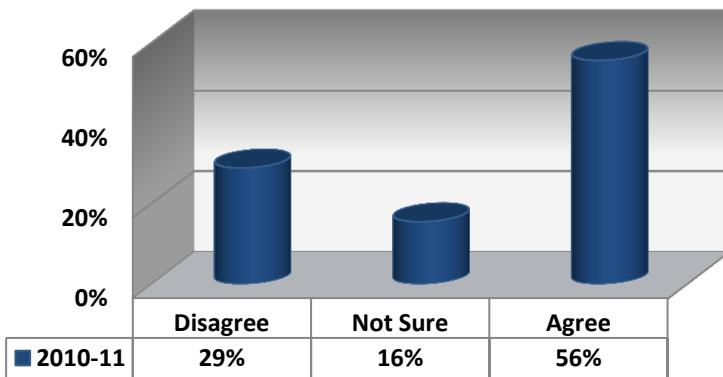


## IT Power, Cooling and Floor Space: Making Progress?

Constant change and growth in IT infrastructures is stressing the physical resources of data centers large and small. Industry publications and vendor slide sets tell and retell stories of customers who hit the figurative wall on data center electrical capacity... or literal walls when their equipment outgrows their floor space.

In our **2010-11 GCG Unix Vendor Preference Survey** (methodology and demographics [here](#)), 306 Unix data center managers and workers told us how they're managing facilities pressure. Overall, we found that facilities are definitely on customers' minds and are factored into their decisions. But we also saw a slight lessening of specific concerns. Here's an overview of this year's results:

Server Purchases Strongly Influenced by Power, Cooling, Floor Space Concerns

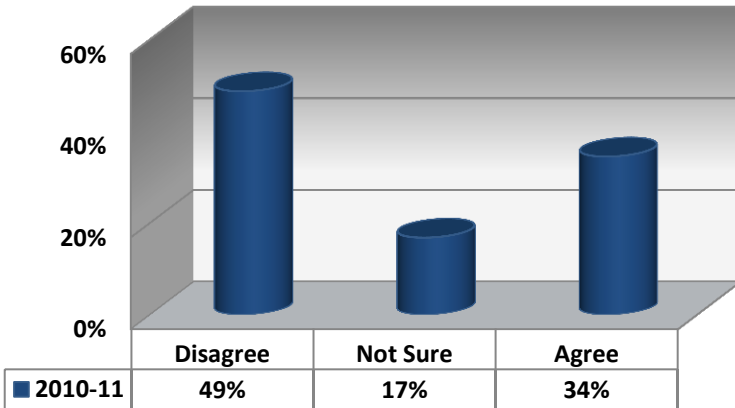


Almost 60% of our survey respondents say that facilities concerns play a big role in their server purchasing decisions.

While these are obviously big factors, they were a bit bigger last year when 65% of respondents were in the 'agree' camp. Despite this drop, both scores (2010-11 and 2008-09) are considerably higher than what we saw in 2007, when less than half of our respondents said that power and footprint requirements had much impact on their server decisions.

We drilled down with a few more questions in order to find out if any particular facilities issue is causing more pain than the others. Is floor space the biggest problem? Or are constantly rising electrical requirements more difficult to deal with? Or are customers hitting the wall, literally, when they try to jam more and more gear into their data centers? This is what they told us...

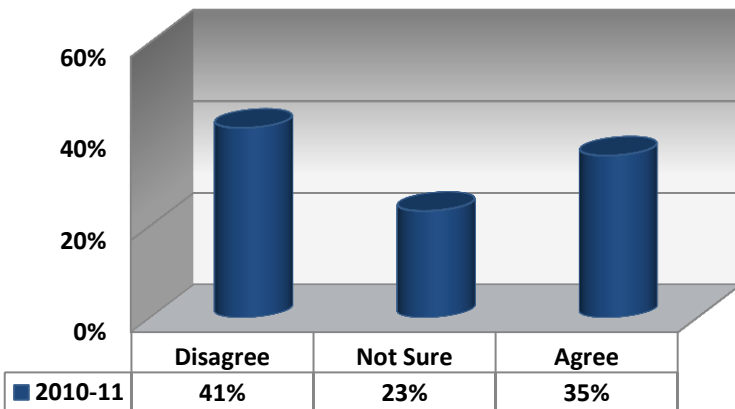
### Rapidly Running out of Floor Space



Just over a third of our enterprise customers said that they're running out of data center floor space. This is a bit of a change from years past when 40% said that IT footprint was a major problem for them.

We believe that blades and high density rackmount systems are finally having a significant impact on this problem and are relieving raised floor congestion.

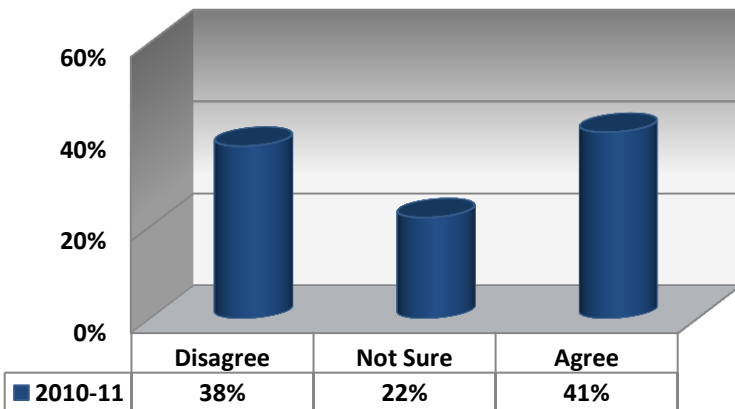
### Hitting our Limits on Cooling Capacity



We see that most customers don't have a major problem with cooling... yet...

Higher density systems help conserve floor space, but can cause cooling problems as the heat load of the mass of systems begins to overwhelm data center cooling. While systems have enough internal cooling to get rid of the heat, they're just pushing it onto their neighbors and raising the ambient temperature in the data center. We expect to see data center cooling problems rise over time.

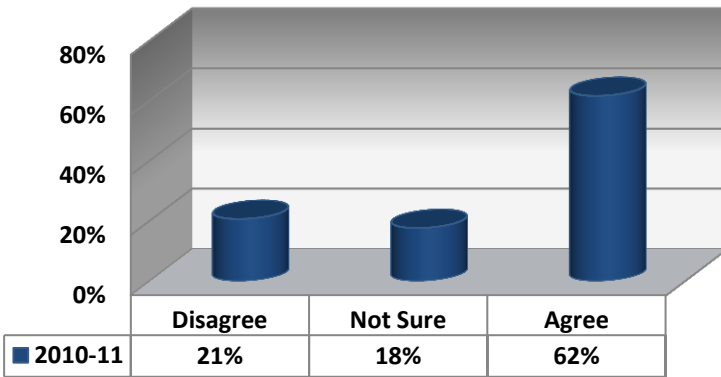
### Rapidly Running out of Electrical Capacity



Last year, half said that electrical capacity was a big problem for them. This has dropped to 41%, which is a welcome development.

As customers refresh systems, they're buying servers and other gear that have been explicitly designed to be thrifty with power. These products also have more power saving options (sleep, hibernate) and give customers the ability to tailor these options to suit their environments. It's paying off.

**Power, Cooling, Floor Space will be a much bigger concern in the future**



Not surprisingly, facilities will become a more important factor in the future. However, we've seen a significant change on this question over the last few years.

In the 2007 edition of our survey, 70% agreed that facilities would become more important to them. This number rose to 76% in our '08-'09 survey. In this year's survey, we're seeing a considerable drop: 62%. It looks like new technology has gone a long way toward alleviating the problems.

It's good to see that progress is being made on the data center environmental front. While there are still efficiency improvements to be made, it seems that most organizations are reasonably comfortable with their facilities situation.

If you're interested in finding out more about this survey (demographics, expanded results, detailed GCG analysis), click [here](#).

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