

Design process: procedure that leads from design action(verb) to the design object(noun)

Waterfall Process: Easy to understand, easy to follow, produces valid solutions, the base line for most designs, \*  
Process is iterative.

Information → [Needs Analysis → problem statement → generate design criteria → generate solutions →  
evaluate solutions → test/Prototype] → implement solution.

Design thinking: modern design process which allows empathetic thinking, creates rapid iterative prototyping.

Empathize → Define → Iterate → prototype → test > Repeat.

Agile Process: prompt delivery with constant refinement, seeks customer collaboration and feedback, focuses on quick response and is adaptable.

Problem ↔ Solution (Keep going back and forth indefinitely)

Co-evolution: requirements are not always understood so each solution will bring a new issue to solve, mimics evolving design requirements.

Problem ↔ solution (goes back and forth the more the client tells you about problems)

Spiral: works well as attributes of the design are added one after another (increases complexity)

1: Determine objective, 2. Identify Risks, 3. Development and test, 4. Plan next iteration \

Persistence Loop generate /reformed solutions until you are content, time runs out, Money runs out.

Design Optimization- believe in a better solution, even when not apparent.

Designs Criteria- create criteria and develop constraints.

Generate solution: as many ideas as possible each following the design criteria.

Prototype test- verifies complete or simple simulation physical or virtual, verifies functionality.

Solution works? - Analyze the solution and repeat steps until works well

Problem refinement – helps update requirements and refines problem statement.

Identify real Problem – define problem and assess user's needs, make sure solving true problem    Design  
Mantra Ask yourself if you are following and the true requirements.

Foundation: the possessed knowledge you have and life experience, natural talent and new knowledge which will  
have with the task at hand Perfo4

Types of target specification: performance, Installation, in Aesthetics, Standards, Ergonomics, Materials Production,  
Life Span, Quantity, Documentation, Environment, Patents, Shelf Life, Quality, Pricing, Competition, Maintenance  
repair, height, market, political + social aptitudes, Manufacturing, Disposable, Company, Constraints, Shipping,  
Process, Customer, Time, Costs, Safety

Many equipment steps towards properly defining the problem,

Each step depends on key information obtained from previous steps.

Success depends on: Taking the required time to complete each step properly.

Approaching the process as objectively as possible