Repository, Process, and Tools Support
# for
Set Based Design (SBD)

How NEAR, ExARM, and ExAMS can complement and support SBD
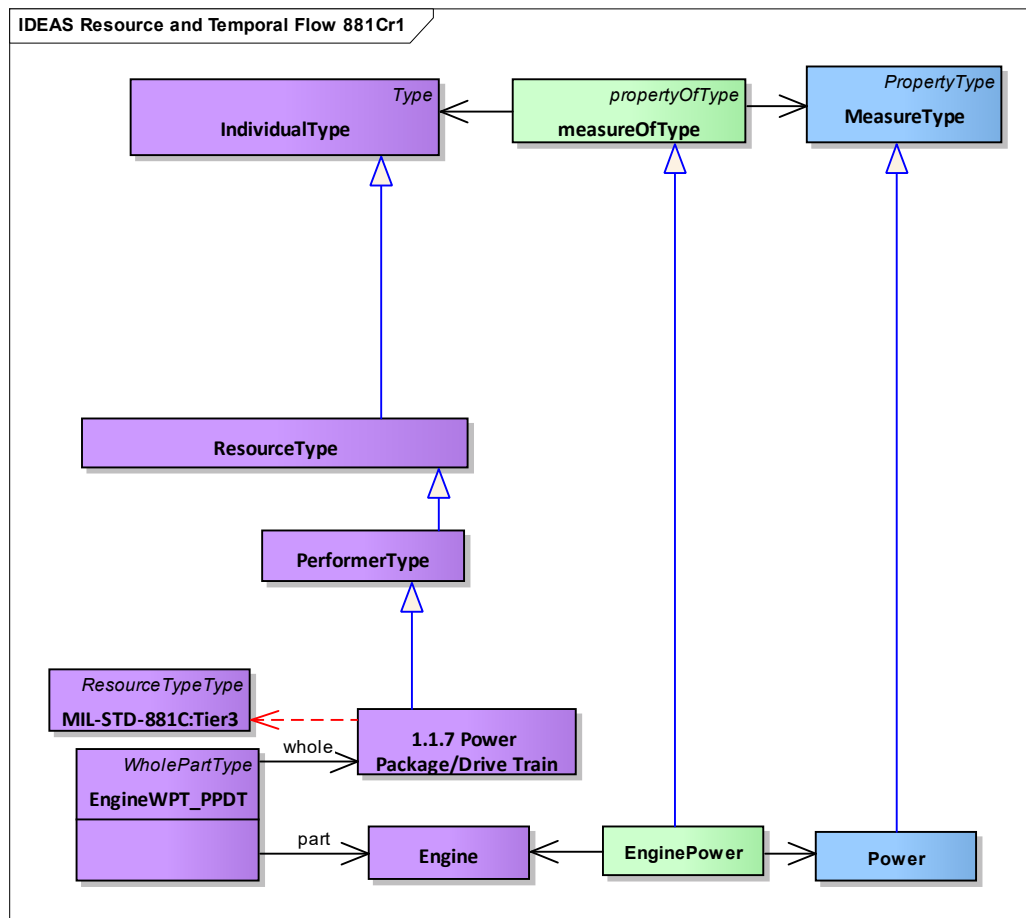
24 August 2016

Naval Enterprise Architecture Repository (NEAR)

- NEAR implements the DoDAF Meta Model (DM2) ontology
  - DM2 was designed specifically to represent Measures such as SBD's Market Research Database (MRDB)
  - DM2 was designed with MIL-STD-881C in mind
- NEAR has automated interfaces to architecture tools in common use in the DON
- NEAR is implemented in a full-scale DBMS, enabling complete data administration and management of SBD data including:
  - Access control
  - Archiving
  - Re-use
  - Re-combination of datasets
- With updated DON governance, NEAR can support integration of JCIDS data with SBD
  - Current JCIDS data in NEAR does not support SBD, follows old JCIDS and DoDAF guidance
  - Revise SNI 5000.2E to build upon updated CJCSM 3170 of December 2015 and support SBD
  - For example, current CJCSM 3170 emphasizes metrics early-on and linkage of DoDAF views with KPP's, KSA's, and Capability definitions

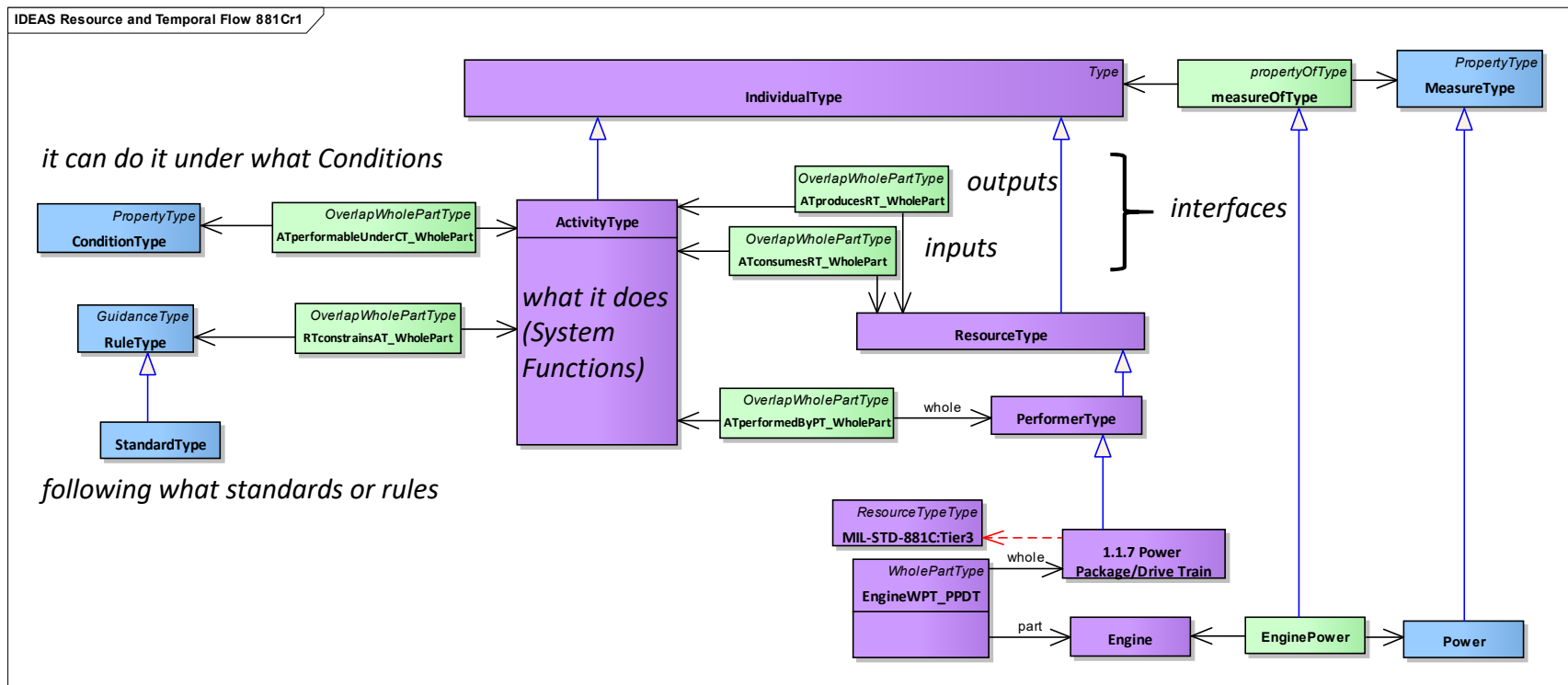# Example: How Amphibious Combat Vehicle (ACV) Measures fit in DM2
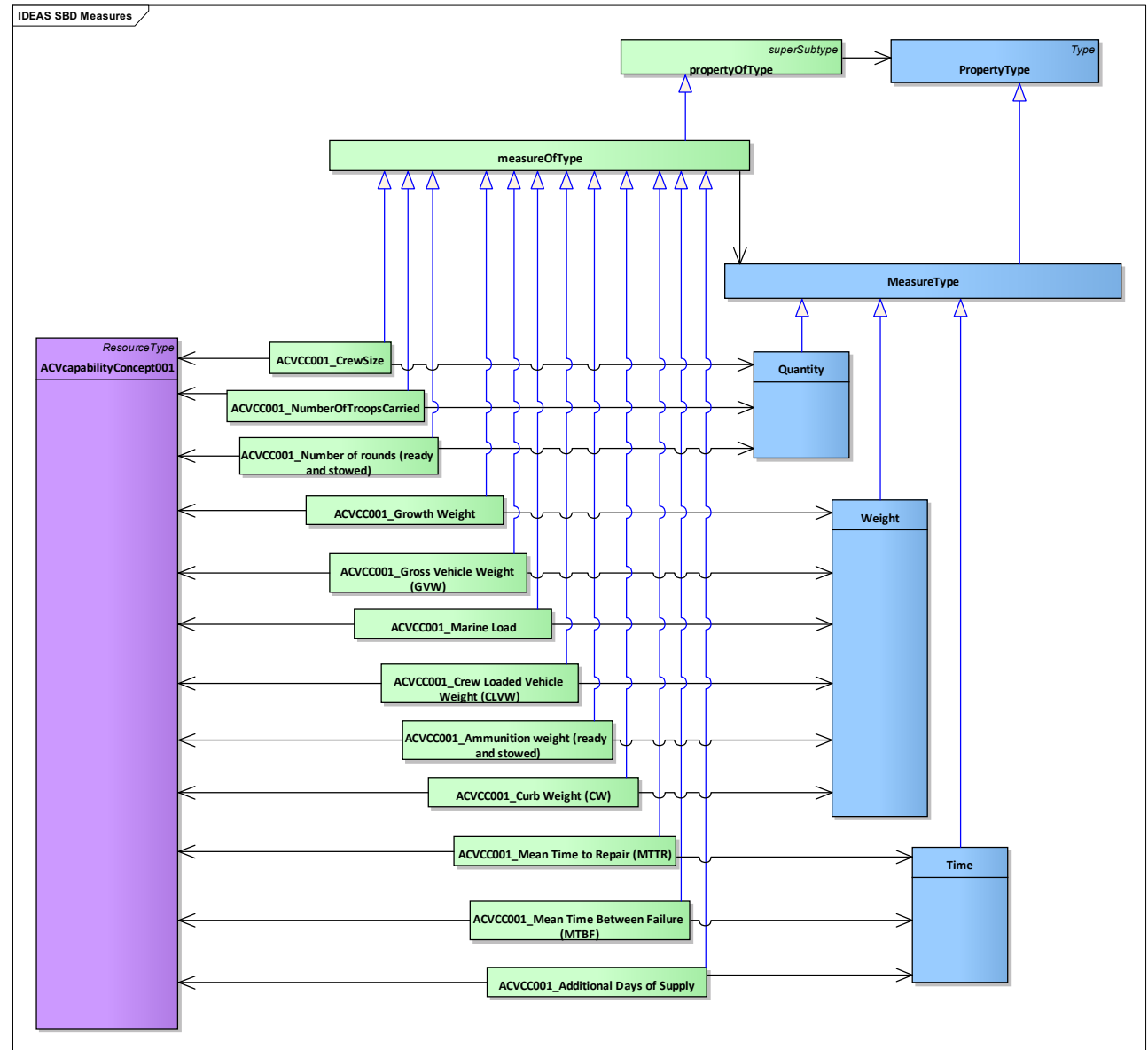
Example: How MIL-STD-881C Fits in DM2

Also covers System Functions, Standards, Inputs/Outputs, … most of DOTM_PF

IDEAS Resource and Temporal Flow 881Cr1

it can do it under what Conditions

following what standards or rules

In NEAR, structured 881C reusable across the DON

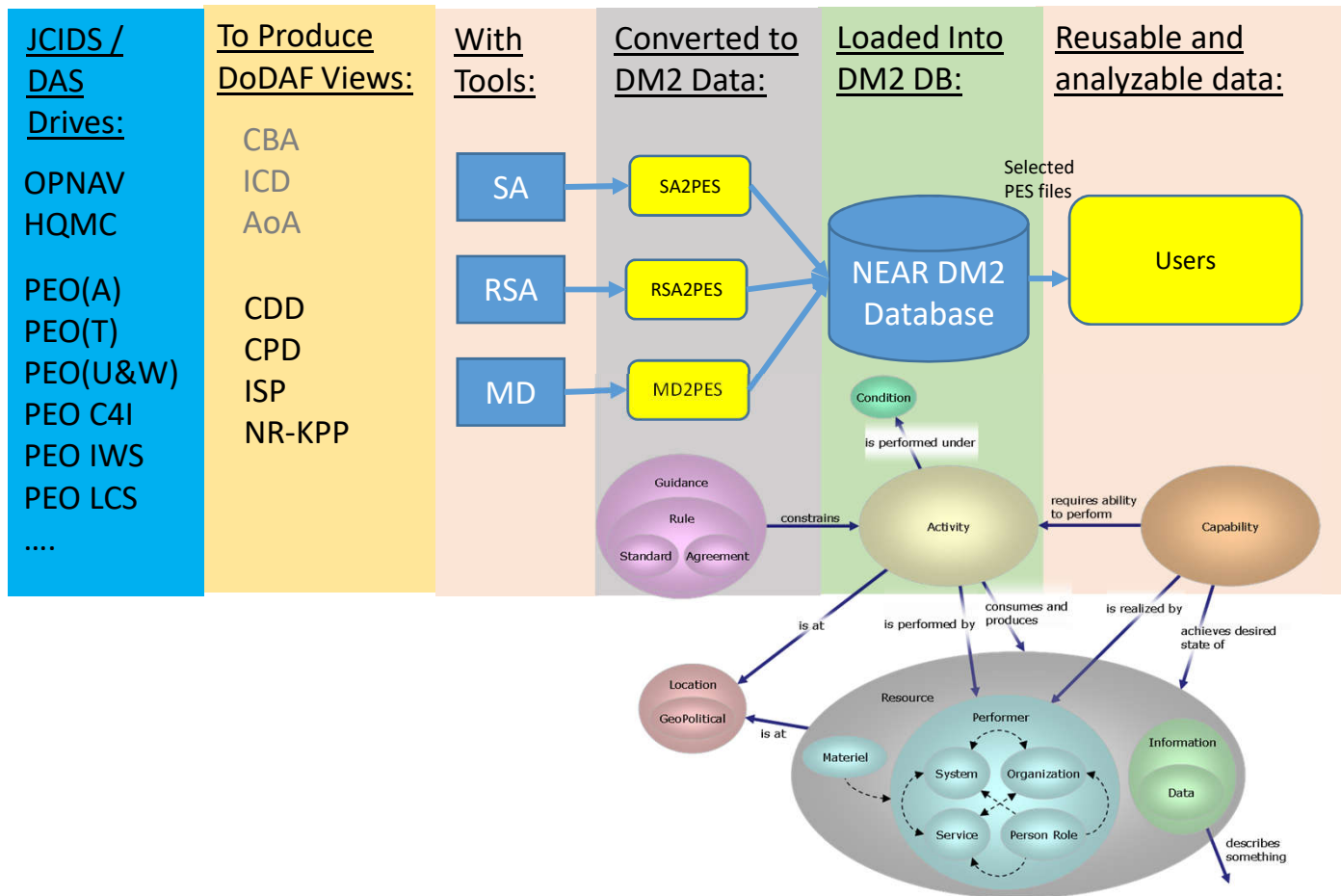# Engineers don't see the ontologic plumbing: example simple tool developed by Silver Bullet

NEAR Current

NEAR Next Planned Phase: Two-way and bilateral tool exchange
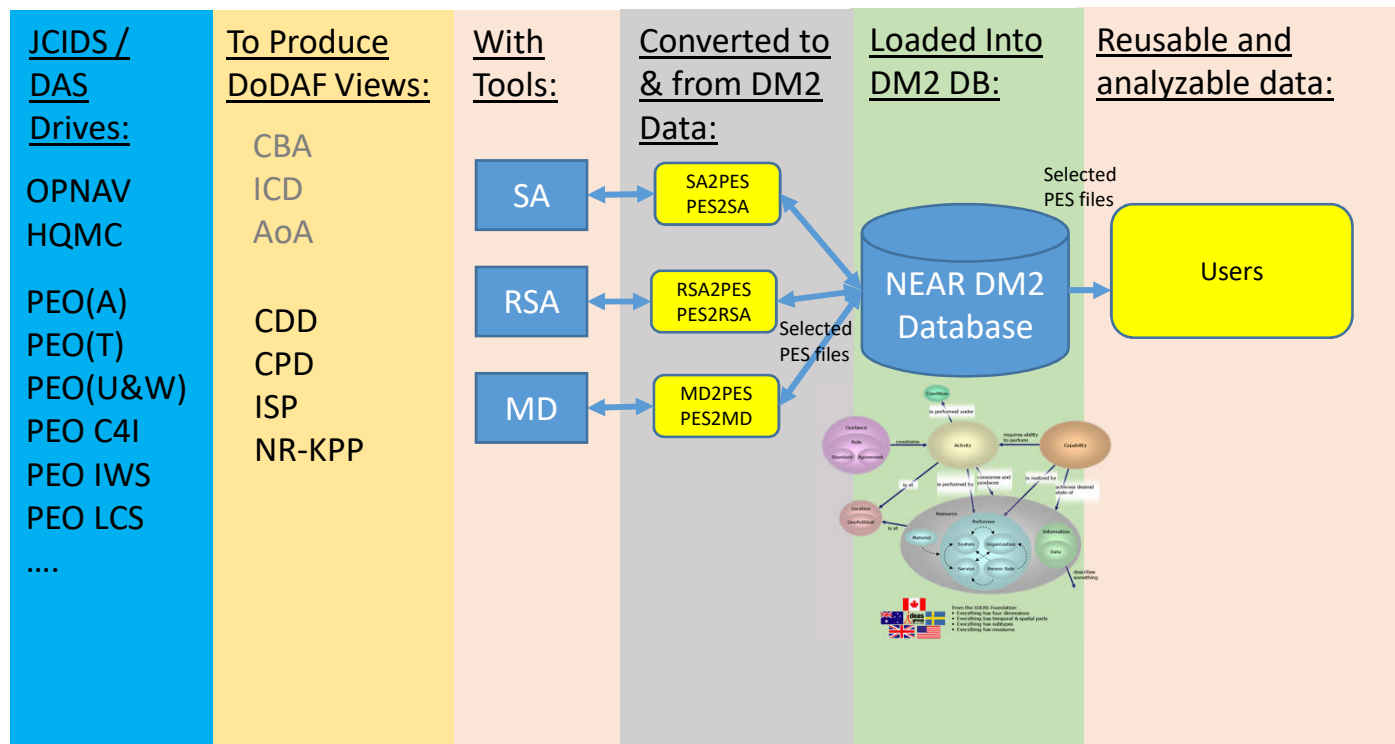
Next Phase: NEAR Support to SBD

JCIDS / DAS Drives:	To Produce DoDAF Data:	With Tools:	Converted to DM2 Data:	Loaded Into DM2 DB:	Reusable and analyzable data:

OPNAV
HQMC

PEO(A)
PEO(T)
PEO(U&W)
PEO C4I
PEO IWS
PEO LCS
….

CBA'
ICD'
AoA'

CDD'
CPD'
ISP'
NR-KPP'

Done IAW revised governance

SA

RSA

MD

MRDB with TPT

SA2PES
PES2SA

RSA2PES
PES2RSA

MD2PES
PES2MD

MRDB2PES
PES2MRDB

NEAR DM2 Database

Selected PES files

Selected PES files

Users

Next Phase: Additional Tools

JCIDS / DAS Drives:	To Produce DoDAF Data:	With Tools:	Converted to DM2 Data:	Loaded Into DM2 DB:	Reusable and analyzable data:

JCIDS / DAS Drives:

OPNAV
HQMC

PEO(A)
PEO(T)
PEO(U&W)
PEO C4I
PEO IWS
PEO LCS
....

To Produce DoDAF Data:
- CBA'
- ICD'
- AoA'
- CDD'
- CPD'
- ISP'
- NR-KPP'

Done IAW revised governance

With Tools:
- SA
- RSA
- MD
- MRDB With TPT
- CORE
- EA
- Innoslate
- DOORS

Converted to DM2 Data:
- SA2PES PES2SA
- RSA2PES PES2RSA
- MD2PES PES2MD
- MRDB2PES PES2MRDB
- CORE2PES PES2CORE
- EA2PES PES2EA
- INNO2PES PES2INNO
- OWL2DOORS

NEAR DM2 Database

Selected PES files

Users

Selected PES files

Architecture "to-be" OWL statements are requirements. Document requirements should be = architecture requirements.

NEAR Proposed Support to ExARM

JCIDS / DAS Drives:	To Produce DoDAF Data:	With Tools:	Converted to DM2 Data:	Loaded Into DM2 DB:	Usable in ExARM VDD Construction:	To Become Part of ID SoSA DB:
OPNAV	CBA'	SA	SA2PES PES2SA	NEAR DM2 Database	Selected PES files	M&S SoSA Database
HQMC	ICD'	RSA	RSA2PES PES2RSA		ExARM Data Selector (Queries) and Formatter	ExARM P6 & P15
PEO(A)	AoA'	MD	MD2PES PES2MD		Operational and System Architecture Data Needed for Study (PES, ExAMS, SA, and MS Office formats)	
PEO(T)	CDD'	MRDB With TPT	MRDB2PES PES2MRDB	Selected PES files		
PEO(U&W)	CPD'	CORE	CORE2PES PES2CORE		ExARM VDD & Vignette	
PEO C4I	ISP'	EA	EA2PES PES2EA			ExARM P3, 4, & 5
PEO IWS	NR-KPP'	Innoslate	INNO2PES PES2INNO		VDD Library	
PEO LCS		DOORS	OWL2DOORS			
....	*Done IAW revised governance*					

Backups

Executable Architecture Requirements Model (ExARM)

SOP
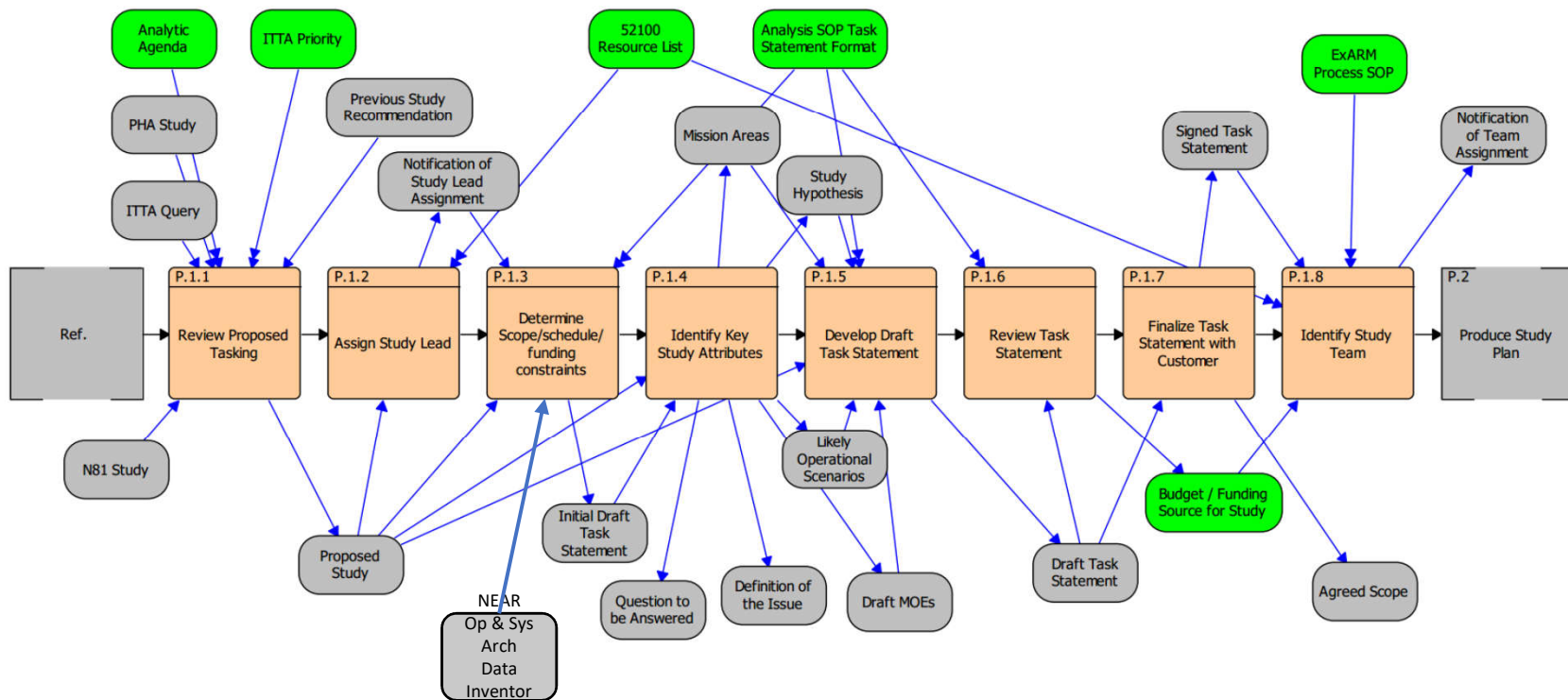
1 October 2013

Figure 15 Initial Study (EFFBD)
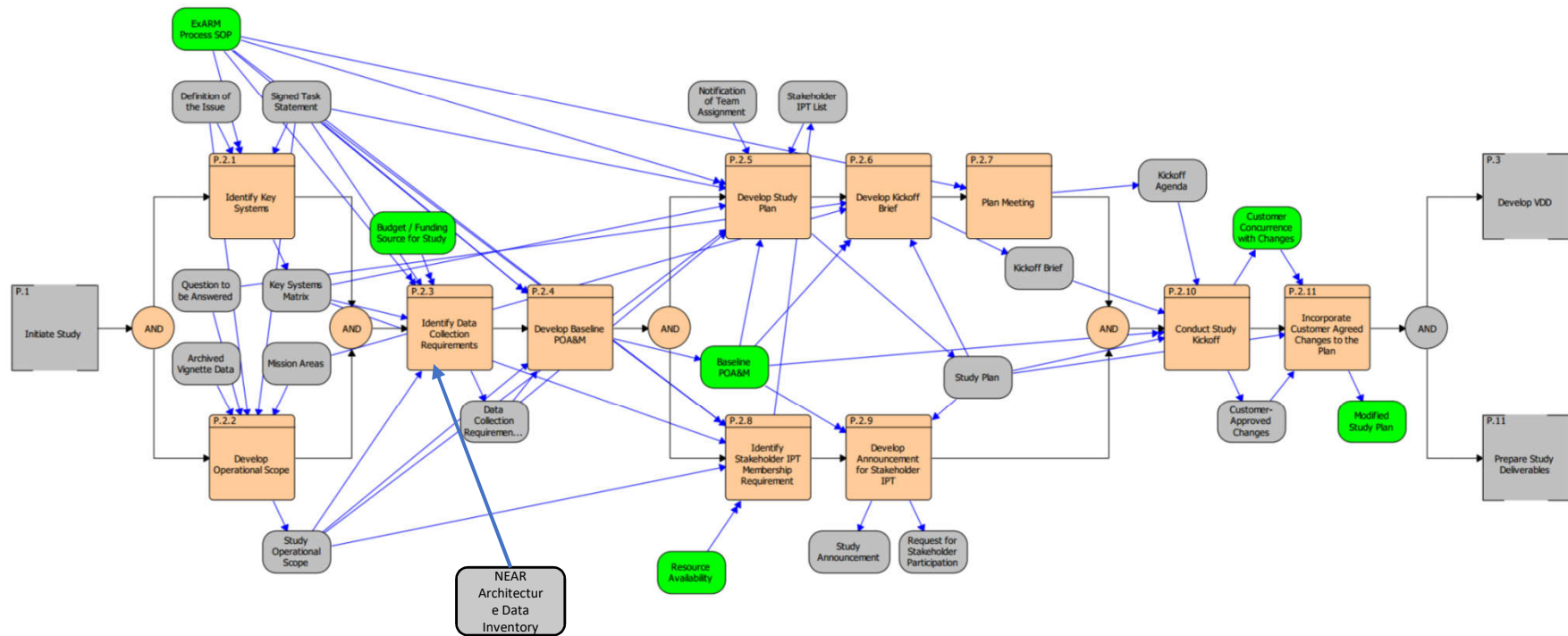
Figure 17 Produce Study Plan (EFFBD)
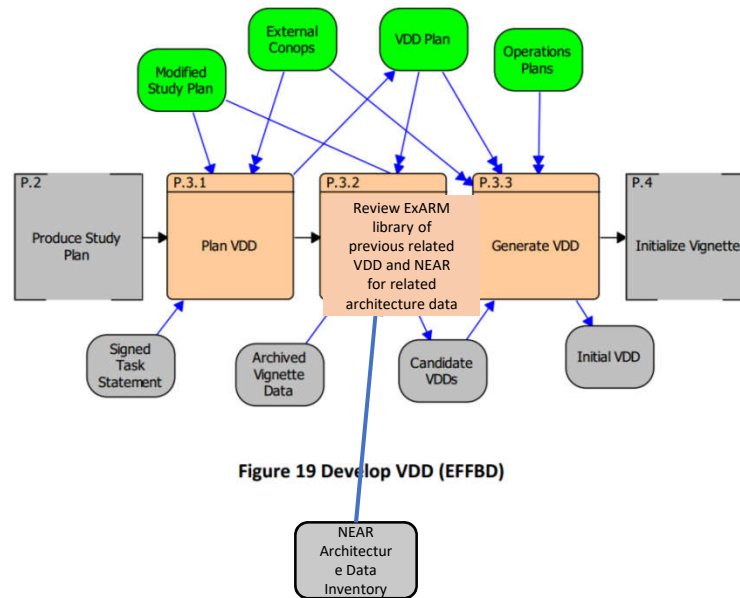
Figure 19 Develop VDD (EFFBD)

Figure 21 Initialize Vignette (EFFBD)

Executable Architecture Requirements Model (ExARM)

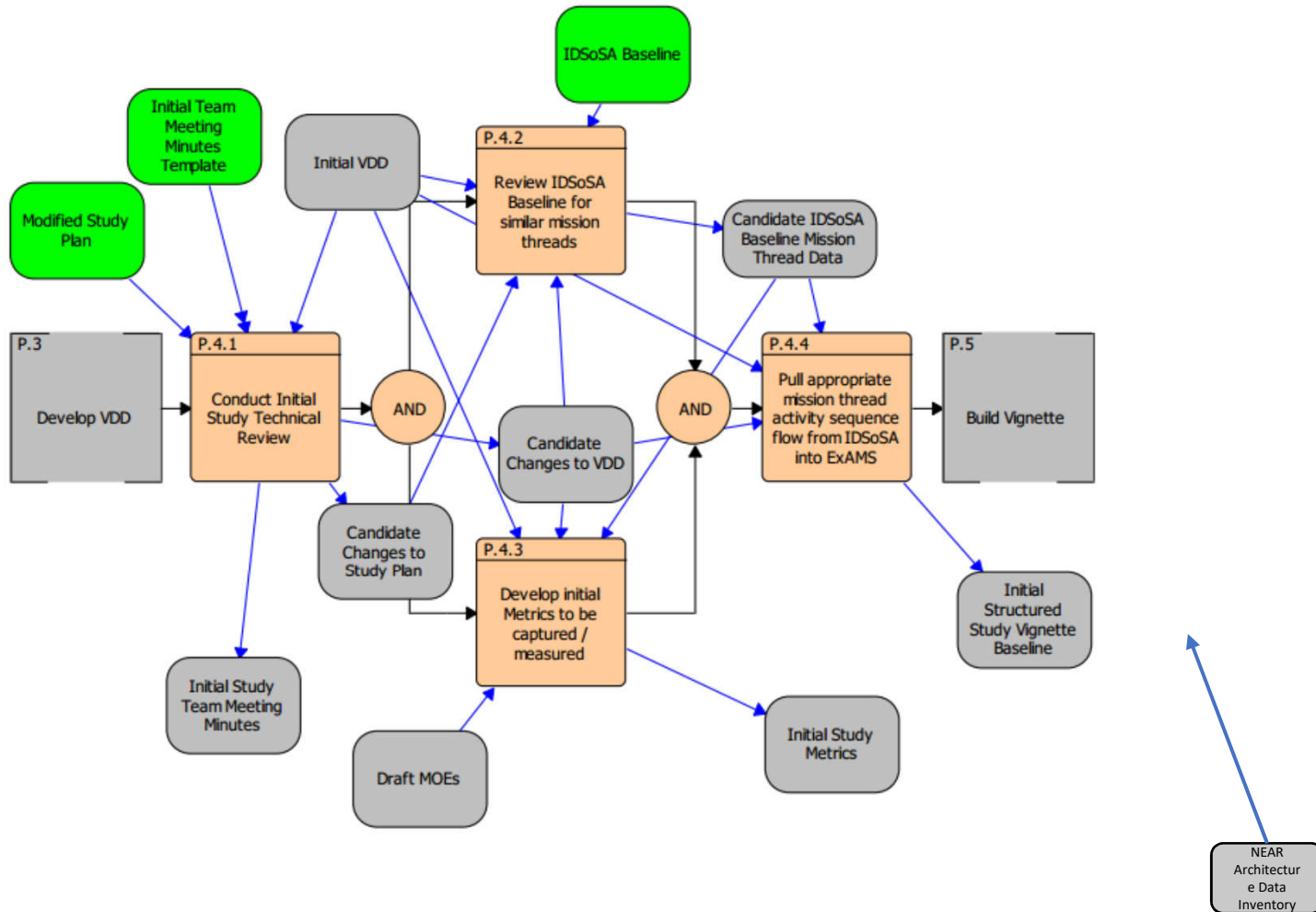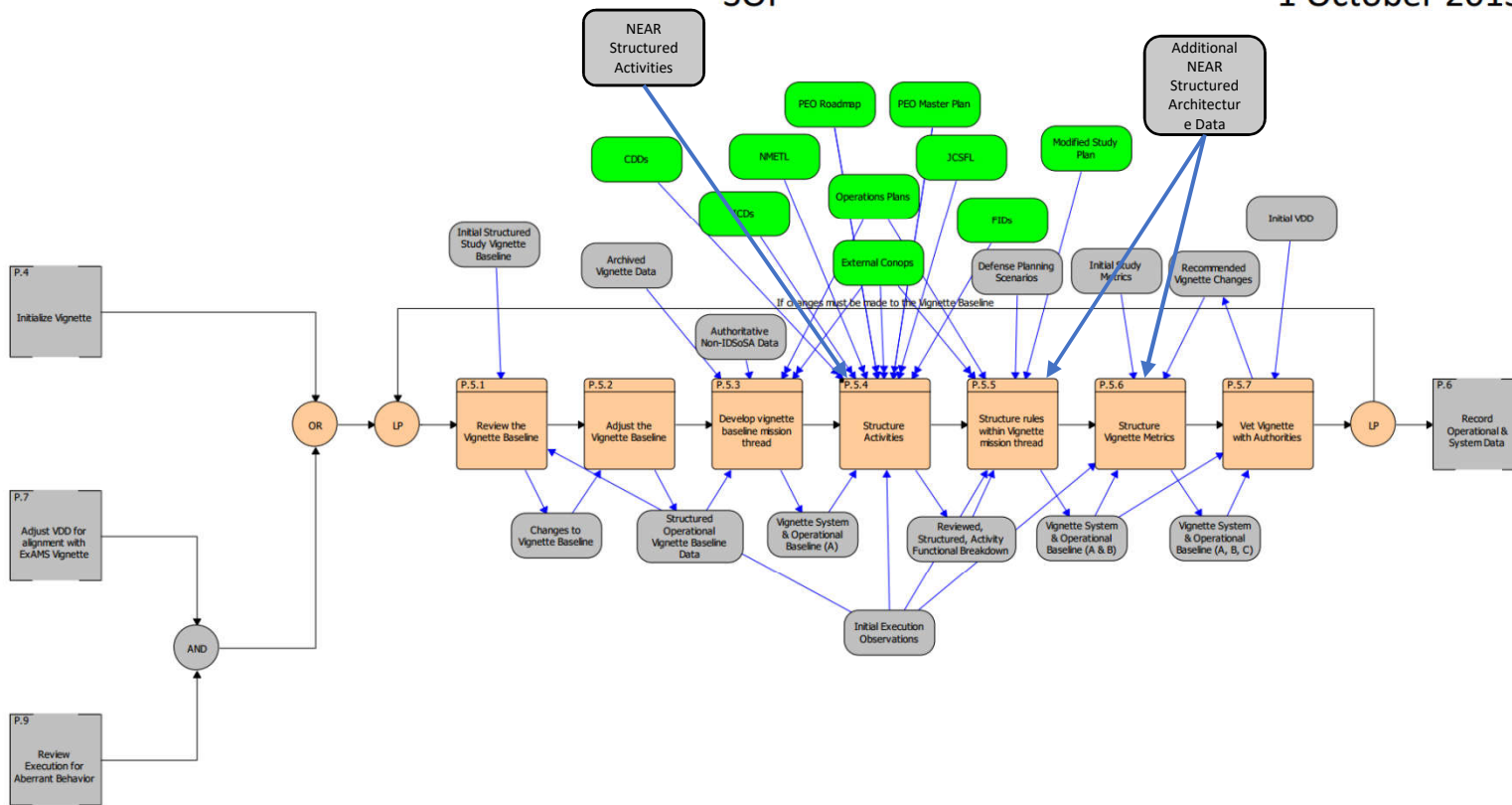SOP   1 October 2013
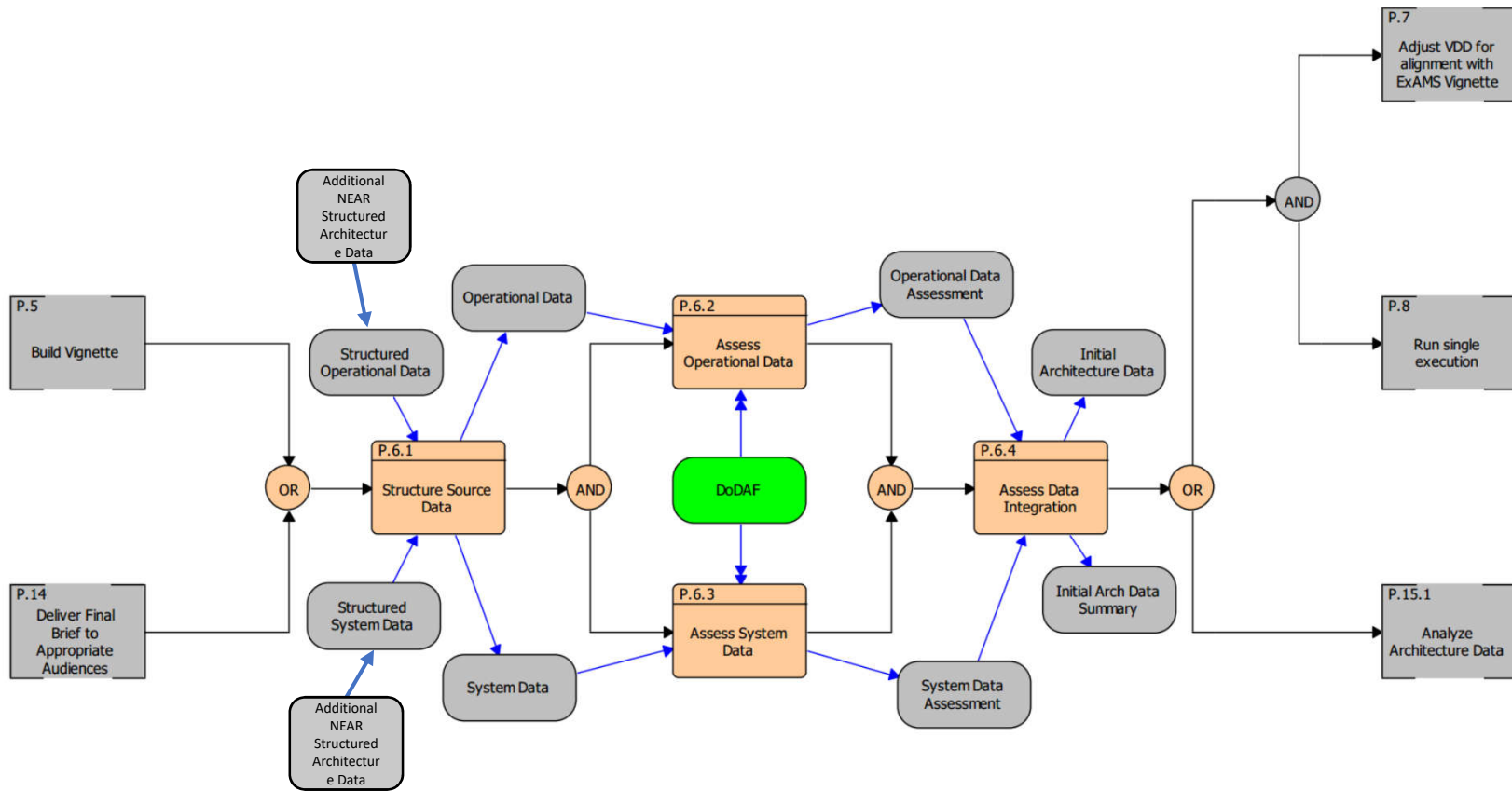

Figure 23 Build Vignette (EFFBD)

Figure 25 Record Operational & System Data (EFFBD)

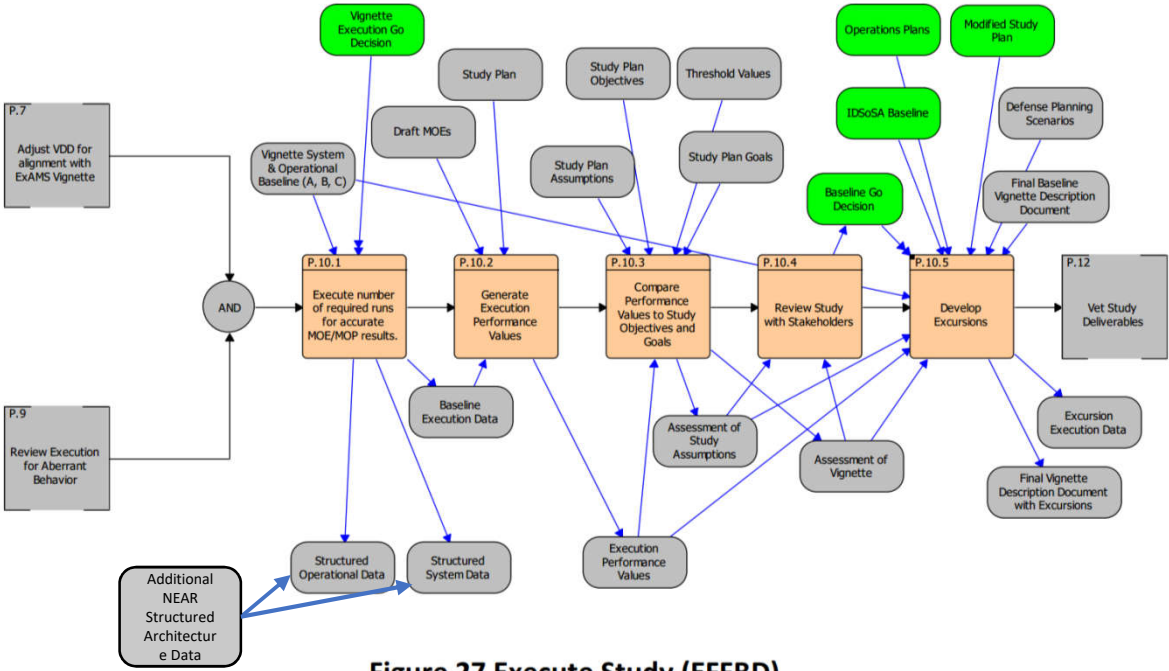Figure 27 Execute Study (EFFBD)

Executable Architecture Requirements Model (ExARM)

SOP   1 October 2013
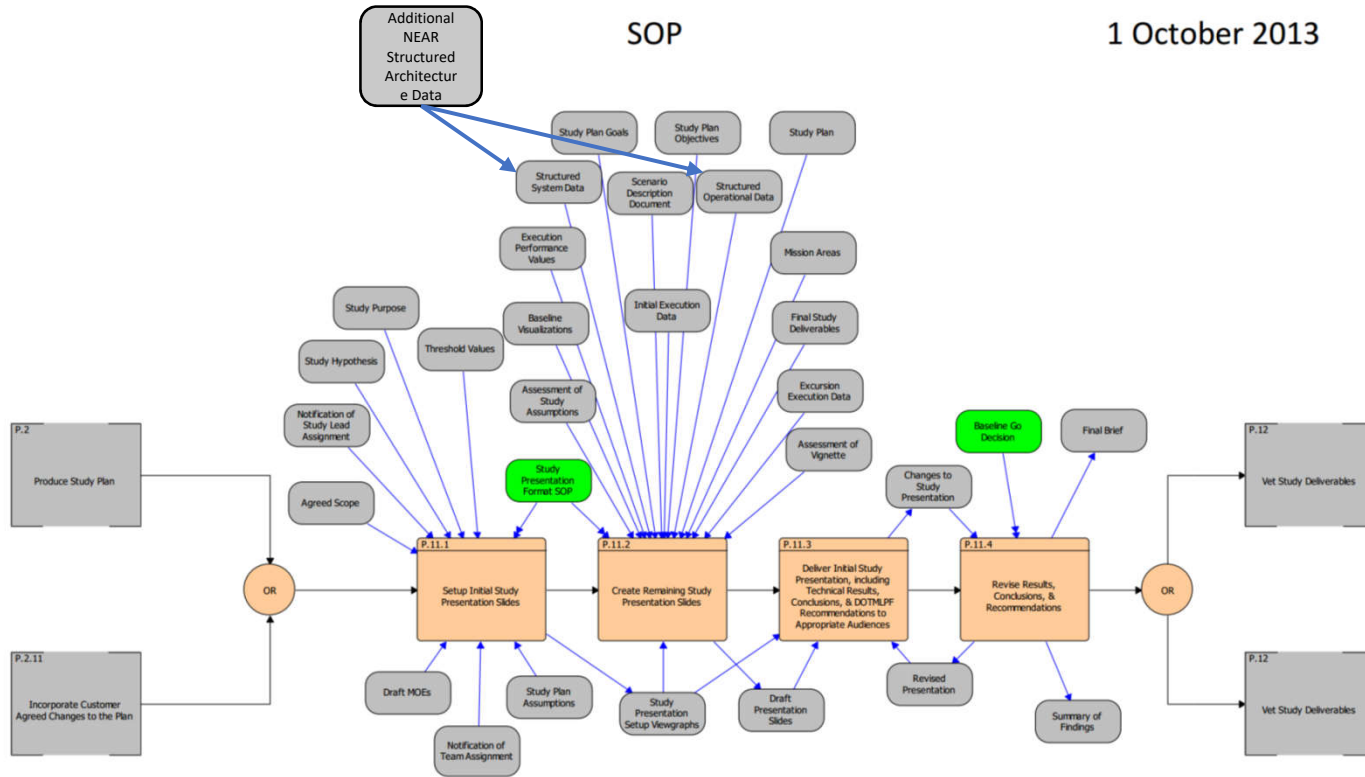

Figure 29 Prepare Study Deliverables (EFFBD)

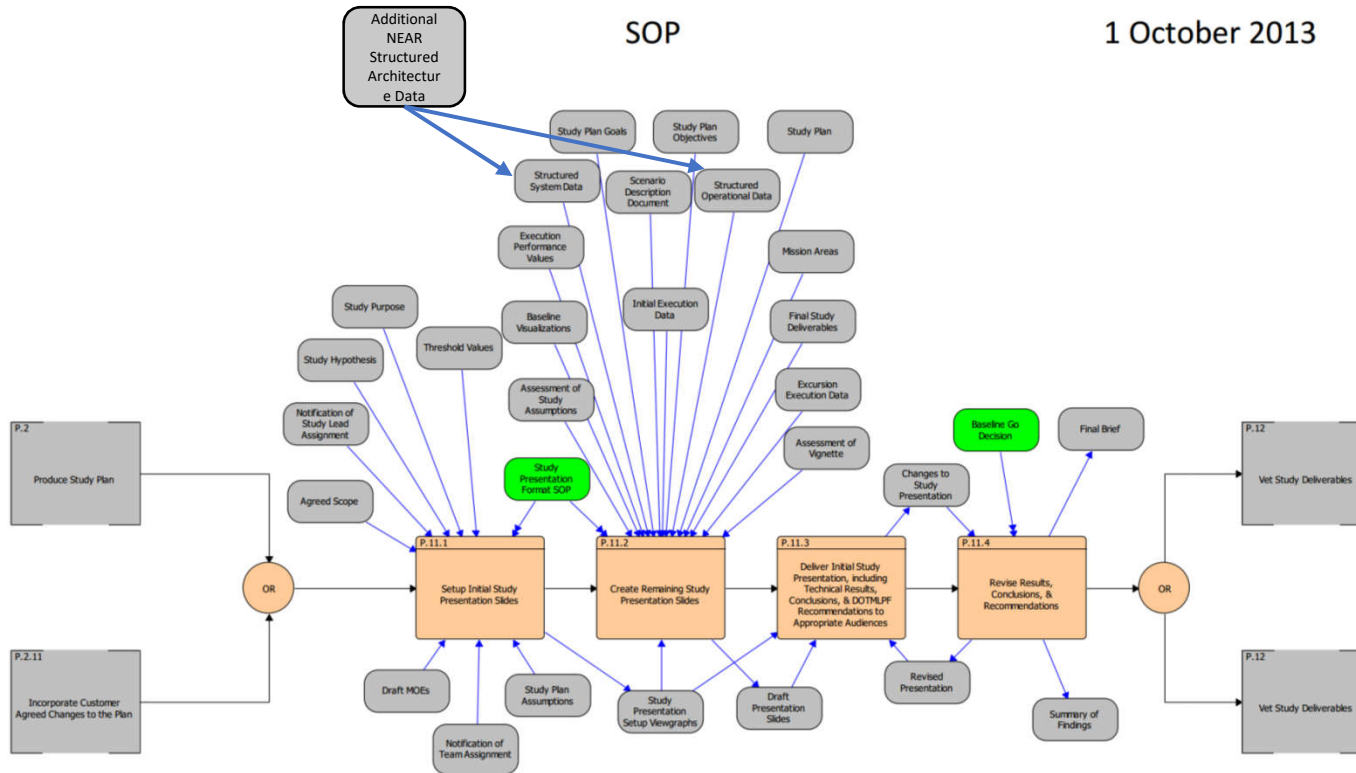Executable Architecture Requirements Model (ExARM)

SOP   1 October 2013

Figure 31 Prepare Study Deliverables (EFFBD)

Figure 33 Incorporate into ID SoSA (EFFBD)