

## Why CAD drafting has caught on

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CAD drafting services are growing by leaps and bounds and CAD companies based in India have become outsourcing hubs.

Drafting and engineering design used to be a very complicated and time-consuming process before computers came on to the scene. Everything had to be done by hand, and the scope for error was tremendous. Computer aided design, or CAD, has changed all that. Now companies have access to Cad Drafting Services that make the entire process much more efficient, and much faster as well. CAD drafting services now help every industrial sector with more precise and accurate data to work upon according to their requirements – including architectural & construction, facility management, utility, survey, geological and environmental, civil and structural engineering companies, mining consultants, and the mechanical industry.

CAD drafting is used for a variety of purposes – digitization of architectural paper plans of industrial and residential constructions, drafting of facility drawings such as HVAC plans, electric plans, pipeline plans, and space planning calculations, digitization of survey site plans, landscape drawings, ground cadastre plans, city plans, road network plans, tools and machinery used to make components etc. CAD used to mean only automated drafting. But now it also includes 3D modeling and computer-simulated operation of the model. CAD enables engineers, consultants, and researchers to use computers to simulate operational data to determine loads and stresses instead of having to build prototypes and change components to determine the effects of tolerance ranges.

Large automotive, aerospace and electronics were the first to use CAD drafting. These included companies like GM, Lockheed, Bell and Renault. But with computers becoming more affordable, CAD drafting has become almost universal. The development of software for personal computers has given an added impetus to CAD.

CAD drafting can be done in either 2D or 3D dimensions. CAD and GIS software packages such as AutoCAD (from AutoDesk), VectorWorks, Microstation, Smallworld, TurboCAD, QCad, ArchiCad, IntelliCAD offer 2D/3D vector-based drafting and 3D solid and surface modelers such as ProE, Catia, SolidWorks, TrueSpace, LightWorks offer mechanical engineering drawing capabilities. They also allow rotations in three dimensions, which mean that an object can be viewed from any angle, even from the inside.

There are many producers of the lower-end 2D systems, including a number of free

and open source programs. 3D wireframe is an extension of 2D drafting. Each line has to be manually inserted into the drawing. The final product has no mass properties associated with it and cannot have features directly added to it, such as holes. The operator approaches these in a similar fashion to the 2D systems, although many 3D systems allow using the wireframe model to make the final engineering drawing views.

CAD drafting services have become especially important in microelectronics, since devices have become smaller and more complex.

CAD systems have brought down product development costs, and shortened the design cycle considerably. Smaller and mid-sized companies have been able to significantly cut down the size of their drafting departments, and hence their costs.

The CAD drafting services industry in India is booming, with more and more companies jumping into the fray. Outsourcing has also led to the growth of the industry, both for domestic customers and foreign clients. India today is seen as a hot destination for architectural and engineering design and GIS Mapping because of the rising cost and the shortage of architects and engineers in the West. Not to mention the availability of quality talent and proficiency in English.

AABSyS is one such company that has made the most of the emerging outsourcing opportunities. The company provides Auto Cad, GIS, programming services. The company has focused on the competitive and quality conscious European, North American, Australian and Middle East markets and built a sound and satisfied customer base.

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