

Topic:
Outsourcing

Outsourcing by Design

Attitudes and intentions to outsourcing CAD/CAM/CAE activities at mechanical engineering sites

iCT is produced by Business Advantage, a B2B research, business development and marketing consulting practice operating in the global IT, Digital and Telecommunication sectors.

To what extent does the trend towards outsourcing extend to activities within the product design and engineering process? There has been a sharp growth in the number of companies offering every service under the sun in recent years. To assess the current use and future demand for this, we interviewed managers with responsibility for the product development process at 259 UK mechanical engineering sites. **Peter Hessney, President and CEO of Cadigen**, also provides an insiders view of the state of this market.

Outsourcing Figures

Our survey reveals that nearly three out of ten sites are currently outsourcing some part of the product design and development process. Table 1 illustrates the most commonly outsourced activities expressed as percentages of the whole sample.

Activity	Proportion of sites currently outsourcing this activity
Design/drafting jobs done off-site	12%
Hiring CAD operators to work on-site	7%
Production of rapid prototypes	5%
Engineering analysis	5%
Conversion of 2D CAD files to 3D	3%
Translation of data between different CAD systems	2%
Management of CAD operations for a specific project	2%

A wide range of other activities are outsourced by less than 1% of sites; among these, we encountered two sites (0.8%) who have entrusted the overall management of their CAD/CAM functions to an external source.

No great surprise that there are very few engineers/CAD managers willing to pass any degree of control to external agencies. Peter Hessney, President and CEO of Cadigen thinks this will change. *"I think in general that outsourcing is a much more accepted practice in America than in Europe. We have to accept that engineers are generally very conservative, and there are a lot of individuals who want control. But outsourcing offers the opportunity to have the same level of control, but in a contractual format. Sure this can be a difficult cultural step, but it's made easier as people realise they can be free of the hassle of pay roll, training, software purchasing and upgrades, productivity management etc."*

"One of the main barriers we encounter is the view 'you've got to be inside my company.' Well that's false! Web based collaboration software allows interactive discussions, say between engineers and designers etc. The arrival of collaboration technology has really started to fuel more outsourcing opportunities both project wise and on a whole department basis."



Peter Hessney, President and CEO of Cadigen.

Photo by K. McKinzie, Rochester Business Journal.

[Cadigen](#) is a provider of computer-aided design and drafting services to a broad range of the CAD using community, and is based in Pittsford, New York. Its core services are:

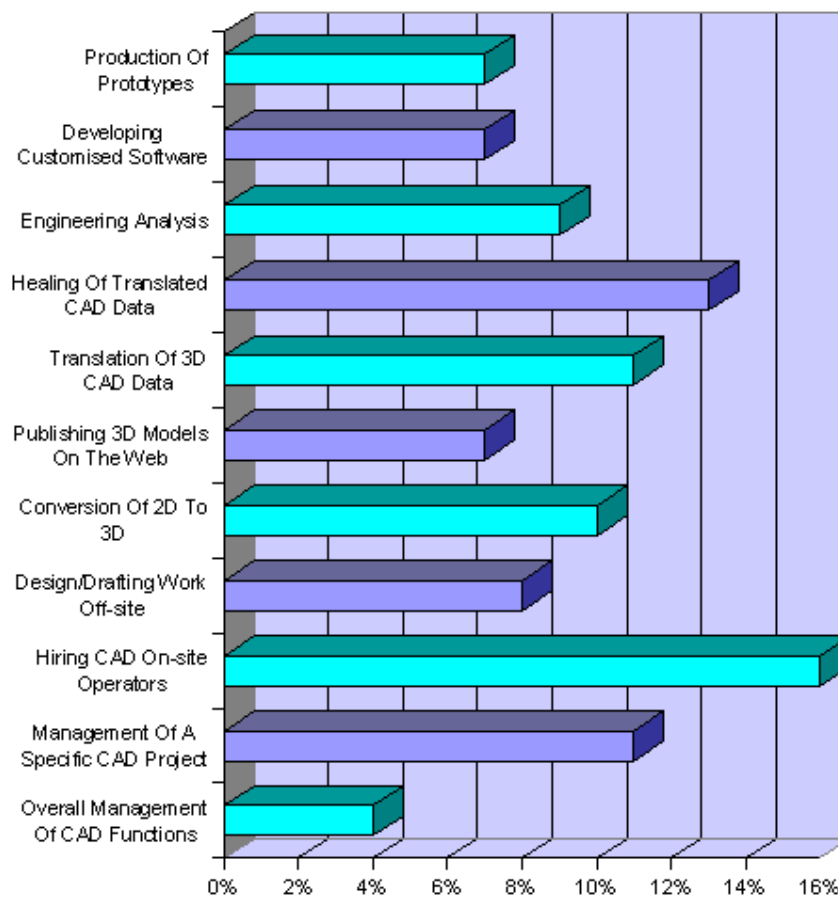
- **'Managed Outsourcing'** (the management of entire CAD operations)
- **'CAD As You Need It'**
- **'Project Extension'** (adding resources or specific skills to an in-house team).

Future Intentions

Of the 72% of sites who are not currently outsourcing any elements of the design/product development process, there is no sign that any change in habits is imminent. No activity is being actively considered for outsourcing by more than 1% of these sites, with the exception of the hiring of CAD operators to work on-site -- 3% of this group are looking into this option.

However when the whole sample was asked which activities they would consider outsourcing in future, a more positive picture emerges, as shown by the chart below:

Which Activities Would You Consider Outsourcing In Future?





December 2001

The Big Opportunity

Only 4% of our sample said they would consider outsourcing their entire departmental CAD function, but with such low levels of outsourcing in any aspect of the design process, we wouldn't expect many people to jump in to say they're ready to put the whole show in someone else's hands. Peter Hessney however regards this as the Holy Grail. *"This is what I'm going after; I think it's an opportunity on a multi-billion dollar scale over the next ten years. At the moment departmental outsourcing is really in the embryo stage, even in the USA. There are probably only about 20 or so companies that have done this. But this will grow, and we are putting together a business model geared completely to this area."*

"The engineering community is taking a while to recognise that there are certain internal functions that can be carried out just as efficiently when you contract them out. But this perception is changing. Instead of people asking 'why would I do that?', they're asking 'why aren't I doing it? Our response is that they should be doing it because it's costing them more money to try to manage it themselves. People might manage engineering tightly, but when you get down to the CAD element, and the output of the CAD department, our experience is that it's often not managed that efficiently. There is room for a service provider to go in and turn this around."

Conclusion

Three out of ten sites are outsourcing elements of the design process; we can't tell however from these findings whether this group has fully embraced outsourcing as a means to boost productivity and competitiveness, or have simply hit on a way to cope with a crisis. Understanding these attitudes will be important for suppliers seeking to persuade companies to do more than just farm out tasks when the pressure is on.

The percentages of sites willing to consider various types of outsourced service is currently low, but still encouraging bearing in mind the perception that many managers have trouble delegating within their own offices, let alone outsourcing. Overcoming these cultural barriers will be the key to growth in this market; **iCT** will keep an eye on how this develops.

If you want to understand more about attitudes to and intentions on outsourcing in domestic or overseas markets, our [market research services](#) can provide the solution. If you want sales leads for companies interested in outsourcing elements of the product development process, find out how our [telemarketing services](#) can deliver them.

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