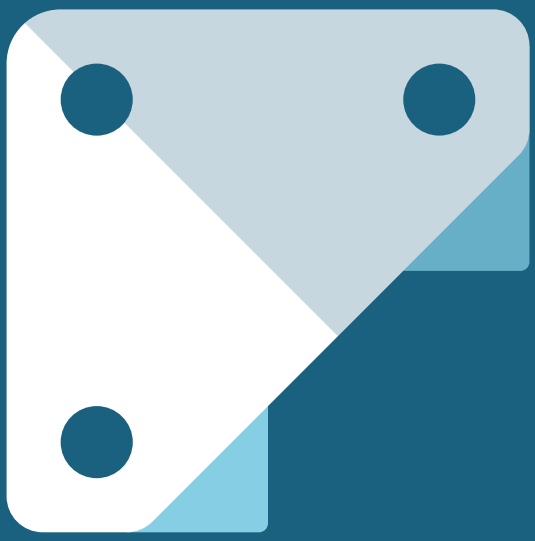

HOW TO

REUSE DIGITAL PARTS

A Comprehensive Introduction to Engineering Digital Part Reuse

ENABLING ENGINEERING INNOVATION

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WHAT YOU WILL LEARN IN THIS EBOOK

- **The three types of standard parts**
- **How to think in standard parts**
- **How reusing standard parts will give you more time to innovate**
- **How much time reusing parts will save you as an engineer**

We will also cover the ***5-pillars of The Reuse Method.***

The Reuse Method is an engineering framework for introducing a part standardization process within your immediate team and organization.

SPEND MORE TIME ON INNOVATION

If you are like most engineers, you didn't go to school to spend time modeling screws and brackets. You became an engineer to create innovative products and solve complex problems; to bring something new into the world that never existed before.

Not every part is worth designing from scratch. Custom designed parts aren't always better. Is modeling fasteners and clamps a good use of your expertise? Does modeling a bracket or a bearing make your design better? By using more standard parts in your designs, you will free up time to create the innovative parts that make your designs special.

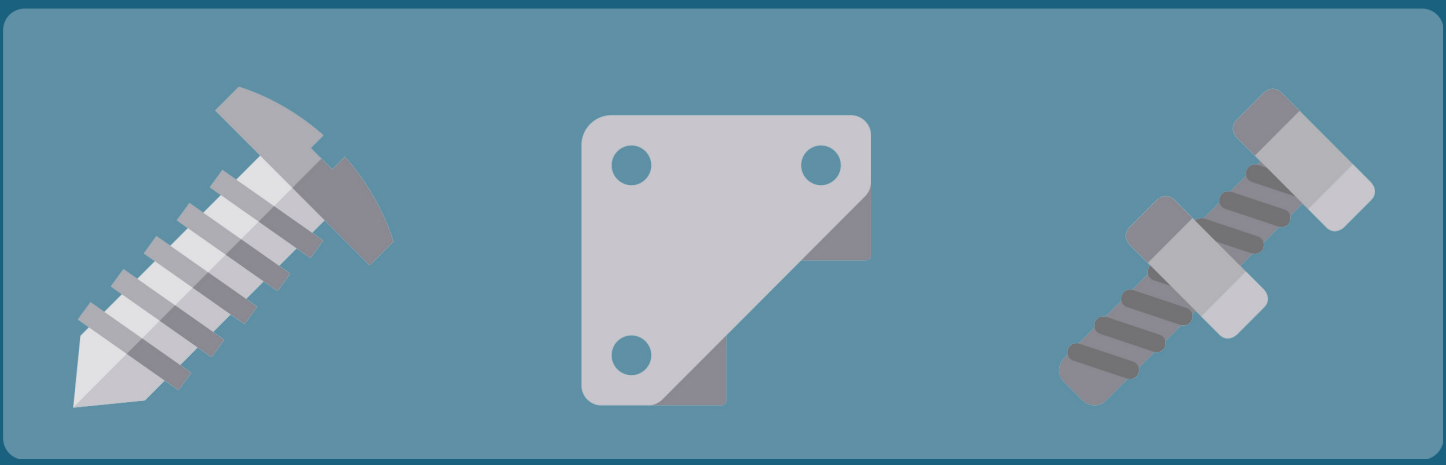
CLICK HERE TO WATCH THE PART REUSE VIDEO SERIES

1

Standard Parts

Standard Parts

When engineers talk about standard parts, they are often referring to off-the-shelf fasteners or industry standard fasteners. In this article, we are going to discuss a broader definition of standard parts. Think of standard parts like LEGOs. They are versatile building blocks, which can be used to efficiently create new designs using “standard” or pre-made parts.



A standard part is any part that can be reused or "standardized" across an assembly or multiple assemblies. Standard parts include fasteners, brackets, cylinders, or even entire assemblies. Broadening the way you think about standard parts and their application can revolutionize your design speed and efficiency as an engineer.

Types of Standard Parts

Many engineers think of "standards" as industry standard fasteners; but in reality, there are three types of standard parts for most engineering teams. Understanding these types of standard parts is the basis for engineering reuse.

The three types of standard parts:

- ***Industry Standard Parts***
- ***Commercial Standard Parts***
- ***Company Standard Parts***

We are going to take a closer look at each of the three types of standard parts and how they fit into a part reuse strategy.

Industry Standard Parts

Industry standards are part specifications mandated by law in specific industries. Industry Standard Parts are components regulated by a standards body. These parts meet standards that have been tested for safety and reliability. For instance, Department of Defense projects are usually regulated by military MIL-SPEC specifications or other military standards. Regulated parts are inspected for conformance by U.S. Government standards bodies.

How much time can reuse save you?

DOWNLOAD the Engineering Reuse Time Savings Calculator to find out!

Standards catalogs are an authoritative digital representation of physical-industry standard parts. For example, AIA NAS standards catalogs are used in the aerospace industry. SAE standards catalogs represent automotive and aerospace parts. Your industry may have specific standards you are used to following.

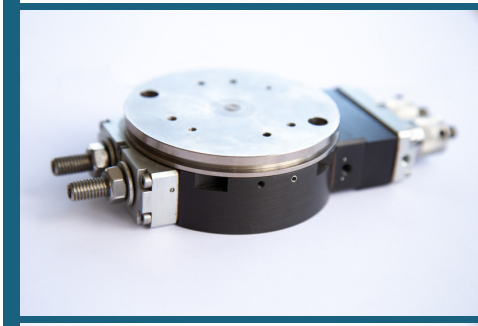
Commercial Standard Parts

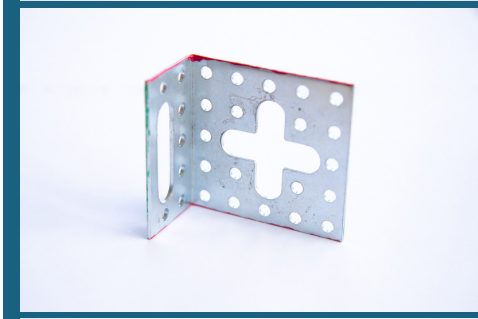
In most projects, you will have parts you source from suppliers. These parts are often called commercial standard parts, supplier standard parts, or COTS (commercial off-the-shelf) parts.

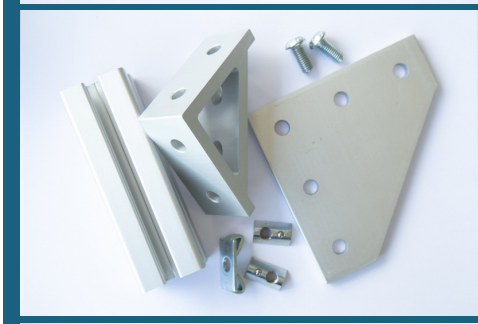
Commercial standard parts get used alongside the parts you design within your CAD program but are externally sourced from a manufacturer. Common commercial standard parts include fasteners, brackets, bearings, motors, cylinders, connectors, as well as any other off-the-shelf parts.

Commercial standard parts are often found in part catalogs from manufacturers. Part catalogs are a list of parts and specifications available from a manufacturer. Traditionally catalogs were physical, but today having digital catalogs is essential for manufacturers. These digital catalogs provide selectable rules which enable the engineer to configure the exact component they need.

One crucial role you have as a design engineer is to identify which parts should come from a manufacturer/ supplier. Using more commercial standard parts can save a lot of time and resources, especially if the supplier has downloadable CAD files that you can drop right into your design.







Company Standard Parts

Company standard parts are internal designs your company has already created for reuse. Most likely, your company has an extensive collection of internally created parts from past projects. For these parts to be considered "standard parts" they need to be reusable across multiple designs.

Reusing or repurposing company standard parts multiplies the effective use of your company's intellectual property. It is an effective way to harness the power and resources your company used to create these parts in the past. Using company standard parts is one of the easiest ways to accelerate design time, cut redundant documentation, and increase profitability.

THINKING IN STANDARD PARTS

Most engineers spend time every day creating or redrawing parts that already exist, either internally or from a supplier. This is a frustration I hear from engineers all the time.

If a part, especially a preapproved part already exists, why recreate it? It is a waste of resources for several engineers to create or source identical parts, but it happens all the time.

If you want to have more time to create innovative designs instead of redoing work someone else has already done, you have to find ways to speed up your process. Thinking in standard parts will help you accomplish better work with fewer resources.

Achieving more efficient design takes a mindset change from traditional engineering processes. These processes were originally created with drafting tables and pencil drawings in mind, not the advanced 3D CAD tools available to design engineers today.

When a project starts, a lot of engineers are tasked with solving a specific problem. There are usually parameters they must adhere to within the project scope. Typically, they begin by figuring out how they can solve the main problem they are responsible for overcoming. After that, they create a design and use industry standard or commercial parts to fill in the gaps.

Thinking in standard parts is a slightly different approach. It starts with you, as the engineer, taking a few minutes to put parameters on yourself. Slowing down by a few minutes on the front end of a project can save you hours of work on the back end. Use standard parts where you can first, then use the time you would have spent creating a new part to add value and innovation to your design.

At the start of your project, ask yourself: "Are there parts I have created in the past or commercial standard parts that I can use in this design?" The parts you decide to use become parameters from the start of the design rather than an afterthought.

Throughout your design process, determine which parts will bring the most value through innovative design and new part creation. Put your expertise to use designing those parts. If designing a new part doesn't add value, try to use a standard part instead.

If you played with LEGOs as a kid, you are already familiar with the concept of thinking in standard parts. LEGOs are the perfect example of the infinite possibilities of thinking in standard parts. Almost all LEGO sets are made up of standard or repurposed parts.

LEGO doesn't mold a new block for every kit it makes. They have a list of standard parts they use in every single design. For each of the primary LEGO blocks, there are variations that serve different functions.

Each variation is unique and serves a different purpose, but they weren't created from scratch. These variations of standard blocks are modified for reuse for specific applications rather than being completely redesigned with each new set.

Which is faster, building a LEGO set or designing and 3D printing individual parts and putting them together? Both designs can accomplish the same goal. The 3D printed parts may look different, but is it worth the extra time?

Imagine building 50%-70% of an assembly out of LEGOs, then designing and 3D printing the most important parts from scratch. What you will get is the best of both worlds. A unique, innovative design and a lot of time saved.

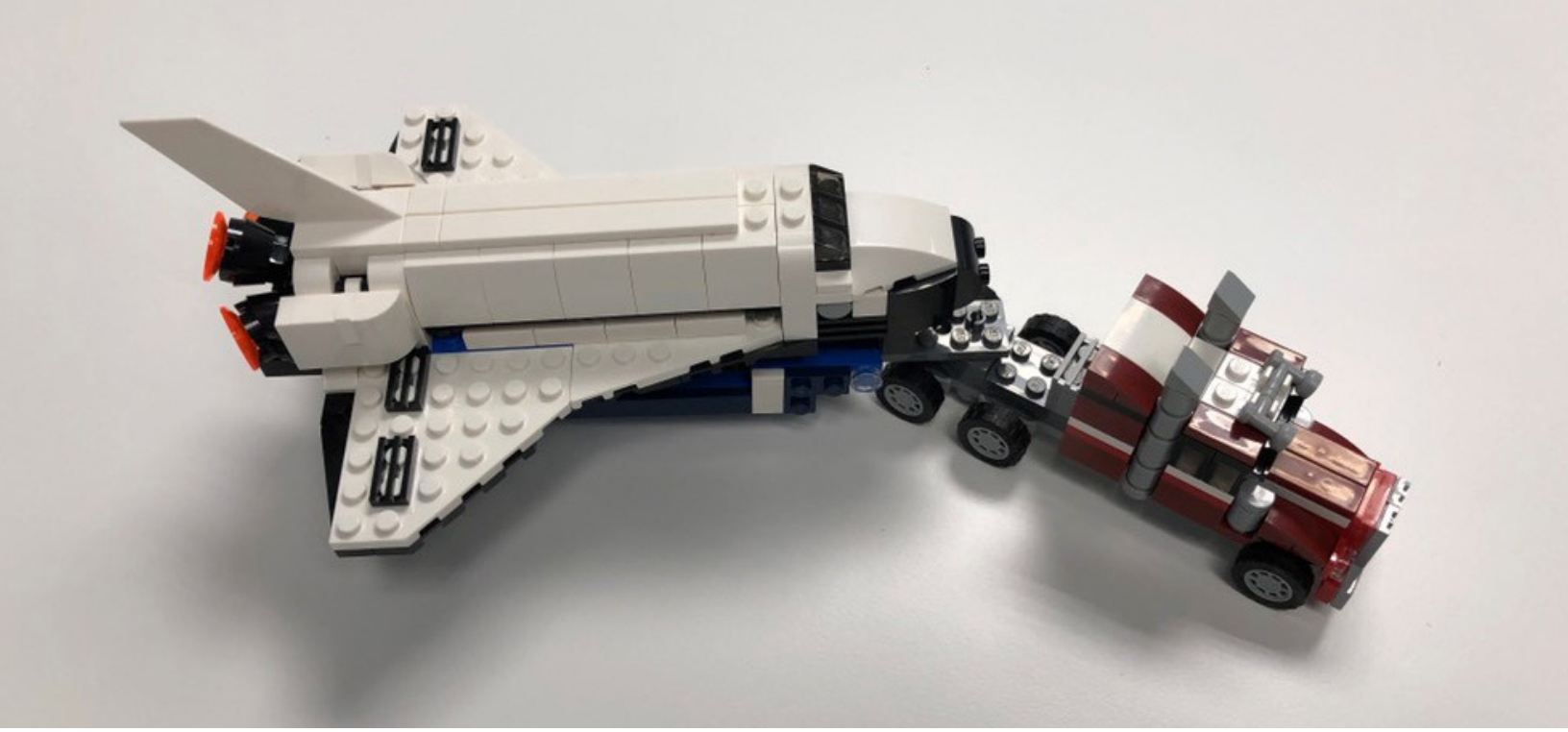
The time you save by using standard parts can be used to design the innovative portions of your project; the ones that make your assembly special.

2

Part Reuse

Part Reuse

When you think in standard parts, it is much easier to reuse parts your team already created or sourced in the past. Every time you enter a new part into your system, you will have new CAD resources for future projects. The parts are already approved and sourced by your company. Why not make everyone's job easier by reusing what you already have?

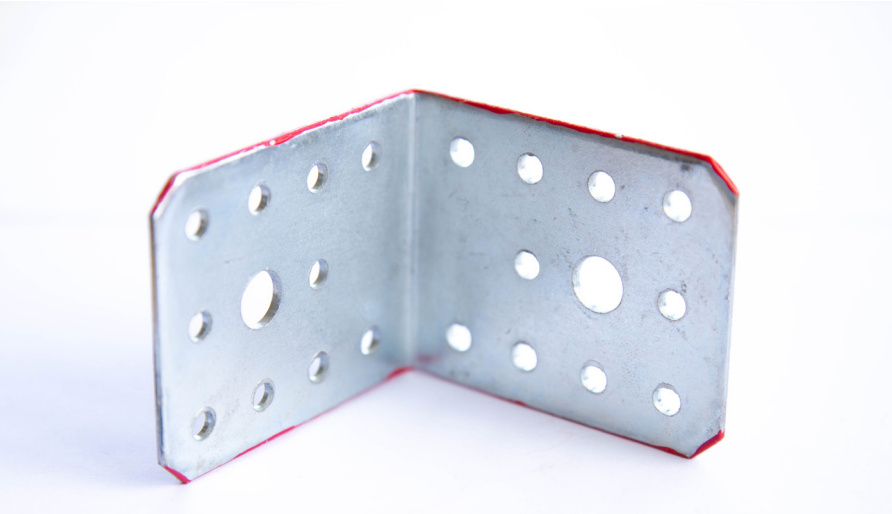


LEGO's entire philosophy is based on standard part reuse. There is a LEGO CREATOR line that specifically focuses on creating multiple different designs from the same set of parts. They provide instructions to build 2-3 completely different models from a single set of parts.

When your entire team works together to reuse parts the benefits will begin to multiply. Instead of each engineer sourcing similar parts from different outlets, they can standardize select common parts across the whole team. The work of one engineer can benefit the entire engineering

department. One standard part can be in use across multiple assemblies and projects.

You can also configure a part to be reused more effectively by modifying the design to fit several applications. Let's apply this concept to an L-bracket. When designing an L bracket, you can include several mounting configurations within the same part. The bracket will now be useful within different assemblies with varying mounting needs without designing or searching for a new part.



An engineer may need to plan ahead to make sure the standard L bracket will work, but they will save time and resources by reusing this "standard" component. The time saved by not searching for, redrawing, or creating a part on the engineering side adds up. Part reuse not only saves your time as an engineer, but it also saves resources throughout the product life-cycle from the supply chain to manufacturing and maintenance of the physical product.

An engineer's real-world LEGOs are fasteners, brackets, motors, cylinders, just to name a few. Some progressive companies reuse complex assemblies as standard parts for various projects as well.

Part Reuse in the Real World

A Global 500 Aerospace Manufacturer

We worked with a global aerospace manufacturer to assist them in implementing a company-wide bracket standardization and reuse process. By focusing on reuse, they reduced the number of brackets used in their assemblies by 850 parts.

By Enabling 5,000 users to reuse brackets, they were able to save $1.42M on brackets alone. Now those 5,000 users can focus on designing a better plane instead of redrawing brackets. The buying team can concentrate on getting the best pricing vs. sourcing 850 different brackets.

And that is just brackets: not screws, bearings, motors, or more complex assembly parts.

Ryerson University Hyperloop Team

Elon Musk introduced the idea of a Hyperloop transportation system in 2013. SpaceX put on the Hyperloop competition to encourage innovative solutions for the concept. The Ryerson University International Hyperloop Team went to the SpaceX competition in 2016.

Their focus was on creating landing gear for the Hyperloop Pod. The team created and tested five systems in less than 1-year. They were able to accomplish this by thinking in standard parts and utilizing the majority of the parts in their design from AIA Standards and manufacturer components. In fact, out of the 204 parts used in the landing gear, 160 were standard "off-the-shelf" parts.

Thinking in standard parts allowed the team to stay agile. They won the Subsystems Innovation Award at the SpaceX Hyperloop competition in 2016 for their landing gear design. Ryerson's team created a better solution than their competitors who had more resources.

The parts for the landing gear design can be sourced and manufactured cost-effectively because of the use of standard parts. Most of the standard parts, 120, were AIA/NAS parts, which are industry standard parts.

The Ryerson Hyperloop team is an example of how a reuse strategy can help you do more with less.

Learn more about Ryerson's International Hyperloop Team by clicking here.

How Part Reuse Saves Time

In some organizations, there are duplicates of the same part within a single assembly. It happens because a part is entered into a company database multiple times under different names. In some cases, the same part is in the system with a different name dozens of times. Every new part placed in an assembly takes time to source or draw. It also consumes company resources in every phase of the product life-cycle.

In a survey of over 500 manufacturing companies, engineers said they each spend roughly two hours per day sourcing and redrawing supplier parts. That's equal to 59 days of innovation and problem solving lost to mundane non-value-added work per year for every engineer.

The Department of Defense conducted in-depth research on parts management. The Parts Standardization and Management Committee published the results in a paper called: Reducing Program Costs (RPC) Through Parts Management.

We will reference this study as RPC.

The RPC report says that it takes 6-hours, on average, to search for every new part entered into a data management system. For every 1-hour spent searching for a part, it takes ten additional hours to document the part. Engineering design

and documentation is only 46% of the total cost of introducing and maintaining a new part. (RPC Pg. 11-12)

DoD regulations do add extra documentation, which your company may not have to deal with. If your company requires 10% of the documentation the DoD requires, you will spend 1-hour documenting for each hour you spend searching for a part.

Each part has to be approved, entered into a data management system, and documented. In some cases, there are 2D drawings made up for manufacturing or for a sourcing department to help them find the correct parts. Not all of the documentation will be completed by a design engineer, but it is part of the engineering process none the less.

When introduced to a 6-hour per part search time, a lot of engineers push back saying that it doesn't take anywhere near 6 hours for them to search for a part. For certain industries and parts, this may seem like a high number.

The bottom line is part search takes a lot of time and if we are honest, it usually takes more time than we want to admit. There can be a lot that goes into a part search, which is easy to forget about or not count in the search time.

Once you determine that you need a new part, you have to figure out what

attributes the part must have. Then you need to figure out where to find the part, which manufacturers provide acceptable components, and what are the differences. After that, you need to search for the correct part file, download or locate it internally, and import it into your CAD [assembly design].

When the part makes it into your CAD program, the part search process isn't over yet. Now you have to ensure the part fits and works as planned. The part has to be approved. If the part doesn't fit or isn't approved, then the process starts all over. Sometimes the part will be rejected downstream in the supply chain department, purchasing, or manufacturing, which brings the part search back to square one.

The level of detail that a manufacturer's CAD models provide can vary widely. For example, if you download a clamp and want to define it's clamping angle at 90 degrees versus 45 degrees it can be a challenge for reuse.

Often, engineers redraw parts they already have to fit the specific position they need it in for their current design.

Sometimes the downloaded files don't import well into the designer's CAD program and need to be repaired. This process can take hours depending on the part.

If a part needs to be redrawn, it can add hours to the search process. Engineers often think of search time in terms of how long it takes to find the part initially. However, when all factors are considered, including redrawing and repairing parts, it usually takes a lot longer than engineers realize.

Some parts, like simple fasteners, may only take a few minutes but complex parts could take days to find the right part.

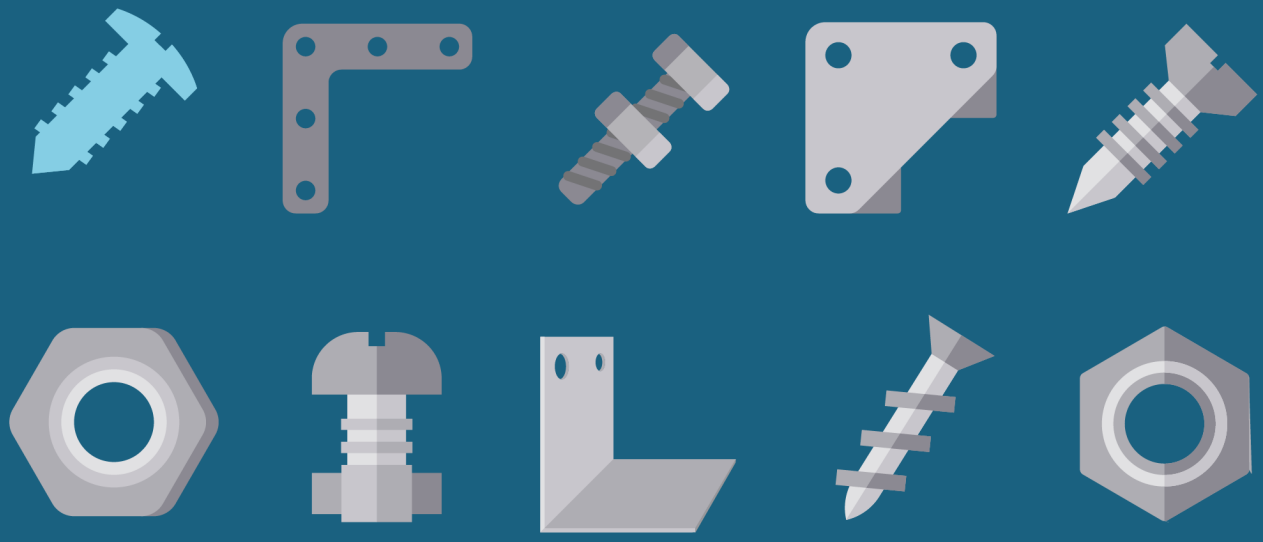
Regardless of whether it takes 1-hour on average, or 6-hours on average to find a part, it is non-value-added time. Searching for, repairing, and redrawing parts slow down the design process, reduce the quality of the final assembly, and increase the cost of engineering on a project.

As an example of how much time reusing parts can save you on a project, let's assume, on average, it takes you half the time the RPC says it takes to search for a part. Let's also assume the documentation takes 10% of the time shown in RPC.

In this example, every new part you enter into your file management system will take 6-total hours between part search and documentation (3 hours to search and 3 hours to document). Those hours are usually spread out over the life of a project giving the illusion of quick sourcing time when initially searching for the part.

10% New Part Reduction

400-part assembly reduced by 40-new parts
6 hours on average saved per part
240 hours (6 weeks) saved



6-hours on average, per each new part, is 75% of a day's work for every part entered. To give an idea of how much time saving this scenario equates to, let's look at a 400-part assembly.

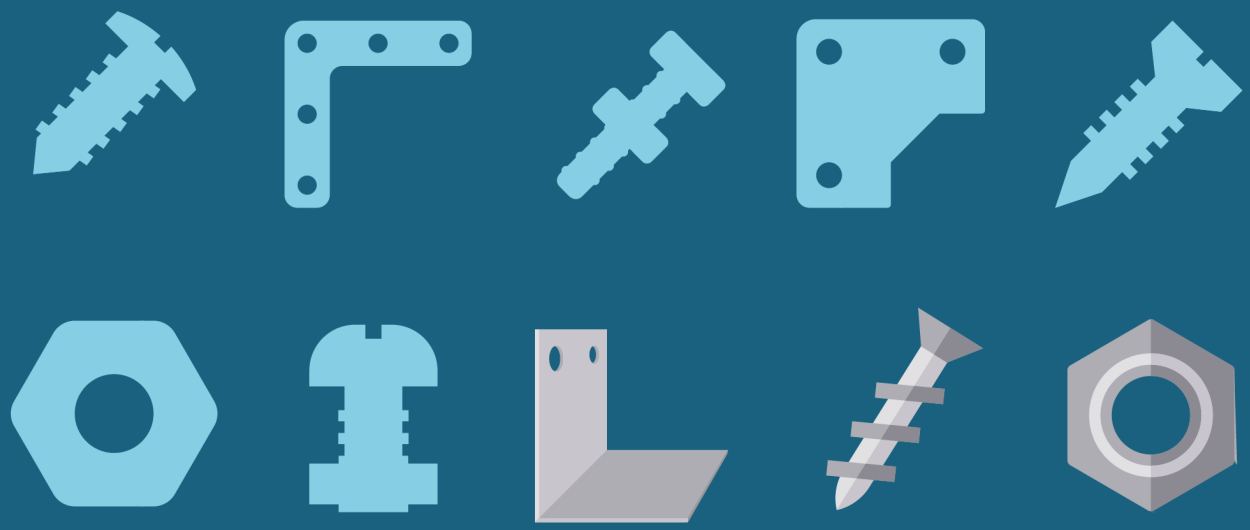
Would your 400-part design be better if you spent an extra 240 hours (6 weeks) working on value-added design? What if you were able to finish a project 6-weeks ahead of schedule?

Let's split the difference. What if you had three extra weeks to work on the innovative portion of your project, cut costs for your assembly, and finish 3-weeks ahead of your deadline. How would that make you look to your manager?

Basing the estimate on 10% reuse is a conservative number in many industries. One manufacturer we work with reuses 70% commercial off-the-shelf parts in some of their designs. In the same 400-part assembly, 70% reuse would be 280 standard parts, at 6-hours per part they're saving 1,680 total engineering hours.

70% New Part Reduction

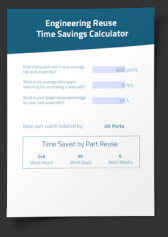
400-part assembly reduced by 280-new parts
6 hours on average saved per part
1,680 hours (42 weeks) saved



That is 42-weeks of time savings or nearly 10-months. What if your team was able to spend 21 extra weeks designing the unique features of a product and finish 21-weeks ahead of schedule?

How much time can reuse save you?

DOWNLOAD the Engineering Reuse Time Savings Calculator to find out!



Engineers are often siloed within their department and are not aware of what happens in other departments after a project leaves their desk. It isn't only the time you spend drawing the part that costs company resources; there are other costs as well. There is part design, which you are likely familiar with, but the part also needs to be approved, tested, and documented. Someone has to source the physical part or manufacture it. There are costs to keeping a physical part in inventory after it is manufactured and logistical costs as well.

By standardizing parts for reuse, a Fortune 100 manufacturer was able to cut their purchased part count by 25%. That is no small feat considering thousands of engineers access their systems and use millions of parts every year.

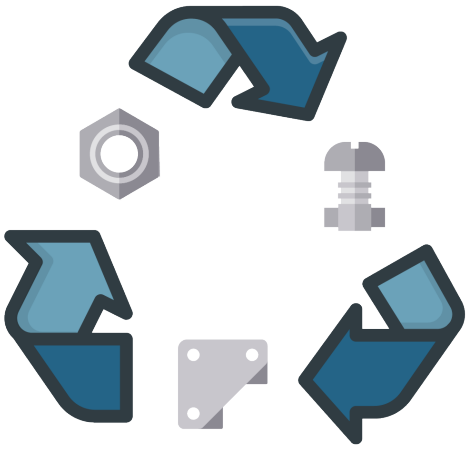
3

The Reuse Method

The Reuse Method

The Reuse Method is a framework for effectively managing standard parts for reuse. The methodology walks through five pillars to increase productivity, efficiency, and reduce costs. When The Reuse Method is applied, it helps engineers spend more time on innovation and problem solving, and less time redoing someone else's work.

The Reuse Method can also enable the digital thread (important data passing between departments and on to vendors/ manufacturing).



The 5-Pillars of The Reuse Method

1. Measuring and Data Collection

2. Thinking in Standard Parts

3. Implementing a Standard Parts Process

4. Creating a Culture of Reuse

5. Managing Standard Parts Effectively

Pillar 1: Measuring and Data Collection

You will want to collect some information before starting to implement any reuse efforts. Effective reuse requires a little work up front but will save a lot of time over the life of a project.

First, you will need to collect some part sourcing information so you can understand why things are done the way they are in your company and how reuse is currently being handled. For example, figure out the percentage of purchased parts, which vendors are preferred and the reasoning for their status, and why your company chooses to manufacture certain parts versus buying them.

Having a good "before and after" snapshot is helpful for your analysis, but it is also a handy tool to present your workflow to leadership. Talking about saving time is not as compelling as showing how much time you were able to save using the process.

You will need to figure out how much time it takes you on average to source, document, and test a part. You also need to determine how often you are creating parts that have the potential to be reused as standard parts. Keep a log of how often you are searching for parts and how long it takes you to find the right fit.

Pillar 2: How to Think in Standard Parts

We already covered the concept of thinking in standard parts. Now we will cover some practical tips for how to think in standard parts as part of your regular design process.

The first step is to ask your team what parts you can reuse that already exist. You must start communicating with your team when you create a part other engineers in your department may be able to use. Have you created or sourced parts that can be reused in your coworkers' assemblies?

When starting a new assembly ask yourself and your team the following questions:

- How can I/we use more standard parts or reuse parts we already have in our system?

- Are there similar assemblies we have created in the past I/we can pull parts or design from for this assembly?

- How can I/we design this assembly and use parts that I/we can reuse for future assemblies or applications?

- How can I/we modify this design to reuse more screws, brackets, bearings, or similar simple parts?

When getting ready to design a new part or sourcing a new part ask yourself the following questions:

- Is this part unique enough to require a new part?
- Will designing a new part or modifying an existing part add value to the final design?
- Can I use an industry standard part or a supplier part for this application?
- Is there already a part in our system I can reuse?
- Is there a part in our system I can reconfigure for this application?

- Can I use a Company Standard Part for this application?

- Can I modify a Company Standard Part for this application?

- If no, is there a way to change the design to use a Standard Part?

- Is designing a new part for this application rather than reusing or modifying an existing part worth the hours it will take to design a new part from scratch?

Pillar 3: Implementing a Standard Parts Process

A standard part process will look different for each company. The central concept is putting protocols and governance in place. These steps ensure each department is making the best part sourcing decisions.

A project manager is usually responsible for initiating a standard parts process for their team. Once user adoption in one team is complete, the process is taught to other engineering teams throughout the company.

The next step is implementing the standards process and accountability across departments. Standardization will help the buying/

procurement/sourcing departments communicate with the engineering department. When all departments come into alignment around standard part reuse, the best possible price and greater buying power are both made possible.

A standard parts process helps procurement and supply chain management (SCM) understand the decisions engineers are making. They can help engineers cut costs and get products to market faster by ensuring they have the best parts available to them.

Pillar 4: Creating a Culture of Reuse

The value of The Reuse Method can be seen on an individual basis, but the real value comes when an entire team, and eventually an entire enterprise, adopt the practice. The savings compound with each user who is actively reusing parts and sourcing parts effectively.

Once you have adopted standard part practices and are seeing the results, you can bring standard parts practices to your team. Sure, you can sit on the concept and keep it to yourself but keeping it to yourself won't help you advance your career or reach your full potential as an engineer.

Being proactive is almost always viewed positively by leadership. Introducing an initiative that saves time and money can help you advance your career. Also, it will make you feel better about your job and the value you have to offer. You can't put a price on job satisfaction!

Getting people to change the way they do their job isn't easy. There is an entire field of study around Change Management, and it can get tricky. The best way to get people to change is to show them proof of the results from the changes you made to your process.

There are engineers out there who are afraid of change. The industry is changing at a rapid pace, and change isn't only smart business, but it is imperative for your company's long-term success.

Engineers that grow their skill set and help bring designs to the market faster with fewer resources will stay relevant, as innovation pushes the field into the future.

Using the data you gathered from the previous pillars; you can show your team the value you have gotten from The Reuse Method.

Make sure to keep a record of the time you've saved and the improvements you were able to make to your designs as a result. Having written data will make it easier for you to introduce the process to your coworkers, managers, and leadership within your organization.

It is also a good idea to take benchmarks before you start implementing The Reuse Method. Take notes during the process, and again after a few months of adoption. Be as detailed as possible about what you've learned and how the process has helped you become a better engineer.

You can use this material to present The Reuse Method to your team. Once a culture of reuse is established in the engineering department, your company will be on the cutting edge of innovation. You won't be scrambling to get products to market that are similar to the ones you created in the past. Instead, you will bring more innovative solutions to the market in less time.

How much time can reuse save you?

DOWNLOAD the Engineering Reuse Time Savings Calculator to find out!

Pillar 5: Managing Standard Parts Effectively

Thinking in Standard Parts and implementing a part reuse strategy is only possible if you manage your CAD files with precision. If you can't find the CAD file you are looking for, you won't save any time. There are different options and techniques available for managing files. We will cover a few

techniques and file management systems in this section.

Classification

Classification in its basic form is categorizing and storing digital parts based on their attributes. The same part can be classified based on several different attributes.

Classification in its purest form is like the Dewey Decimal Classification System used in libraries. It is an effective way to keep your data managed inside a file system database.

To make classification work, you must put a consistent file management process in place. Straying from these practices will impede your ability to reuse parts

Folder Management and Naming Conventions through classification. These two essential classification techniques will help you find parts faster.

- Folder Management
- Naming Conventions

Folder Management

The basic idea of folder management is to create a hierarchy of folders based on either previous projects or types of parts. You must determine what makes the most sense within your particular environment.

Once you determine a folder structure, take some time to create the folders and

start arranging your CAD files into the new structure. When you get your old CAD files into the correct hierarchy, you need to create a control and approval process for future files.

Even if you work by yourself, use a checklist to make sure you are classifying parts into the right folders. Using a checklist ensures that you can easily access your files in the future.

Naming Conventions

Equally as crucial as folder management is creating a logical naming convention. You need to create a naming convention that will help easily find and reuse parts.

If you have more than one engineer, it is vital every engineer is using the same naming convention. If not, each engineer might download the same part from different suppliers for the same assembly.

Digital Part File Storage

You have to store your CAD files somewhere. Here are a few suggestions based on the size of your company. There are several ways to store files, which we'll cover in this section.

Local File Storage

If you work for a small company specializing in simple products you can manage your CAD files locally. To do this effectively, you must have a good folder system in place. You can create a folder structure to help you find parts that you will reuse often. Naming structure and conventions live inside your local storage.

When several engineers are working on a project, or your assemblies are complex, you will need a better way to manage files like a PDM system does. For large assemblies and long projects, you may need a PLM system as well.

PDM

PDM or Product Data Management system manages your part and product data. It is a file system for storing important data about the parts you use. These files can be stored locally or in a cloud system. A PDM helps manage the files, allows for permissions, and helps to set protocols for approval processes.

When several engineers are working on complex assemblies, PDMs are critical. They ensure you are using the right parts and are storing and managing them correctly.

PLM

PLM or Product Lifecycle Management systems create workflows, timelines, and processes. PLMs help make sure projects stay on deadline and keeps everyone working on the same iteration of each part and assembly.

4

Moving Beyond Classification

Moving Beyond Classification

Classification is similar to the Dewey Decimal System, the methodology for arranging books within a library. It is a logical structure for managing folder hierarchies based on types of parts. PDM and PLM systems are the libraries where the part data is stored and managed. The Dewey Decimal System and classification is a highly organized and effective way to find books at the library, but it falls short when you need to find 3D parts.

PDMs and PLMs promise to help you find parts in your database faster. The reality is, they can't live up to their promise. They are designed for storing information effectively, not indexing and aggregating it. Those systems hold data, but they don't effectively parse the data and provide relevant results for each user's needs.

Classification helps keep the data in PDMs and PLMs organized but can only take you so far. If you reuse a handful of parts, classification may work for you. On the other hand, if you want to reuse a variety of parts, classification won't hold up. It is a great way to keep your files in logical folder hierarchies, but it isn't an efficient way to search for parts. Classification doesn't effectively find the right parts for you.

Consistency is the key to long-term classification success. The faster you want to locate parts the more attribute data you need to enter with each part. Every time a new part is entered, you need a burdensome amount of attribute information for quick searchability. If every engineer isn't using the same naming

conventions and attribute information on every part, then classification falls apart.

When you need to find information quickly in your daily life do you go to the library or do a Google search? If the year is 1990, the library is an excellent source for finding information. In 2019 paper library systems have become out-of-date.

CLASSIFICATION ISN'T ENOUGH

Google's information index, through data aggregation, is a better way to search than browsing books in a section at a library and skimming through pages for the right information. Going to the library for a quick information search will never overcome the simplicity, accuracy, and speed of Google. Digging through folder hierarchies is as archaic as heading to the library to find information readily available online.

If you want to efficiently search for parts to reuse, you need a strategic parts management system. Even though you should continue using good file management practices they are no longer the primary factor in required to efficiently find the parts you need.

There is a more efficient way to find parts that takes a lot less time and less work to manage. A strategic parts management system is to classification as Google is to a library. When you use a strategic parts management system, it takes your part data and information and parses it for easy access and search.

WHAT IS A PARTS MANAGEMENT SYSTEM?

A parts management system is a tool that helps you find, and reuse approved standard parts. Like Google, it parses and aggregates part data so the right part can be found quickly and efficiently. Parts management systems have several different search functions to aggregate your company standard parts, preferred supplier parts, and industry standard parts; making them easy to find. A parts management system helps you find the exact part you need so you can focus on innovation and value-add design, instead of searching for and drawing digital parts.

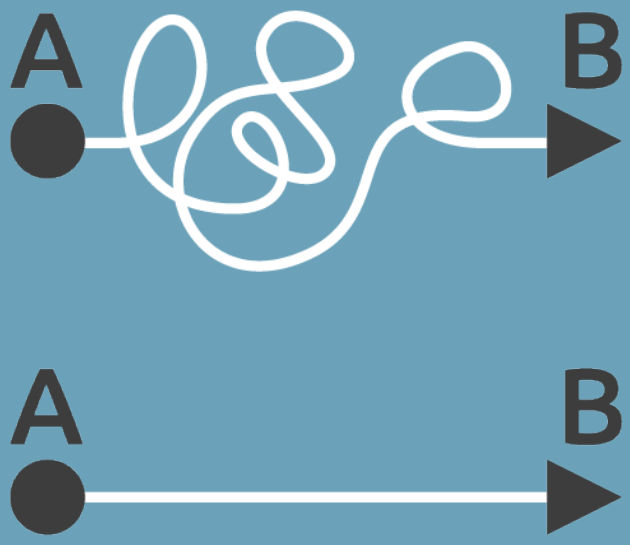
When searching 3D parts, attributes are helpful but not always enough for accurate search. The more attribute data stored in your part files, the more accurate your search will be. However, searching for 3D parts without a geometry search makes no sense. Every good parts management system will search for parts based on geometry, topology, as well as part attributes. Having more search features that are available for filtering search results makes finding the right part faster.

Trying to reuse parts without a parts management system is like trying to find a specific bolt in a random pile of parts. Put another way; it's like trying to find a needle in a haystack. You may find what you are looking for eventually, but not efficiently.

A parts management system brings you the power of a Google-like search to your company parts and preferred supplier parts. It will help you find pre-approved standard parts for reuse even if the part was created by someone in a different location or a different division within your enterprise. The best parts management tools provide catalogs of supplier parts that are up-to-date and provide native CAD files.

Using a parts management system lets you stay in your CAD workflow without always having to leave to download a STEP file from the internet. When you get a native CAD file from a parts management system, versus downloading a STEP file, it will have better part data, maintain part movement, and ensure part quality.

If you are beginning to see the value of part reuse and using more commercial parts, a parts management system will increase the speed and accuracy of your part search and reuse efforts exponentially faster than trying to search through folder hierarchies.



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Enterprise Digital Part Standardization

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When your engineering department is reusing parts, you are just beginning to see the value of part standardization. Every department and division that implements a reuse policy compounds the cost savings.

The Reuse Method with a parts management system in place fosters interdepartmental collaboration. Organizational adoption provides a method and a means for departments to communicate and work together towards shared company goals.

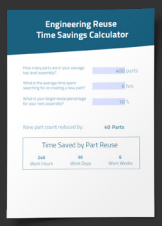
What happens when your engineers are using, and reusing parts that have already been approved by purchasing and supply chain management? You get better designs, in less time, at the lowest cost.

Want to learn how the Reuse Method will save you time and cut costs?

Download the Engineering Reuse Time Savings Calculator by clicking the banner below. After filling out the form, you will be able to schedule a FREE 15-minute Part Reuse Assessment with one of our consultants.

How much time can reuse save you?

DOWNLOAD the Engineering Reuse Time Savings Calculator to find out!



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