



## Trends in Simulation Software Usage



# Trends in Simulation Software Usage Report



## Purpose

In the **2014 CAD Trends Survey** (report available [here](#)), the Simulation trend had the second highest adoption rate. We have, therefore produced this more detailed report specific to **Simulation**.

## Source and Methodology

The data in this report was obtained by online survey in December 2013 by Business Advantage Group, an international market research, data, sales development and consulting practice specialising in the CAD/CAM/CAE/PDM/PLM sectors. The survey was managed from our offices in London and San Francisco, drawing respondents from our in-house CAD/CAM/CAE data repository of over 500,000 CAD/CAM/CAE users and decision makers. 409 respondents across a range of company sizes and industries worldwide took part.

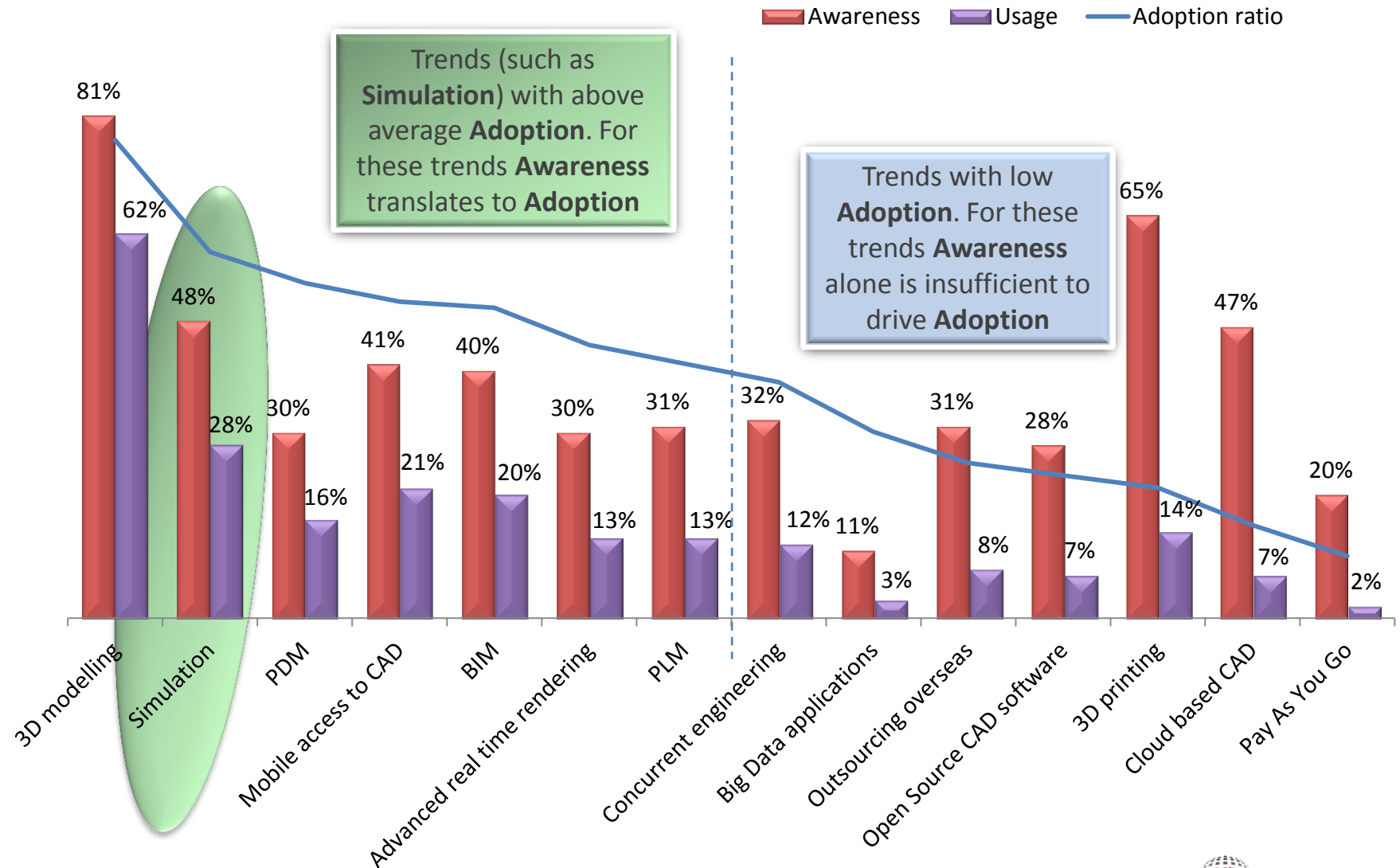
## Feedback

We welcome your feedback and any further questions you may have that the data may be able to answer. We would love to hear your thoughts.

# CAD Trends 2014 – Awareness and Usage



For full report see click [here](#)



Note: Adoption ratio shows usage as a proportion of those who are aware of a trend



Q. Which of the following leading trends are you familiar with or have you heard of? (Base: All – 409)

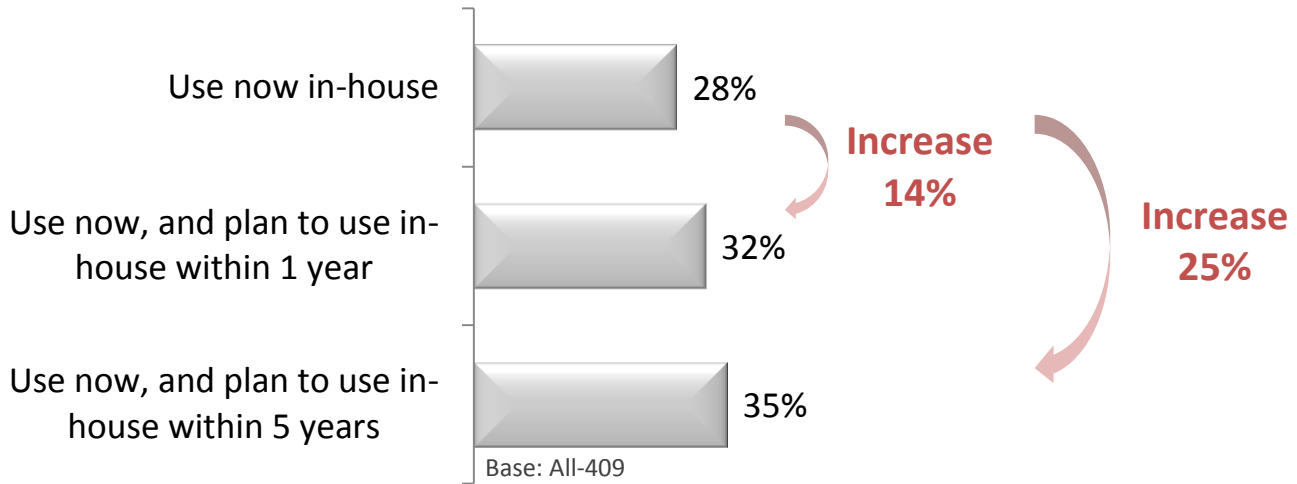
Q. Thinking about these trends again what do you/your company already use in-house at the moment? (Base: All – 409)

# Simulation Software - Current Situation and Anticipated Growth



Simulation is a stable area in today's CAD/CAE market. In comparison to the other trends users rate it high in importance at 6.5 out of 10 (based on the 197 who are aware of Simulation).

Simulation already has higher than average usage which may be why it has lower than average future growth potential. Nonetheless growth of 14% (from 28% usage to 32% usage) within one year and 25% (from 28% to 35%) within 5 years is anticipated.



# Medium and Large Companies Drive the Demand for Simulation Software

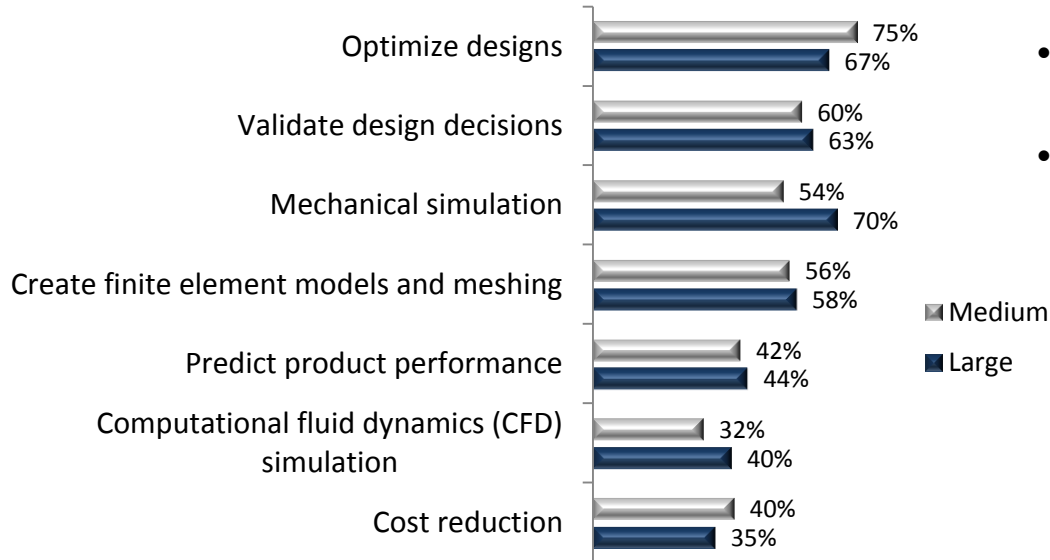


## Importance of Simulation Analysed by Company Size



- Simulation importance and usage currently varies with company size
- It is more likely to be used in large companies (41%) than small companies (19%)
- Therefore medium and large sized companies are the key potential markets for Simulation Software

## What drives Importance for Medium and Large companies ?



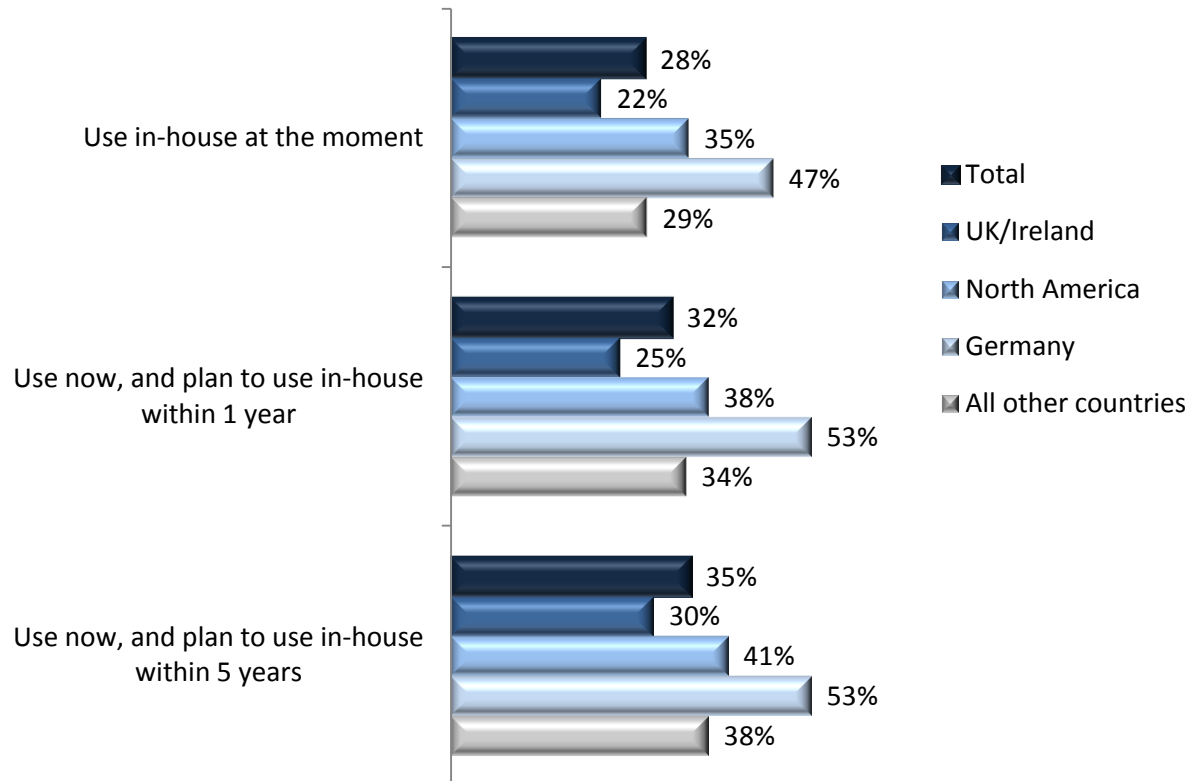
- Medium companies – Optimising designs
- Large companies – Mechanical Simulation and Validation

*Based on those using or planning to use simulation*



# Current and Future Usage of Simulation by Country

Nearly half of CAD users in Germany use Simulation and this is expected to grow in the near future and but then stabilise. The UK shows lowest penetration however it shows the highest growth over the next 5 years (35%). North America will continue to increase usage.

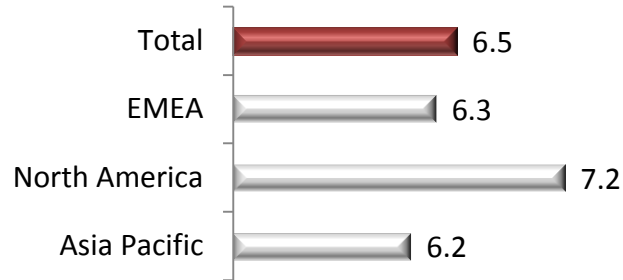


Base: All

# North America Shows High Potential for Simulation



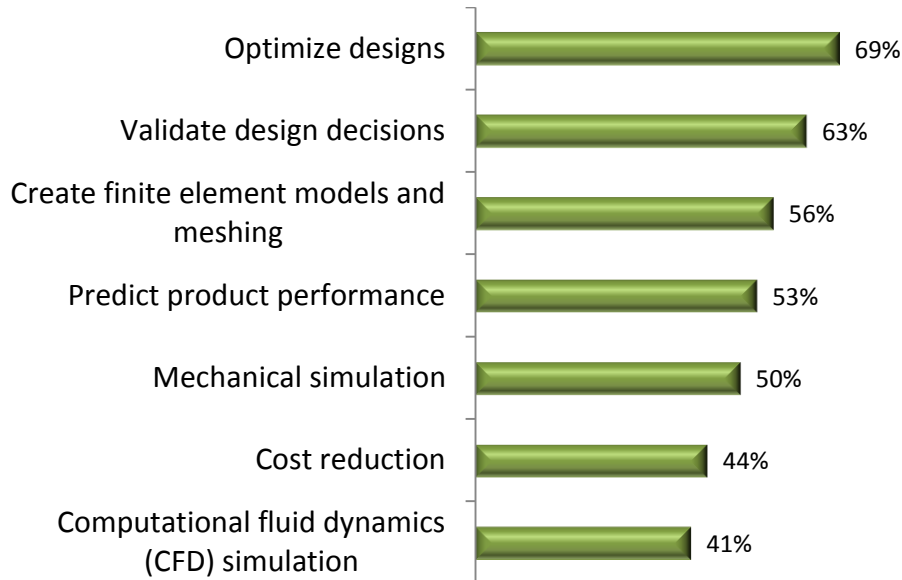
## Importance of Simulation Analysed by Region



- North America gives high importance to Simulation even though the current usage is not so high compared to other regions



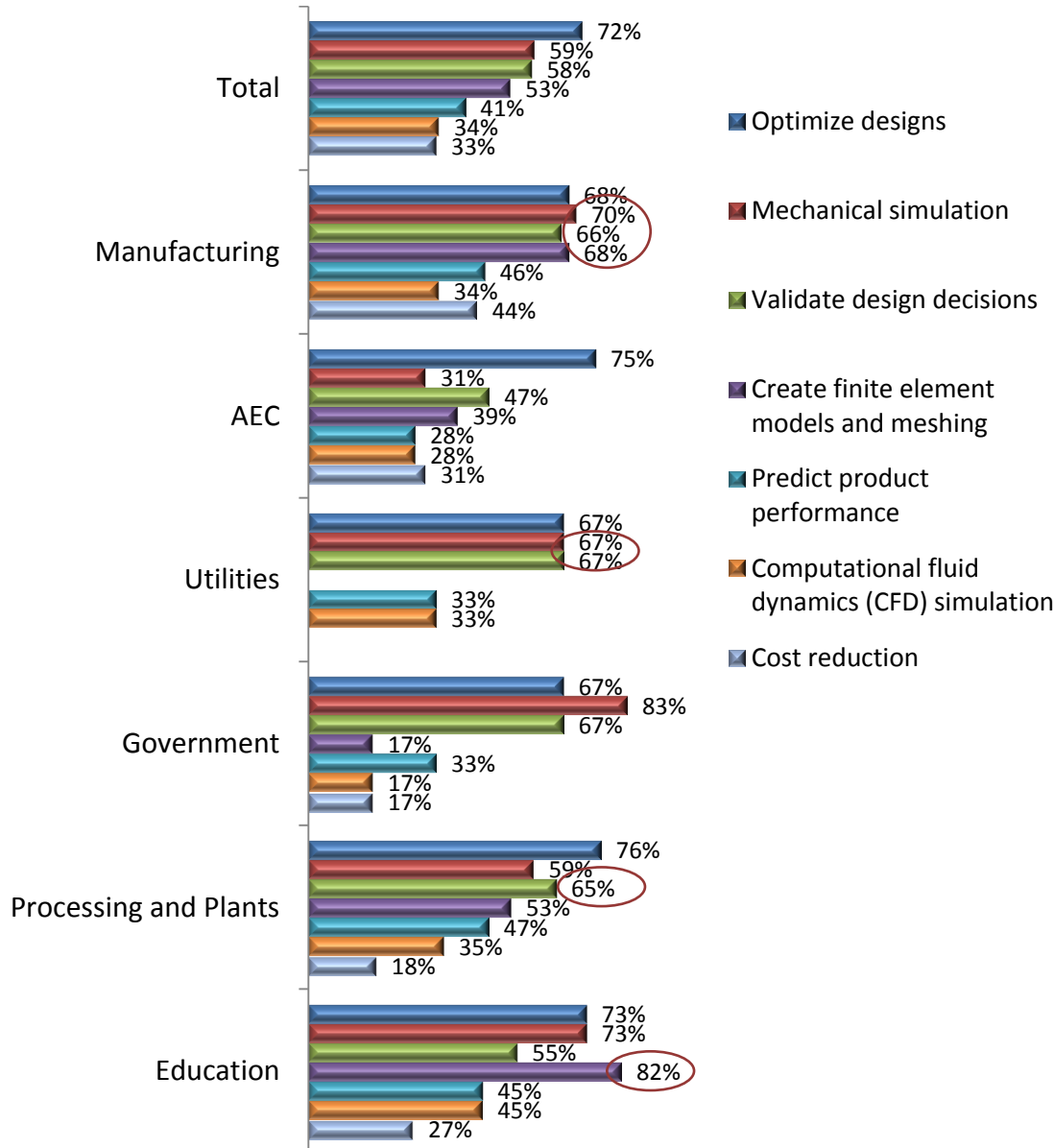
## What drives Importance in North America?



- Optimising and validating designs are the key drivers for Simulation Software in North America

*Based on those using or planning to use simulation*

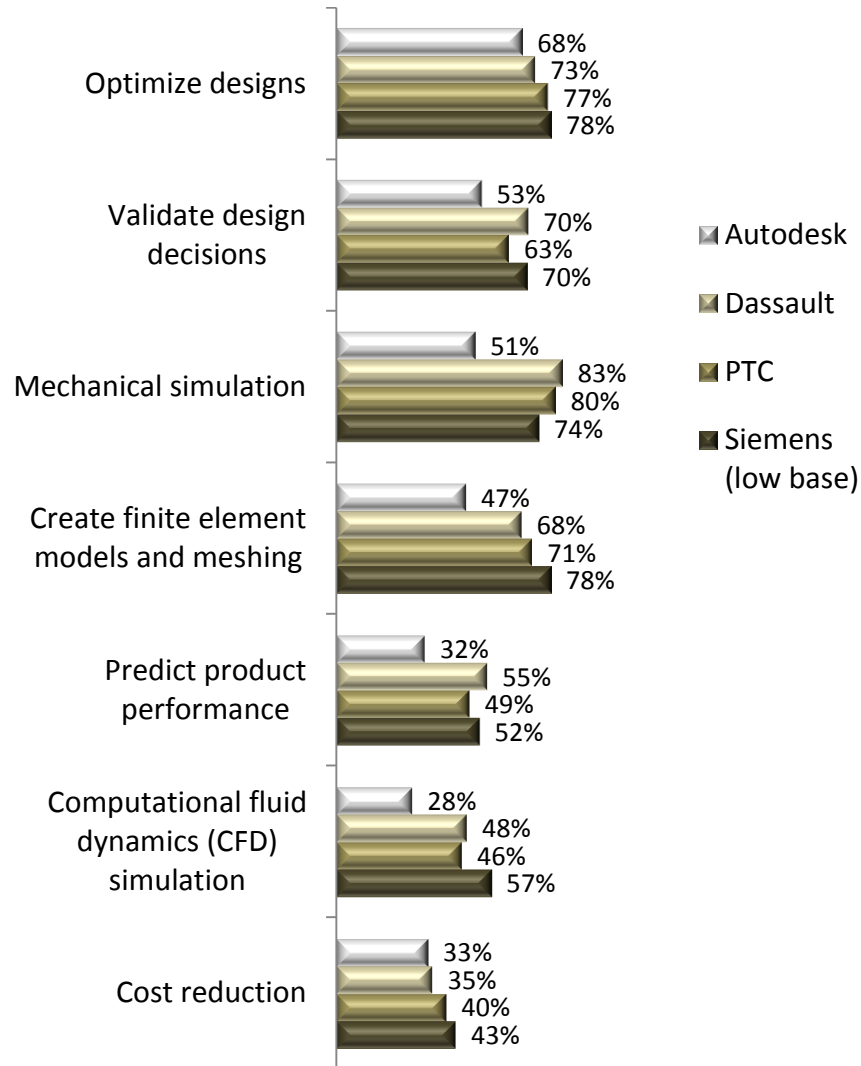
# Usage of Simulation Software – by Industry Sector



- Manufacturing sector uses simulation for a variety of reasons
- AEC sector uses it primarily to optimize designs
- Mechanical simulation and validating design decisions are key in Utilities
- In the Education sector simulation is mainly used to create finite element models and meshing



# Usage of Simulation Software – by CAD Vendor



- Dassault PTC and Siemens users show a similar pattern in using Simulation software
  - They mainly use Simulation for mechanical simulation, to validate designs and to create finite element models and meshing
- Autodesk users on the other hand show some differences in usage – optimizing designs is the key reason to use simulation

*Based on those using or planning to use simulation*

# Conclusions and Expectations for Simulation Software Suppliers



- Of all the CAD Trends we track, only ‘3D Modeling’ is more important or has higher awareness than ‘Simulation’
- Worldwide 28% already use ‘Simulation’
- This will grow significantly in all markets – achieving that growth may take different marketing, see this [case study](#)
- We expect Simulation software to continue to broaden its applications and markets, continue to get easier to use as well as become more accessible - for example Cloud business models are lowering hurdles of hardware power and software cost

We will continue to monitor the Simulation trend – if you have particular suggestions for the 2015 survey please give us your feedback



*Please get in touch with us for further information or customised reporting*  
[www.business-advantage.com](http://www.business-advantage.com)



Nicola Mansfield, Market Analysis Director ([nicola.mansfield@business-advantage.com](mailto:nicola.mansfield@business-advantage.com))  
Bill Gordon, VP Business Development ([bill.gordon@business-advantage.com](mailto:bill.gordon@business-advantage.com))  
Chris Turner, CEO/Managing Director ([chris.turner@business-advantage.com](mailto:chris.turner@business-advantage.com))



London: +44 (0)1689 873636  
San Francisco: +1 (650) 558-8870



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