PTC Parts Classification, Management and Reuse: Reduce Costs and Accelerate Time to Market

Introduction:
The Value of Taming Part Proliferation

Some companies are hesitant about parts classification, thinking it's too complex or time consuming. But parts classification is a worthwhile endeavor. In addition to realizing major real dollar savings from these initiatives, organizations can resolve significant data management challenges and positively impact all areas of the company.

According to the Aberdeen Group, 30-40% of a typical manufacturer's parts are either duplicates or acceptable substitutes. Consider this hypothetical – and extremely conservative – example to understand the financial impact:

$$P^i \times 12 \times D^\% \times P^{ic}$$
= $2.9M savings / year

P^i – Part Introduction Rate (3000)

12 – Time period (months)

$D^\%$ – Duplicate Part percentage (2%)

P^{ic} – Cost to introduce a New Part ($4000)

Parts Classification Serves Three Purposes

1. Ensures correct, accurate metadata is attached to parts

2. Makes it easier to find and reference existing exact or similar parts

3. Helps avoid creation of duplicate parts

Challenges

Many manufacturers are dealing with part proliferation due to increasing product complexity associated with smart, connected devices. Complicating matters is when companies inherit an existing parts database as part of an acquisition.

Manufacturers are rightly concerned about duplicate parts and the costs of managing a sparsely used and inefficient library or warehouse of component parts. New parts can cost thousands or even tens of thousands of dollars.

Engineers and product designers tend to make a new part instead of reusing a standard part believing they can easily and more quickly create a part than find the exact or similar one in the parts database.

Combined, these issues lead to yet another challenge: poor supplier-preference alignment between engineering and sourcing.

Implications

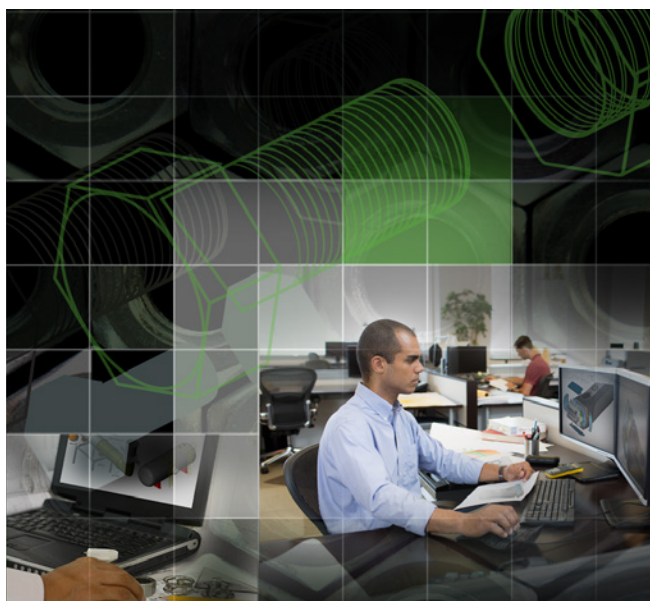The effects of these challenges are felt in numerous ways:

- Increase in product and supply chain complexity, leading to time-to-market delays

- Sub-optimized direct material spend, lower margins

- Excessive inventory and inventory cost due to part proliferation

Parts classification is at the core of parts management, helping manufacturers strike a balance between allowing engineers the freedom to use the best and optimum part while taking into consideration availability and price.

PTC Solution:
Enabling Parts Classification and Reuse

PTC makes it possible for manufacturers to enable and better manage part reuse. Using Windchill PartsLink Classification and Reuse, design teams can classify parts by adding information about part attributes and creating a hierarchical taxonomy. This makes it easy to break parts down by categories, which could include hardware, electrical, sourced components and more.

For example, a bolt in the hardware category might be classified as a "HEX HEAD, HEAVY" with attributes that include the length, thread pitch and finish. A capacitor might be categorized as a "FILM, SURFACE MOUNT" with attributes that describe its capacitance, voltage, temperature rating and more.

With this taxonomy in place, engineers and design teams can search on any of the parameters to find an exact or similar part.

Moreover, as parts are classified, the addition of high-quality, accurate data in the form of metadata describing the part's attributes also delivers value downstream:

- Quality management helps to more easily verify and test parts

- Purchasing can easily identify suppliers with required parts

- Service and support can readily determine the correct replacement part number while serving products

By minimizing the time, effort and expense required to introduce new products, PTC enables manufacturers to deal with fewer new parts, from fewer suppliers, for lower prices, at higher quality, at a faster rate.

Benefits

Support for classification helps to improve part reuse. In fact, it dramatically increases the likelihood that designers will locate and reuse existing parts instead of creating new, redundant ones. It also provides manufacturers with better information about the parts being used, enabling users in all functions to quickly find the parts they want.

By taking advantage of classification, manufacturers can:

- Reduce product and supply chain complexity

- Reduce inventory and enable faster turns

- Achieve spend optimization with preferred suppliers

- Realize cost savings by identifying and eliminating duplicate parts

- Avoid confusion in service about correct parts or suppliers

- Identify inefficient or broken processes through failure to find parts

- Empower manufacturing to better prepare appropriate tooling and verification

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Classification of data breaks down silos of information. It gets everyone on the same page, internally and throughout the supply chain."

Lewis Lawrence,
PLM Process Owner, Weatherford

Weatherford

Accelerate time to value

Manufacturers can ensure they quickly deploy and effectively use the PTC solution by taking advantage of the Value Ready Deployment for Parts Reuse service.

Ready to get started? Contact PTC today.

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