

Zitech Engineering, LLC
Product Life Cycle (PLC) Process

PLC Phase	Requirements Analysis	Concept & Feasibility	Design & Development	Alpha (Un-released)	Beta/Pilot (pre-release)	Gamma (Released)	Product Maturity	Omega (End of Life)	
Product Development / Management	Activities	<ul style="list-style-type: none"> Create Product Roadmaps Develop New Product Concepts Develop CES Concepts Employ DFX Analysis Perform Opportunity/Threat Assessments Create Preliminary MRS CRS 	<ul style="list-style-type: none"> Assign R&D Project Manager Create C&F Plan Perform C&F Study/Model Build/Test C&F Prototype C&F Review Prepare for Executive Review 	<ul style="list-style-type: none"> Assign Program Manager Create Spec (EDS) Design System Design Review Reconcile Specs Develop Preliminary Alpha Plan Prepare for Design Exit 	<ul style="list-style-type: none"> Finalize Alpha Prototype Plan Build Alpha Prototypes Test/Debug Alpha Prototypes Reconcile Test Data Plan Develop Preliminary Beta Plan Prepare for Alpha Exit 	<ul style="list-style-type: none"> Finalize Beta Plan Design, Build/Test Pilot Process Build/Test Beta Units Field Test Beta Units Beta Test Review Reconcile Test Data & Create Action Plan Develop Preliminary Gamma Plan Prepare for Beta Exit 	<ul style="list-style-type: none"> Finalize Gamma Plan Design Production System Build/Test Production System Review Production System Reconcile Test Data & Create Action Plan Prepare for Gamma Exit 	<ul style="list-style-type: none"> Assign Product Manager Create PLC Management Plan Optimize Production System Optimize Product Performance Periodic PLC Reviews Reconcile Product CSP Data and Create Action Plan Prepare for Quarterly Executive Review 	<ul style="list-style-type: none"> Create Obsolescence Plan Optimize Product/Profitability Communicate Obsolescence Plan to Customer Kill Product Perform PLC Post Mortem Obsolescence Review Reconcile Product Performance Data and Create Action Plan Prepare for Executive Review
	Deliverables	<ul style="list-style-type: none"> Technology and Product Roadmaps Market/Customer Based DFX Database Opportunity Assessment/Matrix Threat Matrix Preliminary MRS's CRS's 	<ul style="list-style-type: none"> Designated Owner White Paper C&F Plan Completed Benchtop Prototype C & F Minutes/Findings C & F Exit Presentation/Checklist Critical MRS 	<ul style="list-style-type: none"> Engineering Design Spec (EDS) Design Package Minutes/Findings Action Plan Preliminary Alpha Plan Design Exit Presentation/Checklist 	<ul style="list-style-type: none"> Alpha Prototype Plan Completed Alpha Prototypes Test Results/Report Action Plan Preliminary Beta Plan Alpha Exit Presentation/Checklist 	<ul style="list-style-type: none"> Beta Plan Pilot Line Beta Units Beta Field Test Report Beta Review Minutes/Findings Beta Action Plan Preliminary Gamma Plan Beta Exit Presentation/Checklist 	<ul style="list-style-type: none"> Gamma Plan Production System Design Documentation Factory Layout/Facility Test Report/Metrics Gamma Review Minutes/Findings Gamma Action Plan Gamma Exit Presentation/Checklist 	<ul style="list-style-type: none"> Designated Owner PLC Plan Process Kaizen Plan/Metrics Product Kaizen Plan/Metrics Product Andon Summary Status Product Maturity Action Plan Product Quarterly Presentation 	<ul style="list-style-type: none"> OBS Plan Product P&L Analysis Obsolescence Presentation to Customer Completed Ramp Down Procedure Obsolescence Review Minutes/Findings Obsolescence Action Plan Obsolescence Presentation/Checklist
Typical Duration	1 Day to 3 Months	1 Month to 6 Months	3 Weeks to 1 Year	1 Month to 3 Months	6 Weeks to 6 Months	2 Months to 6 Months	1 Year to 5 Years	1 Year to 3 Years	
Control Gates	Executive Mgmt Review	Executive Mgmt Review	Design Exit Review	Alpha Exit Review	Beta Exit Review	Gamma Exit Review	Quarterly Executive Review	Executive Review	