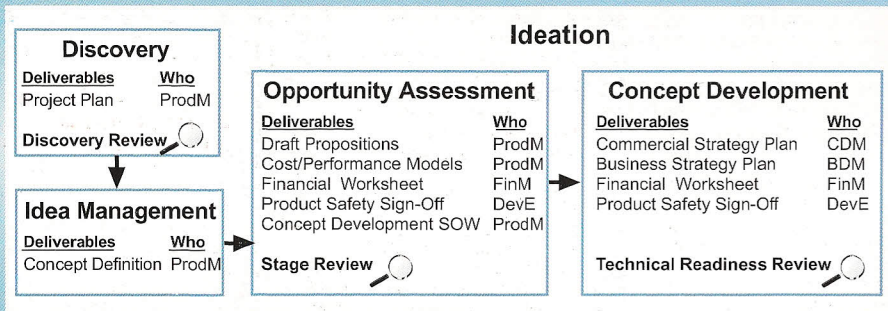


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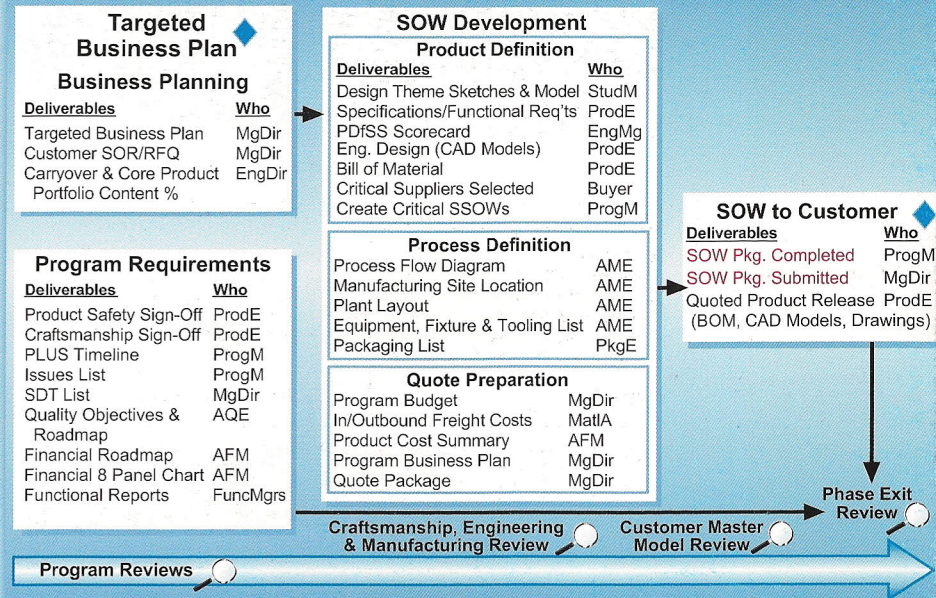
# Ideation



1



# Proposal





## 2



## Design

## Program Requirements

Deliverables	Who
Product Safety Sign-Off	ProdE
Craftsmanship Sign-Off	ProdE
PLUS Timeline	ProgM
Issues List	ProgM
Parts Matrix	ProgM
SDT List	ProgM
Quality Objectives & Roadmap	AQE
Supplier AQP Report	AQE
Financial Roadmap	AFM
Financial 8 Panel Chart	AFM
Approved CAR & TA	AFM
Functional Reports	FuncMgrs

## Product Design

Deliverables	Who
PDFSS Scorecard	ProdE
DFMEA	ProdE
DFM&A	AME
Design Verification Plan	ProdE
Engineering Dev. Testing	ProdE
CAD Models/Drawings	ProdE
Surface Release	StudM

## Process Design

Deliverables	Who
Process Flow Diagram	AME
Plant Layout	AME
PFMEA	AME
PEIL	AME
Prototype Control Plan	AQE
Measurement System Analysis	AQE
Equip, Fixtures & Tooling Req'ts	AME
Packaging Req'ts	PkgE

## Supplier Selection

Deliverables	Who
Create SSOWs	ProgM
All Suppliers Selected & SSOWs Signed	Buyer
Supplier Kick-Off Meeting	AQE

## DV Release

Product Deliverables	Who
ECR/ECO's & BOM	ProdE
Product Drawings	ProdE
Master Sample	ProdE

Process	Who
Tool Drawings	AME
Equipment & Fixture Req'ts	AME

Procurement	Who
DV Purchase Orders (Components, Equipment, Fixtures & Tooling)	Buyer

Phase Exit Review

Craftsmanship, Engineering &amp; Manufacturing Review

Customer Master Sample Review

Program Reviews

## 3



## Design Verification

## Product Deliverables

Deliverables	Who
Procure DV Components	Buyer
Procure DV Equipment, Fixtures & Tooling	Buyer
Pre-Launch Control Plan	AQE

## Program Requirements

Deliverables	Who
Product Safety Sign-Off	ProdE
Craftsmanship Sign-Off	ProdE
PLUS Timeline	ProgM
Issues List	ProgM
SDT List	ProgM
Parts Matrix	ProgM
Quality Objectives & Roadmap	AQE
Supplier AQP Report	AQE
Financial Roadmap	AFM
Financial 8 Panel Chart	AFM
Customer Tool Authorization	MgDir
Material Sign-Off	MatlM
Functional Reports	FuncMgrs

## Design Verification

Deliverables	Who
DV Assemblies	ProgM
Build Issues List	AME

Deliverables	Who
DV Testing	TestE
DV Test Approval	EngM
PDFSS Scorecard	ProdE

## Production Release

Product Deliverables	Who
ECR/ECO's & BOM	ProdE
Service Parts Release	ProdE
Product Drawings	ProdE
Master Sample	ProdE

Process	Who
Tool Drawings	AME
Equipment, Fixture & Gage Specification	AME
Packaging Specification	PkgE

Procurement	Who
Production Purch. Order (Components, Equipment, Tooling, Fixtures, Gages & Packaging)	Buyer

Phase Exit Review

Craftsmanship, Engineering &amp; Manufacturing Review

Customer Master Sample Review

Program Reviews



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# Production Validation

Product Deliverables	
Supplier Parts Submission	AQE
Procure Production Components	Buyer
Process	
Procure Production Equipment, Tooling, Fixtures, Gages & Packaging	Buyer
Operation Description Sheets	AME
Production Control Plan	AQE
Plant Hiring & Training Plan	LaunchM

## Production Validation

PV Build		Product & Process Validation	
Deliverables	Who	Deliverables	Who
Run-at-Rate	AME	PV Testing	TestE
PV Assemblies	LaunchM	PV Test Approval	EngM
Build Issues List	AME	PDFSS Scorecard	ProdE

## Program Requirements

Product Safety Sign-Off	ProdE
Craftsmanship Sign-Off	ProdE
PLUS Timeline	ProgM
Issues List	ProgM
SDT List	ProgM
Parts Matrix	ProgM
Quality Objectives & Roadmap	AQE
Supplier AQP Report	AQE
Financial Roadmap	AFM
Financial 8 Panel Chart	AFM
Material Sign-Off	MatIM
Process Sign-Off	LaunchM
Functional Reports	FuncMgrs

## Customer Part Approval

Deliverables	Who
Customer Part Submission	QualM
Master Sample	LaunchM

Craftsmanship, Engineering & Manufacturing Review

Customer Master Sample Review

Supplier Readiness Review

Phase Exit Review

Program Reviews

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# Launch

## Production Preparation

Deliverables	Who
Pre-Production Builds	LaunchM
Pre-Production Shipments	MatIM
Master Sample	LaunchM
PDFSS Scorecard	ProdE

## Program Requirements

Deliverables	Who
Craftsmanship Sign-Off	ProdE
PLUS Timeline	ProgM
Issues List	ProgM
SDT List	ProgM
Parts Matrix	ProgM
Quality Objectives & Roadmap	AQE
Supplier AQP Report	AQE
Financial Roadmap	AFM
Financial 8 Panel Chart	AFM
Launch Performance Report	LaunchM
Customer Tool Payment	MgDir
Material Sign-Off	MatIM
Functional Reports	FuncMgrs

Start of Production

Craftsmanship, Engineering & Manufacturing Review

Customer Master Sample Review

Supplier Readiness Review

Phase Exit Review

Program Reviews



# Engineering Deliverables

= PLUS Reviews    D = Phase Deliverables  
 = Milestone    ✓ = Functional Deliverable

Phase 1 2 3 4 5	Deliverables	Who	Level II & III Documents
	<b>Craftsmanship, Engineering &amp; Manufacturing Review</b>	EngM	PLUS Reviews Procedure, Craftsmanship Sign-Off, Engineering Report, Mfg. Report, Quality Report Forms
	<b>Targeted Business Plan</b>		Business Planning Procedure
D D D D	Product Safety Sign-Off	ProdE	Product Safety Sign-Off Form
D D D D D	Craftsmanship Sign-Off	ProdE	Craftsmanship Sign-Off Form
D	Carryover & CPP Content Percentage	EngDir	
	<b>SOW Development</b>		SOW Development Procedure
D ✓	Design Theme Def., Sketches, Models	StudM	
D ✓✓	Specifications/Functional Req'ts	ProdE	Functional Requirements & Specifications Matrix (Local)
D D D D D	PDFSS Scorecard	EngM/ProdE	PDFSS Scorecard Form
D ✓✓	Engineering Design (CAD Model)	ProdE	Packaging, Environmental Layout, Models/Drawings
D D D D	IMDS Status (% compliant by phase req't)	ProdE	Regional / Local Form
D	Bill of Material	ProdE	Bill of Material Work Instruction
	<b>SOW to Customer</b>		
D	Quoted Product Release	ProdE	
	<b>Product Design</b>		Product Design Procedure
✓ D ✓✓✓	Design FMEA	ProdE	DFMEA Form
✓✓✓	Engineering Analysis/FEA	ProdE	Hand Calculations, FEA Results
✓ D ✓	Design Verification Plan	ProdE	DVP&R Form
D	Engineering Development Testing	ProdE	Surrogate Data/FEA/ED Test Results on DVP&R Form
D	CAD Models/Drawings	ProdE	
✓✓	Drawing Release Schedule	ProdE	Drawing Release Schedule Form
✓✓✓	Complexity Chart	ProdE	Regional / Local Form
✓✓✓	Test Status Report	TestE	Test Status Report Form
D	<b>Surface Release</b>	StudM	AG Surface Information / Customer Surface Information
	<b>DV Release</b>		
D	ECR/ECO's & BOM	ProdE	Eng Chg Request (ECR) & Eng Chg Order (ECO) Form
D	Product Drawings	ProdE	Drawing Standards
D D	Master Sample	ProdE	
	<b>Design Verification</b>		Design Verification Procedure
D	DV Testing	TestE	DVP&R Form
D	DV Test Approval	EngM	DVP&R Form
	<b>Production Release</b>		
D	ECR/ECO's & BOM	ProdE	Eng Chg Request (ECR) & Eng Chg Order (ECO) Form
D	Service Parts Release	ProdE	Regional / Local Form
D	Product Drawings	ProdE	Drawing Standards
	<b>Production Validation</b>		Product Validation Procedure
D	PV Testing	TestE	DVP&R Form
D	PV Test Approval	EngM	DVP&R Form

# Program Management Deliverables

Phase 1 2 3 4 5	Deliverables	Who	Level II & III Documents
	<b>Program Reviews</b>	ProgM	PLUS Reviews Procedure, Phase Report, Funct'l Reports
	<b>Phase Exit Reviews</b>	ProgM	PLUS Reviews Procedure, Phase Report, Funct'l Reports
	<b>Cust. Master Model/Sample Rvws</b>	ProgM	PLUS Reviews Procedure
	<b>Craftsmanship, Eng &amp; Mfg Rvws</b>	LaunchM	PLUS Reviews Procedure, Craftsmanship Sign-Off Form, Engineering, Manufacturing & Quality Report Forms
	<b>Supplier Readiness Review</b>	ProgM	PLUS Reviews Procedure
	<b>Targeted Business Plan</b>		
	<b>Business Planning</b>		Business Plan Procedure
D	Targeted Business Plan	MgDir	Business Plan Form
D	Customer SOR/RFQ	MgDir	Customer Form and/or Format
	<b>SOW Development</b>		SOW Development Procedure
D ✓✓✓✓	Program Budget	MgDir	Program Budget Form
D	Create Critical SSOWs	ProgM	Supplier Statement of Work Form (POS)
D ✓✓✓✓	Program Business Plan	MgDir	Business Plan Form
D	Quote Package	MgDir	
	<b>Quote to Customer</b>		
D	SOW Package Completed	ProgM	Statement of Work Form
D	SOW Package Submitted	MgDir	Statement of Work Form / Quote Package
D D D D D	PLUS Timeline	ProgM	PLUS Timeline Form
D D D D D	Issues List	ProgM	Issues List Form
D	SDT List	MgDir	SDT List Form
D	SDT List	ProgM	SDT List Form
	<b>Surface Release</b>		
D	Create Supplier Statement of Works	ProgM	Supplier Statement of Work Form (POS)
	<b>Supplier Kick-Off Meeting</b>		
	<b>DV Release</b>		
	<b>Design Verification</b>		Design Verification Procedure
D D D D	Parts Matrix	ProgM	Parts Matrix Form
D	Customer Tool Authorization	MgDir	
D	DV Assemblies	ProgM	
	<b>Production Release</b>		
	<b>Production Validation</b>		Production Validation Procedure
✓✓	Manufacturing Site Ready	LaunchM	New Facility Launch Workbook
D	Plant Hiring / Training Plan	LaunchM	
D	PV Assemblies	LaunchM	
D	Process Sign-Off	LaunchM	PSO Form
D D	Master Sample	LaunchM	
	<b>Customer Part Approval</b>		
D	Pre-Production Builds	LaunchM	Regional / Local Form
D	Launch Performance Report	LaunchM	Launch Performance Report Form
D	Customer Tool Payment	MgDir	Regional / Local Form



# Manufacturing & Material Deliverables

Phase 1 2 3 4 5	Deliverables	Who	Level II & III Documents
○○○	<b>Craftsmanship, Eng. &amp; Mfg. Review</b>	EngM	PLUS Reviews Procedure, Engineering, Manufacturing & Quality Report Forms
○○○	<b>Craftsmanship, Eng. &amp; Mfg. Review</b>	LaunchM	PLUS Reviews Procedure, Craftsmanship Sign-Off, Engineering, Manufacturing & Quality Report Forms
	◆ <b>Targeted Business Plan</b>		
	<b>SOW Development</b>		SOW Development Procedure
D D ✓ ✓ ✓	Process Flow Diagram	AME	Regional / Local Form
D ✓	Manufacturing Site Location	AME	Per MEQ Standards
D D ✓ ✓ ✓	Plant Layout	AME	New Plant/Line Launch Procedure (MOS)
D D	Equipment, Fixtures & Tooling List	AME	Regional / Local Form
D D	Packaging List	PkgE	Regional / Local Form
D	In/Outbound Freight Cost	MatlM	
	◆ <b>SOW to Customer</b>		
	<b>Product Design</b>		Product Design Procedure
D ✓	DFM&A	AME	Design for Manufacturing & Assembly Form
	◆ <b>Surface Release</b>		
	<b>Process Design</b>		Process Design Procedure
D ✓ ✓ ✓	PFMEA	AME	PFMEA Form
D ✓ ✓ ✓	PEIL	AME	PEIL Form
D	Equipment, Fixtures & Tooling Req'ts	AME	
D	Packaging Requirements	PkgE	
	◆ <b>Supplier Kick-Off Meeting</b>		
	<b>DV Release</b>		
D	Tool Drawings	AME	Tool Drawings per Drawing Standards
D	Equipment & Fixture Requirements	AME	Regional / Local Form
	<b>Design Verification</b>		Design Verification Procedure
D D ✓	Build Issues List	AME	Issues List Form
	◆ <b>Production Release</b>		
D	Tool Drawings	AME	Tool Drawings per Drawing Standards
D	Equip., Fixtures & Gage Specifications	AME	Technical Specification Form
D	Packaging Specifications	PkgE	Regional / Local Form
D D D	Material Sign-Off	MatlM	MSO Form
	<b>Production Validation</b>		Production Validation Procedure
✓	Equipment Qualification	AME	Equipment Qualification Form
✓	Packaging Qualification	PkgE	Packaging Qualification Form
✓ D ✓	Operation Description Sheets	AME	Operation Description Sheet Work Instructions (MOS)
D ✓	Run-at-Rate	AME	Customer or Regional / Local Form
	◆ <b>Customer Part Approval</b>		
D	Pre-Production Shipments	MatlM	Regional / Local Form

# Quality Deliverables

Phase 1 2 3 4 5	Deliverables	Who	Level II & III Documents
○○○	<b>Craftsmanship, Eng. &amp; Mfg. Review</b>	EngM	PLUS Reviews Procedure, Eng. Report Form, Mfg. Report Form, Quality Report Form
○○○	<b>Craftsmanship, Eng. &amp; Mfg. Review</b>	LaunchM	PLUS Reviews Procedure, Eng. Report Form, Mfg. Report Form, Quality Report Form
	◆ <b>Targeted Business Plan</b>		
	<b>SOW Development</b>		SOW Development Procedure
D D D D D	Quality Objectives & Roadmap	AQE	Quality Objectives & Roadmap Form
✓ D D D D	Supplier AQP Status	AQE	Supplier AQP Report
	◆ <b>SOW to Customer</b>		
	◆ <b>Surface Release</b>		
	<b>Process Design</b>		Process Design Procedure
D ✓	Prototype Control Plan	AQE	Control Plan Form
D ✓	Measurement System Analysis (MSA)	AQE	Measurement Systems Analysis Form (MOS)
D	◆ <b>Supplier Kick-Off Meeting</b>	AQE	Supplier AQE Kick-Off Meeting Work Instruction
	◆ <b>DV Release</b>		
	<b>Design Verification</b>		Design Verification Procedure
D ✓	Pre-Launch Control Plan	AQE	Control Plan Form
	◆ <b>Production Release</b>		
	<b>Production Validation</b>		Production Validation Procedure
✓	Supplier Process Sign-Off	AQE	Supplier PSO Form
D	Supplier Part Submission	AQE	Supplier Part Submission Work Instruction
D ✓	Production Control Plan	AQE	Control Plan Form
✓	Capability Studies	AQE	Regional / Local / Customer Forms
✓	Measurement System Analysis (MSA)	AQE	Measurement Systems Analysis Form (MOS)
	◆ <b>Customer Part Approval</b>		
	<b>Customer Part Submission</b>		Customer Part Approval Procedure
D	Customer Part Submission	QualM	Per Customer Requirements



## Finance Deliverables

Phase 1 2 3 4 5	Deliverables	Who	Level II & III Documents
	<b>Business Planning</b>		<b>Business Planning Procedure</b>
D D D D D	Financial 8 Panel Chart	AFM	Financial 8 Panel Chart Form
	<b>SOW Development</b>		<b>SOW Development Procedure</b>
D ✓ ✓ ✓ ✓	Product Cost Summary	AFM	Product Cost Summary Form
D D D D D	Financial Roadmap	AFM	Financial Roadmap Form
✓ D ✓ ✓ ✓	Approved CAR & TA	AFM	Appropriation Request Procedure (LOS), CAR Form (LOS)
✓ ✓ ✓ ✓ ✓	IRR Report	AFM	Regional/Local

## Purchasing Deliverables

1 2 3 4 5	Deliverables	Who	Level II & III Documents
	<b>Supplier Selection</b>		<b>Supplier Selection Procedure (POS)</b>
D	Critical Suppliers Selected	Buyer	Sourcing Recommendation Form (POS)
D	All Suppliers Selected	Buyer	Sourcing Recommendation Form (POS)
D	Signed Statement of Works (SSOW)	Buyer	Supplier Statement of Work Form (POS)
	<b>♦ Supplier Kick-Off Meeting</b>		
D	DV Purchase Orders	Buyer	
D	Procure DV Components	Buyer	Purchase Auth. & Requisition Procedure (POS)
D	Procure DV Equipment, Fixtures & Tooling	Buyer	Purchase Auth. & Requisition Procedure (POS)
D	Production Purchase Orders	Buyer	
D	Procure Production Components	Buyer	Purchase Auth. & Requisition Procedure (POS)
D	Procure Production Equipment, Tooling, Fixtures, Gages, and Packaging	Buyer	Purchase Auth. & Requisition Procedure (POS)

## PLUS Reviews

Review	Purpose	Frequency	Documents	Conducted By
<b>Discovery Review (Phase 0)</b>	Review the project findings for future development / sponsorship.	At the end of Discovery	Discovery Review Form	Product Manager or Project Sponsor
<b>Stage Review (Phase 0)</b>	Decide whether to proceed to Concept Development or postpone the project.	At the end of Opportunity Assessment	Stage Review Form	Product Manager or Project Sponsor
<b>Technical Readiness Rvw (Phase 0)</b>	Obtain approval for technical integrity and viability of product leaving Concept Development.	At the end of Concept Development	Technical Readiness Review Form	Development Engineer
<b>Phase 0 Exit Review</b>	Decide whether to proceed to Phase 1(Proposal), revise or postpone the project.	At the end of Concept Development (after Tech. Readiness Review)	Phase 0 Exit Review Form	Product Manager
<b>Customer Master Model / Sample Reviews (Phase 1-5)</b>	Ensure the Master Model/Sample meets aesthetic value and Customer craftsmanship objectives.	During Phases 1-5 prior to Phase Exit Review	Craftsmanship Sign-Off & Master Model/Sample	Scheduled by: Program Manager Conducted by: Studio Manager
<b>Supplier Readiness Rvws (Phase 4-5)</b>	Verify supplier readiness by visiting 3-5 critical supplier plants (internal and/or external suppliers)	Phase 4-5. At a minimum once per Phase prior to the Phase Exit.	Supplier AQP Workbook form, Supplier Timeline, Supplier Statement of Work (SSOW)	Program Manager
<b>Program Reviews (Phase 1-5)</b>	Review the current status of the program.	Monthly in Phases 1-5	Phase Report Form and: ♦ Engineering Report ♦ Mfg. Report ♦ Quality Report ♦ Finance Report	Program Manager
<b>Phase Exit Reviews (Phase 1-5)</b>	Review current phase PLUS deliverables, Functional Reports, Issues List and Lessons Learned.	Within two weeks of the Phase Exit date on the Program Timeline	♦ Purchasing Report ♦ Prod. Safety Sign-Off ♦ Craftsmanship Sign-Off ♦ Fin. 8 Panel Chart	Program Manager
<b>Craftsmanship, Engineering &amp; Manufacturing Reviews (Phase 1-5)</b>	Review the current product design and manufacturing process to meet Customer and AG requirements. Conduct an internal AG Craftsmanship Review on a Master Model/Sample.	Minimum prior to: ♦ Quote ♦ DV Release ♦ Production Release ♦ Cust Part Submission ♦ Start of Production Add'l reviews as needed	♦ Engineering Report ♦ Mfg. Report ♦ Quality Report ♦ Craftsmanship Sign-Off ♦ Product Safety Sign-Off	Engineering Manager