



SOCIETY OF CONCURRENT PRODUCT DEVELOPMENT BODY OF KNOWLEDGE



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STRATEGY	PEOPLE	PROCESS	TOOLS	TECHNOLOGY
<p>BUSINESS VALUES</p> <ul style="list-style-type: none"> • Innovator/Trend Setter • Leader • Fast-Follower • Operational Executor <p>DIRECTION SETTING</p> <ul style="list-style-type: none"> • Business • Product • Market • Technical • Risk <p>COMPETITION</p> <ul style="list-style-type: none"> • Competitive Analysis • Benchmarking <p>PROCESS DIRECTION</p> <ul style="list-style-type: none"> • Innovation • Market-Pull • Technology-Push • JV/Alliance/Partnership • Core Competencies • Adv. Development • Product Planning • Branding • Product Development • Patent & IP • Acquisition & Licensing • R&D Investment • Quality Standards • Risk Management <p>PORTFOLIO</p> <ul style="list-style-type: none"> • Hurdle Rates • Risk • Prioritization • Product Selection • Project Funding • Life Cycle Mgt. <p>RESOURCES</p> <ul style="list-style-type: none"> • Facilities • Human • Capital • Time <p>MAINTENANCE</p> <ul style="list-style-type: none"> • Reengineering • Planning Policies • Succession Planning • Reinvestment Process 	<p>ENVIRONMENT</p> <ul style="list-style-type: none"> • Facility Design • Collocation • Ergonomics Culture, • Values & Principles * Empowerment <p>COMPETENCIES</p> <ul style="list-style-type: none"> • Leadership • Management • Functional • Individual <p>ORGANIZATION</p> <ul style="list-style-type: none"> • Flat Structure • Digital Speed • Global 24/7 <p>PROCESSES</p> <ul style="list-style-type: none"> • Decisionmaking • Resource Allocation • Outsourcing • Contracting • Communications • Measurement • Recognition • Reward <p>TEAMS</p> <ul style="list-style-type: none"> • Chartering • Cross-Functional • Early Involvement • Concurrent • Self-Managing • Team Leadership • Roles/Responsibilities • Negotiation • Becoming A Unit • Conflict Resolution • Measuring • Rewarding <p>INDIVIDUALS</p> <ul style="list-style-type: none"> • Wizards • A & B Performers • C Performers <p>CAREER PATHING</p> <ul style="list-style-type: none"> • Management • Technical <p>TRAINING</p> <ul style="list-style-type: none"> • Awareness • Skill Development • Skill Maintenance • Lifelong Learning 	<p>FRAMEWORKS</p> <ul style="list-style-type: none"> • Concurrency • Structure/Components • Nomenclature • Cadence • Management • Documentation • Software-Only <p>SUBPROCESSES</p> <ul style="list-style-type: none"> • Lightbulb Capture • Product Selection • Customer Requirem'ts • Reverse Engineering • Product Definition • Product Specification • Platform & Architecture • Modularity • Reuse • Systems Engineering • Project Planning • Estimating • Supplier Involvement • New Product Sourcing • Product Design • Software Design • Process Design • Design Review • Quality Control • Prototyping • Beta Testing • Performance Testing • Life Testing • Production Scaling • Project Management • Continuous Improvem't • Knowledge Managem't <p>TAILORING</p> <ul style="list-style-type: none"> • Platform • Derivative • Incremental • Evolutionary • Sustaining <p>STANDARDS</p> <ul style="list-style-type: none"> • Design Rules • Performance Norms <p>CONTROL</p> <ul style="list-style-type: none"> • Measurement • Post-Launch Reviews <p>AUTOMATION</p> <ul style="list-style-type: none"> • Electronic Documents • Groupware & Workflow • Collaboration 	<p>IDEATION</p> <ul style="list-style-type: none"> • Innovation • Concepting • Voice-Of-Customer • Requirements Capture • Quality Fcn. Deploy'm't <p>PROJECT PLANNING</p> <ul style="list-style-type: none"> • WBS • PERT/CPM • Gantt • Network <p>DEFECT PREVENTION</p> <ul style="list-style-type: none"> • Robust Design • Design Of Experiments • Fail Mode/Effect Analy. • Geometric Tolerancing <p>COSTING</p> <ul style="list-style-type: none"> • Activity-Based • Standard • Target • Product • Life Cycle • Project • Capital <p>DFX: DESIGN FOR "X"</p> <ul style="list-style-type: none"> • DFM/A- Mfg. & Assy. • DFE- Environment • DFT- Testability • DFR- Reliability • DFR- Serviceability • DFD- Disassembly <p>RELIABILITY</p> <ul style="list-style-type: none"> • Prediction • Growth <p>IMPROVEMENT</p> <ul style="list-style-type: none"> • Value Engineering • Defect Tracking • Corrective Action <p>LIBRARIES</p> <ul style="list-style-type: none"> • Standard Parts • Preferred Parts • Load Cases • Group Technology • Lessons Learned • Vortals <p>METRICS</p> <ul style="list-style-type: none"> • Predictive vs. Resultant • Corporate vs. Project • Product vs. Project • Functional • Individual • Improvement 	<p>REALTIME/D</p> <ul style="list-style-type: none"> • Product Interactivity • Virtual Reality • Visualization • Mock-Up • Global Product Model <p>MCAD</p> <ul style="list-style-type: none"> • Surfaces, CAID, & 3D • Reverse Digitization • Rapid Prototyping • 2D & CAD • CAE - FEA, CFD, • Tool & Mold Design • Computer-Aided-Test • Production Test Design <p>ECAD</p> <ul style="list-style-type: none"> • Top-Down Design • Behavioral Synthesis • Modeling & Simulation • Circuit Design • Circuit Layout • Circuit Test Design <p>SOFTWARE DESIGN</p> <ul style="list-style-type: none"> • Digital vs. Embedded • Frameworks * Architectures • Functional Design • Review & Inspection • Production Design • Test Design • CASE Tools • Coding & Languages <p>OPERATIONS DESIGN</p> <ul style="list-style-type: none"> • CAPP • Process Simulation • Cycle-Time Estimation • CAM/NC Programming • Facility Design <p>PDM/S/W REPOSITORIES</p> <ul style="list-style-type: none"> • KBE • Configuration • Change Management • Vault & Archives <p>DATA STANDARDS</p> <ul style="list-style-type: none"> * Digital Data • Document • Internet • EDI & CALS <p>PROJECT MANAGEMENT</p> <ul style="list-style-type: none"> • Resource Planning • Multi-Project • Single-Project <p>DECISION MAKING</p> <ul style="list-style-type: none"> • Decision Support • Metrics <p>TRAINING</p> <ul style="list-style-type: none"> • Distance Learning • Interactive Learning

Version 3.5