

VAVE

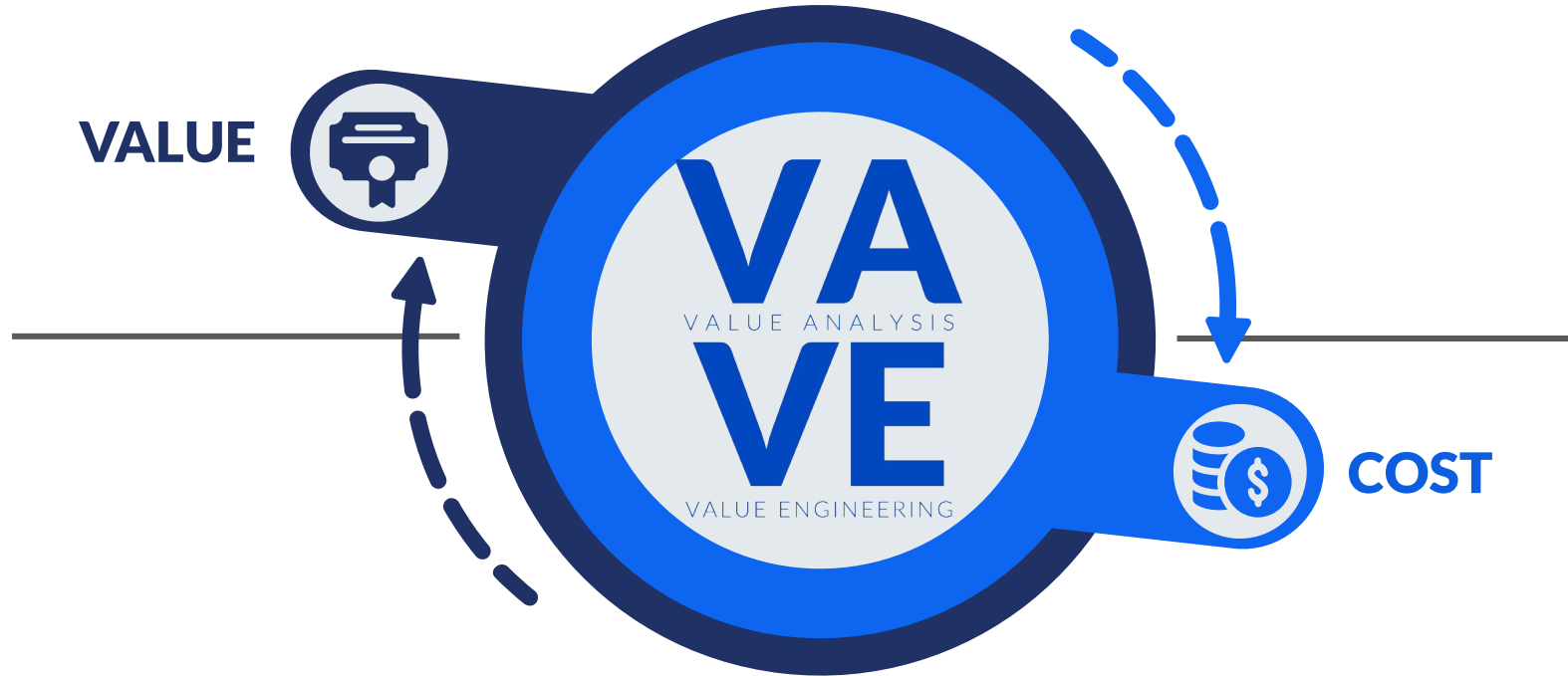
VALUE ANALYSIS VALUE ENGINEERING

Reduce Custom Parts Prices, Become Customer of Choice

Created by
Tier-1 Manufacturing Experts

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What is Value Analysis, Value Engineering (VAVE)?



Value Analysis, Value Engineering is a method of reducing costs without impacting the quality

What's the difference: VA vs VE

VALUE ANALYSIS

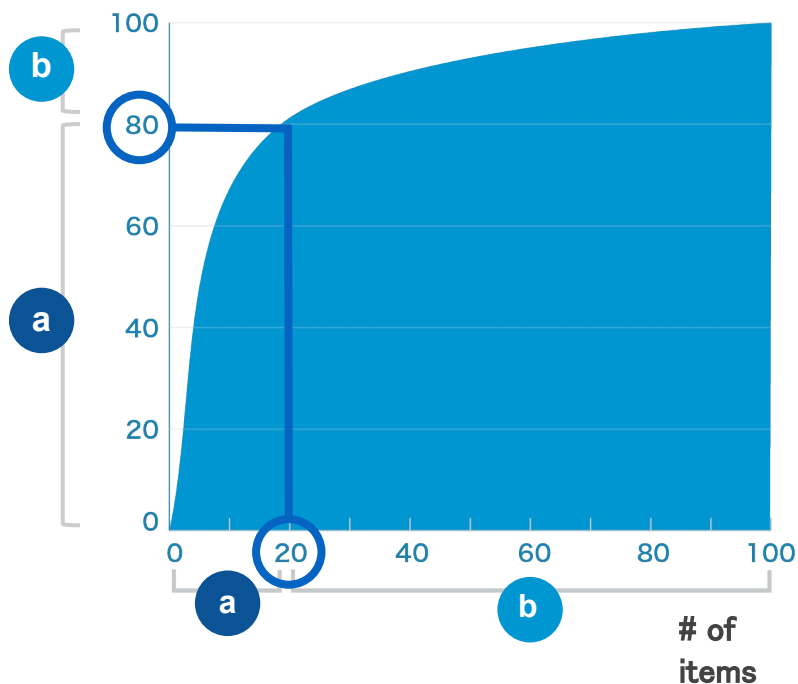
Conducted on existing products, processes, or services. It looks for ways to reduce unnecessary costs in current designs or processes, sometimes **after they have already been implemented.**



VALUE ENGINEERING

Typically applied during the **design and development stage.** It emphasizes finding the best possible balance between cost, functionality, and quality before a product is manufactured or a process is implemented.

VAVE for HMLV: Core or Long-Tail Parts



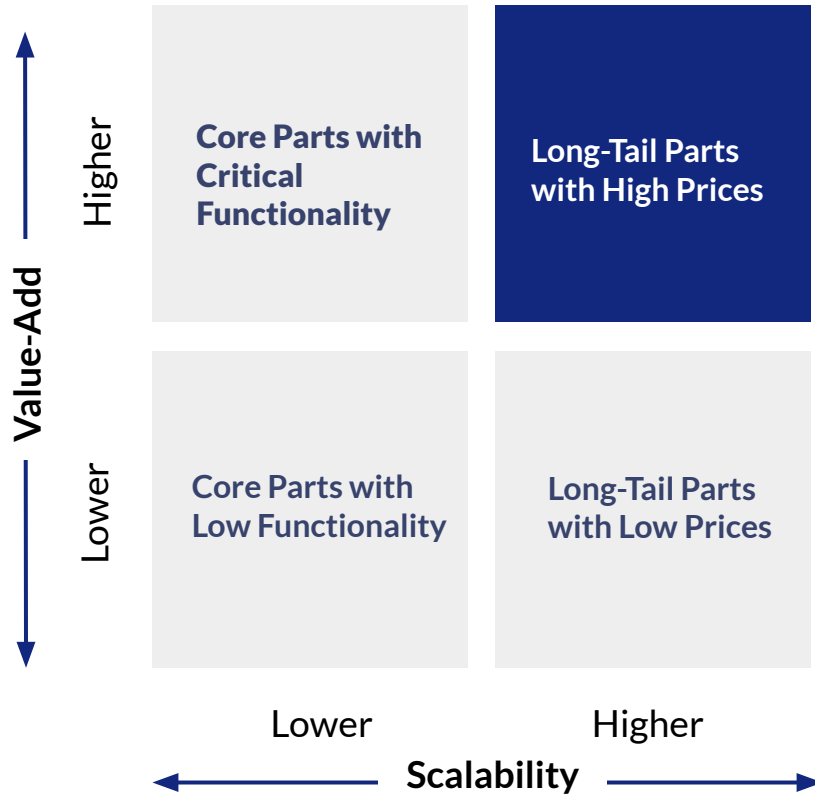
a: Core Parts
20%-volume × 80%-impacts
Ex) Circuit, Semiconductor, Motor



b: Long-tail Parts
80%-volume × 20%-impacts
Ex) Steel sheet, Harness



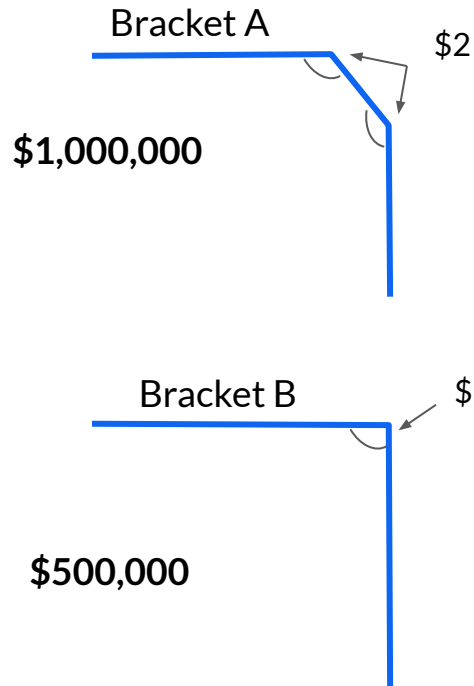
VAVE for HMLV: Core or Long-Tail Parts



Core Parts will add functionality, but they will require significant testing and review; however, **long-tail parts do not affect the performance** and thus are the easiest starting point for cost reduction

Value Engineering: Optimizing Design

\$1/bend, 100 brackets per machine, 5000 machines/yr:



For established manufacturers with a long-history, there are tons of reference parts that are very similar with very different costs. **Although the simple solution is changing suppliers, price gap is often from process and or materials**

IV: VAVE Challenges

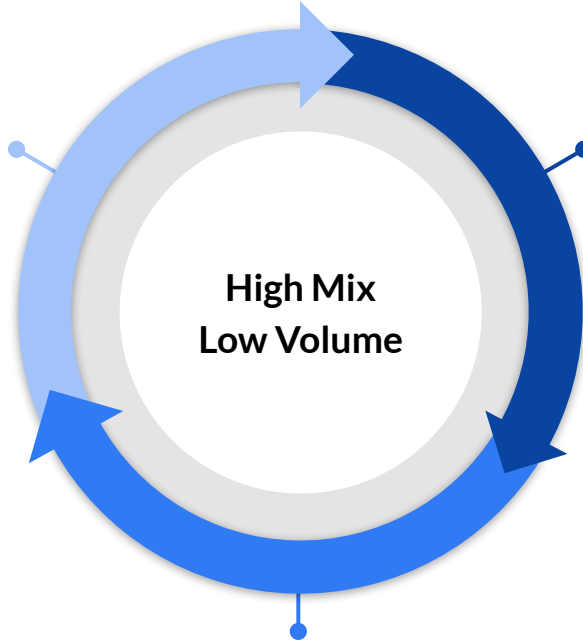
[illegible]

Go A-Z of all the drawings to find all similar drawings, then search them in ERP system to find drawings

Challenges in High-Mix-Low-Volume Manufacturing

Diseconomies of Scale

Low-volume industries might deal with more complex and unique products, **making it challenging to identify standardized improvements** that can be applied across the board



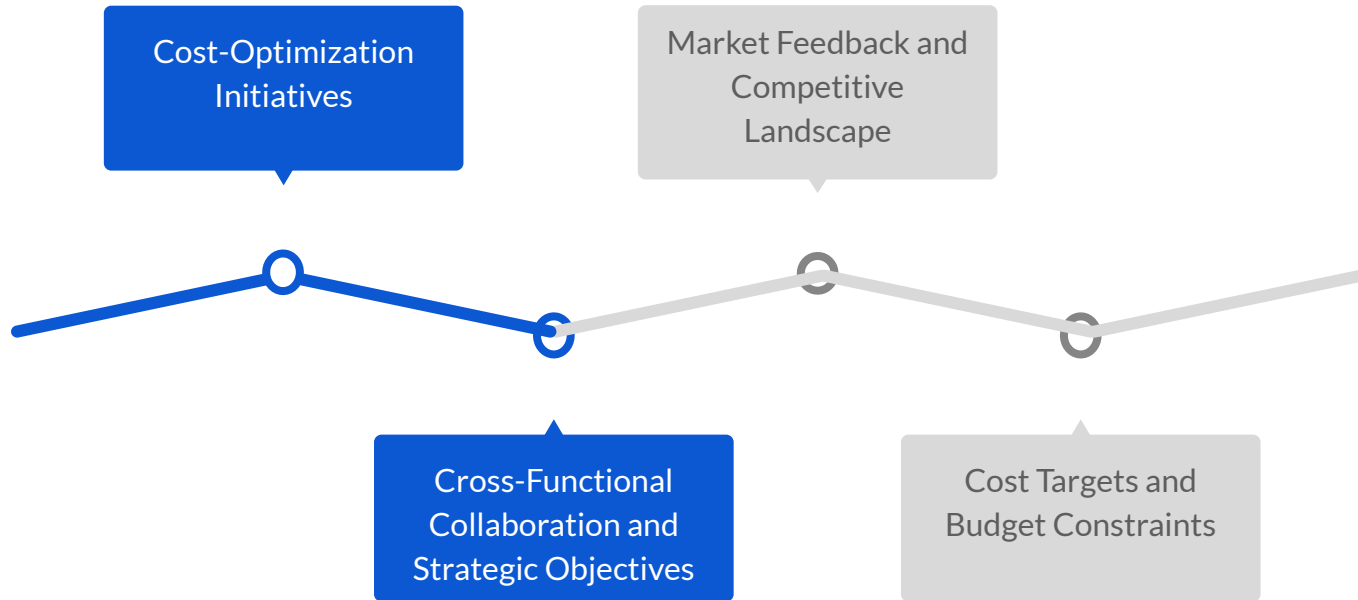
Time Commitment

Respond quickly to changing customer demands, market trends, or unforeseen disruptions while maintaining reasonable production costs

Complex Customization

Range of products with different specifications, configurations, and customizations

VAVE Approaches: Reactive vs Proactive



Many begin VAVE too late, when they are forced to do it because of cuts rather than to grow

Estimating 2 unknowns: VA hours and cost reduction %

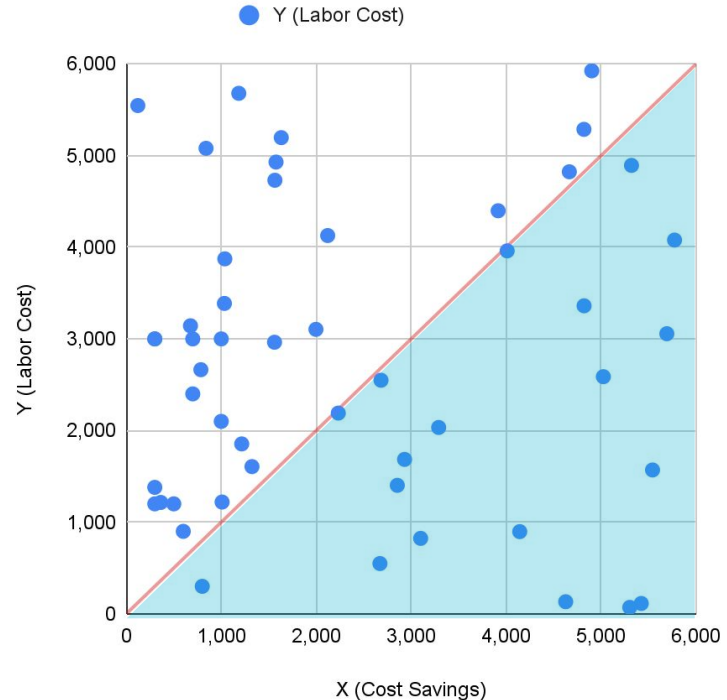
Difficult to decide whether to conduct VAVE because:

- Uncertainties of potential cost reduction
- Uncertainties of labor hours required

Perform VAVE if the cost savings exceed the cost of implementing VAVE.



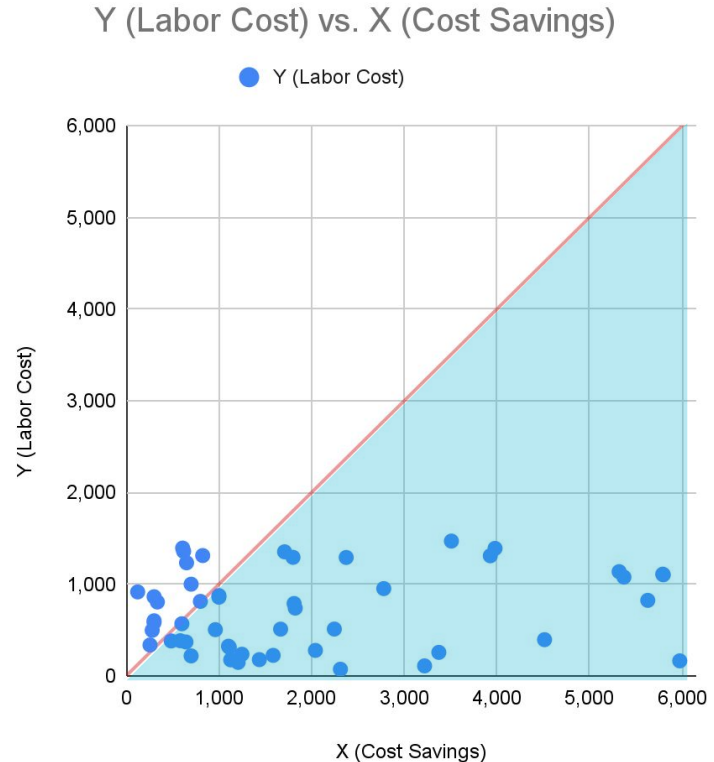
Y (Labor Cost) vs. X (Cost Savings)



But, what if labor cost is always lower?

If labor costs are sufficiently low, then cost savings will almost always exceed the cost to conduct VAVE.

People can start to introduce VAVE into their workflow for **every single part!**



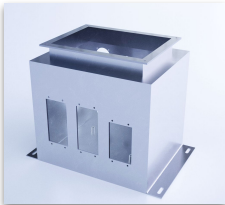
IV: Digital Solution



CADDi = Optimizing End to End Supply Chain

CADDi MANUFACTURING

Procurement Platform
for Custom Parts



Sheet metal



Machining



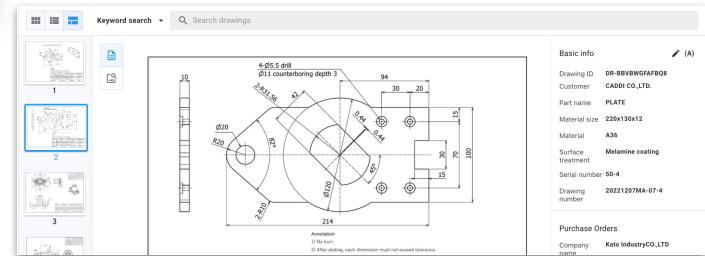
Wire Harness



Provide better quality, cost and delivery
for “High-Mix Low-Volume” Manufacturers

CADDi DRAWER

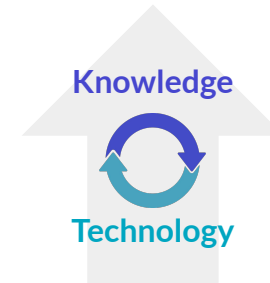
Cloud-based Drawing
Assetization Platform



Turn the dormant drawing library into assets,
to achieve cost reduction and standardization

CADDi DRAWER

Turn your dormant drawing library into assets
Achieve cost reduction and standardization

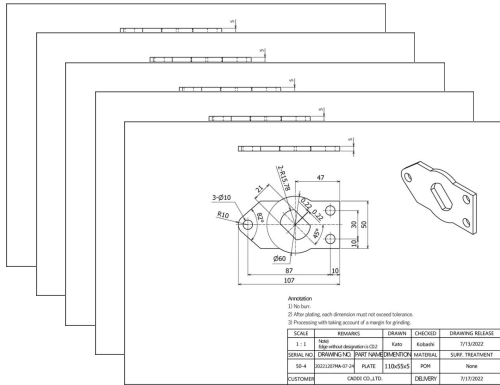


CADDi MANUFACTURING

Drive the “assetization” of drawings + supply chain data

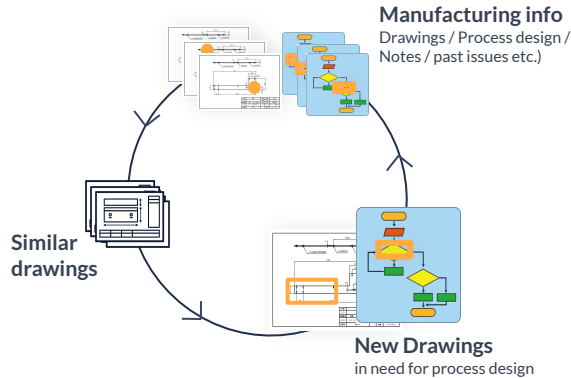
Reduce search/design time

Hard to find/reuse previous similar designs, the number of parts keep increasing



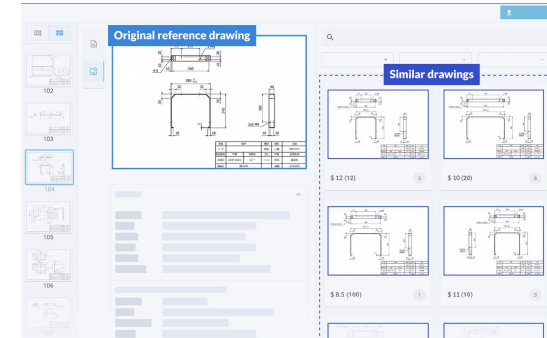
Improve Design

Build a robust feedback system to apply learnings from past issues



Standardization

Utilizing past drawing data for VAVE/Standardization



Digitize all drawings (and metadata) instantly

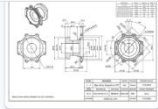
≡ CADDi DRAWER Drawings

demonstration_07 

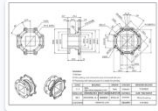


Keyword search

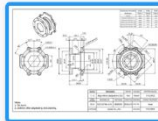
🔍 bearing



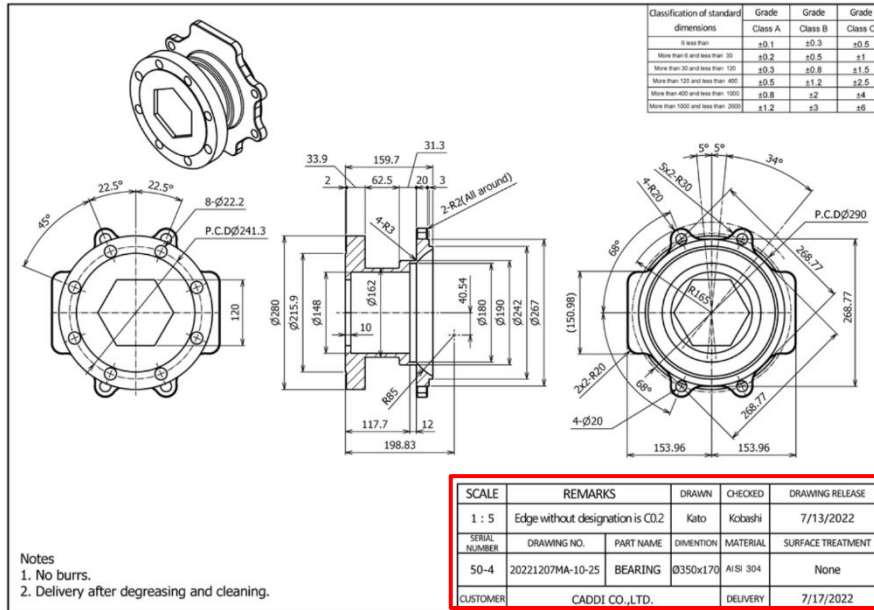
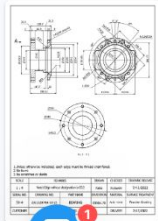
6



7



8



Basic info

Drawing ID **DR-3ZKRC7BNM6TE**

Customer **CADDI CO.,LTD.**

Part name **BEARING**

Material size **Ø350x170Ø**

Material **AISI 304**

Surface treatment **None**

Serial number **50-4**

Drawing number **20221207MA-10-25**

Purchase Orders

Company name **CVO IndustryCO.,LTD**

Currency **USD**

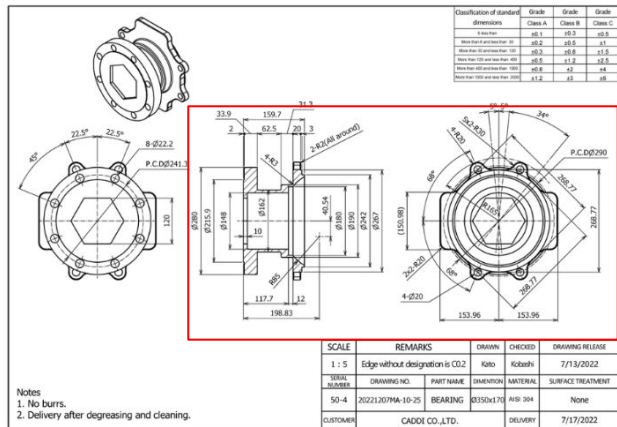
Order date **2017-04-05**

Price **\$240.14**

Quantity **20**

Drawing number **20221207MA-10-25**

Find all similar drawings instantly



CVO Industry
\$240.14(20)

Purchase Orders 3

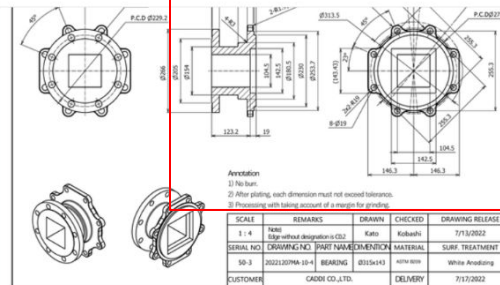
Basic info

Drawing ID: DR-32KRC7BNM6TE
Customer: CADDI CO.,LTD.
Part name: BEARING
Material size: Ø350x170Ø
Material: AISI 304
Surface treatment: None
Serial number: 50-4
Drawing number: 20221207MA-10-25

Purchase Orders

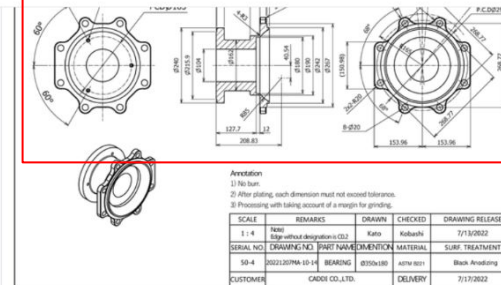
🔍 You can search with Drawing number · Drawing name · Project name

Filter



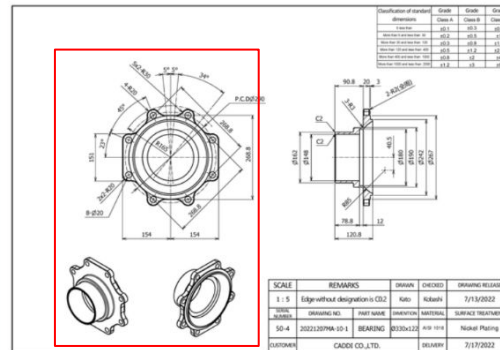
Kawaguchi Industry
\$136.16(10)

Purchase Orders 3



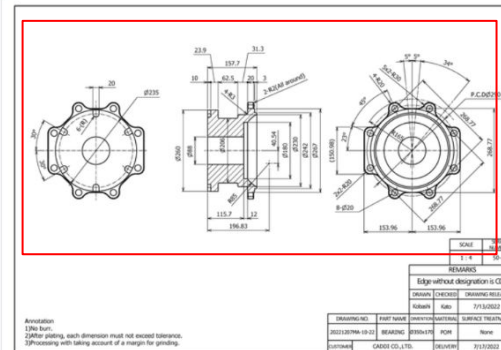
Kawaguchi Industry
\$149.80(5)

Purchase Orders 3



Hori precision equipment
\$94.02(5)

Purchase Orders 3

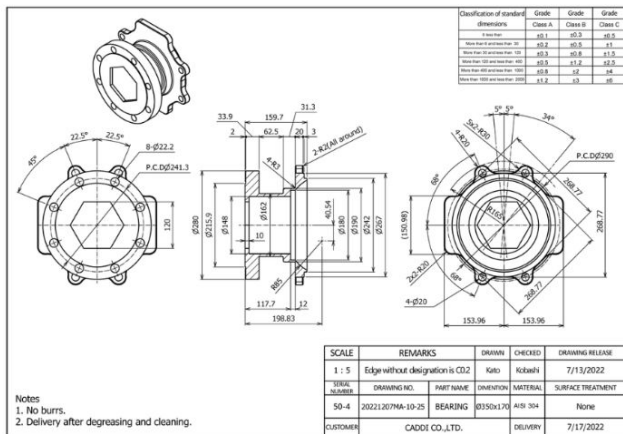


Shimizu Factory
\$83.62(15)

Purchase Orders 3

Easily identify differences of dimensions, material, etc

Keyword search

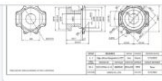


Production and Engineering can tag features for improvement

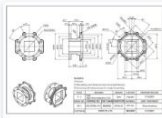


Keyword search ▾

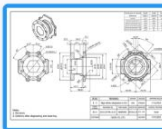
🔍 bearing



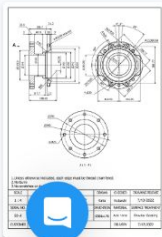
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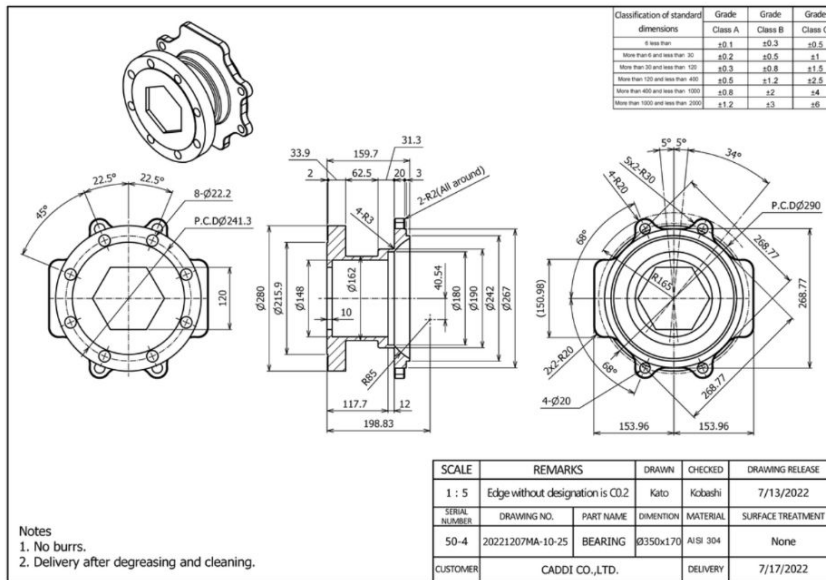
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8



9



Purchase Orders

Company name CVO IndustryCO.,LTD

Currency USD

Order date 2017-04-05

Price \$240.14

Quantity 20

Drawing number 20221207MA-10-25

There are 3 purchase orders

Show all purchase orders →

Tag + Edit tag (T)

tolerance 125 mm ± 5 mm

CVO industry had 7% defect

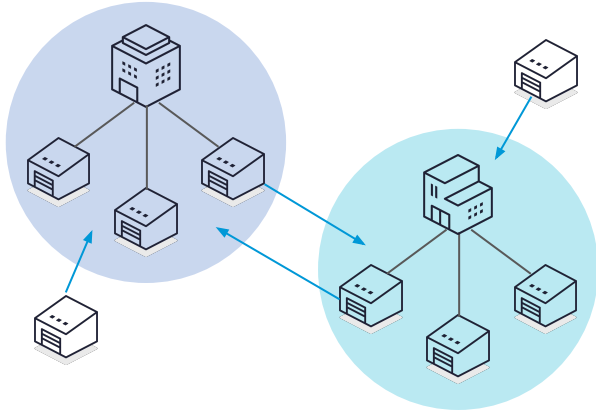
Tag

Add



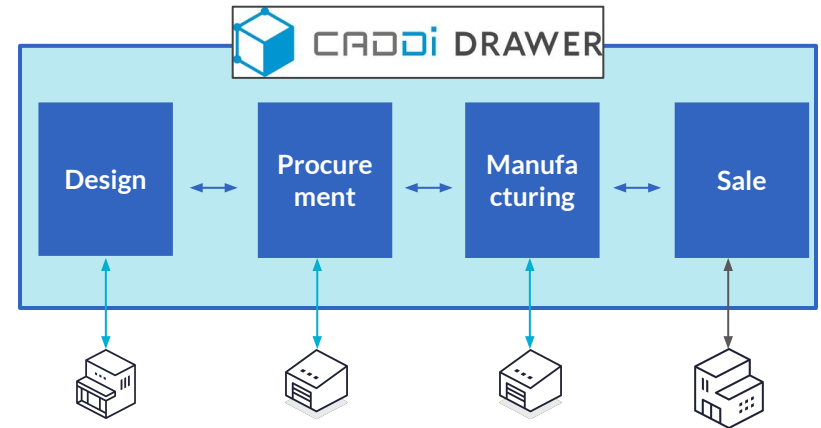
Assetize your drawings, improve collaboration

Siloed Departments



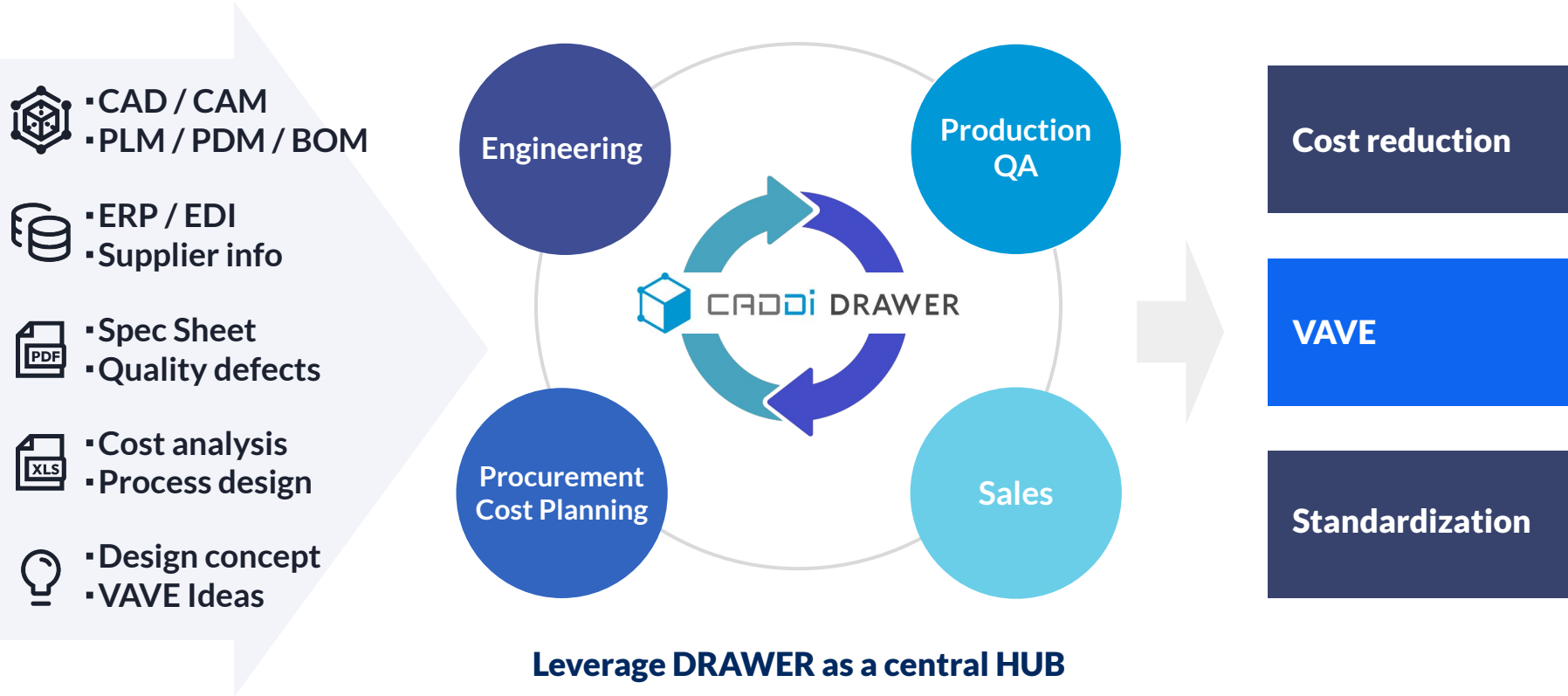
Communicate with your departments all on one dashboard and centralize key information on drawings accessible to everyone

Supply Chain Data Assetization



Data is consolidated so all departments have instant access to all information

Break down silos to achieve your business goals



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