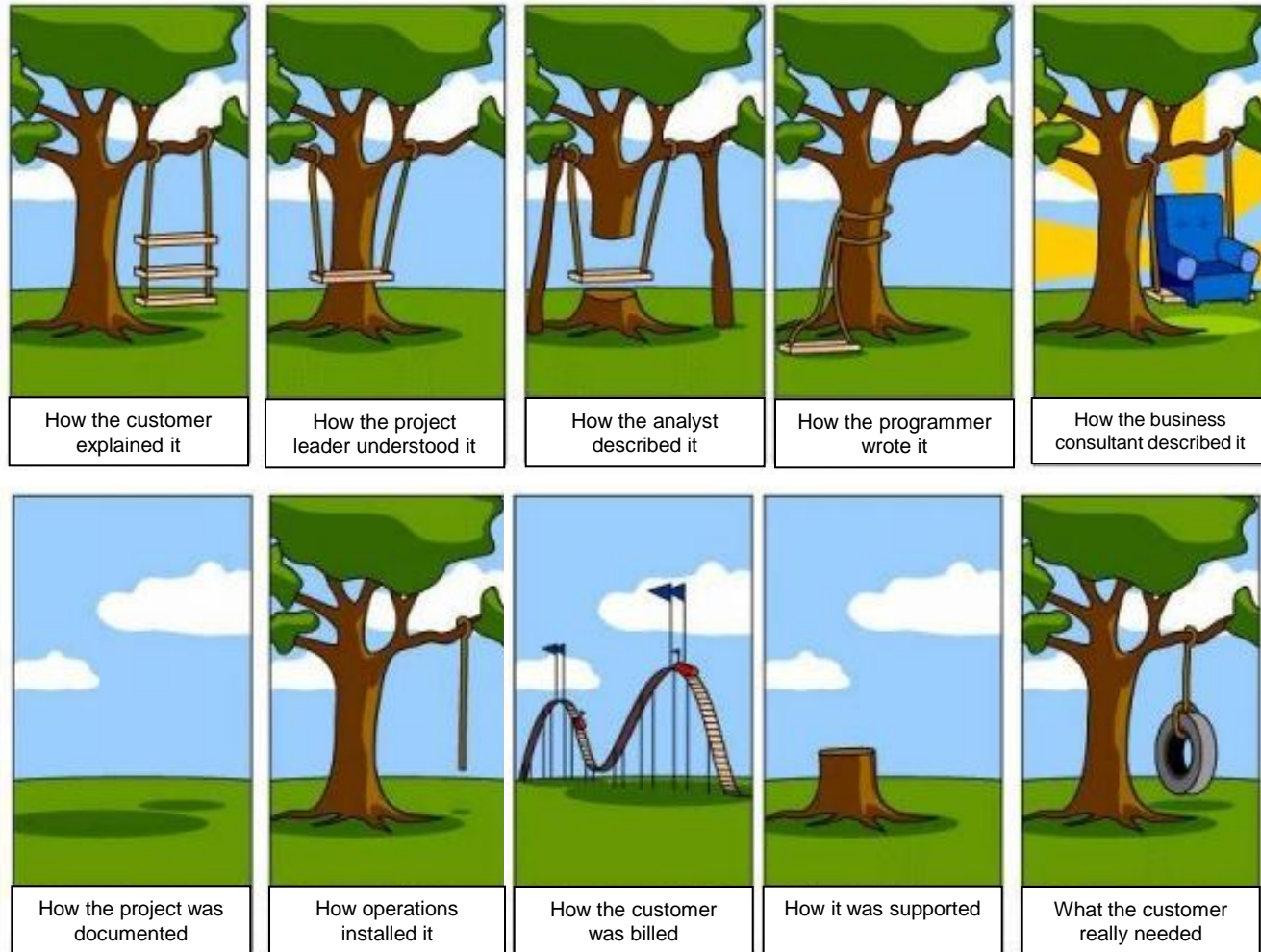
... the innovation value chain ...



... new product design conflicting requirements ...

- exhibits “hard” and “soft” design requirements
 - customers want improved product performance, functionality and better value
 - marketers want a competitive edge, product differentiation and speed to market
 - production engineers want simple production and easy assembly
 - technologists want to try new materials, design and processes
 - accountants demand costs and margins for minimum investment
 - ... makes new product development a difficult, complex and challenging process
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... multiple perceptions of reality ...



... systems thinking ...

- deals with complexity
 - deals with change
 - identifies casual relationships (cause and effect)
 - holistic thinking (study of wholes rather than parts)
 - deals with diversity (different perspectives, assumptions, perceptions)
 - uses methodologies for practical applications
 - focus on systemic, expansive view
 - caters for creativity
-

... systems thinking methodologies...

Purpose	System Approach (methodology)
Improving Goal Seeking and Viability	Hard Systems Thinking
	System Dynamics: The Fifth Discipline
	Organizational Cybernetics
	Complexity Theory
Exploring Purpose	Strategic Assumption Surfacing and Testing
	Interactive Planning
	Soft System Methodology
Ensuring Fairness	Critical System Heuristics
	Team Syntegrity
Promoting Diversity	Postmodern Systems Thinking



... thank you ...

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