

More time for creative product development - Intelligent Find methods make it possible

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For engineers working in a chaotic data set, it may be tempting at first to simply create a brand new part instead of searching for an existing component; this however leads to extensive extra work in the long run. Why don't many engineers search first? The answer: Often no adequate search facilities are available, which makes searching very time consuming.



>> An engineer invests around 70 % of his time with non-constructive activities – 27 % search, 18 % creation of new data, 23 % configuration. <<

Aberdeen Group, Component Supplier Management, March 2002

The consequence of insufficient searching or unnecessary new designs are i.a.

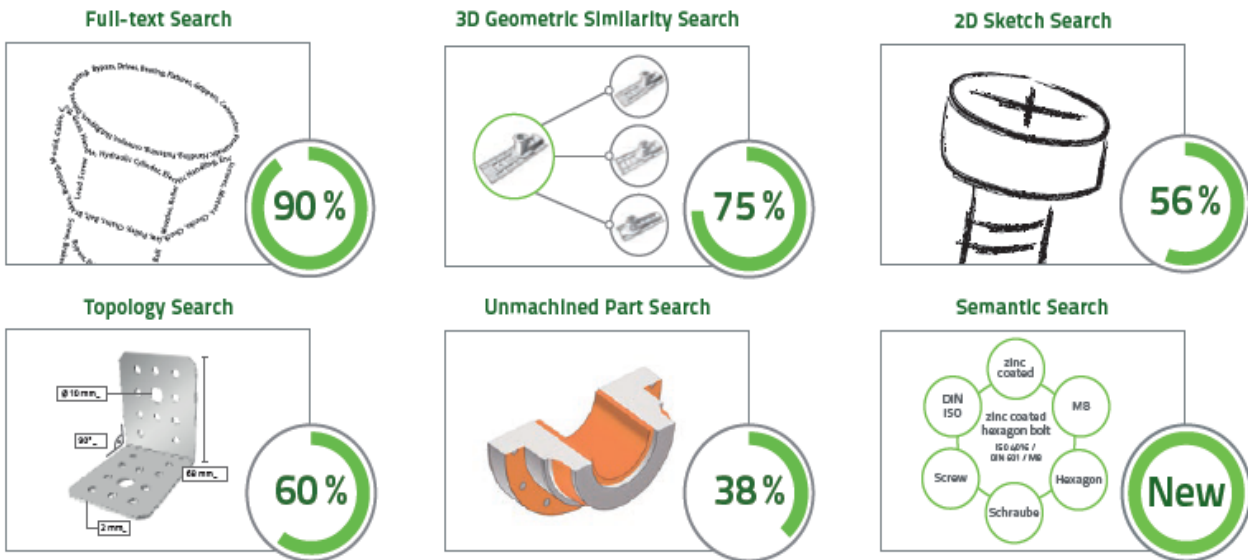
- 2D production drawings are not available and have to be created anew
- CAM programming has to be created for later production
- Master data files and work plans have to be created anew in ERP & PLM which is very time consuming and expensive

Already existing and reusable components can mean enormous time savings for engineers and downstream departments. Thanks to the vacated time, engineers can concentrate even more on the creative designing of new and innovative products.

Ranking of the most popular search methods among engineers

A CADENAS survey shows the many varied types of search methods appreciated by engineers and buyers.

F Which search methods are used and combined by engineers & purchasers?



Intuitive search methods reduce search times

CADENAS' Strategic Parts Management PARTsolutions offers a multitude of intelligent search methods, which help to find the necessary part in a non-classified parts master. And in contrast to the traditional classification of parts users don't have to learn another new class system, or adapt their search behavior to the system. The search functions can also be applied to both standard and supplier parts including company specific parts.

CADENAS Intelligent finding features

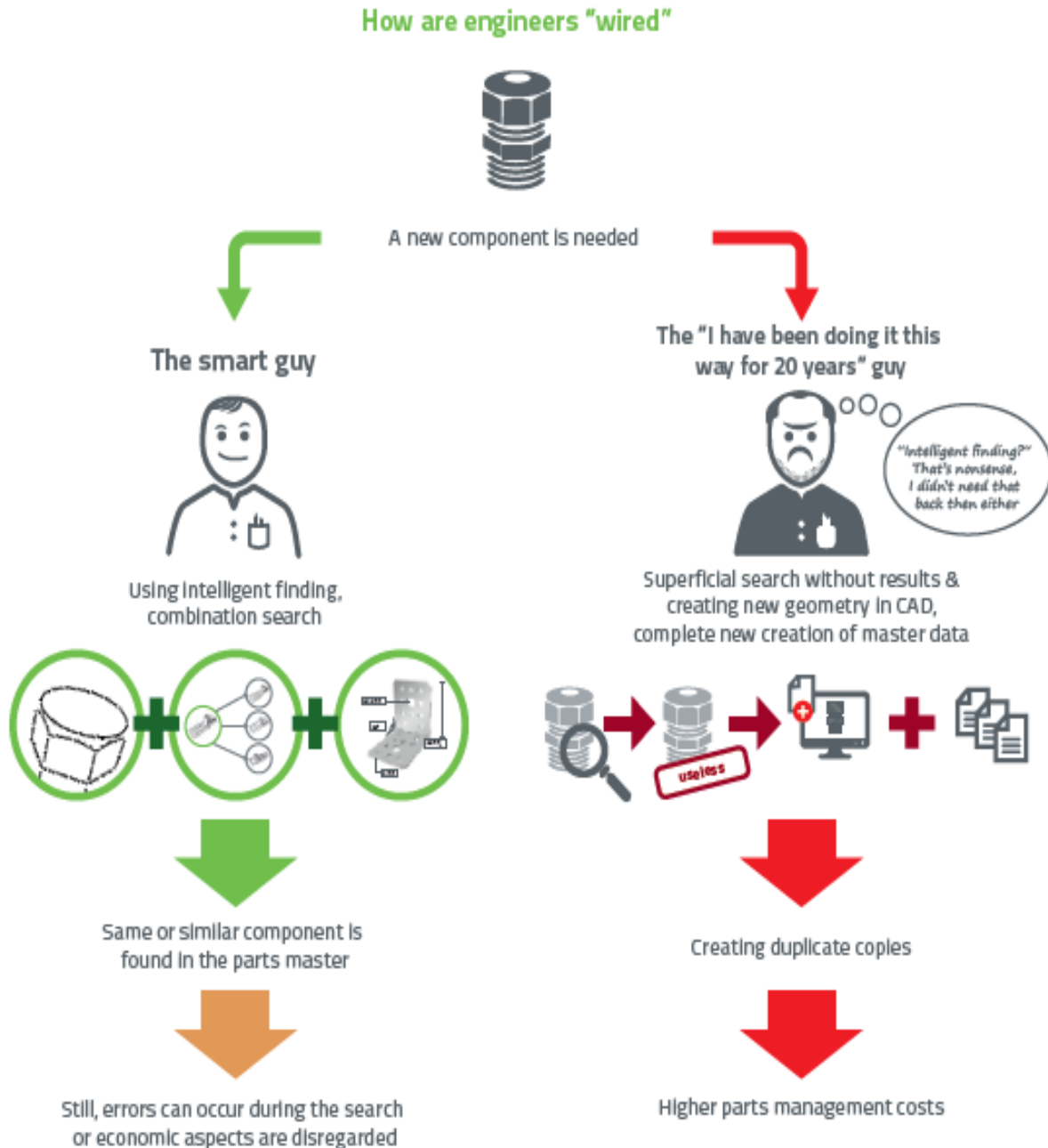
	Company parts	Standard and supplier parts
Geometric Similarity Search (3D)	✓	✓
Search by Sketch (2D)	✓	✓
Full-text Search <ul style="list-style-type: none"> ▪ Synonyms ▪ Related search terms ▪ Keywords 	✓	✓
Topology Search	✓	✓
Color Search	✓	✓
Semantic Search	✓	✓
Unmachined Parts Search	✓	✓
Classification 2.0 with reference models	✓	✓
Purchase analysis <ul style="list-style-type: none"> ▪ Alternative suppliers ▪ Make or Buy ▪ Price search 	✓	✓
Speed Searching more than a million parts < 5 s	✓	✓

Features of search methods by alternative providers

	Company parts	Standard and supplier parts
Geometric Similarity Search (3D)	✓	✗
Search by Sketch (2D)	✗	✗
Full-text Search <ul style="list-style-type: none"> ▪ Synonyms ▪ Related search terms ▪ Keywords 	✗	✗
Topology Search	✗	✗
Color Search	✗	✗
Semantic Search	✗	✗
Unmachined Parts Search	✗	✗
Classification 2.0 with reference models	✗	✗
Purchase analysis <ul style="list-style-type: none"> ▪ Alternative suppliers ▪ Make or Buy ▪ Price search 	✗	✗
Speed Searching more than a million parts < 5 s	?	✗

Among the various intelligent search methods include the following:

- Full-text Search - [Click here for the video](#)
- 3D Geometric Similarity Search - [Click here for the video](#)
- 2D Sketch Search - [Click here for the video](#)
- Topology Search - [Click here for the video](#)
- Unmachined Part Search - [Click here for the video](#)
- Color Search - [Click here for the video](#)

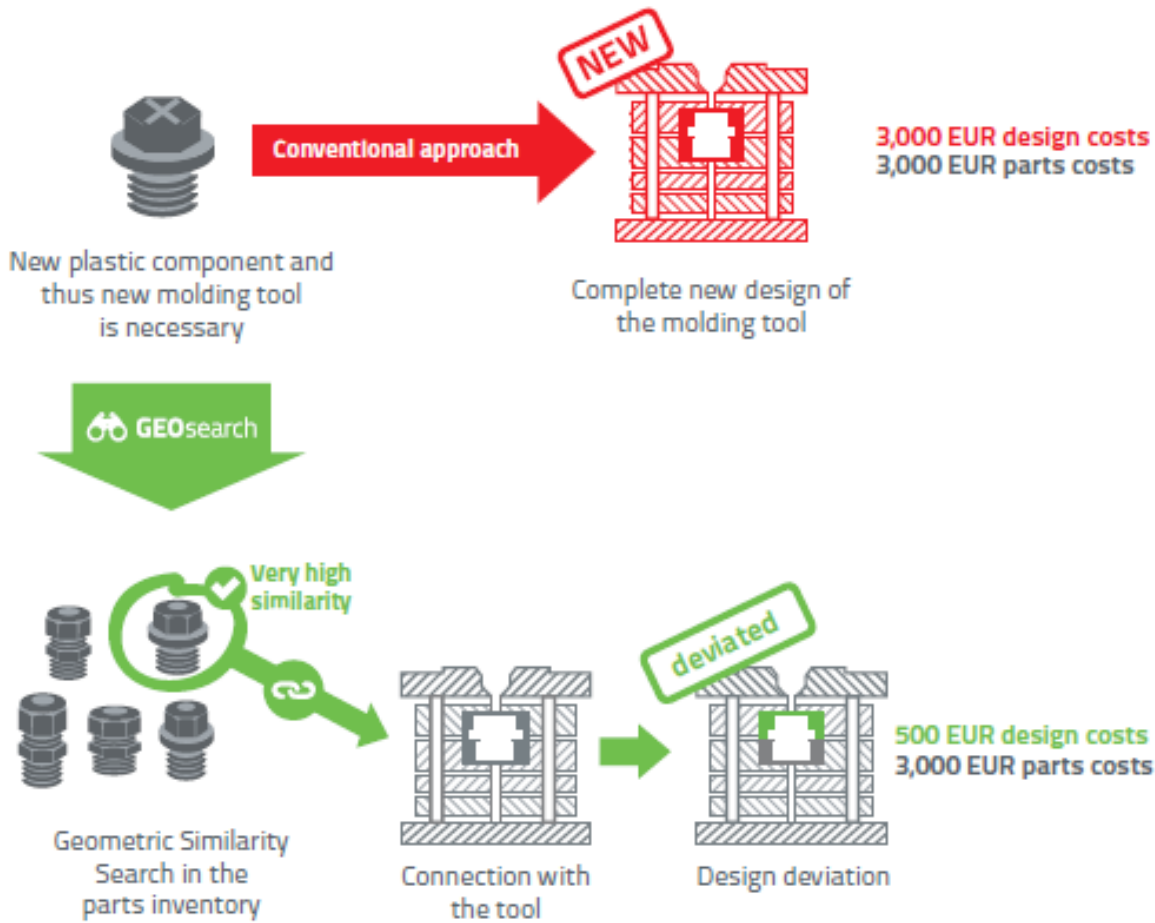


The combination makes the solution

PARTsolutions provides engineers and purchasers with not just a simple search function, but rather a comprehensive solution. With this solution, through the clever combination of the individual search

methods, completely new engineering applications can be uncovered.

The following example illustrates how a new mold tool can be cheaply constructed thanks to the combination of intelligent search methods. Geometrically similar plastic components are searched first. From this, the used molding tool can be derived. With a small modification of the existing tool, a suitable tool can be generated for the new component in very little time.



Problem	Features & Approach	Benefits
Molding tool has to be calculated and designed anew	<ul style="list-style-type: none"> Full-text Search Search by Sketch (2D) Unmachined Part Search Geometric Search (3D) Color Search Topology Search Parts catalog Parts-tool-connection 	<ul style="list-style-type: none"> Saving time needed for designing Cost savings Estimated price can be deviated, reducing calculation costs

For further examples of how companies have successfully implemented their individual solutions by

skillful combination of search methods by CADENAS, see the [PARTsolutions brochure](#).

For information about Strategic Parts Management PARTsolutions and intelligent search methods, see: www.cadenas.de/geometric-similarity-search