

GVSETS 2024

XM30 COMBAT VEHICLE DIGITAL ACQUISITION STRATEGY

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PM XM30 Combat Vehicle

13 August 2024

DELIVER MODERNIZED GROUND COMBAT SYSTEMS TO TRANSFORM AND SUSTAIN THE ARMY




DIGITAL ENGINEERING & THE BIG WHY...?



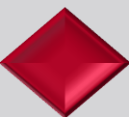
Deliver capabilities in a better way

- 1 *Synchronize* design across disciplines
- 2 *Reduce risk* through modeling & simulation (M&S)
- 3 *Agile* Software (SW) development
- 4 Vehicle *Digital Twins*
- 5 *Synchronize* test, engineering, requirements



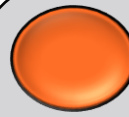
Deliver upgrades at pace > threat evolution

- 1 Change management *synchronized* across multiple disciplines
- 2 *Accelerated* logistics product delivery (TMs, provisioning, etc.)
- 3 *Reduce* physical testing
- 4 *Integrate design* into manufacturing process
- 5 *Over-the-Air* (OTA) delivery of SW upgrades (Tesla® model)



Cost Avoidance

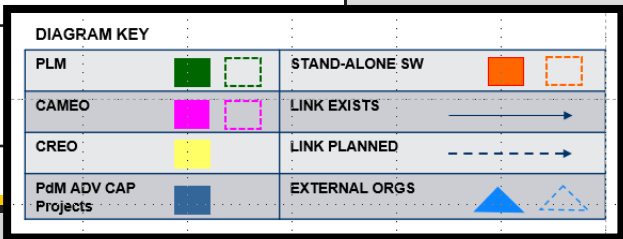
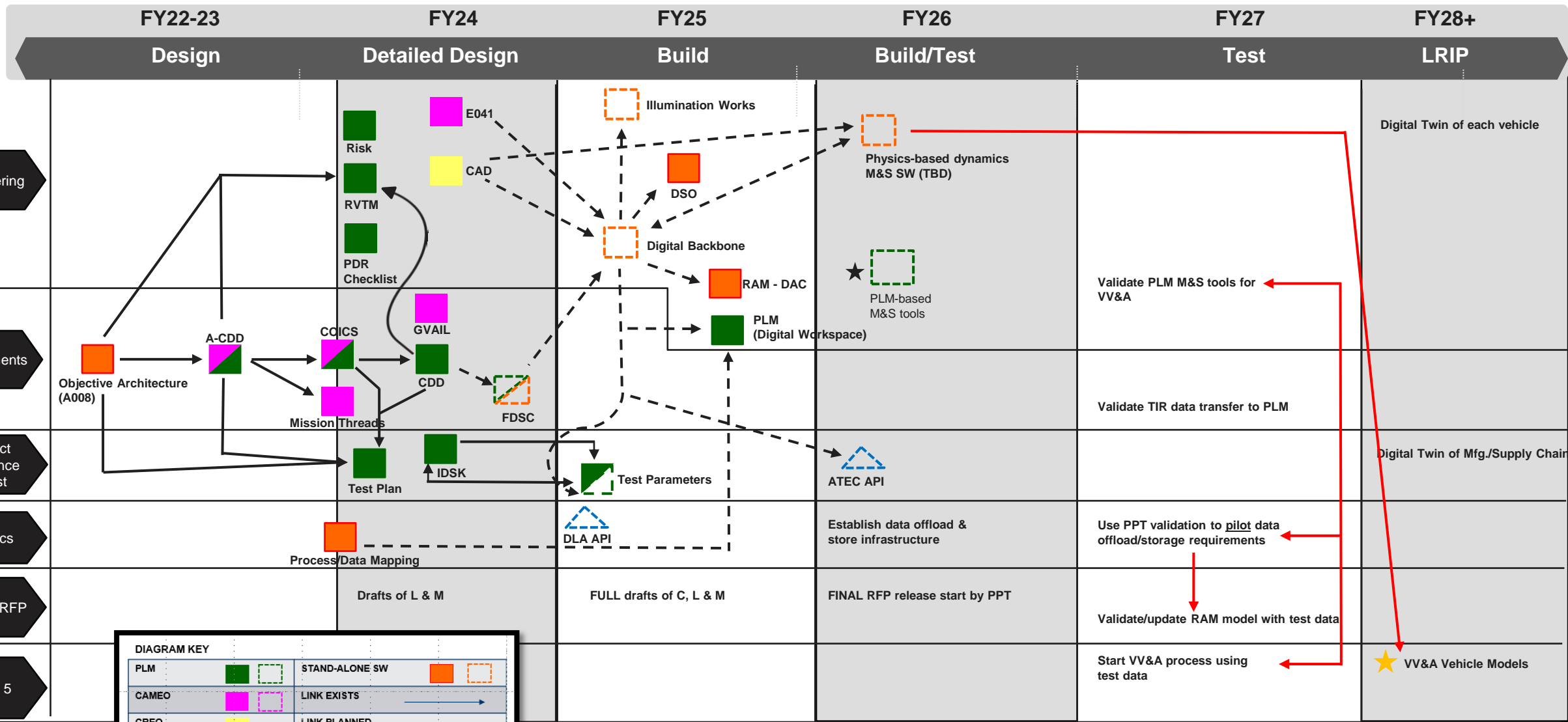
- 1 *Increased* Reliability
- 2 *Reduced* Physical Testing
- 3 *Competition* through MOSA
- 4 Intellectual Property through *Competition*
- 5 *Improved* Manufacturing & Supply Chain



Increased Operational Readiness

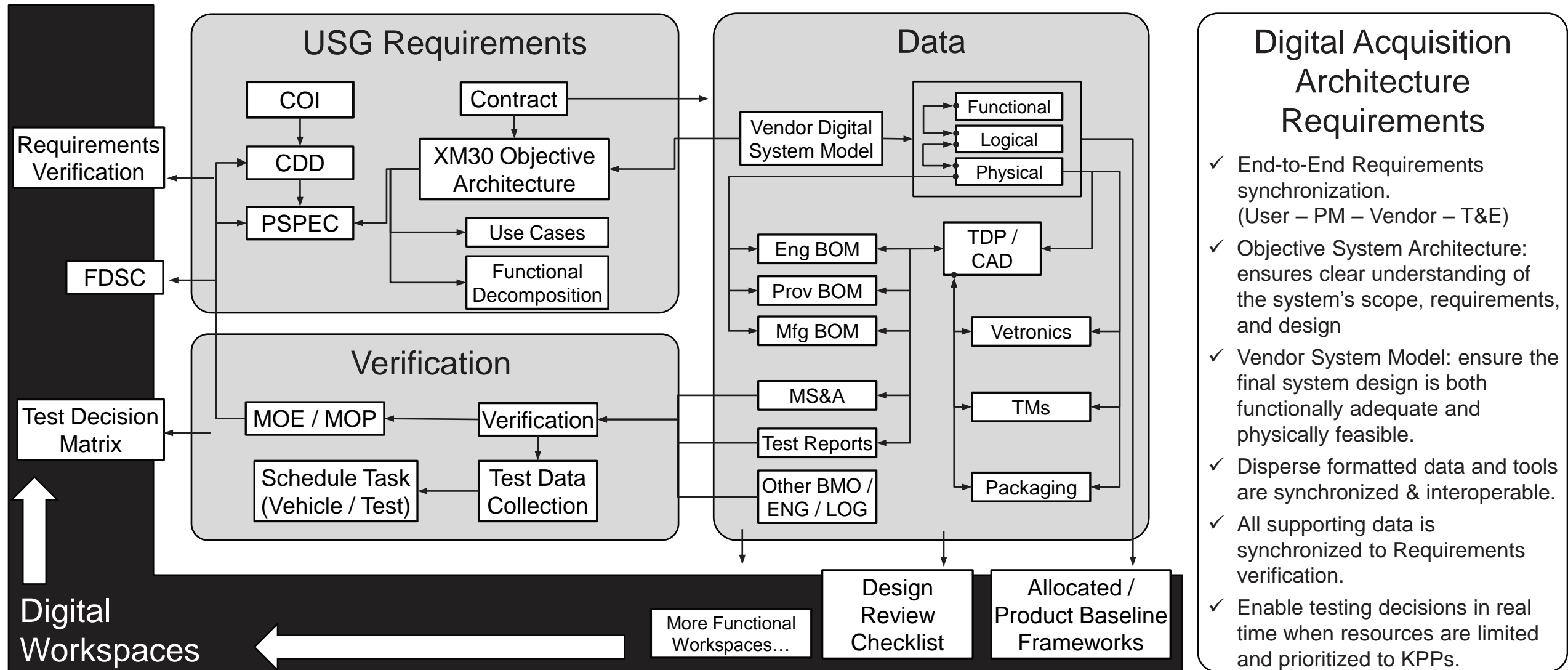
- 1 Predictive & Prognostic Maintenance (*PPMx*)
- 2 *RAM* modeling
- 3 Supply Chain Risk Management (*SCRM*)

THE BIG 'HOW'



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DIGITAL ENGINEERING: THE DEVIL IS IN THE DETAILS

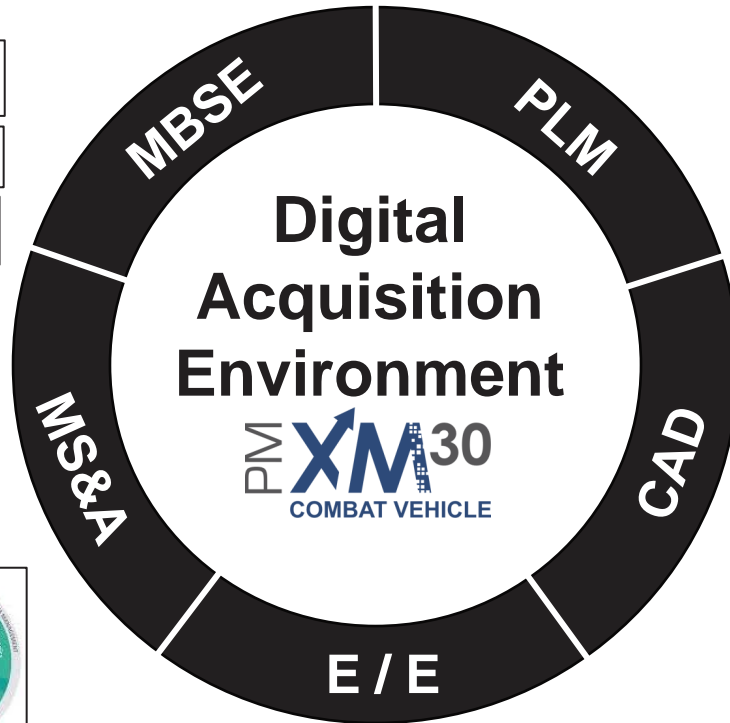


- ## Digital Acquisition Architecture Requirements
- ✓ End-to-End Requirements synchronization. (User – PM – Vendor – T&E)
 - ✓ Objective System Architecture: ensures clear understanding of the system's scope, requirements, and design
 - ✓ Vendor System Model: ensure the final system design is both functionally adequate and physically feasible.
 - ✓ Disperse formatted data and tools are synchronized & interoperable.
 - ✓ All supporting data is synchronized to Requirements verification.
 - ✓ Enable testing decisions in real time when resources are limited and prioritized to KPPs.

XM30 DIGITAL ACQUISITION ENVIRONMENT

Digital Engineering Enablers

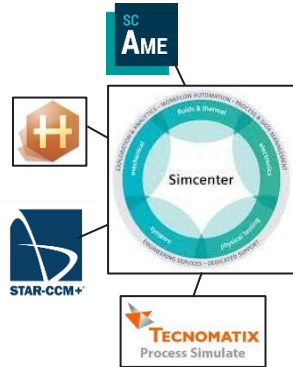
Model-Based Systems Engineering



Product Lifecycle Management



Modeling Simulation & Analysis



Model-Based Definition Computer-Aided Design

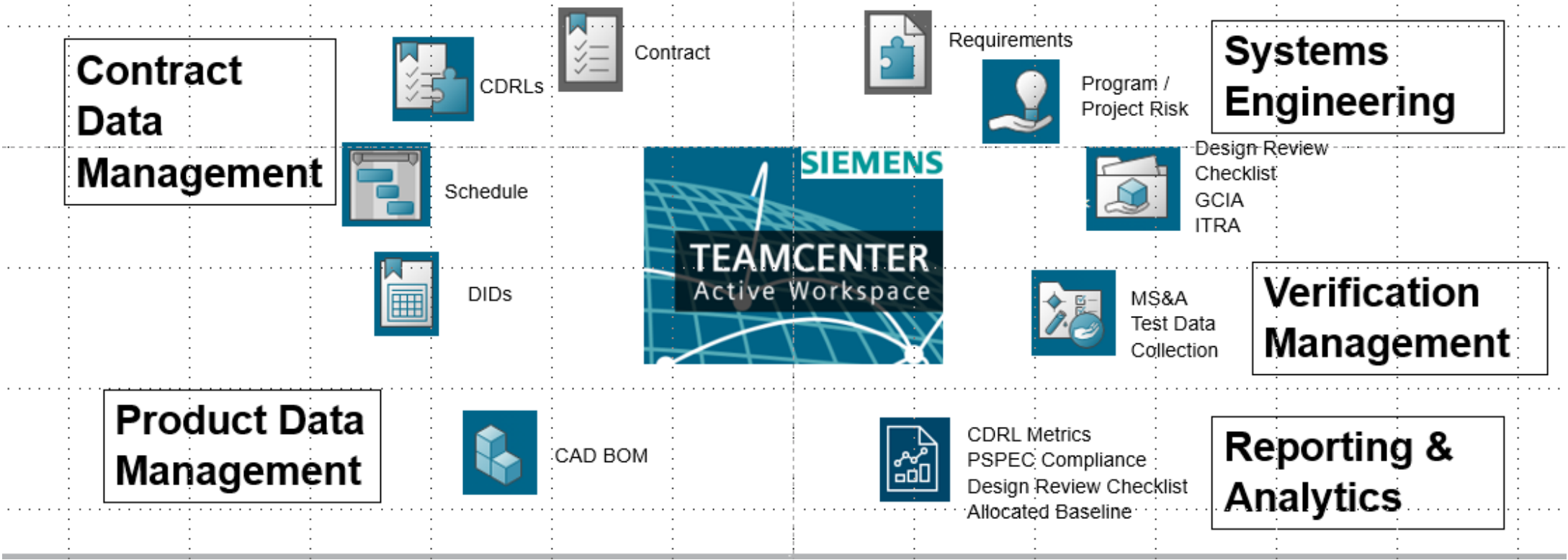


Electrical / Electronic



PRODUCT LIFECYCLE MANAGEMENT (PLM) – *SIEMENS TEAMCENTER*

XM30 DAE's Knowledge Management tool to **synchronize** data/processes from system design to sustainment. *Impact to XM30* – Enhanced collaboration among different stakeholders using most current information **Single Source of Truth**





Q&A