

Choosing the right 3D CAD solution

# CAD BUYER'S GUIDE



WE MAKE  
YOU INNOVATE



## TABLE OF CONTENT

- Introduction..... **3**
- Common questions to ask yourself  
when considering different CAD tools..... **4**
- What does the different 3D CAD offerings include? ..... **5**
- Comparison at a glance..... **15**
- Conclusion..... **16**
- Reach out to us..... **17**
- We make you innovate..... **18**

## INTRODUCTION

Deciding on the right 3D CAD solution for your company is not an easy task. It can be a jungle to navigate between the offers and which concrete tools you need, that can help you accelerate innovation and strengthen the product development process.

To make it easier for yourself you can always consider your next 3D CAD solution based on what companion tools are included, for example simulation and PDM tools. If changes are needed, there is the possibility to upgrade on most of our solutions and tools.

In this guide, we will identify the most common criteria for buying a CAD solution based on your concrete needs. We will go through the software tools for making 3D models that we are offering in PLM Group.



### WHAT IS CAD?

CAD (computer-aided design) is the tool that brings a design to a manufacture-ready state. It is the all-important software environment where designers and engineers translate concept sketches into three-dimensional models which are then visualized, optimized, simulated, and can be directly 3D printed or produced with traditional manufacturing tools.



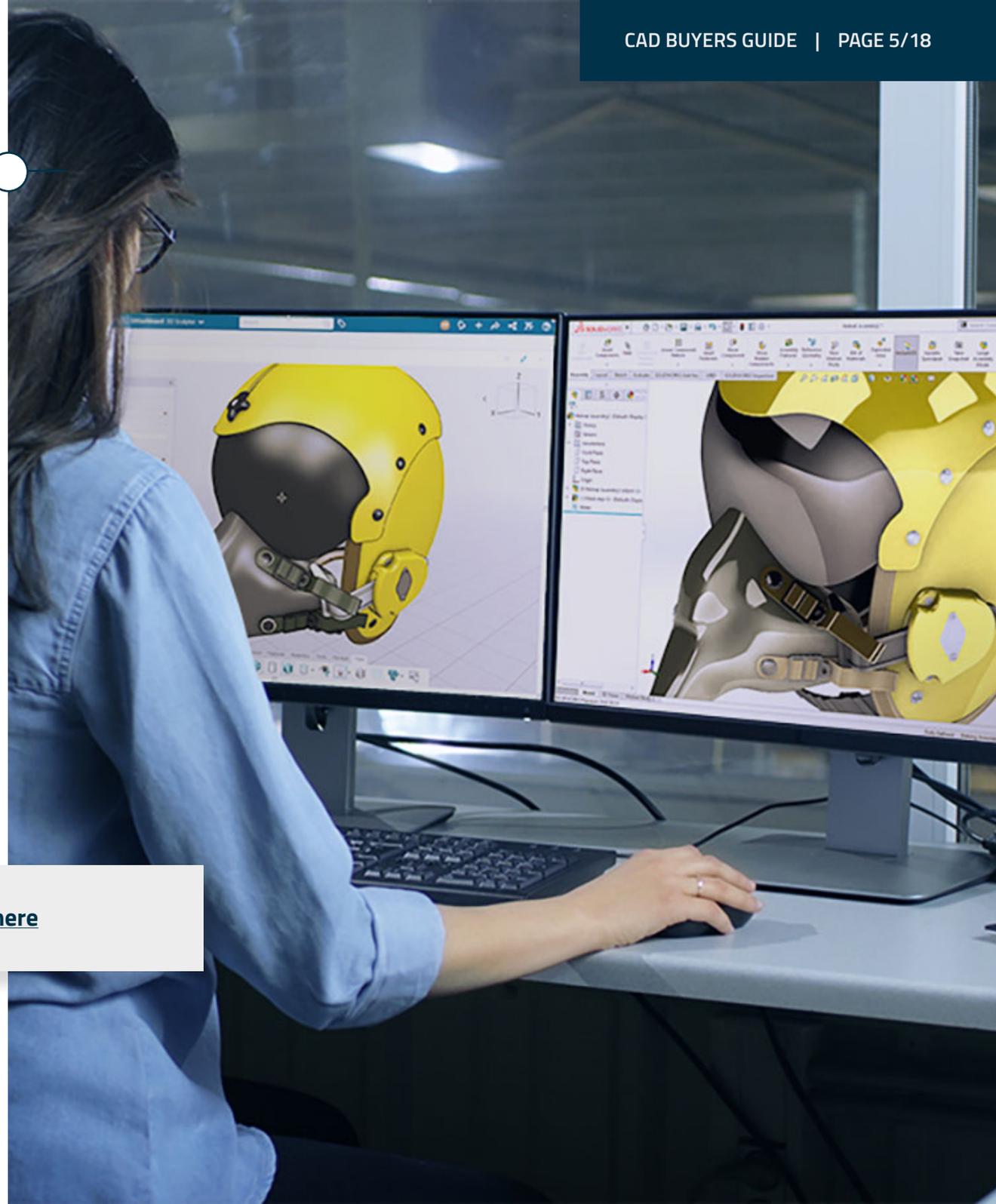
## COMMON QUESTIONS TO ASK YOURSELF WHEN CONSIDERING DIFFERENT CAD TOOLS

- What kind of design content do I need to make - are 2D drawings important or do I only need parts and assemblies?
- What is a common CAD tool in my area of business?
- Am I going to be the only user of the solution in our company?
- What file formats do I need to be able to send to my business partners?
- What solutions do my business partners use?
- If I recruit new people with CAD competence, what competence is most widespread out there?
- What is my budget?

## WHAT DOES THE DIFFERENT 3D CAD OFFERINGS INCLUDE?

- SOLIDWORKS Desktop
- 3DEXPERIENCE SOLIDWORKS
- 3DEXPERIENCE xApps
- 3DEXPERIENCE CATIA
- Draftsight

Compare packages [here](#)



## SOLIDWORKS Desktop

This is the CAD workhorse of many companies worldwide. Being a well proven tool in daily use among many thousands big and small companies, SOLIDWORKS is one of the most popular CAD packages there is and has held that position for more than two decades.

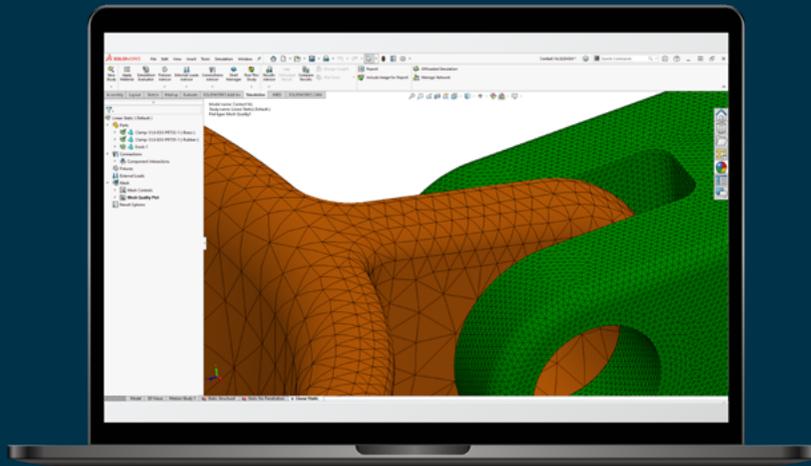
SOLIDWORKS is a one-stop solution when it comes to making 3D models; Models are parametric and feature-based, which means that editing and reusing models is easy.

SOLIDWORKS comes in Standard, Professional and Premium packages – where the main difference is addins and additional tools like Toolbox, PDM and rendering. All modelling tools however, like Sheet Metal and Weldments and all surfacing and solid modelling tools, are included in the Standard package.

Licensing for SOLIDWORKS desktop has a couple of options; Licenses are either purchased as standalone, meaning the license is locked to a specific workstation that the software is used on, or network-based, where the licenses can float between several workstations connected to the same network in a company.

### WORTH TO CONSIDER

Standalone licensing is better suited for smaller teams up to 10 people. Network license is the best option when you need to share a few licenses in a team.



## SOLIDWORKS Standard

SOLIDWORKS Standard contains all the tools needed to create 3D models of any kind; solid – and surface models, sheet metal and weldment models, and 2D drawings.

### IDEAL FOR COMPANIES WHO WORK WITH

Simpler parts and assemblies and drawings where built-in revision control is not necessary. Mechatronic industry, sheet metal and weldments-based manufacturing, 2D drawings.

### COMPANY SIZE

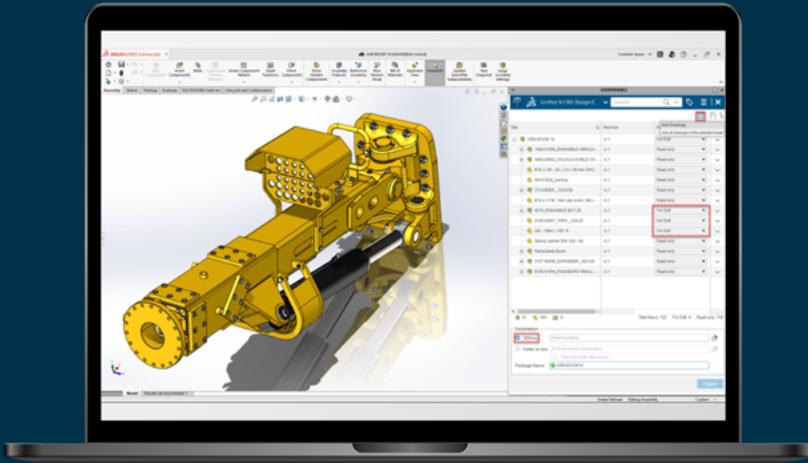
Smaller companies with design/engineering departments of 1-5 people.

### WORTH TO CONSIDER

If you need Toolbox, which is Solidworks' database of standard fasteners, consider upgrading to SOLIDWORKS Professional or higher.

### PRICE

Quarterly subscription prices starts from 947 euro. Please contact your local reseller for individual plan and price.



# SOLIDWORKS Professional

SOLIDWORKS Professional contains the same modelling tools as Standard, and also contains tools for adding standard fasteners, managing data with revision control and creating product renderings.

## IDEAL FOR COMPANIES WHO WORK WITH

Parts and assemblies with fasteners. Comes with SOLIDWORKS PDM Standard (installed and implemented separately) which helps you manage your data by controlling revision and state of any product, as well as access to it. Contains tools to create rendered pictures of your products.

## COMPANY SIZE

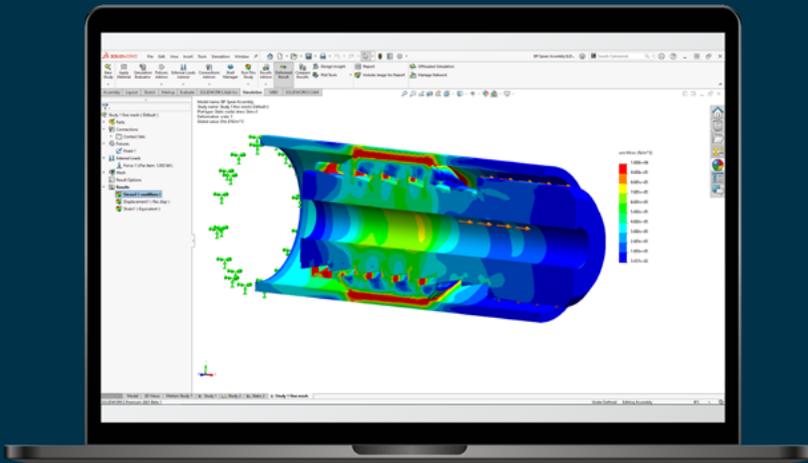
Design/engineering departments of up to 10 people where organising and sharing work internally is important.

## WORTH TO CONSIDER

If you need physical simulation, you can upgrade to SOLIDWORKS Premium.

## PRICE

Quarterly subscription prices starts from 1.132 euro. Please contact your local reseller for individual plan and price.



## SOLIDWORKS Premium

SOLIDWORKS Premium is the top product in the SOLIDWORKS CAD series. It contains the same tools as SOLIDWORKS Professional, but also comes with simulation tools that let you create static linear studies.

### IDEAL FOR COMPANIES WHO WORK WITH

Parts and assemblies with fasteners, and need for Physical simulation (Static linear studies). Comes with SOLIDWORKS PDM Standard (installed and implemented separately) which helps you manage your data by controlling revision and state of any product, as well as access to it. Contains tools to create rendered pictures of your products.

### COMPANY SIZE

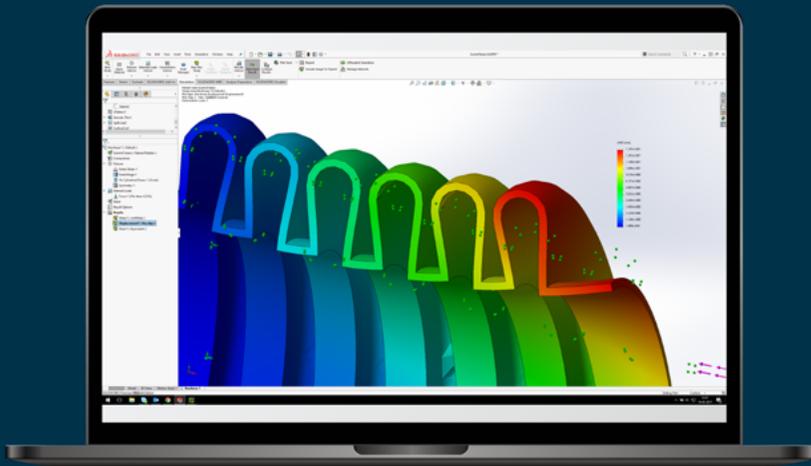
Design/engineering departments of any size where organising and sharing work internally is important.

### WORTH TO CONSIDER

If you need something else than static linear studies, you can upgrade to packages for Flow Simulation, and time-based studies like deforming, frequency etc.

### PRICE

Quarterly subscription prices starts from 1.500 euro. Please contact your local reseller for individual plan and price.



# 3DEXPERIENCE SOLIDWORKS –

(Standard/Professional/Premium)

3DEXPERIENCE is Dassault Systèmes' brand name for the software in their portfolio that is connected to the cloud. Almost all software products that are delivered by Dassault Systèmes comes with this option – and the advantage of being connected to the cloud is that sharing 3D content is a lot easier, both within the company and with outside stakeholders. Everyone working on the same dataset is another big advantage, and tools for managing data and organising your work is included – without the need for a server.

3DEXPERIENCE SOLIDWORKS is a locally installed version of SOLIDWORKS which is connected to the cloud. It is also licensed through the cloud with a named user licensing, so the user will have access to the license on any workstation he or she is logged into. The user experience of 3DEXPERIENCE SOLIDWORKS is identical to traditional SOLIDWORKS Desktop, with a few minor differences; file management is done in the cloud and not through SOLIDWORKS PDM.

## IDEAL FOR COMPANIES WHO WORK WITH

Parts, assemblies and drawings which they need to share easily through the included cloud-based data management solution.

## COMPANY SIZE

Design/engineering departments of any size where organising and sharing work internally as well as externally, is important.

## WORTH TO CONSIDER

The license is tied to a specific user. The solution can not be downgraded to an older year version. This solution can not be connected to an existing PDM SOLIDWORKS PDM. Instead, it is to be used with the included 3DEXPERIENCE ENOVIA based PDM/PLM solution.

## PRICE

Quarterly subscription prices starts from 1.080 euro. Please contact your local reseller for individual plan and price.

## 3DEXPERIENCE xApps

On the 3DEXPERIENCE platform, there is a selection of CAD tools that run in your web browser without the need of installation. They let you create, edit, and manage feature-based parametric 3D CAD content without any need for installation and upgrade. There are a variety of different tools available depending on what specific modelling tool you have. The idea is that you do not have to pay for weldment modelling tools if you only need Surface modelling tools.

This way you can choose only the modelling tools you need now – and choose to expand the toolset later. The tools can be bought separately but may also be sold in bundles. The tools mentioned below are those that let you create CAD content – and there are other tools available too, for rendering, technical illustration, and various file management activities. This is a fairly recent addition to our portfolio, and we expect a lot of development in this area.

### IDEAL FOR COMPANIES WHO WORK WITH

Parts, assemblies, and drawings that needs to be shared internally and with external stakeholders. Comes with file management tools for controlling revisions and releases. Different collaborative tools and PLM tools like Collaborative Tasks, Change Management and Issue handling lets you organize your work around your CAD content as well as the CAD content itself.

### COMPANY SIZE

Smaller and bigger design teams, no limit on the number of users.

### WORTH TO CONSIDER

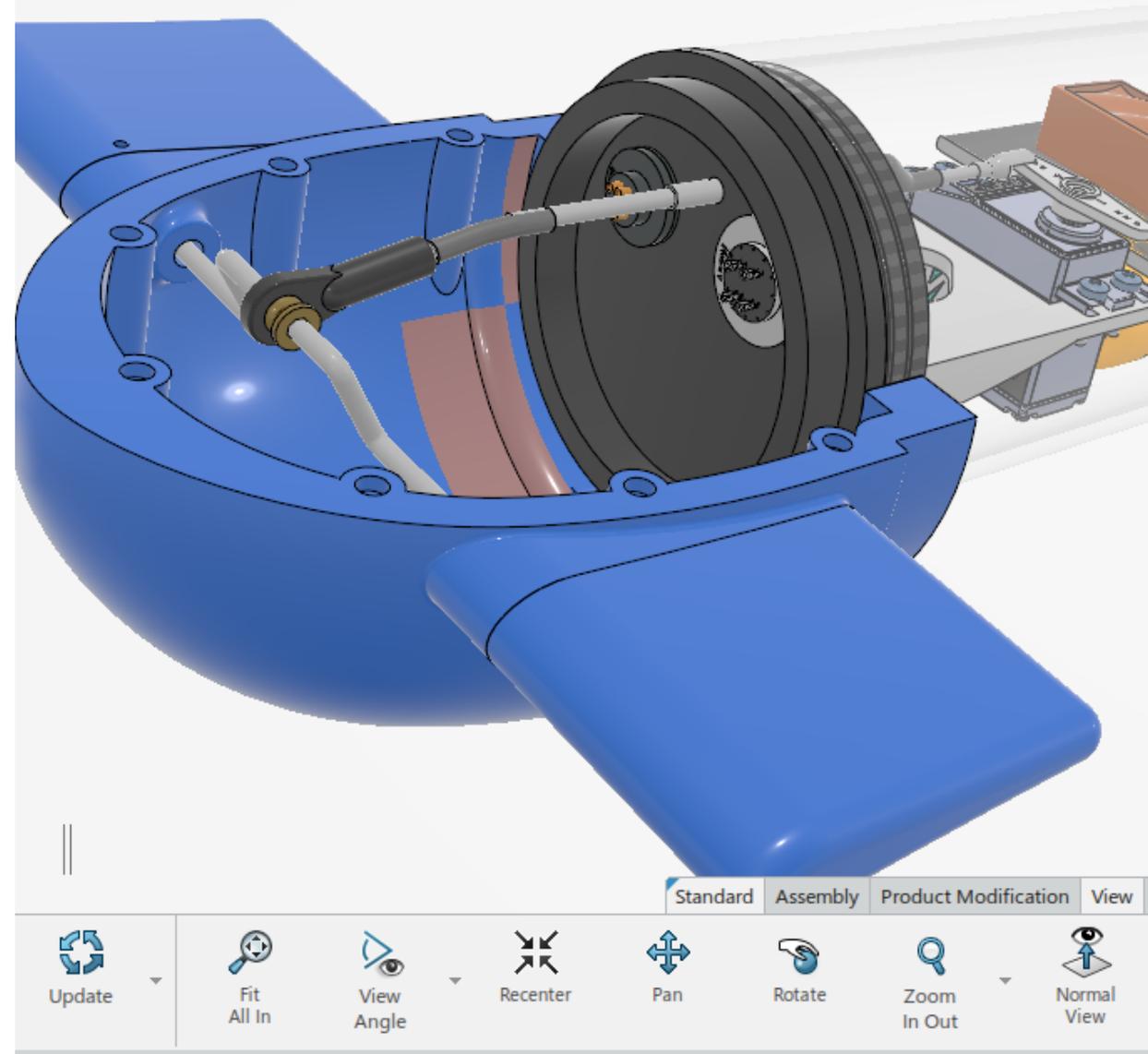
Runs on any platform, if you got a web browser and internet connection. Files are stored on the cloud and workstations only need internet connection and a web browser. The solutions are hosted on the cloud as well so there is no cost for server management, upgrades, or maintenance. CAD content can be exchanged with Solidworks desktop; however features are currently not transferred between SOLIDWORKS and the xApps. License is tied to a specific user.

### PRICE

Quarterly subscription prices starts from 210 euro. Please contact your local reseller for individual plan and price.

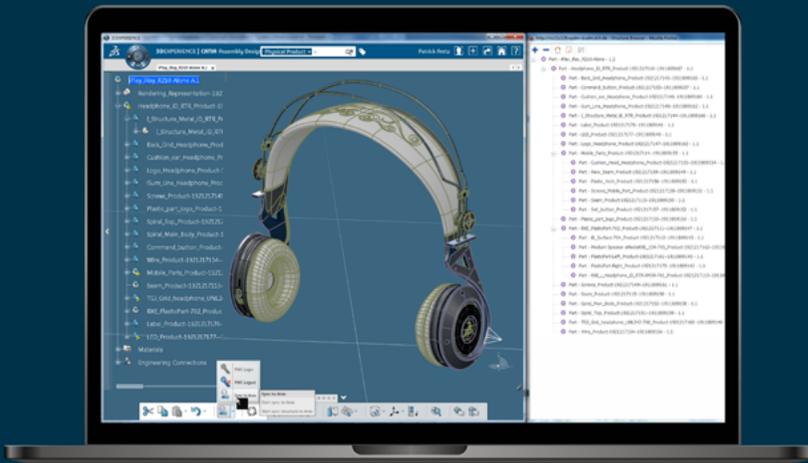
## CAD TOOLS ON THE 3DEXPERIENCE PLATFORM

- 3D Creator: Solid- and surface modelling
- 3D Sculptor: Sub-D modelling which lets you easily model solid models with complex shapes
- 3D SheetMetal Creator: Sheet Metal design
- 3D Mold Creator: Making mold tools for moulded and casted product
- 3D Structure Creator: Make weldment structures with cutlist
- Manufacturing Definition Creator: For making 2D drawings and model-based definition (MBD) content



## 3DEXPERIENCE CATIA

3DEXPERIENCE CATIA is a comprehensive software that is known for its advanced capabilities and flexibility. CATIA is used in more large-scale projects and industries such as aerospace, automotive and heavy machinery. CATIA includes features such as surface modeling, sheet metal design and kinematic. It offers a wide range of capabilities in the areas of analysis and simulation, as well as computeraided manufacturing (CAM) and tooling design.



### IDEAL FOR COMPANIES WHO WORK WITH

3D content and 2D drawings with specific modelling needs that needs a robust tool that can handle both high complexity in geometry as well as large number of components.

### COMPANY SIZE

Larger companies.

### WORTH TO CONSIDER

Although most of the basic modelling functions can be learned quite easily, some of the more specialized tools requires more training to master. For beginners in 3D modelling, there are other tools that are easier to start with.

### PRICE

Quarterly subscription prices starts from 2.268 euro. Please contact your local reseller for individual plan and price.

# DraftSight Enterprise

Draftsight started as a competitor to AutoCAD some years ago and is now Dassault Systèmes' 2D editor for DWG files, with some 3D capabilities. Draftsight comes in different packages for different needs. We consider Draftsight as a companion tool for editing DWG files, rather than a tool for making 3D model, and as such we would not recommend using Draftsight as the main CAD tool in a company.

## IDEAL FOR COMPANIES WHO WORK WITH

Manufacturing definition where 2D Drawings need to be exchanged with partners.

## COMPANY SIZE

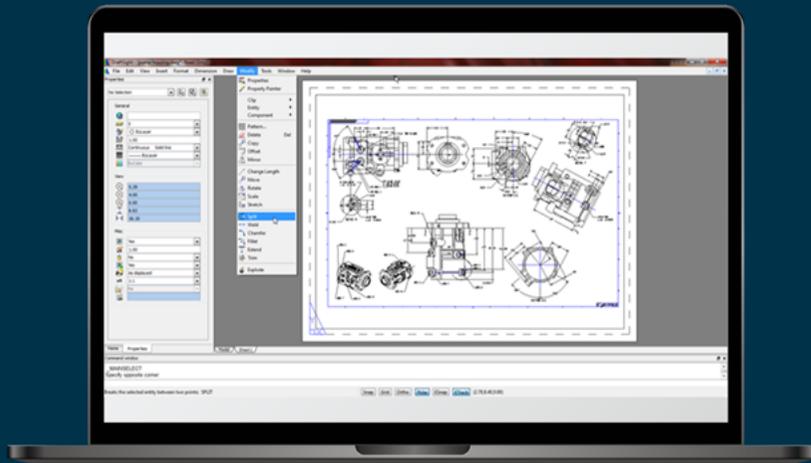
Larger companies.

## WORTH TO CONSIDER

Although there are some possibilities in creating 3D Content with Draftsight Enterprise, it is to be considered a 2D solution.

## PRICE

Yearly subscription prices starts from 399 euro. Please contact your local reseller for individual plan and price.



## COMPARISON AT A GLANCE



SOLUTION	TYPICAL USE	PRICE	EASE OF USE	LICENSING
SOLIDWORKS Desktop	Parts/assemblies and drawings	Medium	Easy - medium	Standalone, term-based or floating network license
3DEXPERIENCE SOLIDWORKS	Parts/assemblies and drawings	Medium	Easy - medium	Named user
3DEXPERIENCE xApps	Parts/assemblies and drawings	Low - medium	Easy - medium	Named user
3DEXPERIENCE CATIA	Any	High	Medium - difficult	Named user
Draftsight	2D drawings	Low	Medium	Floating network license

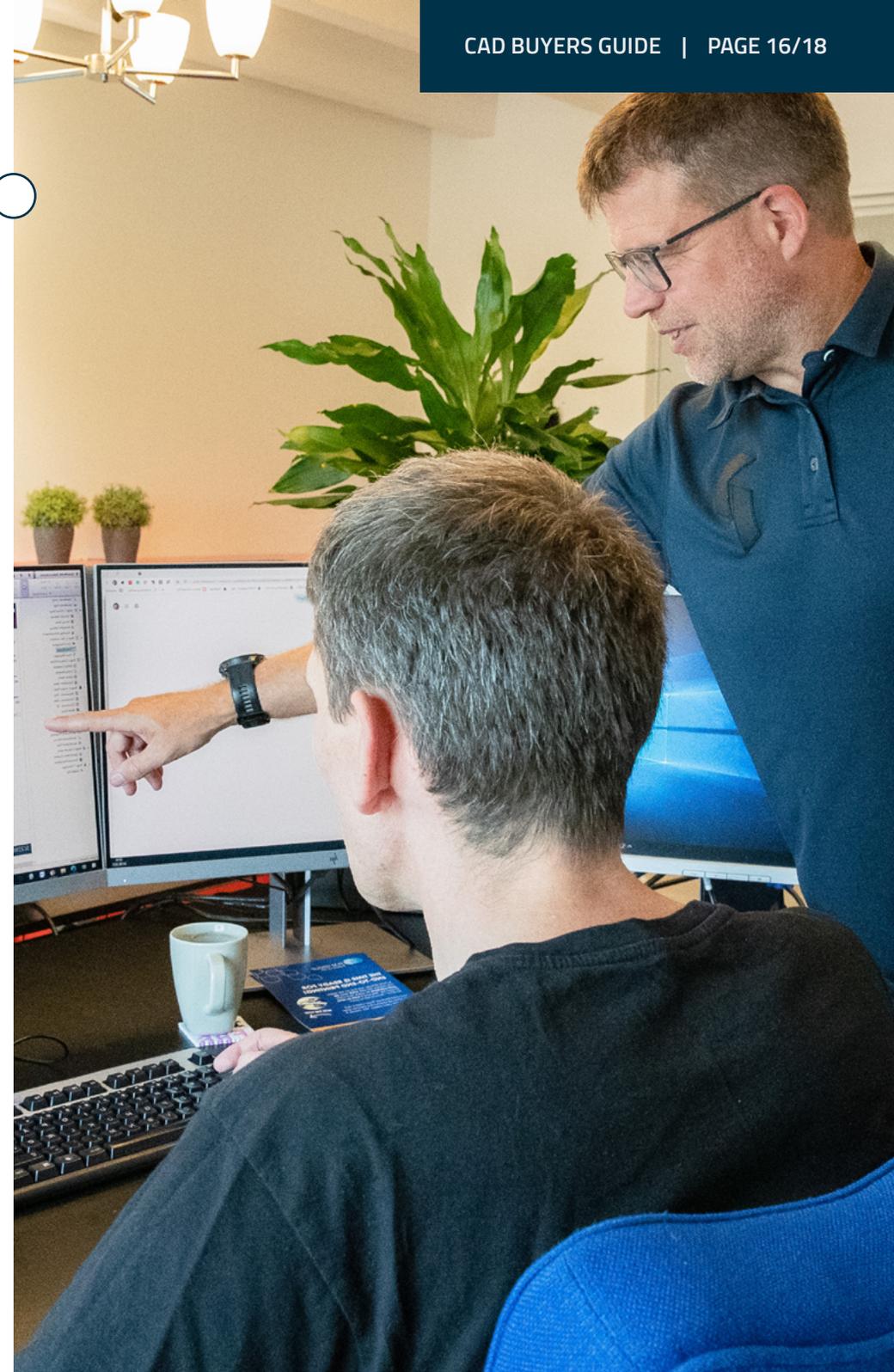
## CONCLUSION

PLM Group has a wide selection of 3D CAD tools in our portfolio. Although SOLIDWORKS and CATIA are the most popular tools, there are others as well – like Draftsight for 2D CAD and the increasingly popular 3DEXPERIENCE xApps that runs in a browser.

Some of the tools are new additions to the SOLIDWORKS and CATIA family which you might not be familiar with. Having such a broad selection of tools we are convinced that you will find a tool that suits your company's specific needs.

If you do not find a tool for your need however, we invite you to contact us to discuss your options. Most of the functionality in the 3D CAD tools can be enriched and extended either by complement products like SOLIDWORKS PDM or by macros or custom add-ins – or a combination of those.

PLM Group is a Dassault Systèmes partner and we are offering both SOLIDWORKS - which is a very common CAD tool worldwide, as well as the CATIA family of CAD tools – which covers almost every 3D need there is for large and small companies.



## REACH OUT TO US

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### **EVERY NEED IS UNIQUE – SO IS THE RIGHT SOLUTION FOR YOU**

Choosing the right solution usually starts with looking at the specific CAD need, the features and functions of the available solutions, the competence and skill of your preferred reseller and your budget. It's also a choice, where different departments are involved, in some cases it is both the technical and financial managers. That means that there are a lot of considerations that needs to be aligned. In the following section, we will take a closer look at the thoughts behind choosing the right 3D CAD solution for your company.

### **WHAT DO YOU NEED TO CONSIDER TO MAKE THE RIGHT DECISION?**

The cost of making a wrong decision can be high, at the same time it can be hard to foresee the company's need in the future – and if a solution which seems perfect today, may not be good for the future version of your company. For this reason, it is good to know that our solutions in most cases can be extended, upgraded, and customized so that it can grow with you.

### **NO MATTER WHAT YOU CHOOSE, WE GOT EXPERTS READY FOR YOU**

We support and train our customers in all the solutions that we sell, and we take pride in keeping our experts certified so that you can expect to get answers on any question that you might have. It is in PLM Group's interest that you select a CAD package you are happy with today and tomorrow – and we want to support you through the journey.



## WE MAKE YOU INNOVATE

Our mission is to empower people and manufacturing companies to innovate. We do that by digitally transforming your entire value chain, integrating every stage of the product lifecycle from design to aftermarket.

As an innovation partner we support companies across many industries. We have been collaborating with Dassault Systèmes SOLIDWORKS for over 25 years as a value adding partner. Our 3D Printing division co-operates with world-leading additive manufacturing companies, allowing us to provide our customers with the latest and greatest technologies.

Are you ready to embark on your journey?  
Our local teams of experts and global partnerships are at your service.

**THANKS FOR READING!**



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