• Concept development
  • Identify needs of target market
  • Develop product concepts & evaluate
  • Select final concept

• System-level design
  • Define product architecture
  • Divide product into subsystems and components
  • Geometric layout of product
  • Functional specification of each of the product’s subsystems
  • Preliminary process flow diagram for final assembly

• Detail design
  • Complete specification of geometry, materials, and tolerances of all parts
  • Identification of suppliers
  • Process plans for fabrication & assembly

• Testing & refinement
  • Prototypes – alpha & beta

• Production ramp-up
  • Make product using intended production system
  • Evaluate production output