

PTC, Inc. (NASDAQ: PTC) develops a suite of software systems that help companies and government partners design products, manage product information and improve product development processes. The company is headquartered in Boston, MA with \$1.4B in annual revenue and 6,000 employees. PTC has a significant presence in the Federal Aerospace and Defense (FA&D) sector globally, which comprises ~24% of revenue.

**In August of 2020, the [U.S. Navy](#) selected PTC as the backbone of its model-based digital transformation effort, aimed at improving speed of capability insertion and operational readiness. It will be a full digital transformation 'reset' on how Navy acquires, fields and sustains weapons systems.**

- **Top Priorities...Speed to Capability + Readiness** - Using digital transformation to speed capability insertion and readiness for fleet assets. Readiness is where the government will get its largest ROI. RBS is the main readiness enabler for the fleet. The secret to RBS is a common data schema that eliminates the need for data cleansing while fusing PLM and logistics data to improve readiness modeling. Solution elements include:
  - **Product Data Mngt** - Classic PLM functionality that maintains the weapon system configuration baseline and associates all drawing and tech data packages to a known engineering configuration. Stores the product structures, drawings, 3D tech procedures, models, BOMs, related test data, CDRL information.
  - **Readiness Modeling** - Common data scheme for readiness modeling. PLM data is combined with logistics data. A migration tool created by PTC breaks the logistics data out into the S Series Equivalent. This creates a super set which the Navy readiness modelers can lift from. No more manual aggregation or cleaning, ETL, etc of the data required.
  - **Acquisition** - Same system that houses the data is the one used to push requirements to the supply chain for acquisition (models, drawings, provisioning and logistics). Everything goes on contract through the same system that stores and manages the data.
- **Legacy System Retirement** - Retiring 12 old, stove-piped systems and replacing using one platform for all capabilities tied together with one common digital thread; acquisition, MBSE, configuration status accounting, modeling, logistics support, supply chain footprint, and capture of system performance and feedback of data into the responsible in-service engineering authorities.
- **Contractor Data** - Contractors either populate directly through CDRL packages or with staged deliveries. Models, drawings are loaded into an interface and unpacked automatically into the respective product structure to support each individual weapon system.
- **CAD Tool Neutral** - The government can use any CAD files in their original master format (UGNX, Catia, Creo, etc). Way beyond STEP files, ISO 10303 or PLCS, which all offer limited functionality. This allows the government to be non-prescriptive on tools and lets industry focus on product innovation, not toolsets.
- **Virtuous Cycle** - Shipbuilder's view of the product is different than the sailor's. Pull data up from industry, ingest it into the product structure, then push it to the fleet in the context it needs. Then it flows in both directions.
- **Digital Twins** - The government wanted digital twins top down for all fleet assets, including everything that has a product model associated with it - from shipboard weapons systems to power plants and everything in between. This system constantly enriches the digital twins with increasingly complex data, enhancing the virtuous cycle.
- **Secured PTC Cloud** - Solution delivered through a FedRAMP / DISA Authorized IL-5 cloud. ATO granted in 2020. Same system already used for U.S. Air Force for SPM. Connects to several DoD networks. Web based / cloud based so anyone with a CAC card and proper credentials can access the environment.
- **Microsoft Migration** - PTC's backend infrastructure currently in process of moving to the Microsoft Azure government cloud. PTC supplies the expertise to layer on top of that to obtain ATO for each program.
- **Set Stage for AR Maintenance / Additive Manufacturing** - If the government acquires models, it can 1) Create interactive training 2) Make interactive job performance aids or maintenance instructions for repairing the product 3) Additively manufacture a part while at sea to complete the mission.
- **Why PTC was Selected...Security/SAAS Readiness, CAD Interoperability** - PTC is the only COTS PLM vendor with a DISA/FedRAMP certified IL5 PLM SAAS solution. And PTC's Creo Unite technology allows the government to use source CAD from different vendor formats and not have to convert it (STEP, PLCS DEX, DEX1, UGNX, Catia, Creo, etc)