



***NORTHROP GRUMMAN***

# **The Key to a High Maturity Rating is - ORGANIZATION**

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DD(X) - Smart Product Model Project  
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Track - 4B5**

**5th Annual CMMI  
Technology Conference &  
User Group**



# DD(X) SPM Pre-Assessment Findings

PA	SP #1	SP #2	SP #3	SP #4	SP #5	SP #6	SP #7	SP #8	SP #9	SP #10	SP #11	SP #12	SP #13	SP #14	GP2.1	GP2.2	GP2.3	GP2.4	GP2.5	GP2.6	GP2.7	GP2.8	GP2.9	GP2.10	GP3.1	GP3.2
REQM	1.1	1.2	1.3	1.4	1.5										2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	3.1	3.2
PP	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	2.5	2.6	2.7	3.1	3.2	3.3	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	3.1	3.2
PMC	1.1	1.2	1.3	1.4	1.5	1.6	1.7	2.1	2.2	2.3					2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	3.1	3.2
SAM	1.1	1.2	1.3	2.1	2.2	2.3	2.4								2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	3.1	3.2
M&A	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4							2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	3.1	3.2
PPQA	1.1	1.2	2.1	2.2											2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	3.1	3.2
CM	1.1	1.2	1.3	2.1	2.2	3.1	3.2								2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	3.1	3.2
RD	1.1	1.2	2.1	2.2	2.3	3.1	3.2	3.3	3.4	3.5					2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	3.1	3.2
TS	1.1	1.2	1.3	2.1	2.2	2.3	2.4	3.1	3.2						2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	3.1	3.2
PI	1.1	1.2	1.3	2.1	2.2	3.1	3.2	3.3	3.4						2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	3.1	3.2
VER	1.1	1.2	1.3	2.1	2.2	2.3	3.1	3.2							2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	3.1	3.2
VAL	1.1	1.2	1.3	2.1	2.2										2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	3.1	3.2
IPM	1.1	1.2	1.3	1.4	1.5	2.1	2.2	2.3							2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	3.1	3.2
RSKM	1.1	1.2	1.3	2.1	2.2	3.1	3.2								2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	3.1	3.2
DAR	1.1	1.2	1.3	1.4	1.5	1.6									2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	3.1	3.2
QPM	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4							2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	3.1	3.2
CAR	1.1	1.2	2.1	2.2	2.3										2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	3.1	3.2



Organization is the best policy, staying organized is the challenge



## Objectives

- To convey the necessity for organization
- To share the SPM project's organizational model
- To describe how organization provided the foundation to monitor and control the project; *and*
- To indicate keys to the SPM project's organizational success





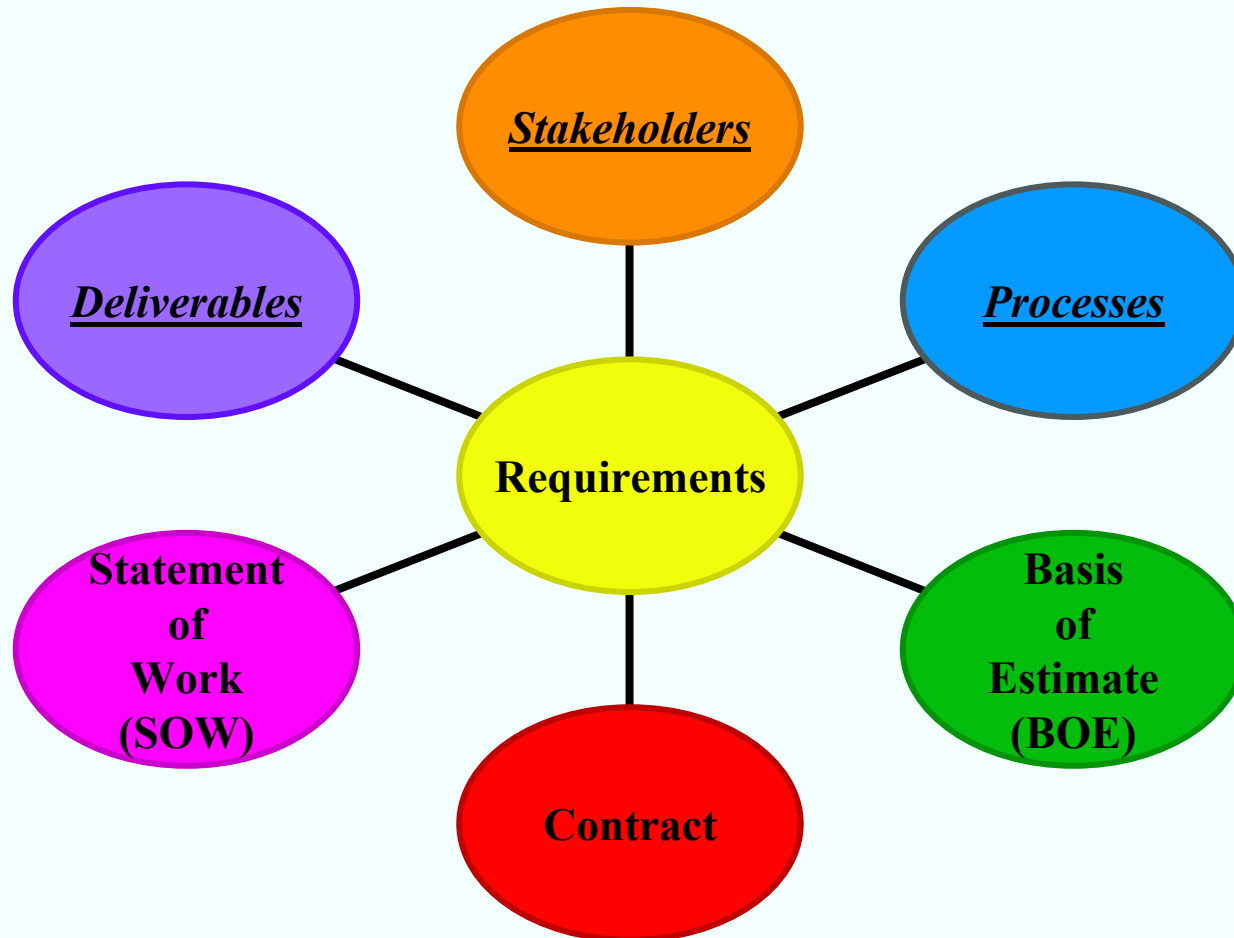
# Organizational Thought Process







# Gather Requirements

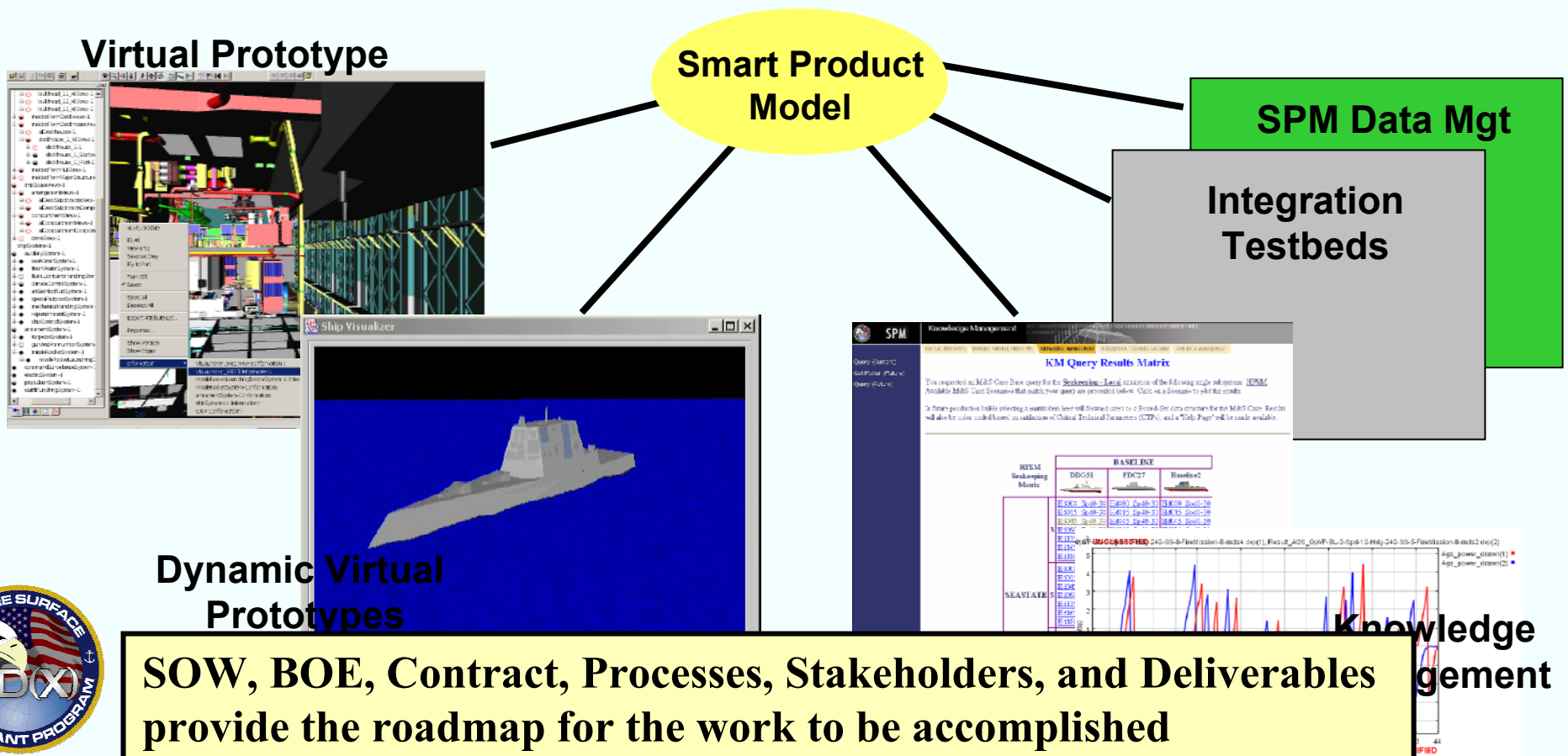


**Know why you are doing what you are doing**



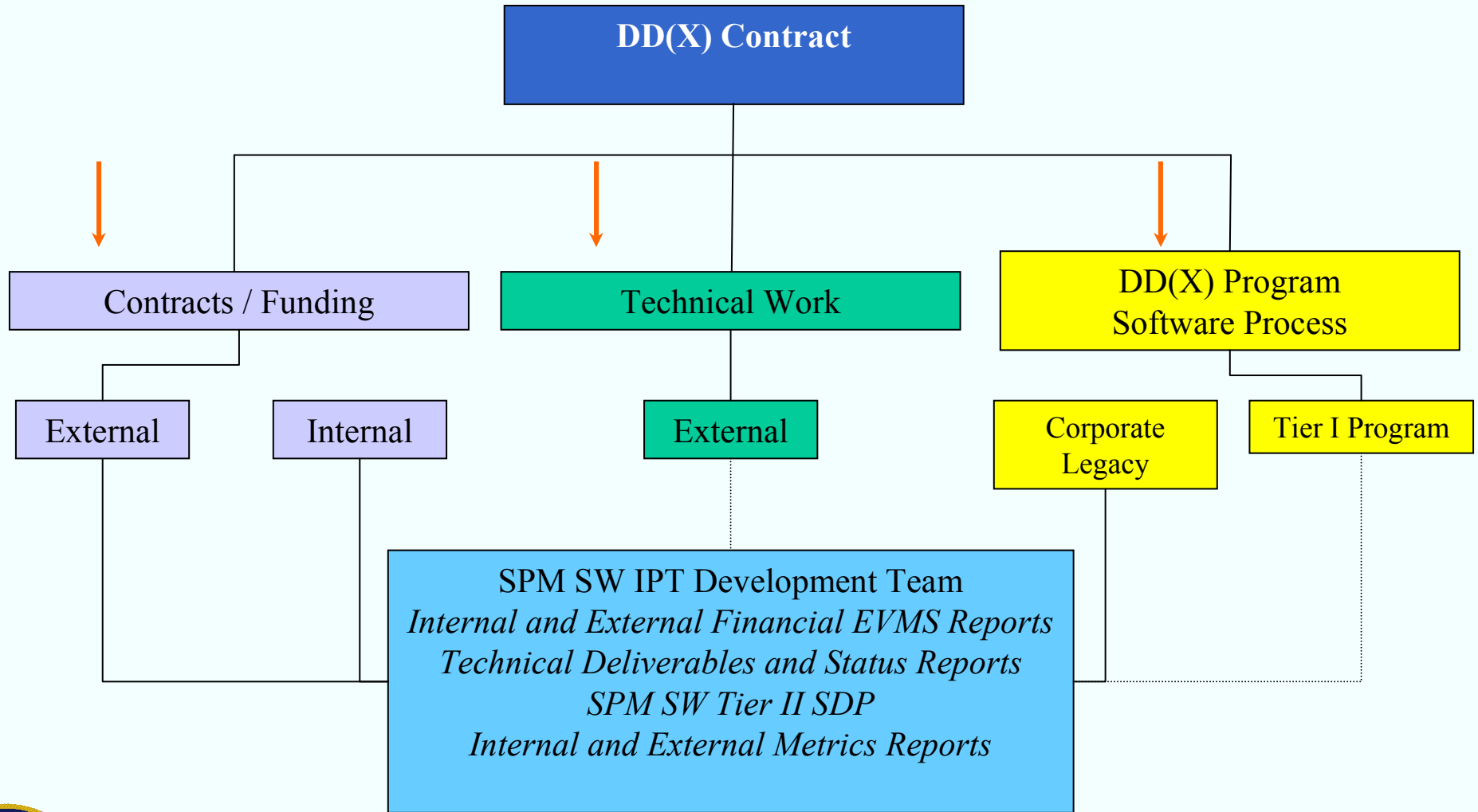
# SPM Functions Drive Organization Requirements

- SPM is an environment that enables interaction with virtual representations of the DD(X) system, its attributes, and behaviors
- SPM provides the capability to access, view, and compare performance analysis results from a central, configuration-managed environment via the web





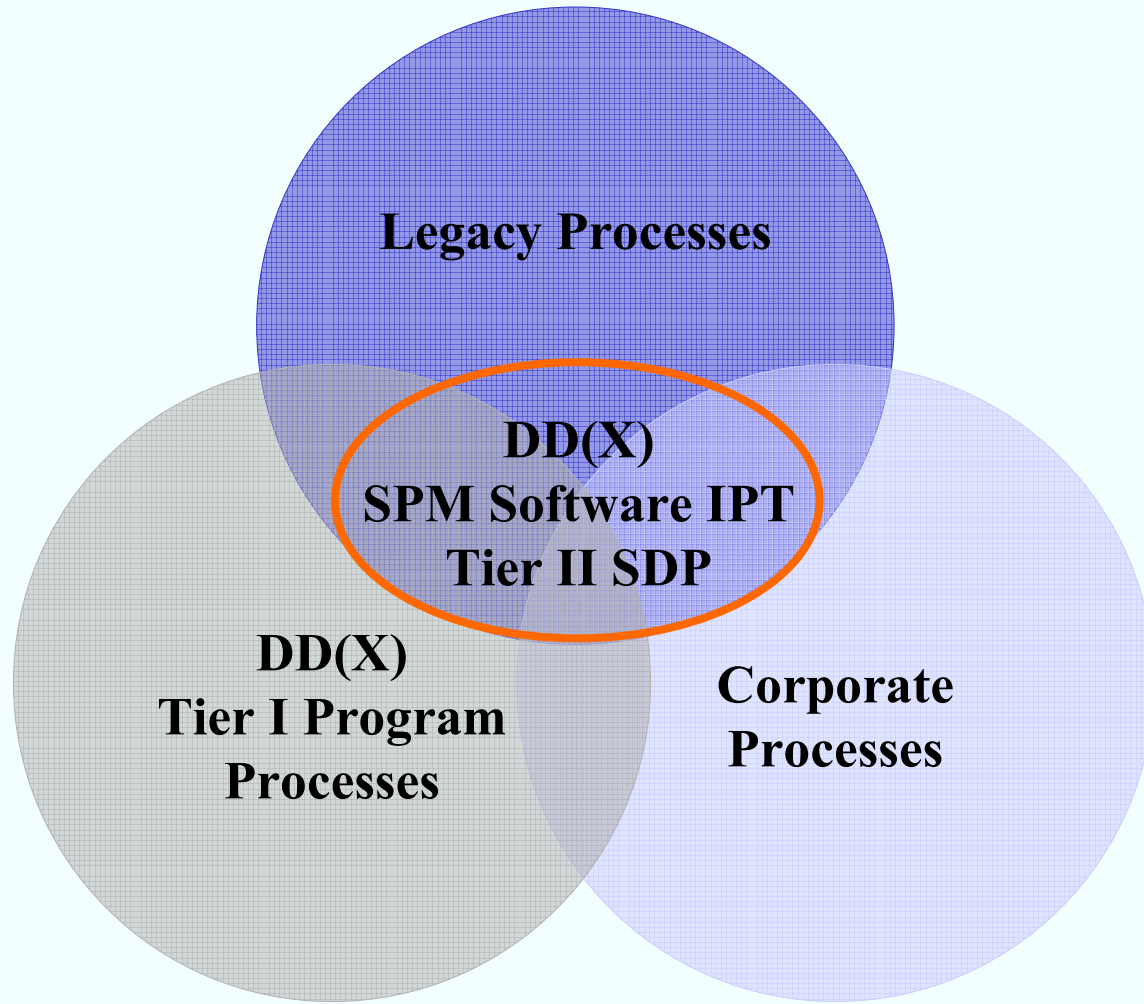
### SPM DD(X) Program Stakeholders



**Understand your customer**



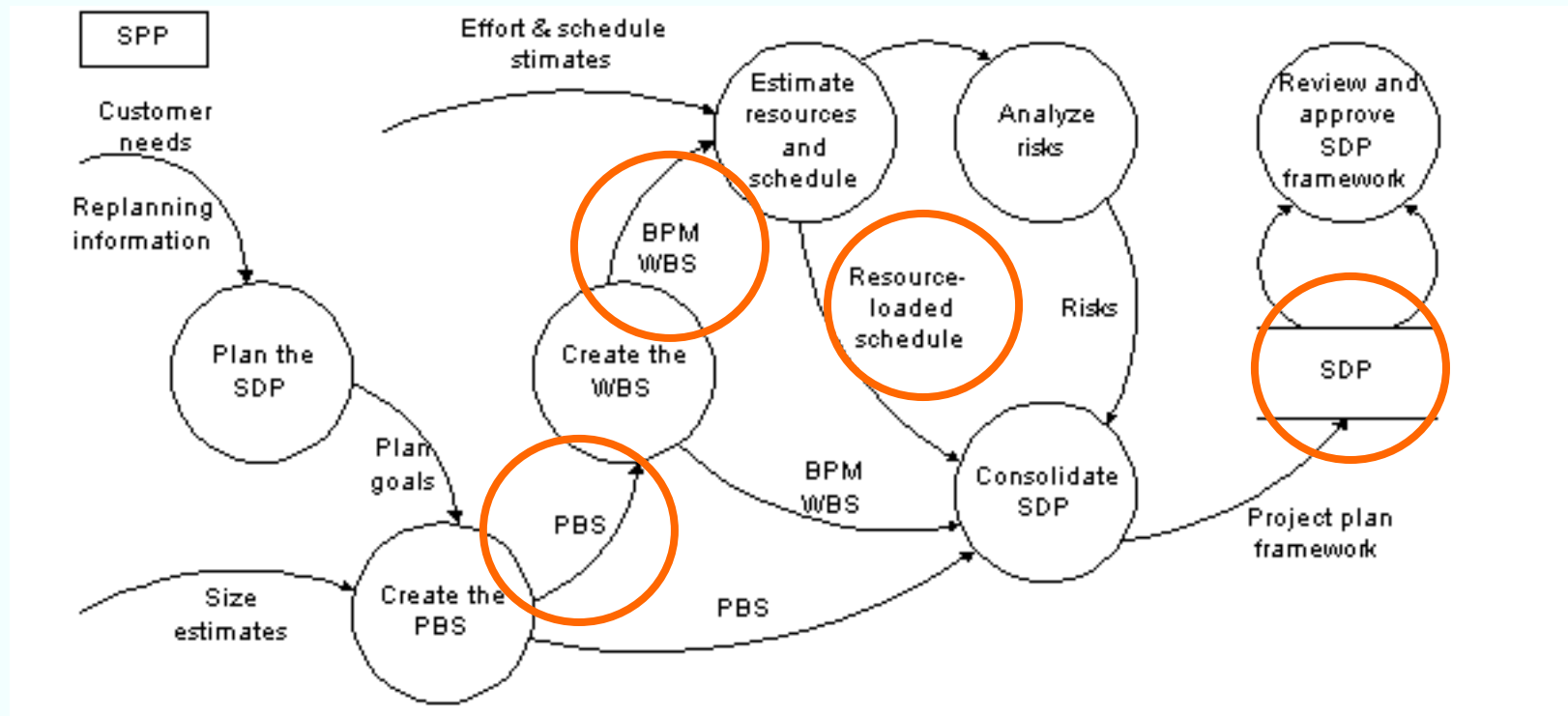
# Understanding the Processes to Satisfy



**The complexity of situation in itself necessitates organization**



# Create the Layout – Project Planning Model



**Organization facilitates effective communication by establishing a common ground**

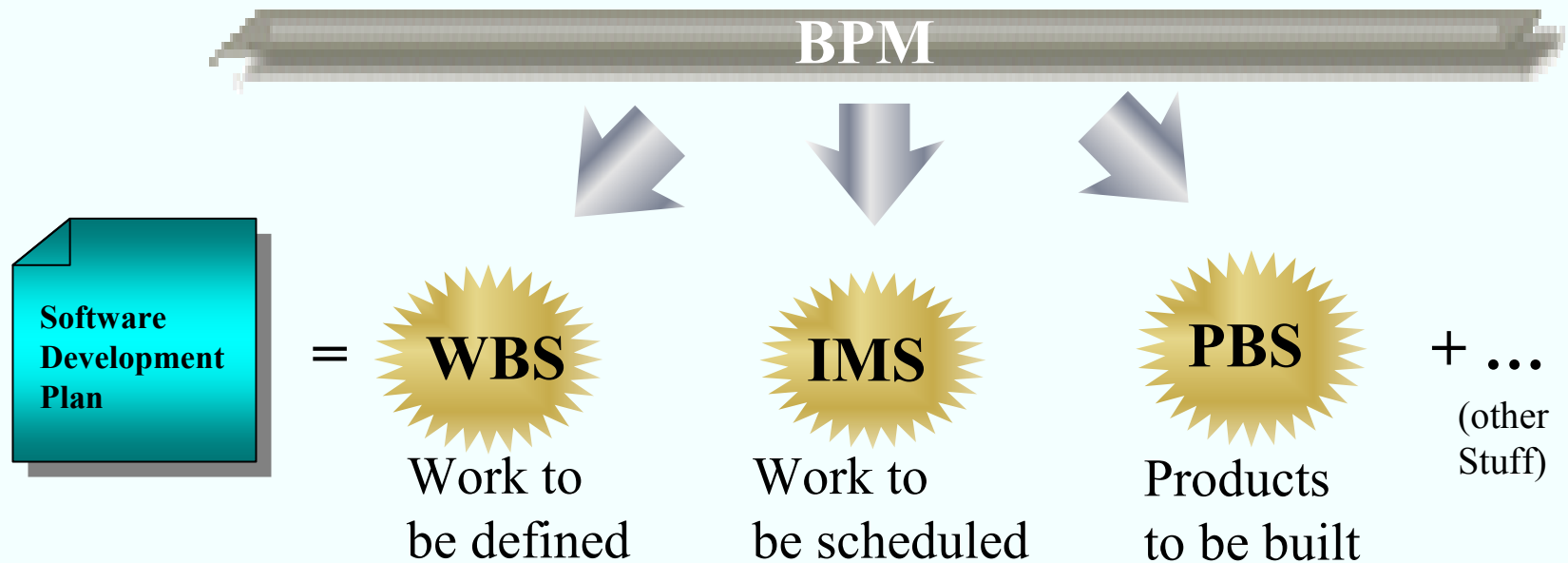
# Why do we need a Build Process Model?

To *develop* software,

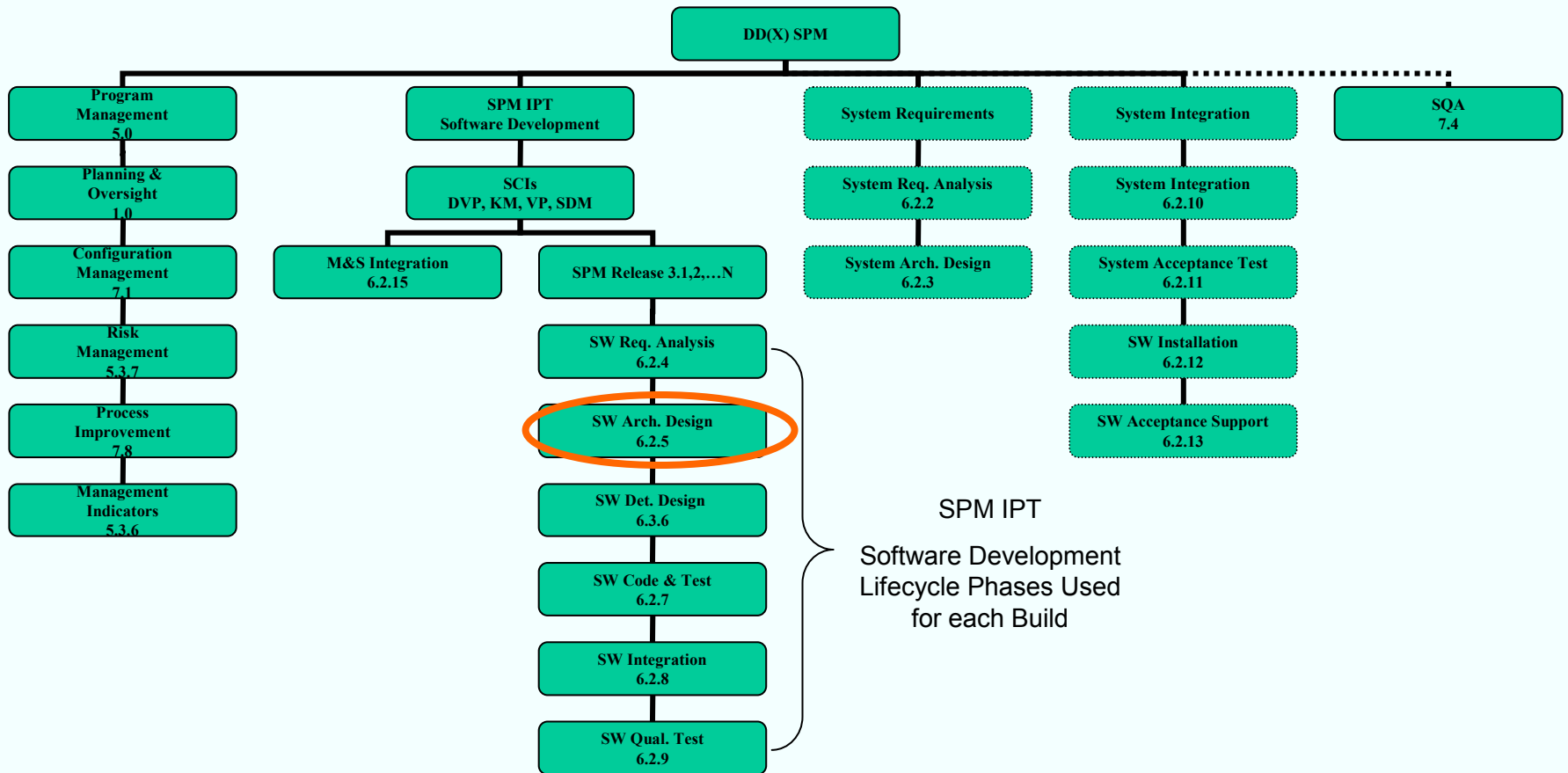
... you first need a *design* of the software

In a similar way,

... a **BPM** is necessary to design the software *plan*



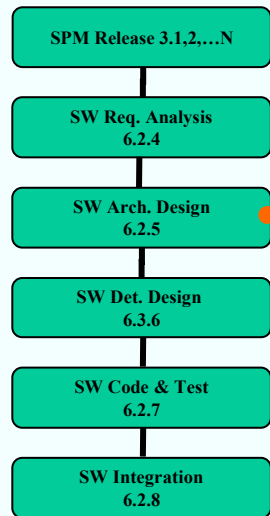
# BPM - Build Process Model



**Use a visual representation to define your purpose - what you are going to do**



# WBS - Work Breakdown Structure



Long Description	Charge Code	Activity Number	Start Date	Finish Date
	PM024		1/2/2004	12/31/2004
Project Planning - SPM SW IPT DEV	PMPP4	A 904393490PMPP4	1/2/2004	12/31/2004
Management Oversight - SPM SW IPT DEV	PMMO4	A 904393490PMMO4	1/2/2004	12/31/2004
Requirements Management - SPM SW IPT DEV	PMSR4	A 904393490PMSR4	1/2/2004	12/31/2004
Configuration Management - SPM SW IPT DEV	PMCM4	A 904393490PMCM4	1/2/2004	12/31/2004
Quality Assurance Management - SPM SW IPT DEV	PMQA4	A 904393490PMQA4	1/2/2004	12/31/2004
Risk Management - SPM SW IPT DEV	PMRM4	A 904393490PMRM4	1/2/2004	12/31/2004
Project Improvement (Closure) - SPM SW IPT DEV	PMPI4	A 904393490PMPI4	1/2/2004	12/31/2004
Management Indicators - SPM SW IPT DEV	PMMI4	A 904393490PMMI4	1/2/2004	12/31/2004
Project Execution - SPM SW IPT DEV	PMPE4	A 904393490PMPE4	1/2/2004	12/31/2004
EVMS Accounting - SPM SW IPT DEV	PMEV4	A 904393490PMEV4	1/2/2004	12/31/2004
Team Communication - SPM SW IPT DEV	PMTC4	A 904393490PMTC4	1/2/2004	12/31/2004
Peer Review Management - SPM SW IPT DEV	PMPT4	A 904393490PMPT4	1/2/2004	12/31/2004
Project Training - SPM SW IPT DEV	PMPT4	A 904393490PMPT4	1/2/2004	12/31/2004
Reserve - SPM SW IPT DEV	R0032	A 904393490R0032	1/2/2004	12/31/2004
<i>KM and DVP SY Requirements Rel 3.3</i>	YR003	A 904393490YR003	7/1/2004	12/31/2004
<b>SPM Req Anal SPM Summary</b>	SR03S	A 904393490SR03S	7/1/2004	12/31/2004
<i>KM SW Requirements Anal SPM SW IPT DEV Rel 3.3</i>	SRM03	A 904393490SRM03	7/1/2004	12/31/2004
<i>DVP SW Requirements Anal SPM SW IPT DEV Rel 3.3</i>	SRDP3	A 904393490SRDP3	7/1/2004	12/31/2004
<b>SPM Arch Des SPM Summary</b>	SA03S	A 904393490SA03S	8/1/2004	10/31/2004
<i>KM SW Arch Anal SPM SW IPT DEV Rel 3.3</i>	SAKM3	A 904393490SAKM3	8/1/2004	10/31/2004
<i>DVP SW Arch Anal SPM SW IPT DEV Rel 3.3</i>	SADP3	A 904393490SADP3	8/1/2004	10/31/2004
<b>SPM Det Des SPM Summary</b>	SD03S	A 904393490SD03S	8/1/2004	10/31/2004
<i>KM SW Detailed Design SPM SW IPT DEV Rel 3.3</i>	SDKM3	A 904393490SDKM3	8/1/2004	10/31/2004
<i>DVP SW Detailed Design SPM SW IPT DEV Rel 3.3</i>	SDDP3	A 904393490SDDP3	8/1/2004	10/31/2004
<b>SPM Code &amp; Test SPM Summary</b>	SC03S	A 904393490SC03S	9/1/2004	11/30/2004
<i>KM SW Coding and Testing SPM SW IPT DEV Rel 3.3</i>	SCKM3	A 904393490SCKM3	9/1/2004	11/30/2004
<i>DVP SW Coding and Testing SPM SW IPT DEV Rel 3.3</i>	SCDP3	A 904393490SCDP3	9/1/2004	11/30/2004
<b>SPM SW Int Summary</b>	SI03S	A 904393490SI03S	9/1/2004	12/15/2004
<i>KM SW Integration SPM SW IPT DEV Rel 3.3</i>	SIKM3	A 904393490SIKM3	9/1/2004	12/15/2004
<i>DVP SW Integration SPM SW IPT DEV Rel 3.3</i>	SIDP3	A 904393490SIDP3	9/1/2004	12/15/2004
<b>SPM Qual Test</b>	SQ03S	A 904393490SQ03S	10/15/2004	12/31/2004
<i>KM SW Qualification Testing SPM SW IPT DEV Rel 3.3</i>	SQ KM3	A 904393490SQ KM3	10/15/2004	12/31/2004
<i>DVP SW Qualification Testing SPM SW IPT DEV Rel 3.3</i>	SQ DP3	A 904393490SQ DP3	10/15/2004	12/31/2004
<i>KM and DVP SY Integration Rel 3.3</i>	YI003	A 904393490YI003	11/1/2004	12/31/2004
<i>DVP M&amp;S VV&amp;A</i>	VVDP0	A 904393490VVDP0	7/1/2004	10/31/2005
<i>SPM SY / Infrastructure Admin</i>	YA000	A 904393490YA000	7/1/2004	10/31/2005
<i>KM and DVP SPM CDR Coordination &amp; Support</i>	DC000	A 904393490DC000	7/1/2004	10/31/2005
<i>CDR Support</i>				
<i>NGIT IIS IDE</i>				
<i>ODG (ODG Mgr) Org. Mgmt</i>			1/2/2004	10/31/2005



**Identify and track where you will collect costs**





# PBS – Product Breakdown Structure

Work Breakdown Structure for the DD(X) SPM SW IPT Release 3.3	
Long Description	Activity Number
KM and DVP SY Requirements Rel 3.3	A904393490YR003
<i>Work Breakdown Structure for the DD(X) SPM SW IPT Release 3.3</i>	
<b>SPM Req Anal SPM Summary</b>	A904393490SR03S
KM SW Requirements Anal SPM SW IPT DEV Rel 3.3	A904393490SRKM3
DVP SW Requirements Anal SPM SW IPT DEV Rel 3.3	A904393490SRDP3
<b>SPM Arch Des SPM Summary</b>	A904393490SA03S
KM SW Arch Anal SPM SW IPT DEV Rel 3.3	A904393490SADM3
DVP SW Arch Anal SPM SW IPT DEV Rel 3.3	A904393490SADP3
<b>SPM Det Des SPM Summary</b>	A904393490SD03S
KM SW Detailed Design SPM SW IPT DEV Rel 3.3	A904393490SDKM3
DVP SW Detailed Design SPM SW IPT DEV Rel 3.3	A904393490SDDP3
<b>SPM Code &amp; Test SPM Summary</b>	A904393490SC03S
KM SW Coding and Testing SPM SW IPT DEV Rel 3.3	A904393490SCKM3
DVP SW Coding and Testing SPM SW IPT DEV Rel 3.3	A904393490SCDP3
<b>SPM SW Int Summary</b>	A904393490SI03S
KM SW Integration SPM SW IPT DEV Rel 3.3	A904393490SIRM3
DVP SW Integration SPM SW IPT DEV Rel 3.3	A904393490SIDP3
<b>SPM Qual Test</b>	A904393490SQ03S
KM SW Qualification Testing SPM SW IPT DEV Rel 3.3	A904393490SQKM3
DVP SW Qualification Testing SPM SW IPT DEV Rel 3.3	A904393490SQDP3
KM and DVP SY Integration Rel 3.3	A904393490YI003

Project:	DD(X) Phase III Design/Build Smart Product Model: Release 3.3		Product List				Size		Date		Configuration Management	
Version:	V02_DRP		Activity Number (Optional)	Build	BPM Phase	Unit	Est. Size	Actual Size	Due	Done	Library Location (Optional)	
PBS Num.	Name of Product (Don't type in these cells)											
1	ConOps (KM portion)	ConOpsRel3Bld3V1.24.d	A904393490YR003	Build 3.3	SY Req (SY Req. Analysis)	Pages	6	69	6-Jul-04	24-Aug-04	SPM Development\SCIs\KM SCI1_ Requirements Phase	
2	ConOps PR Artifacts		A904393490YR003	Build 3.3	SY Req (SY Req. Analysis)	D-Pages	6	6	8-Jul-04	26-Aug-04	SPM Development\SCIs\KM SCI1_ Requirements Phase	
3	KM SRS (updated)		A904393490SRKM3	Build 3.3	SW Req Analysis	Pages	6	80	12-Jul-04	12-Oct-04	SPM Development\SCIs\KM SCI1_ Requirements Phase	
4	KM SRS PR Artifacts		A904393490PMR4	Build 3.3	SW Req Analysis	D-Pages	6	6	14-Jul-04	22-Sep-04	SPM Development\SCIs\KM SCI1_ Requirements Phase	
5	KM Arch Diagrams (draft)		A904393490SRKM3	Build 3.3	SW Req Analysis	Diagrams	9		22-Jul-04	19-Nov-04	SPM Development\SCIs\KM SCI1_ Requirements Phase	
6	KM SDD Arch Sections (draft)		A904393490SRKM3	Build 3.3	SW Req Analysis	Pages	6		22-Jul-04	9-Dec-04	SPM Development\SCIs\KM SCI1_ Requirements Phase	
7	KM NDS Eval Reports		A904393490SRKM3	Build 3.3	SW Req Analysis	Pages	6	0	22-Jul-04	7-Oct-04	SPM Development\SCIs\KM SCI1_ Requirements Phase	
8	KM Arch Diagrams (final)		A904393490SADM3	Build 3.3	SW Arch Design	Diagrams	6		28-Jul-04	9-Dec-04	SPM Development\SCIs\KM SCI2_ Architectural Design Phase	
9	KM SDD Arch Sections (final)		A904393490SADM3	Build 3.3	SW Arch Design	D-Pages	5	60	28-Jul-04	16-Nov-04	SPM Development\SCIs\KM SCI2_ Architectural Design Phase	
10	KM Arch Sec PR Artifacts		A904393490SADM3	Build 3.3	SW Arch Design	D-Pages	6	6	30-Jul-04	17-Nov-04	SPM Development\SCIs\KM SCI2_ Architectural Design Phase	
11	KM Build Plan		A904393490SADM3	Build 3.3	SW Arch Design	Pages	3	13	4-Aug-04	24-Nov-04	SPM Development\SCIs\KM SCI2_ Architectural Design Phase	
12	KM Qual Test Plan		A904393490SADM3	Build 3.3	SW Arch Design	EPI-Pages	7	50	3-Aug-04	27-Jan-05	SPM Development\SCIs\KM SCI2_ Architectural Design Phase	
13	KM NDS Eval Reports (updated)		A904393490SDKM3	Build 3.3	SW Detailed Design	Pages	6	0	18-Aug-04	7-Oct-04	SPM Development\SCIs\KM SCI3_ Detailed Design Phase	
14	KM Detailed Design Diagrams		A904393490SDKM3	Build 3.3	SW Detailed Design	Diagrams	28		10-Aug-04	31-Jan-05	SPM Development\SCIs\KM SCI3_ Detailed Design Phase	
15	Completed KM SDD		A904393490SDKM3	Build 3.3	SW Detailed Design	EPI-Pages	12	69	18-Aug-04	31-Jan-05	SPM Development\SCIs\KM SCI3_ Detailed Design Phase	
16	KM SDD PR Artifacts		A904393490SDKM3	Build 3.3	SW Detailed Design	EPI-Pages	6	6	20-Aug-04	31-Jan-05	SPM Development\SCIs\KM SCI3_ Detailed Design Phase	
17	KM Build Plan (updated)		A904393490SDKM3	Build 3.3	SW Detailed Design	Pages	4	13	2-Sep-04	22-Dec-04	SPM Development\SCIs\KM SCI3_ Detailed Design Phase	
18	KM SW Integ/Test Plan		A904393490SDKM3	Build 3.3	SW Detailed Design	EPI-Pages	18		30-Aug-04	22-Dec-04	SPM Development\SCIs\KM SCI3_ Detailed Design Phase	
19	KM SW Integ/Test Plan PR Artifacts		A904393490SDKM3	Build 3.3	SW Detailed Design	EPI-Pages	6	6	1-Sep-04	22-Dec-04	SPM Development\SCIs\KM SCI3_ Detailed Design Phase	
20	KM SW Qual Test Cases/Procs		A904393490SDKM3	Build 3.3	SW Detailed Design	EPI-Pages	22	92	7-Sep-04	25-Feb-05	SPM Development\SCIs\KM SCI3_ Detailed Design Phase	
21	KM SW Qual Cases/Procs PR Arts		A904393490SDKM3	Build 3.3	SW Detailed Design	EPI-Pages	6	6	9-Sep-04	16-Feb-05	SPM Development\SCIs\KM SCI3_ Detailed Design Phase	
22	KM Midterm Rev. Prod.		A904393490SCKM3	Build 3.3	SW Code and Test	Pages	1		24-Sep-04		SPM Development\SCIs\KM SCI4_ Code and Unit Test Phase	
23	KM Midterm Rev. Pres.		A904393490SCKM3	Build 3.3	SW Code and Test	Pages	5		24-Sep-04		SPM Development\SCIs\KM SCI4_ Code and Unit Test Phase	
24	KM Code		A904393490SCKM3	Build 3.3	SW Code and Test	LOC	4500		18-Oct-04		SPM Development\SCIs\KM SCI4_ Code and Unit Test Phase	
25	KM Code PR Artifacts (x9)		A904393490SCKM3	Build 3.3	SW Code and Test	EPI-Pages	54		18-Oct-04		SPM Development\SCIs\KM SCI4_ Code and Unit Test Phase	
26	KM SW Unit Test Plans (x30)		A904393490SCKM3	Build 3.3	SW Code and Test	EPI-Pages	15		18-Oct-04		SPM Development\SCIs\KM SCI4_ Code and Unit Test Phase	
27	KM SW Unit Test Cases/Procs (x30)		A904393490SCKM3	Build 3.3	SW Code and Test	EPI-Pages	15		18-Oct-04		SPM Development\SCIs\KM SCI4_ Code and Unit Test Phase	
28	KM SW Unit Test Code (x30)		A904393490SCKM3	Build 3.3	SW Code and Test	EPI-LOC	1500		18-Oct-04		SPM Development\SCIs\KM SCI4_ Code and Unit Test Phase	
29	KM SW Unit Test Reports (x30)		A904393490SCKM3	Build 3.3	SW Code and Test	EPI-Pages	75		18-Oct-04		SPM Development\SCIs\KM SCI4_ Code and Unit Test Phase	
30	KM SW Integ Test Cases/Procs		A904393490SCKM3	Build 3.3	SW Code and Test	EPI-Pages	22		25-Oct-04		SPM Development\SCIs\KM SCI4_ Code and Unit Test Phase	
31	KM SW Integ Test Cases/Procs (update)		A904393490SIKM3	Build 3.3	SW Integration	EPI-Pages	7	92	28-Oct-04	25-Feb-05	PM Development\SCIs\KM SCI16_ SW Integration Phase	
32	KM SW Integ Test Code		A904393490SIKM3	Build 3.3	SW Integration	EPI-Pages	600		28-Oct-04		PM Development\SCIs\KM SCI16_ SW Integration Phase	

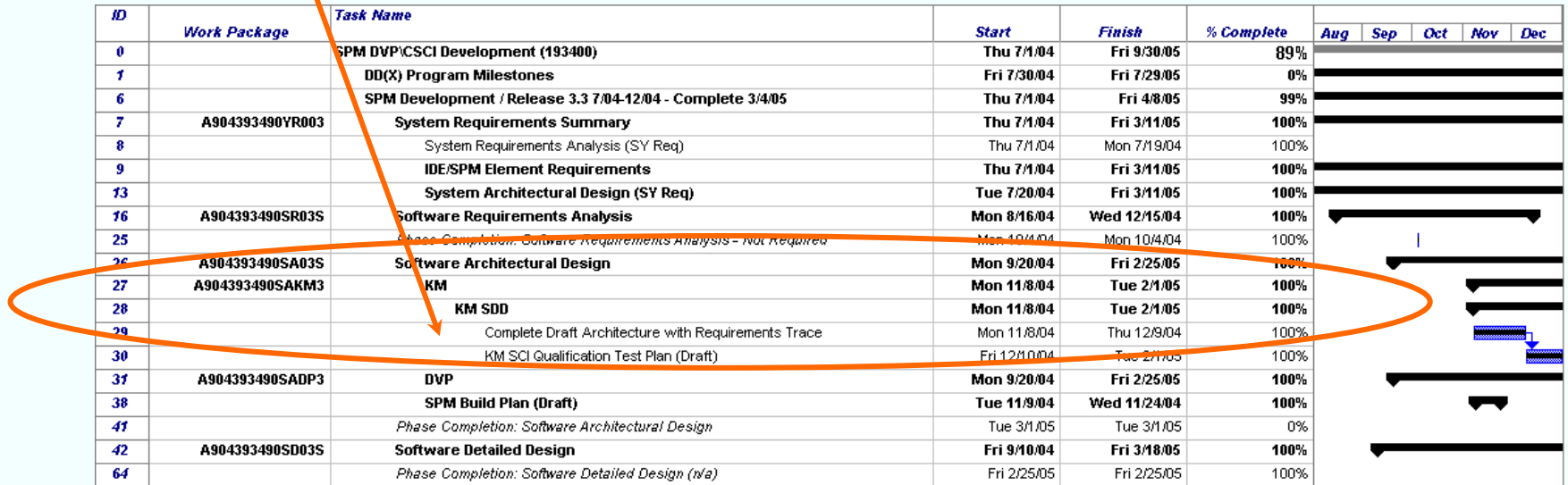


**Identify and track what artifacts to build and the effort it will require**



# IMS – Integrated Master Schedule

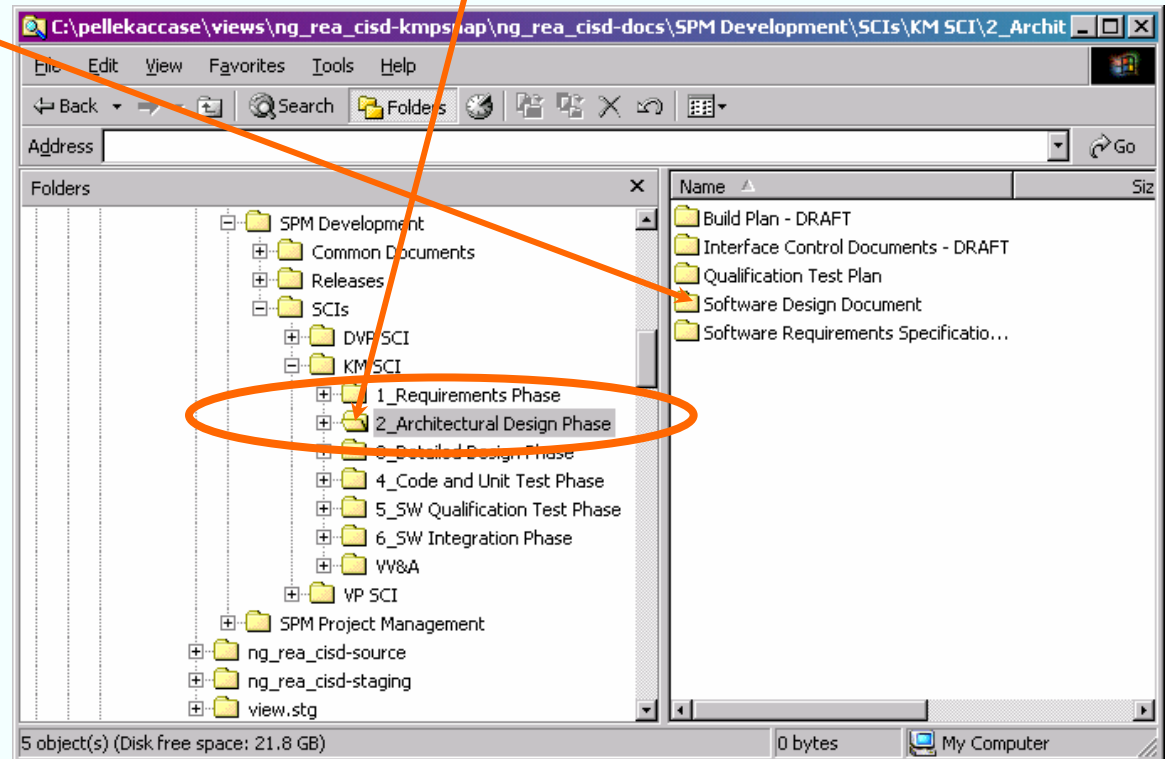
Project:	Product List				Date	
Version:						
PBS Num.	Name of Product	Activity Number	BPM Phase	Due	Done	
8	KM Arch Diagrams (final)	A904393490SAKM3	SW Arch Design	28-Jul-04	9-Dec-04	
9	KM SDD Arch Sections (final)	A904393490SAKM3	SW Arch Design	28-Jul-04	16-Nov-04	
10	KM Arch Sec PR Artifacts	A904393490SAKM3	SW Arch Design	30-Jul-04	17-Nov-04	
11	KM Build Plan	A904393490SAKM3	SW Arch Design	4-Aug-04	24-Nov-04	
12	KM Qual Test Plan	A904393490SAKM3	SW Arch Design	3-Aug-04	27-Jan-05	
13	KM NDS Eval Reports (updated)	A904393490SDKM3	SW Detailed Design	19-Aug-04	7-Oct-04	



Identify and track when to construct each artifact and how long it will take

# Software Development Library

Project:	Product List			Configuration Management
Version:				
PBS Num.	Name of Product	Activity Number	BPM Phase	Library Location (Optional)
8	KM Arch Diagrams (final)	A904393490SAKM3	SW Arch Design	SPM Development\SCIs\KM SCI\2_Architectural Design Phase
9	KM SDD Arch Sections (final)	A904393490SAKM3	SW Arch Design	SPM Development\SCIs\KM SCI\2_Architectural Design Phase
10	KM Arch Sec PR Artifacts	A904393490SAKM3	SW Arch Design	SPM Development\SCIs\KM SCI\2_Architectural Design Phase
11	KM Build Plan	A904393490SAKM3	SW Arch Design	SPM Development\SCIs\KM SCI\2_Architectural Design Phase
12	KM Qual Test Plan	A904393490SAKM3	SW Arch Design	SPM Development\SCIs\KM SCI\2_Architectural Design Phase
13	KM NDS Eval Reports (updated)	A904393490SDKM3	SW Detailed Design	SPM Development\SCIs\KM SCI\3_Detailed Design Phase



**Define where to store information for quick retrieval**



## Development Support Activities

- **Project Planning (Project Manager)**
- **Project Management and Control (Project Manager)**
- **Decision Analysis Resolution (DAR POC)**
- **Requirements Management (Req. Mgt. POC)**
- **Technical Solutions (TS Lead)**
- **Product Integration (PI Lead)**
- **Configuration Management (CM POC)**
- **Quality Assurance (Quality Engineer)**
- **Risk Management (RM POC)**
- **Training Plan (Training Lead)**
- **VV&A (VV&A Lead)**
- **Peer Reviews (Peer Review Lead)**
- **Phase Completion Reviews (Peer Review Lead)**



**People make the difference - Identify process owners who are experienced and capable**





## Manage & Control Tracking Tools – Enablers

- **WBS – Used to record and track cost and effort**
- **PBS – Used to plan and track completed products and size**
- **IMS – Used to plan and track work performance**
- **Requirements Tracking Workbook – Used to record and track number of planned and completed requirements by build (Obtained from SRS)**
- **Peer Review Tracking Workbook – Used to record and track number of planned and completed peer reviews (Obtained from IMS and Peer Review Summary sheets)**
- **Defect Tracking Workbook – Used to record and track number of planned defects, opened or closed defects by severity (Obtained from Peer Review, Testing, and fielded reports)**
- **Training Plan Workbook – Used to record and track number of planned and completed training requirements (Obtained from SDP)**
- **SPM SW Developer Metric Collection Enabler for DD(X) – Used to assist the Developers in providing monthly metrics in a standard format**



**The key to metrics are suitable tracking tools**



## Make Enhancements

- When an item is out of place
- When a place can't be found
- When many items can be consolidated
- When you hear complaints
- When you've reached a metric threshold
- When you've reached months end, the end of a phase, the end of a build, a milestone, or deliverable



**Improve, update, and adjust early and often**

## Keys to Success

**Understand what, why, who, and how**

**Identify experienced and capable process owners**

**Create your own organizational thought process**

**Use the model to facilitate communication**

**Use the model for efficiency and effectiveness**

**Categorize to establish your library structure**

**Customize enablers to support information gathering, tracking and analyzing**

**Improve, update, and adjust early and often**

**Organization is the best policy**





# Process Area & Goal Profile by Maturity Level

	PA	SG1	SG2	SG3	SG4	GG2	GG3	
<b>Level 5</b>	Causal Analysis and Resolution	●	●	●			●	NGIT DES SCAMPI March 2005
	Organizational Innovation and Deployment	●	●	●			●	
<b>Level 4</b>	Quantitative Project Management	●	●	●			●	Northrop Grumman IT DES
	Organizational Process Performance	●	●				●	
	Organizational Environment for Integration							
	Decision Analysis and Resolution	●	●				●	● PA : - Not Satisfied ● PA : - Satisfied ● GOAL : - Not Satisfied ● GOAL : - Satisfied
	Integrated Supplier Management							
	Integrated Teaming							
	Risk Management	●	●	●	●		●	
	Integrated Project Management	●	●	●			●	
	Organizational Training	●	●	●			●	
	Organizational Process Definition	●	●				●	
	Organizational Process Focus	●	●	●			●	
	Validation	●	●	●			●	
	Verification	●	●	●	●		●	
	Product Integration	●	●	●	●		●	
	Technical Solution	●	●	●	●		●	
<b>Level 3</b>	Requirements Development	●	●	●	●		●	
	Configuration Management	●	●	●	●	●	●	
	Process and Product Quality Assurance	●	●	●		●	●	
	Measurement and Analysis	●	●	●		●	●	
	Supplier Agreement Management	●	●	●		●	●	
	Project Monitoring and Control	●	●	●		●	●	
	Project Planning	●	●	●	●	●	●	



**Organization is the best policy, staying organized is the challenge**



***NORTHROP GRUMMAN***



# Question and Answer



# Project Acronyms & Translations

Acronym	Description
BPS	Build Process Model
CMMI	Capability Maturity Model Integration
CPI	Cost Performance Index
CPT	Cross Product Team
CWBS	Contract Work Breakdown Structure
DD(X)	Next Generation Destroyer
DES	Defense Enterprise Solutions
DMS	Defense Mission Systems
DVP	Dynamic Virtual Prototype
EVMS	Earned Value Management System
GP	Genera Practice
IDE	Integrated Data Environment
IMS	Integrated Master Schedule
IPT	Integrated Product Team
IWO	Interoffice Work Order
KM	Knowledge Management
LOC	Line of Code
MPR	Monthly Project Review

Acronym	Description
NAVSEA	Naval Sea Systems Command
PA	Process Area
PBS	Product Breakdown Structure
PM	Product Model
PMT	Project Management Team
SCAMPI	Standard CMMI Appraisal Method for Process Improvement
SCI	Software Configuration Item
SDL	Software Development Library
SDP	Software Development Plan
SP	Specific Practice
SPI	Schedule Performance Index
SPM	Smart Product Model
SPP	Software Process Planning
SQA	Software Quality Assurance
SW	Software
VPM	Virtual Product Model
VV&A	Verification, Validation and Accreditation
WBS	Work Breakdown Structure

