

Key Issues Gates & Checkpoints in Product Development



Sigma Design Company offers the following list of key checkpoints throughout the full product development and commercialization cycle.

1. Concept stage: preliminary investigation

- Market research
- Concept description
- Patent disclosures
- Target specifications
- Target costs
- Forecast by size & material
- Market size – expected share
- Comparison to competition features, strength vs. weakness
- ID barriers to new manufacturing techniques
- Assembly review – key inspection points, tooling & fixtures

2. Technical feasibility stage:

- Marketing plan
- R & D plan
- Production development plan
- ID safety issues
- Production feasibility
- Preliminary product design
- Preliminary product manufacturing process
- Cost estimate
- Schedule
- Market focus
- Develop test plan
- Develop production plan
- QA/QC tests
- OIM warning labels

3. Developmental stage:

- ID critical materials
- ID critical processes
- Proof of performance
- Description of routings, machines & materials

- Costed BOM
- Flow chart routing
- Assembly drawings
- Detail design drawings
- QA/QC tests
- OIM warning labels
- Financial review

4. Production preparation stage:

- Lean manufacturing review
- Testing & validation
- Supplier review
- Quality review
- Complete first prototype
- Test reliability
- Inspection drawings
- Spare parts plan
- BOM release
- Sales drawings
- Promotions, brochures, price structure
- Review financial
- Customer test sites

5. Full scale production:

- Release ECN
- Trial run manufacturing
- Routings
- MPS update
- Stock transfer
- Approval of final production plan
- Approval of final marketing plan

6. Review – feedback:

- Quality review
- Customers' comments
- Design changes, shop changes, ECNs

TURNING SMART IDEAS INTO PRODUCT SOLUTIONS