

PTC® Live Global

CUST 127 - Built for It
The Caterpillar Technical Information Solution

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Our Challenge

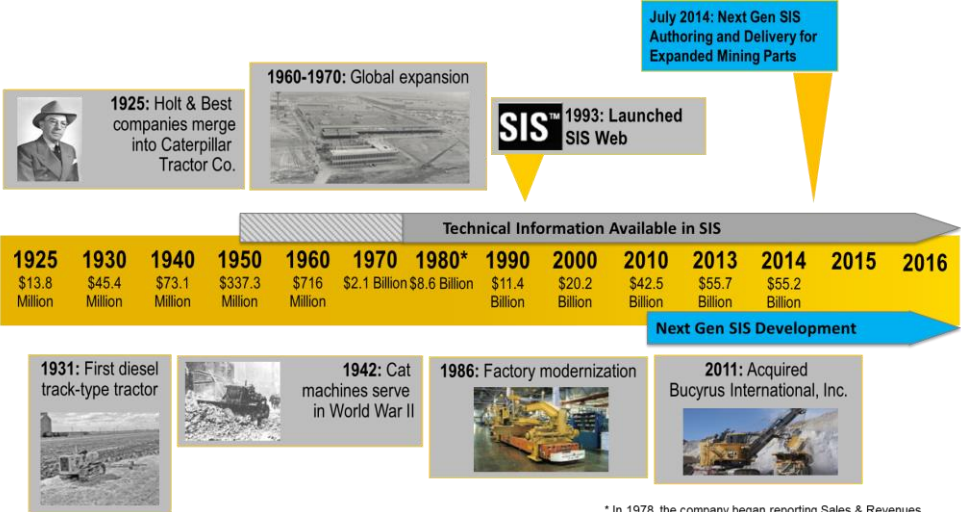
Product Support Personnel spend up to 30% of their time looking for stuff!



We must reduce the time to find it, understand it, and trust it!



A History of Progress



* In 1978, the company began reporting Sales & Revenues

Over 3 million active machines and engines with an average age of 19 years

The Caterpillar Business Model

Executed in Close Partnership with our Dealers



SEED

- Value-based products and services
- Design and development

GROW

- Lead in field population
- Various paths to market

HARVEST

- Aggressively pursue parts and services
- Unmatched Dealer Support

Caterpillar's Global Reach

- Over 2/3 of sales are outside of the United States
- Service Support through the Cat Dealer Network, a competitive advantage
- 160,000+ dealer personnel with 2/3 in product support



Next Gen Service Information System (NGSIS)

- Replace legacy authoring, management and delivery systems
- Build a foundation for future growth – product centric, context sensitive technical information
- Phased approach using agile development

A Foundation for Growth

Every Transaction....Every Dealer....Every Day

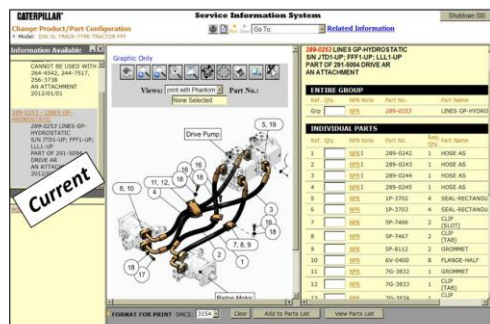
Objective – Enable Caterpillar Customer, Dealer & Company Success

- For the Customer – Right Part, Right Service, Every Time, Any Place
- For the Dealer – Find it, Understand it, Trust it
- For Cat – Create It, Manage It, Deliver It, Update It

Transformation Goals

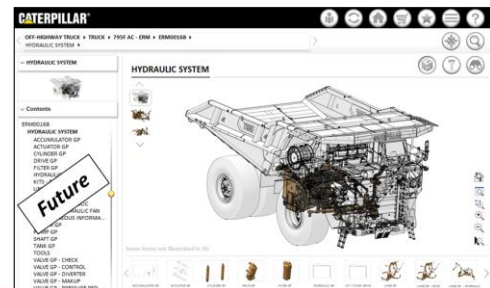
Ease of finding information

- Web based search
- Graphical navigation
- Cat and Non Cat brand information
- Common look and feel
- Maximize new technology adoption
- Multi-language capability
- Platform agnostic delivery



Sustainable Platform

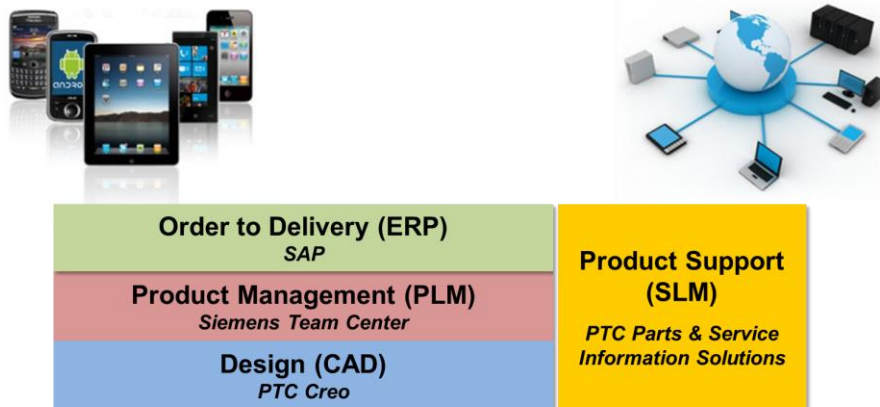
- Commercial based software
- Common frame work end to end
- Leverage across the enterprise
- Author once and deliver many times



Transformation Operating Principles

- Maximize “off the shelf” capability (escalate the gaps)
 - Design to the standard (escalate the variants)
 - Maximize reuse (data, tech info, graphics, code, processes)
 - Don't pave the cow path (design to the use case)
 - Design for efficiency (creation, management, delivery, support, dealers, customers)
 - Design for electronic delivery, print is an artifact and does not have to be perfect
 - Maximize concurrency
 - Maximize transparency and collaboration
 - Don't break current SIS
 - Deliver functional code with each sprint
 - Go boldly, be open and have fun
-

SLM Transformation – Extensible



- *Need to design for both manufacturing and service*
 - *Solutions shown are Cat's strategic direction, real life is SLM has to be able to accommodate a wide range of inputs*
-

SLM Transformation – Flexible

CURRENT
BRAND
PORTFOLIO
21
BRANDS



HINDUSTAN



ELECTRO MOTIVE

Solar Turbines
A Caterpillar Company



TURNER
POWERTRAIN SYSTEMS



OLYMPIAN™



HYPAC

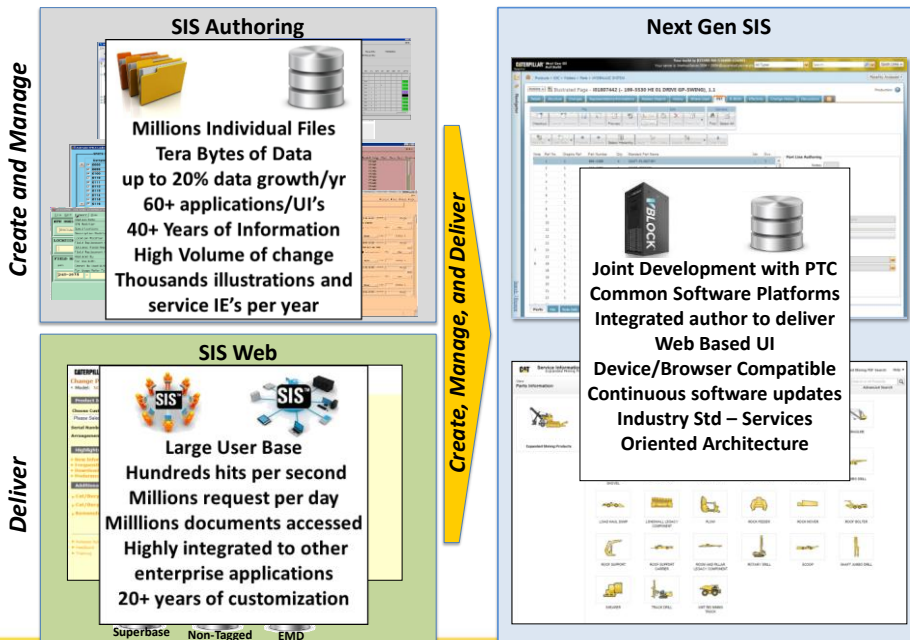
Turbomach
A Caterpillar Company



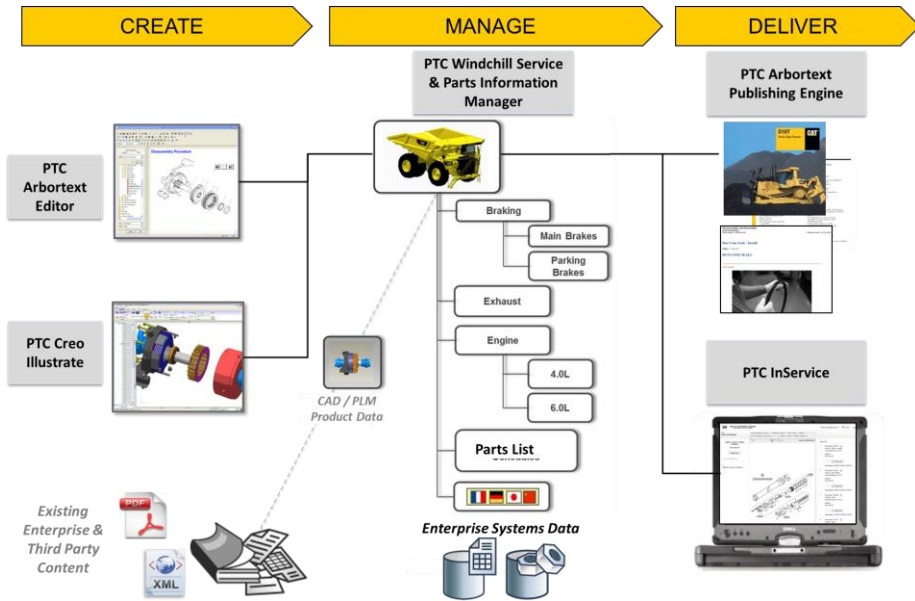
ASIATRAK



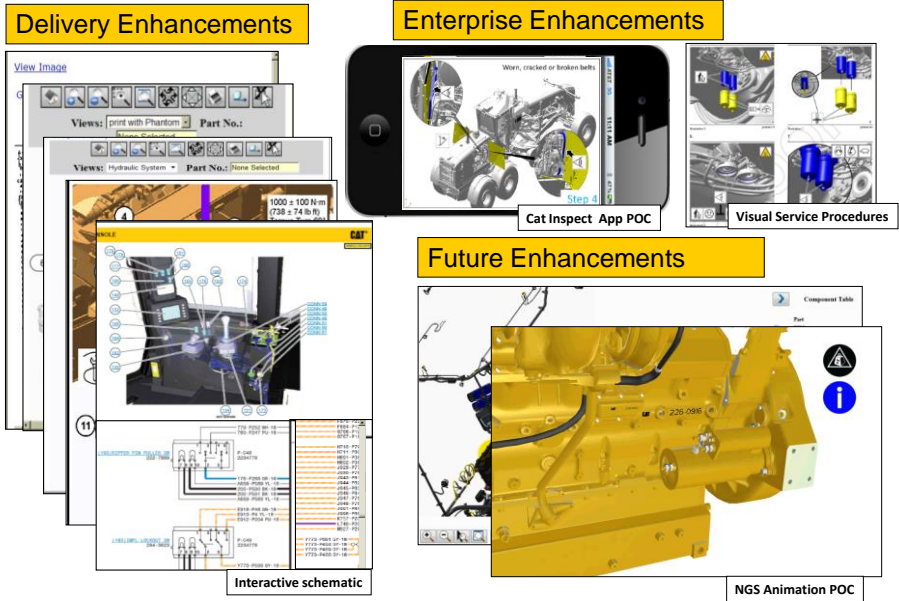
SLM Transformation – Sustainable



SLM Transformation – PTC Solutions



SLM Transformation – Enabling Capabilities



SLM Transformation – Ease of Use

The screenshot displays the CAT Service Information System interface. The top navigation bar includes the CAT logo, 'Service Information System', and 'Expanded Mining Products'. The main content area shows a breadcrumb trail: 'Expanded Mining Products > HYDRAULIC SHOVEL > 6030 F.S.DMG > 120099 > UNCATEGORIZED LOWER LEVELS > 2 - 3 > 3668768 - BUCKET CYLINDER ASSEMBLY'. A yellow callout box on the right side of the interface contains the following text:

Ease of Use – Show the Life of a part

- Part number supersedence
- Part number cross reference
- Part number where used

Mission to Mars Embracing Disruptive Technology

- 3D Model based navigation for parts
- Augmented reality
- 3D Printing
- Crowd Sourcing
- Analytics



Transformation Retrospective

- Data – know it, cleanse it, migrate and use in development as early as possible
 - Have robust spread of use cases for testing
 - Include change agents, non subject matter experts in your team to move focus from the how to the what
 - Identify your high risk areas and focus on those first
 - Show development functionality as it is being developed, the end of each sprint
-

Points to Remember

- **Understand end user needs**
 - **Develop a multi-generation roadmap**
 - Deliver incremental value
 - Aligns with source data availability
 - **Actively manage issues & risk**
 - Data, use cases, agile, change agents
 - **Simplify 'ease of use' for customers & dealers**
 - Graphical Navigation
 - Context-based search
 - Manage change throughout the product lifecycle
 - **The future is global**
 - Keep it visual
 - Keep it simple
-

We succeed when our customers succeed! Thank You



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Global

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ADVANTAGE[™]