

EPICS® / HIGH DESIGN PROCESS

Project Identification Phase: Goal is to identify a specific, compelling need to be addressed	
Common Tasks	<ul style="list-style-type: none"> • Conduct needs assessment (if need not already defined) • Identify stakeholders (customer, users, person maintaining project, etc.) • Define basic stakeholder requirements (objectives or goals of projects and constraints) • Determine time constraints of the project
Gate 1: Continue if have identified appropriate EPICS project that meets a compelling need	
Specification Development Phase: Goal is to understand “what” is needed by understanding the context, stakeholders, requirements of the project, and why current solutions don’t meet need, and to develop measurable criteria in which design concepts can be evaluated.	
Common Tasks	<ul style="list-style-type: none"> • Understand and describe context (current situation and environment) • Create stakeholder profiles • Create mock-ups and simple prototypes: quick, low-cost, multiple cycles incorporating feedback • Develop a task analysis and define how users will interact with project (user scenarios) • Compare to benchmark products (prior art) • Develop customer specifications and evaluation criteria; get project partner approval
Gate 2: Continue if project partner and advisor agree that have identified the “right” need, and if no existing commercial products meet design specifications.	
Conceptual Design Phase: Goal is to expand the design space to include as many solutions as possible. Evaluate different approaches and selecting “best” one to move forward. Exploring “how”.	
Common Tasks	<ul style="list-style-type: none"> • Conduct Functional Decomposition • Brainstorm several possible solutions • Create prototypes of multiple concepts, get feedback from users, refine specifications • Evaluate feasibility of potential solutions (proof-of-concept prototypes); select one to move forward
Gate 3: Continue if project partner and advisor agree that solution space has been appropriately explored and the best solution has been chosen.	
Detailed Design Phase: Goal is to design working prototype which meets functional specifications.	
Common Tasks	<ul style="list-style-type: none"> • Design/analysis/evaluation of project, sub-modules and/or components (freeze interfaces) • Complete DFMEA analysis of project • Prototyping of project, sub-modules and/or components • Field test prototype/usability testing
Gate 4: Continue if can demonstrate feasibility of solution (is there a working prototype?). Project Partner and advisor approval required.	
Delivery Phase: Goal is to refine detailed design so as to produce a product that is ready to be delivered! In addition, the goal is to develop user manuals and training materials.	
Common Tasks	<ul style="list-style-type: none"> • Complete user manuals/training material • Complete usability and reliability testing • Complete delivery review
Gate 5: Continue if Project Partner, Advisor and EPICS Admin agree that project is ready for delivery!	
Service/Maintenance Phase	
Common Tasks	<ul style="list-style-type: none"> • Evaluate performance of fielded project • Determine what resources are necessary to support and maintain the project
Gate 6: Project Partner and Advisor approve continued fielding of project. If not, retire or redesign.	
Retirement or Redesign	