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Topic: MCAD

CAD/CAM Managers at Mechanical Engineering sites identify barriers to improving the design process

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

Suppliers to the engineering community are keen to stress their role in helping their customers get their products to market faster. Making the design process faster and cheaper while maintaining quality is a critical element of this, but what does the engineering design community see as the barriers to making this happen? We interviewed senior decision makers at 250 Mechanical Engineering sites to find out what they perceived as the barriers - if any - to implementing change and improving their design processes.

What Barriers?

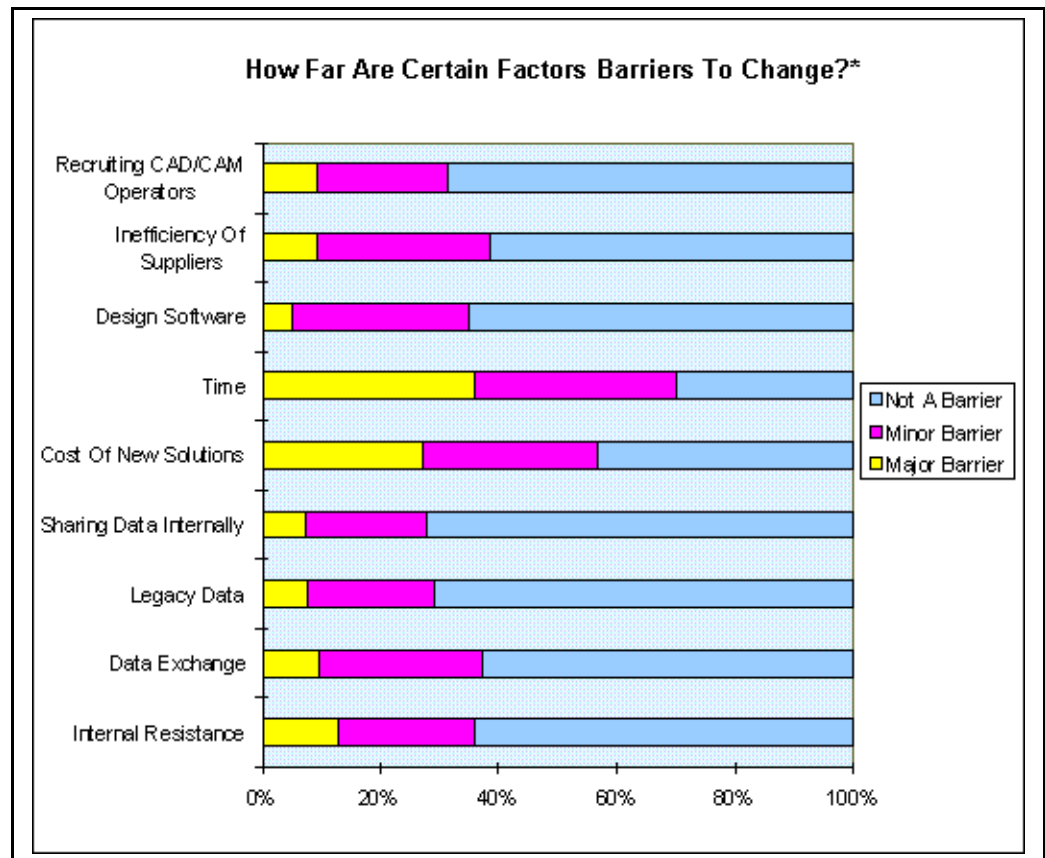
Bearing in mind that we asked our sample to consider all the potential challenges to designing more efficiently (including budget and other resource issues), it's perhaps surprising that 27% feel there are no major barriers to achieving this. This group will include a proportion that feels (rightly or wrongly) that there is simply no need to improve their design processes.

The Old Enemies

We asked our sample about a broad range of issues that are hindering improvements in the design process. No great surprise which two factors are perceived as the biggest barriers - time and money. Over a third of our sample thought that simply being too busy was a major hurdle to improving the design process. The old phrase 'take time to make time' has always been easier to say than to put into practice. Just over a quarter feel that the cost of new solutions is a major barrier. Internal resistance to change was identified as a major problem at 12% of sites.

The chart below shows perceptions of a range of potential barriers categorised as major, minor or non-barriers. Issues around exchanging CAD/CAE data with suppliers, customers etc. were identified as a major barrier by one in ten sites, while sharing data within the organisation was a barrier identified by 7% of respondents.

Significantly, all the nine factors shown are perceived as a minor problem by at least 20% of sites. Frequently it will be the cumulative effective of such factors that hinder the implementation of better ways of working.



*For chart data



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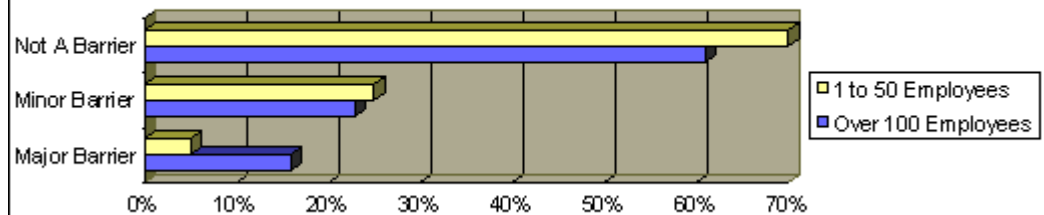
The Size Factor

Clearly, as vendors seek to convince customers of the impact of their solutions in reducing time-to-market, attention needs to be paid to overcoming these perceived barriers to

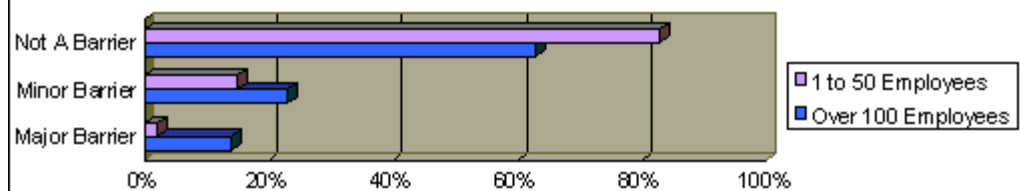
change. In the last issue of *iCAD*, ['Major Issues for the Rest of 2001'](#), Dick Schenk, Vice President of Marketing Communications at UGS, pointed out the importance of marketing to identified sections of a target market according to their needs: *"The challenge is to effectively market and sell to the multiple constituencies within target segments - from the end user of technical solutions to the executives of a global corporation. Each individual or group has specific needs that must be understood and responded to in the context of the aggregate functionality of the offering."* Understanding the needs of small business is just one example of this, and even by doing a rough breakdown in our sample it's possible to see how perceptions of barriers to improving the design process vary according to company size.

Interestingly the proportion of the smaller sites that rate these factors as major barriers is less than the larger sites for every factor. This is surprising for factors such as the cost of new solutions, and time available to plan/implement change (only half as many of the smaller sites rate this a major barrier compared to the larger ones). The chart below shows how sites with less than 50 employees rate four of the potential barriers compared with sites with more than 100 staff.

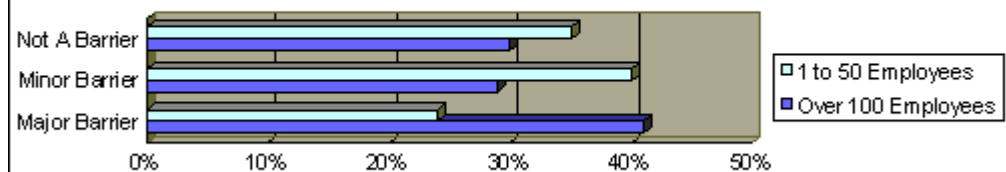
How Far Is Internal Resistance By Employees A Barrier To Change?



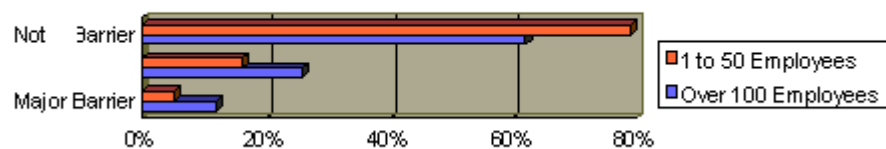
How Far Is Sharing Data A Barrier To Change?



How Far Is Lack Of Time A Barrier To Change?



How Far Is Recruiting CAD/CAM Operators A Barrier To Change?





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Conclusion

The value of these findings lies in considering the groups who have positively identified factors as major or minor barriers to improving the design process. Suppliers looking to convince these sites to adopt new solutions will need to address these in varying combinations. For those sites that stated that some or all of the factors were not a barrier, there are few conclusions to be drawn without further research. For example, some of these sites will actually have effective management/technical solutions for dealing with these issues; for some a selection of the factors will not be relevant to their business; and others may lack awareness of where opportunities lie for improving the design process (and therefore be unaware of the potential barriers).

We have compared perceptions of very small companies to the rest simply to demonstrate how needs/attitudes of different segments can vary. Looking at the perceptions of sites with more than 100 staff is too large a segment to enable any particular conclusions to be drawn. The value of such data to solution providers increases of course when more precise segments are identified, for example, companies of over 1000 staff at multiple sites that feel problems with CAD data sharing are a barrier to improving the design process.

While some of the factors we have considered can be overcome by technical solutions, the barriers raised by concerns over time and money will not disappear. In our article on critical issues in last month's issue of *iCAD*, PTC had this to say: *"Customers get 'Guerilla ROI' from pre-packaged solutions with a rapid deployment and a rapid time to benefit. Deployment is measured in days and weeks, not months or years."* Many vendors will be hoping to exploit the symmetry between the numbers of their potential customers citing lack of time as a major barrier, and the claims made of their solutions in saving this vital commodity.

iCAD will look at perceived barriers to change in other industry sectors in future issues. If there is a particular issue you would like us to explore, please let us know.

If you'd like to know more about the perceptions in your target market that affect investment in your products and services, our [Market Research Services](#) can provide the solution. Alternatively, call David Eaton on +44(0)1689 873636 to discuss your needs.

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