

CAD Trends 2014



Looking to the Future



Purpose

Future planning is key for any business –

we at the **Business Advantage Group**, an international market research, data, sales development and consulting practice specialising in the CAD/CAM/CAE/PDM/PLM sectors want to assist you in that process in 2014 and beyond.

Methodology

To do this, we undertook an **online survey** in December 2013.

The perceived **importance, actual and future usage** of 14 topics related to CAD was captured, enabling us to identify **key trends in the CAD sector** now and over the next five years.

The survey was managed from our offices in London and San Francisco, drawing respondents from our in-house CAD/CAM data repository of over 500,000 CAD users and decision makers.

409 CAD users & decision makers across a range of company sizes and industries worldwide took part.

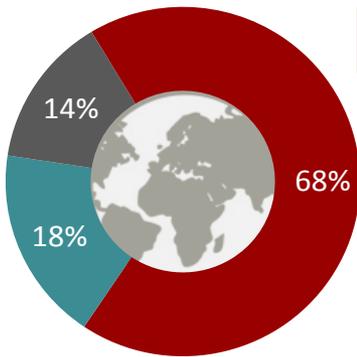
Get Involved

Now please take a look at our top line results...

...and let us know if you agree or disagree with our predictions.

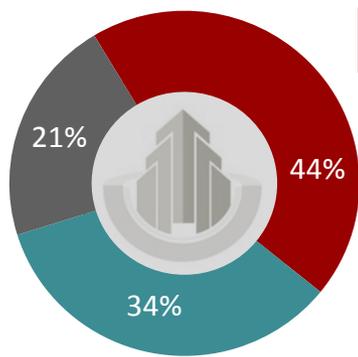
We would love to hear your thoughts.

The Survey Audience



Two thirds in EMEA

- EMEA
- Americas
- Asia Pacific

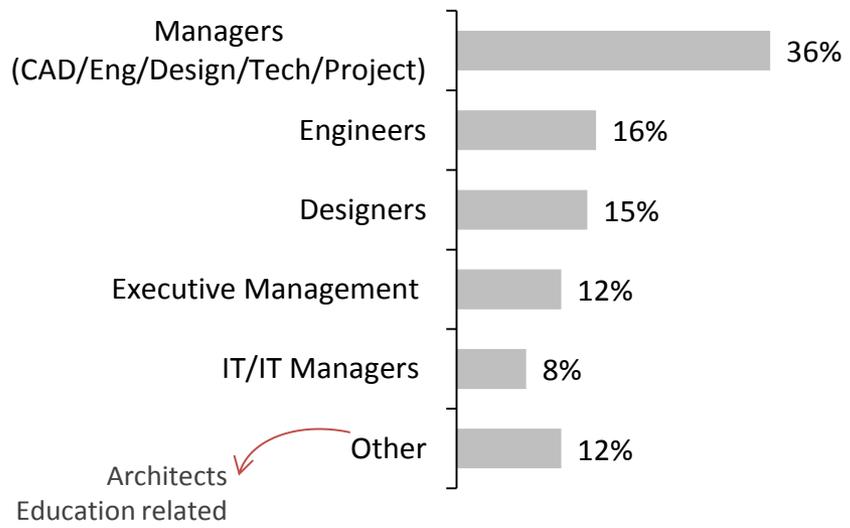


Three quarters SMEs

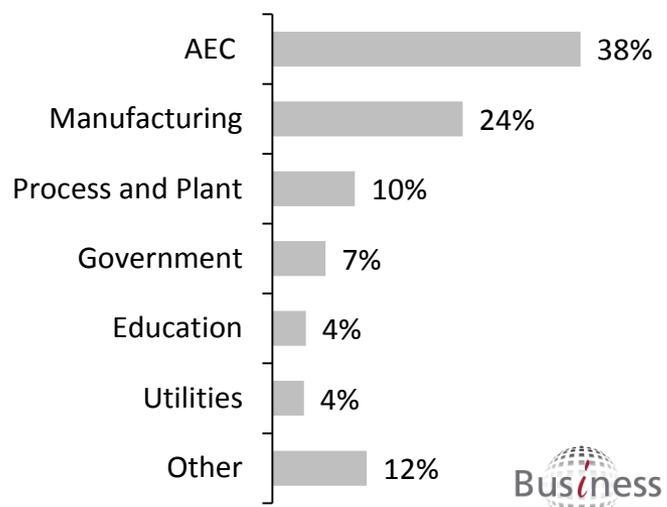
- Small (up to 50 employees)
- Medium (50 -1,000 employees)
- Large (over 1,000 employees)

409 Respondents

Respondent Profile by Job Title



Majority in AEC / Manufacturing / Process & Plant



Section One

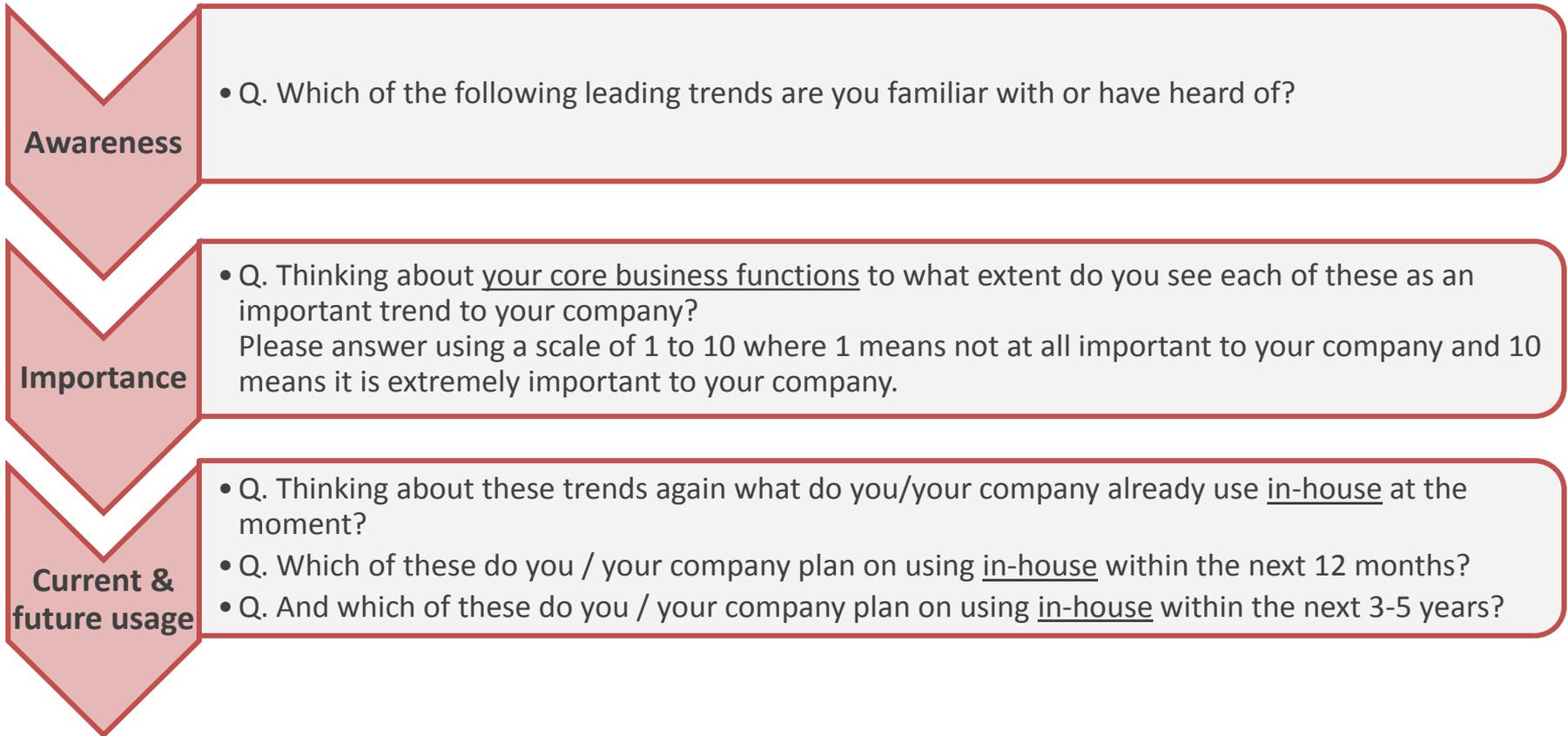
Key Trends



Key Topics

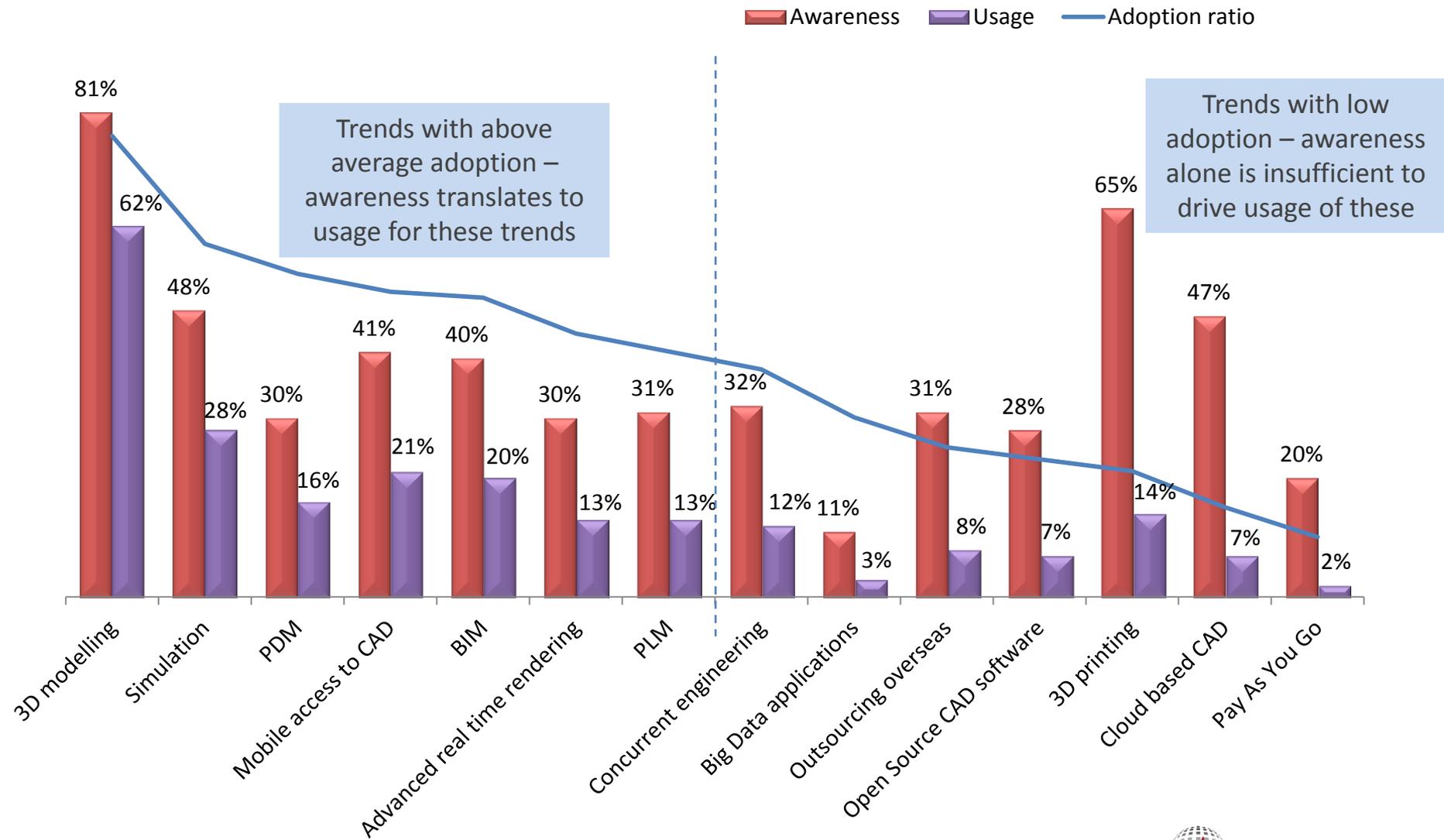


14 key CAD trends were identified for the survey, and respondents were asked a series of questions about each:



Picture of current situation and future trends

Current Trends Snapshot – Awareness/Usage



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

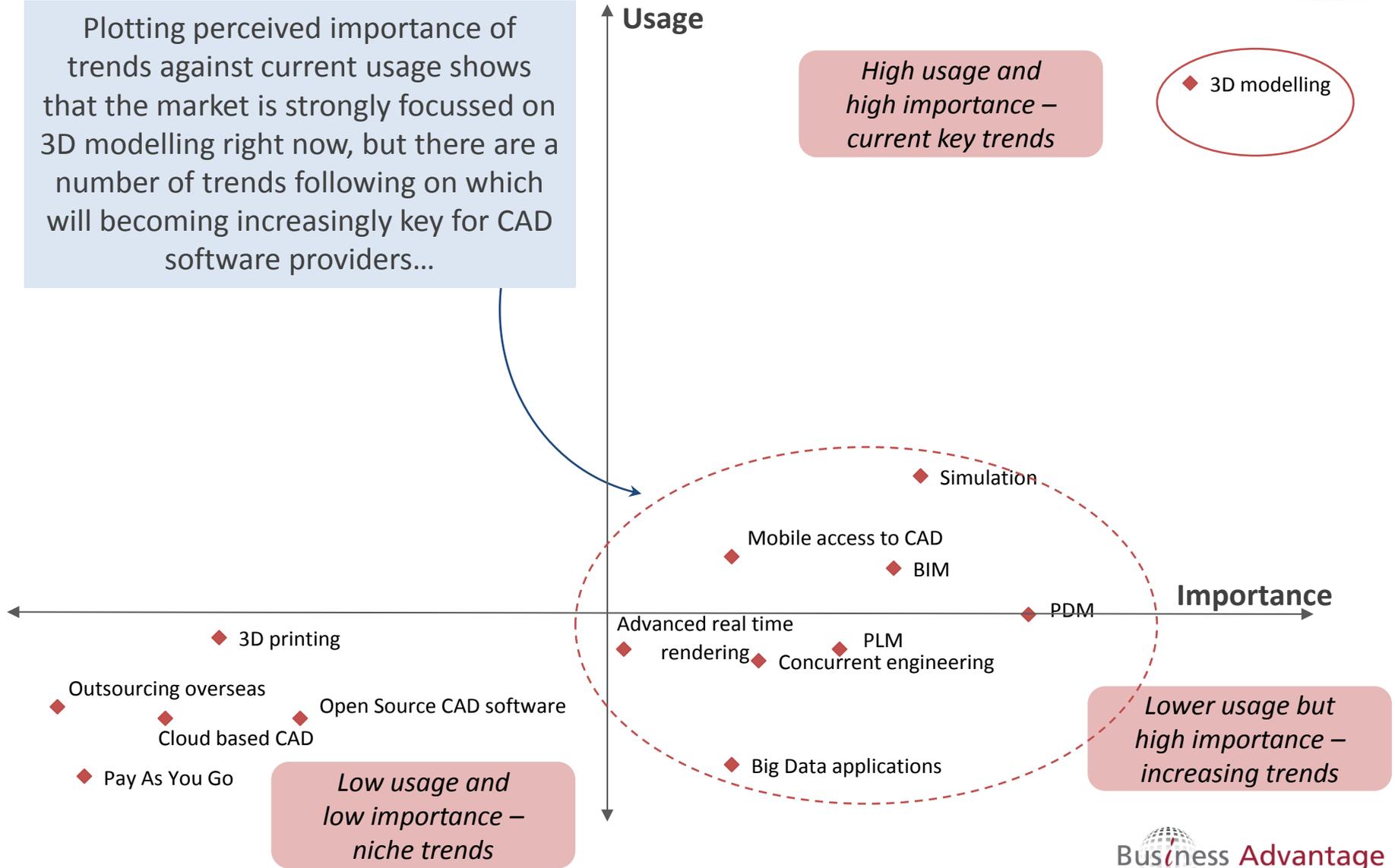


Q. Which of the following leading trends are you familiar with or have you heard of? (Base: All – 409)
 Q. Thinking about these trends again what do you/your company already use in-house at the moment? (Base: All – 409)

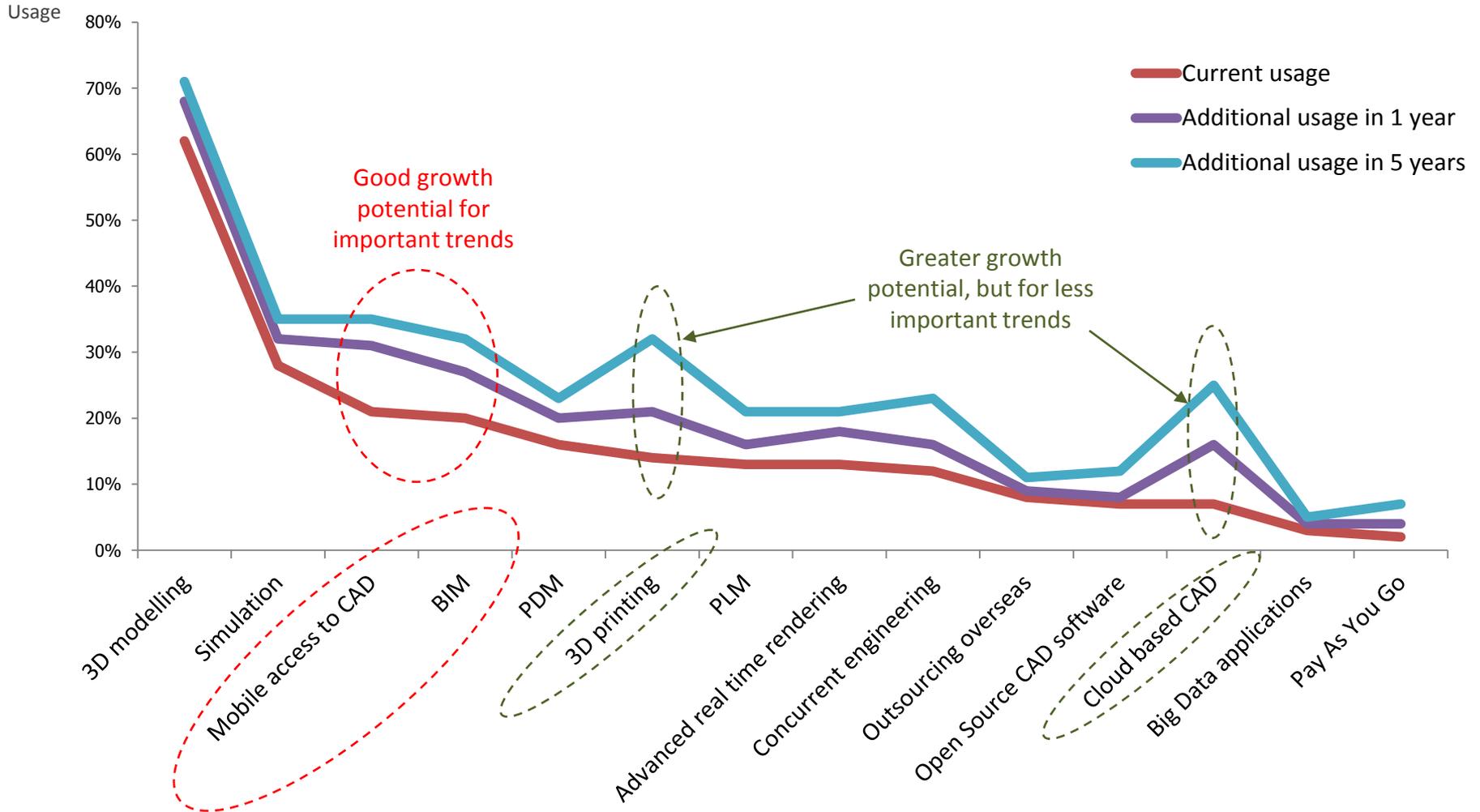
Current Trends Snapshot – Usage/Importance



Plotting perceived importance of trends against current usage shows that the market is strongly focussed on 3D modelling right now, but there are a number of trends following on which will becoming increasingly key for CAD software providers...



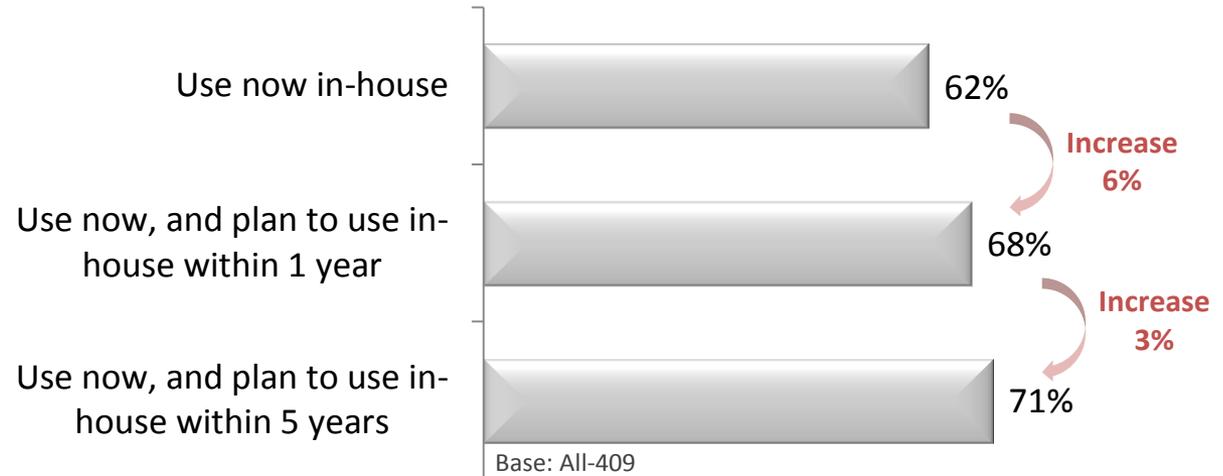
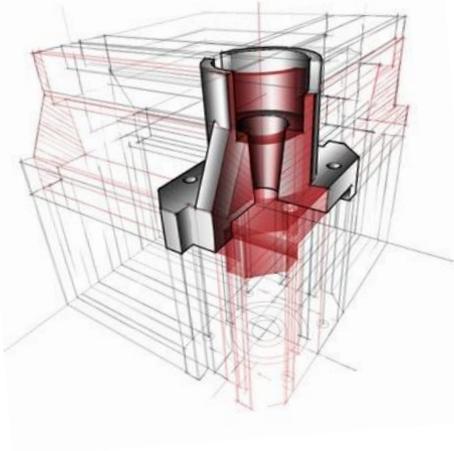
Looking to the Future



Taking each topic in a little more detail in the order of their importance to the market ...



Importance score **7.5 out of 10**
(based on those aware of 3D Modelling – 330)



Key facts:

Core area in today's market, with high importance and usage

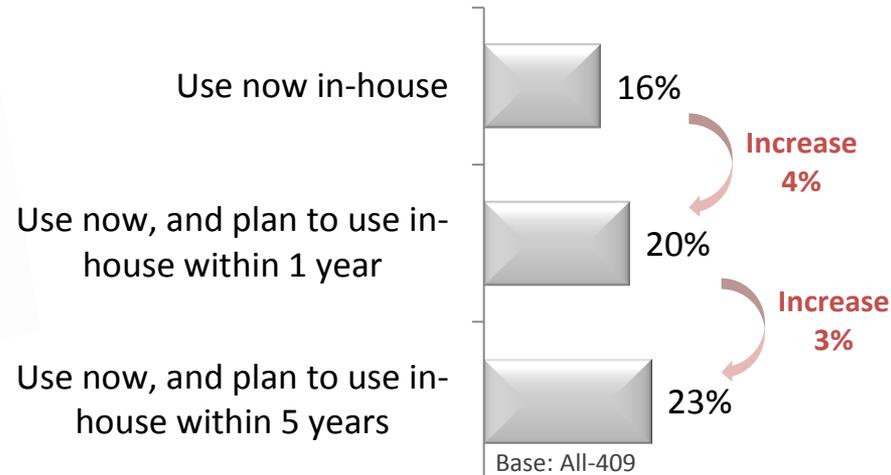
AEC and Manufacturing have similar levels of use

Higher current usage in Germany (81%) than other markets (55%)

Generally high usage across industry sectors

Medium sized companies (50-1,000 employees) more likely to be users than small companies (70% vs.56%)

Importance score **6.9 out of 10**
(based on those aware of PDM – 122)



Key facts:

Stable area in today's market, with high importance and average usage, with lower than average future growth

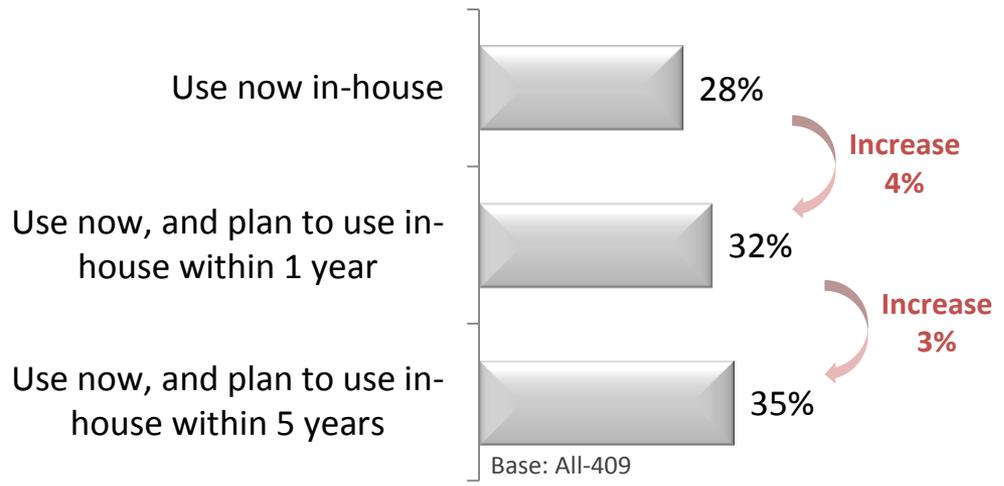
Higher current usage in Manufacturing (36%) than other industry sectors (10%)

Higher usage in medium/large companies (24%) than in small (7%)

3

Simulation

Importance score **6.5 out of 10**
(based on those aware of Simulation – 197)



Key facts:

Stable area in today's market, with high importance and higher than average usage, but lower than average future growth

Higher current usage in Germany (47%) and the USA (35%)

Usage ranges across sectors from Manufacturing (45%) to Utilities (13%)

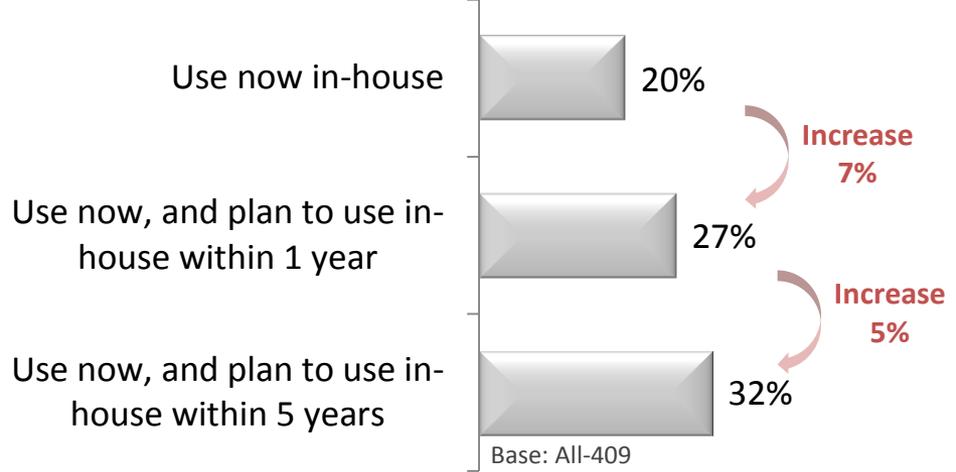
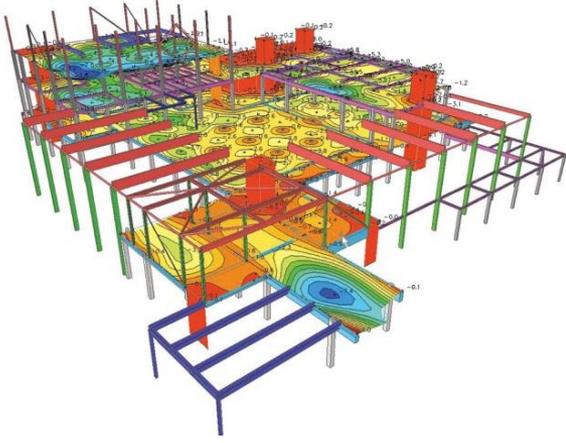
More likely to be used in large companies (41%) than small companies (19%)

Usage of simulation seen in the main for design optimisation (71%) or validation (59%), as well as creating finite element models (53%) *(based on those using or planning to use simulation – 147)*

4

Building Information Modelling (BIM)

Importance score **6.4 out of 10**
(based on those aware of BIM – 165)



Key facts:

Growing area in today's market, with high importance and higher than average usage, and additionally higher than average future growth

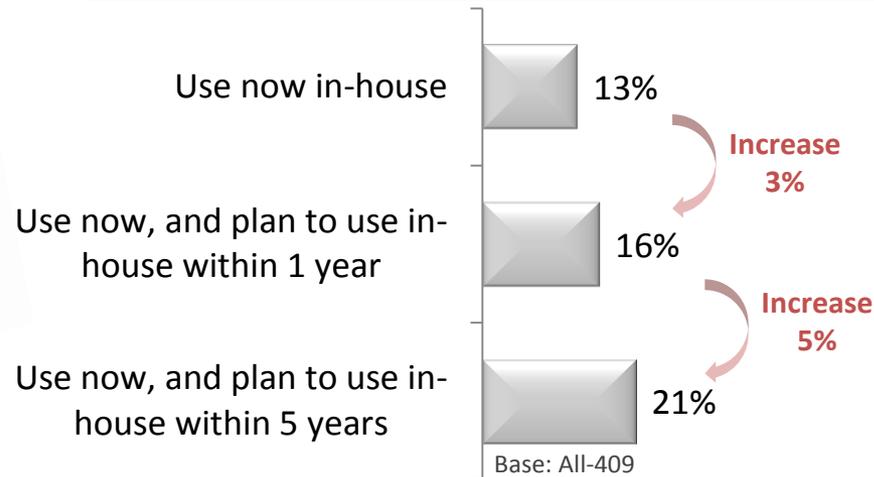
Higher usage in medium companies (27%) than in small (16%)

Benefits of using BIM seen in the main as design improvement (59%), savings on design time (54%) and cost (35%), as well as faster response times to market (35%) *(based on those using or planning to use BIM – 130)*

Product Lifecycle Management (PLM)

Importance score **6.2 out of 10**

(based on those aware of PLM – 128)



Key facts:

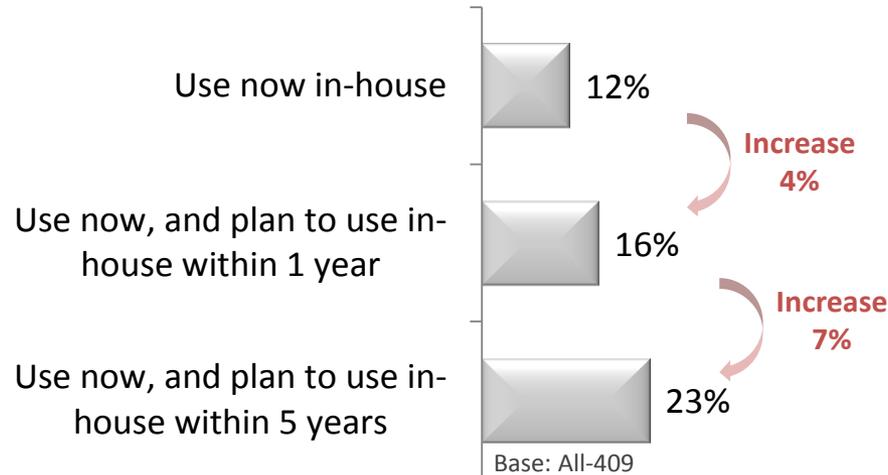
Relatively stable area in today's market, with above average importance and average usage, and average future growth in the 5 year timespan

Higher current usage in the Americas (24%) than EMEA (11%) and in large companies (27%) than small (5%) or medium companies (15%)

PTC Windchill is the main product used (27%) and the perceived benefits are savings on design time (48%) and cost (37%), as well as design improvements (48%) (based on those using or planning to use PLM – 84)

Importance score **5.9 out of 10**

(based on those aware of Concurrent Engineering – 130)



Key facts:

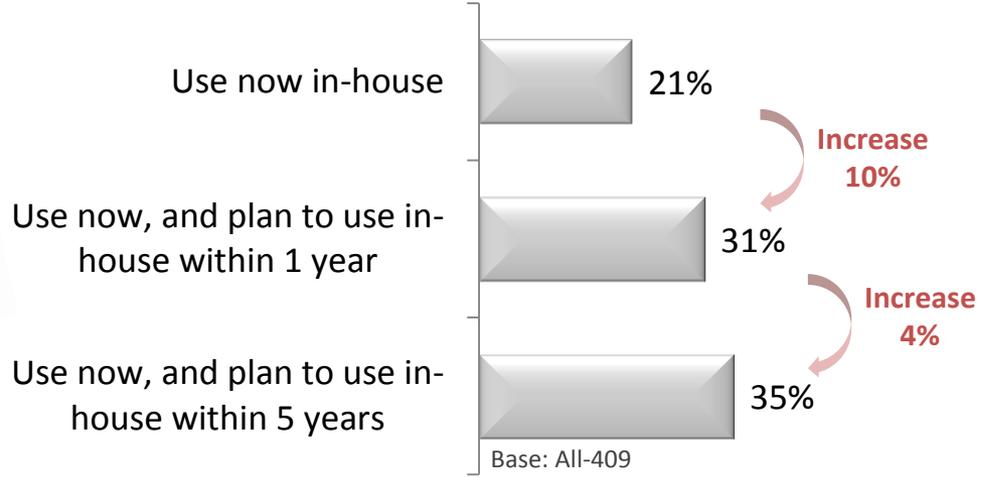
Growing area in today's market, with above average importance and average usage, but with above average future growth, particularly in the 5 year timespan

Higher usage in large companies (19%) than small (9%)

7

Mobile Access to CAD

Importance score **5.8 out of 10**
(based on those aware of Mobile Access to CAD – 169)



Key facts:

Growing area in today's market, with above average importance and usage, and above average future growth, particularly in the 12 month timespan

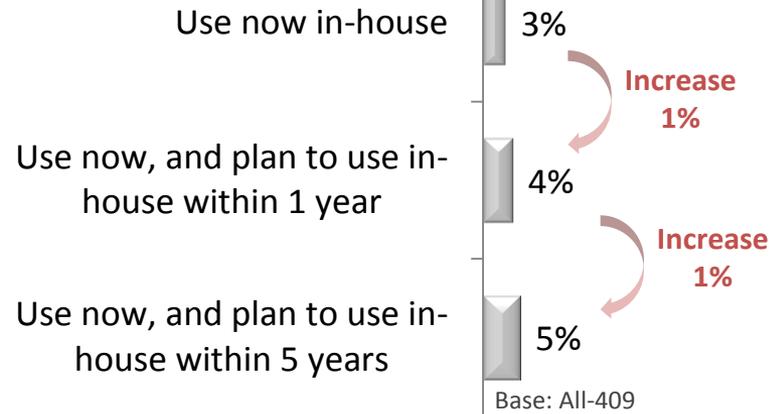
Higher usage in Americas (26%) and EMEA (22%) than Asia Pacific (9%) – growth in coming year more likely to come from Asia Pacific (18%) than EMEA (8%)

This trend is reflected in the hardware usage data shown later in this report



Importance score **5.8 out of 10**

(based on those aware of Big Data – 46)



Key facts:

Niche area in today's market, with above average importance, but very low usage, and little sign of future growth – also very low awareness (only 1 in 10 have heard of Big Data)

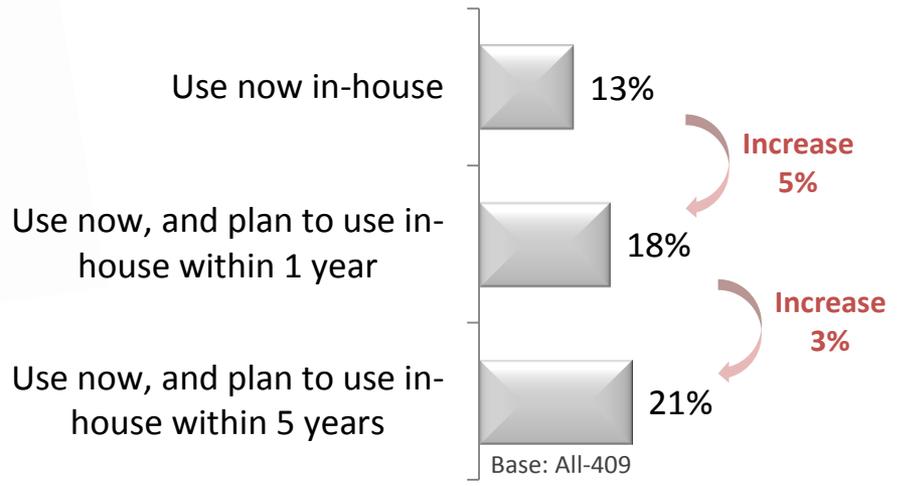
This is the case across all sectors and regions

Benefits of Big Data are seen as faster response times to market (45%), savings on cost (41%) and design time (32%), as well as design improvements (32%), and a range of solutions are currently used, but by a small minority of the market (based on those using or planning to use Big Data – 22)

Advanced Real-Time Rendering and Visualization



Importance score **5.4 out of 10**
(based on those aware of Advance Real-Time Render – 123)



Key facts:

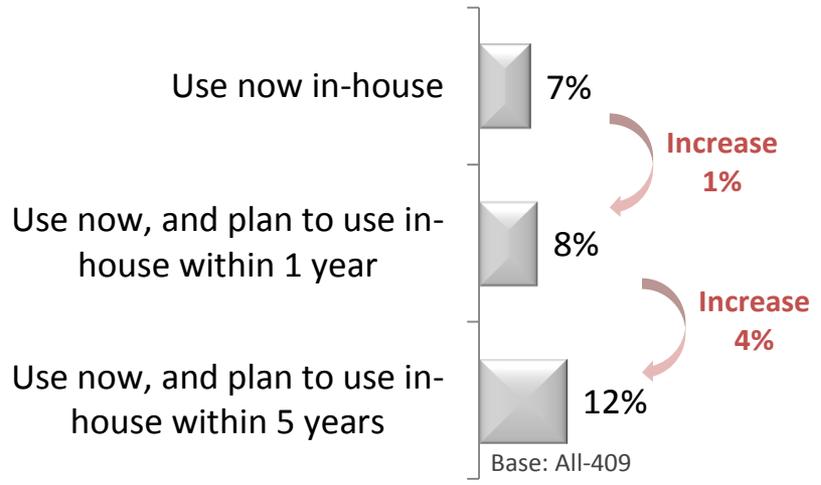
Very stable area in today's market, with average importance and usage, as well as average future growth

Similar picture across sectors and regions, although growth in the next 5 years more likely to come from Asia Pacific (9%) than EMEA (3%)

Open Source CAD Software



Importance score **4.2 out of 10**
(based on those aware of Open Source CAD Software – 116)



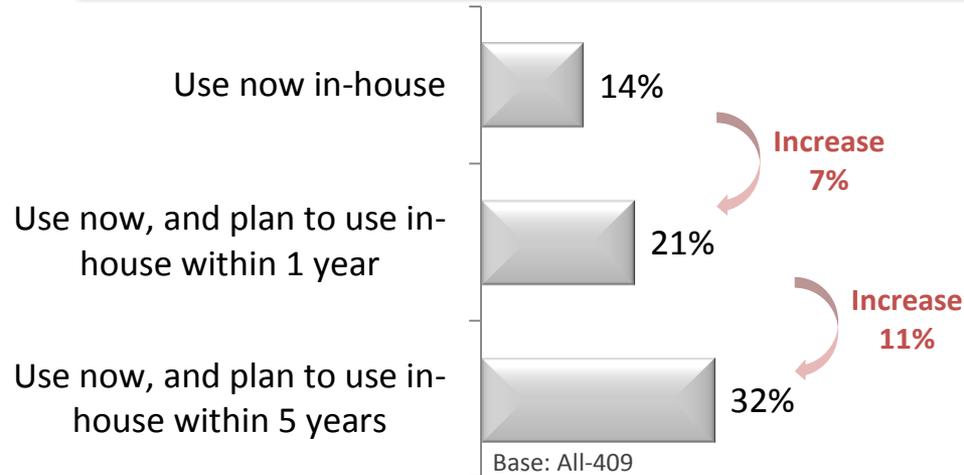
Key facts:

Very niche area in today's market, with below average importance, low usage and below average future growth

This is the case across all sectors and regions, and no particular area stands out for future growth



Importance score **3.9 out of 10**
(based on those aware of 3D Printing – 267)



Key facts:

Potential area of interest in today's market, with currently low average importance, but average usage, and strong future growth

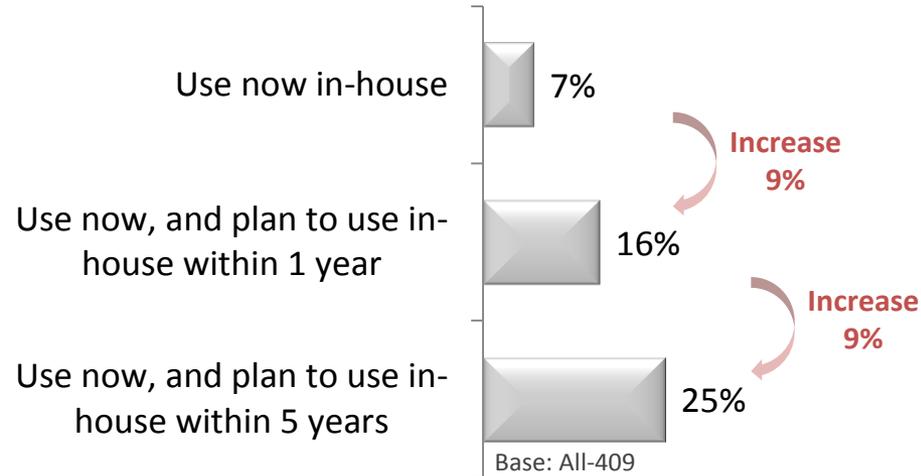
Higher usage in Americas (26%) than EMEA (12%) and Asia Pacific (11%) - also higher usage in large companies (28%) than medium (16%) or small (6%). Growth likely in all sectors and regions

Low brand recognition, the majority could not name their brand. Benefits of 3D printing seen as design improvements (63%), savings on design time (54%) and cost (24%), as well as faster response times to market (38%) (based on those using or planning to use 3D printing – 128)



Importance score **3.7 out of 10**

(based on those aware of Cloud Based CAD – 194)



Key facts:

Potential area of interest in today's market, with currently low average importance and below average usage, but strong future growth

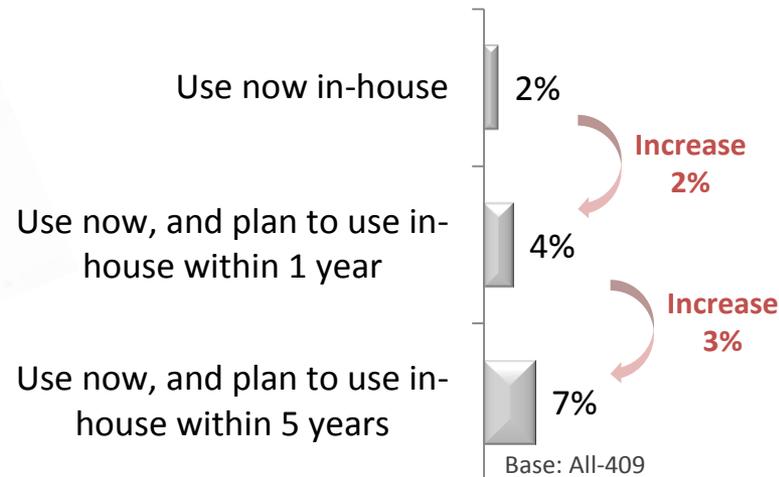
Similar picture across sectors and regions

5 year growth more likely to come from Americas (16%) than EMEA (8%)

Benefits of cloud based CAD seen as higher mobility (76%), increased storage capacity (36%), ease of updating software (35%) and cost reductions (33%) (based on those using or planning to use Cloud based CAD – 103)

Importance score **3.4 out of 10**

(based on those aware of Pay As You Go CAD – 83)



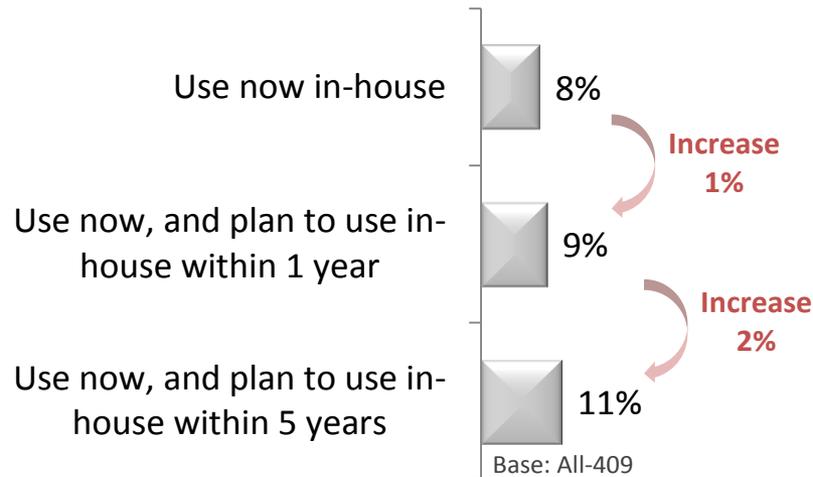
Key facts:

Very niche area in today's market with limited appeal – low importance, low usage and below average future growth

This is the case across all sectors and regions, and no particular area stands out for future growth



Importance score 3.3 out of 10
(based on those aware of Outsourcing overseas – 125)



Key facts:

Niche area in today's market – low importance, below average usage and no sign of future growth

Unsurprisingly higher usage in large companies (14%) than small (4%)

Section Two

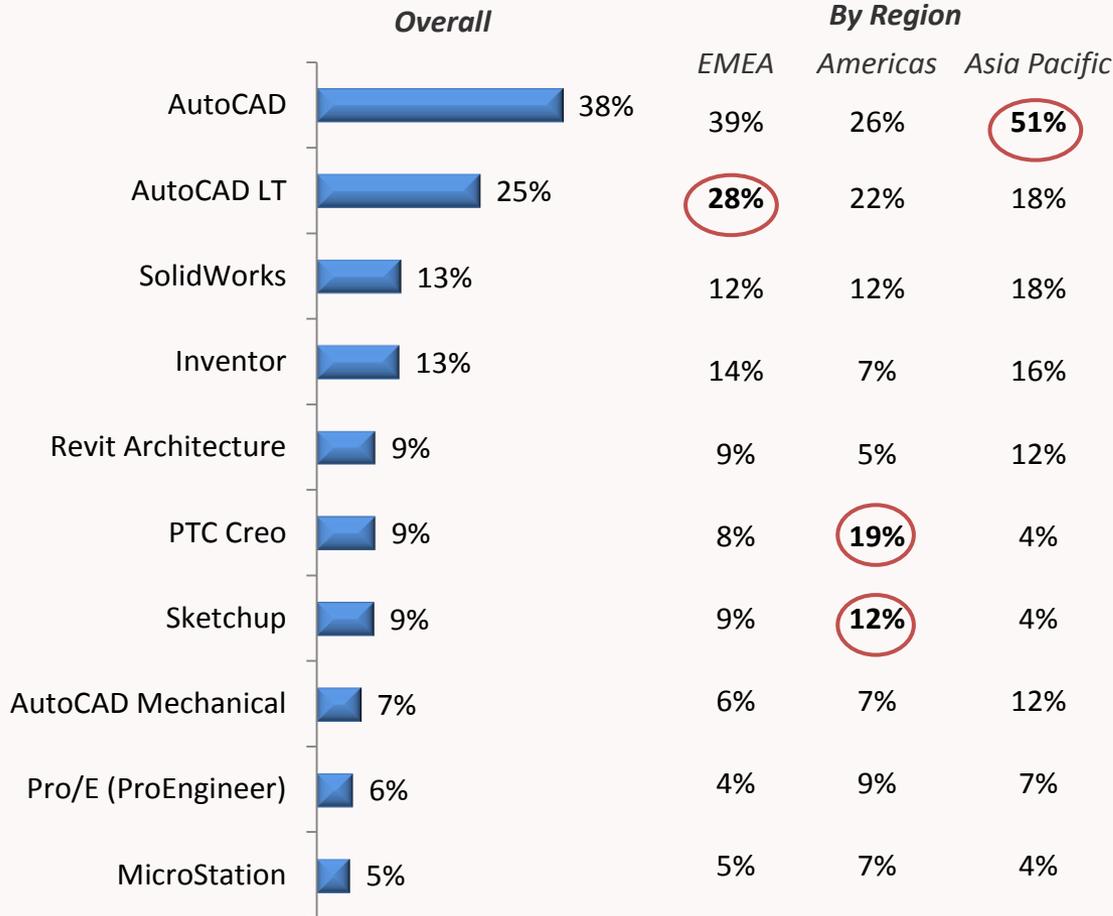
CAD Usage



Top 10 CAD Software Packages in the Market



Product Usage



Note: Usage of 70 different CAD systems were captured in the Survey
Some use multiple CAD software packages and therefore the figures don't add up to 100%

Significantly different from other regions

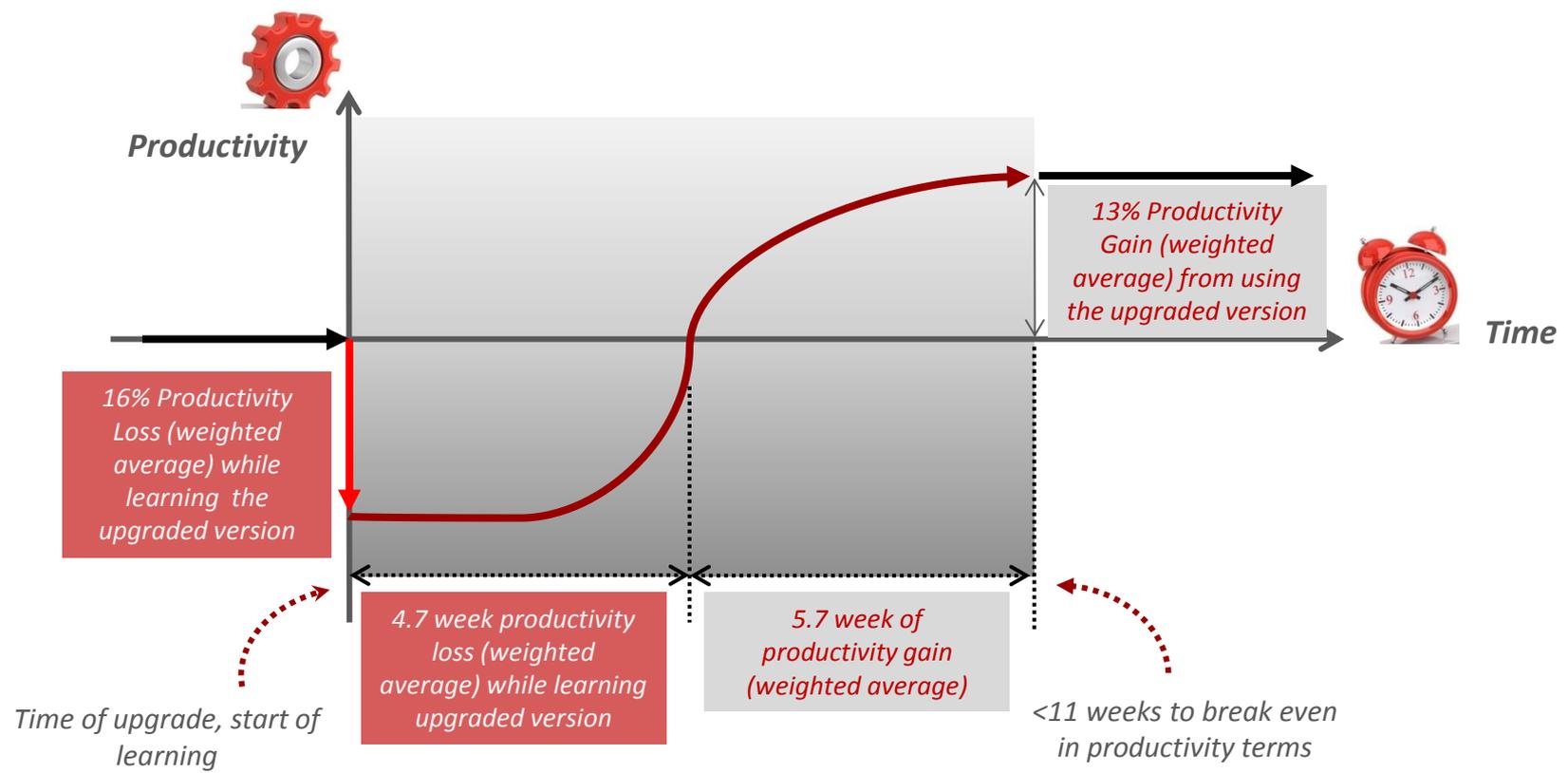
AutoCAD has the highest usage across regions with a very strong presence in APAC

The majority (66%) are multiple CAD software package users and only 34% depend on a single CAD software package

Amongst multiple users, AutoCAD is used 54% of the time, AutoCAD LT and SolidWorks 47% of the time

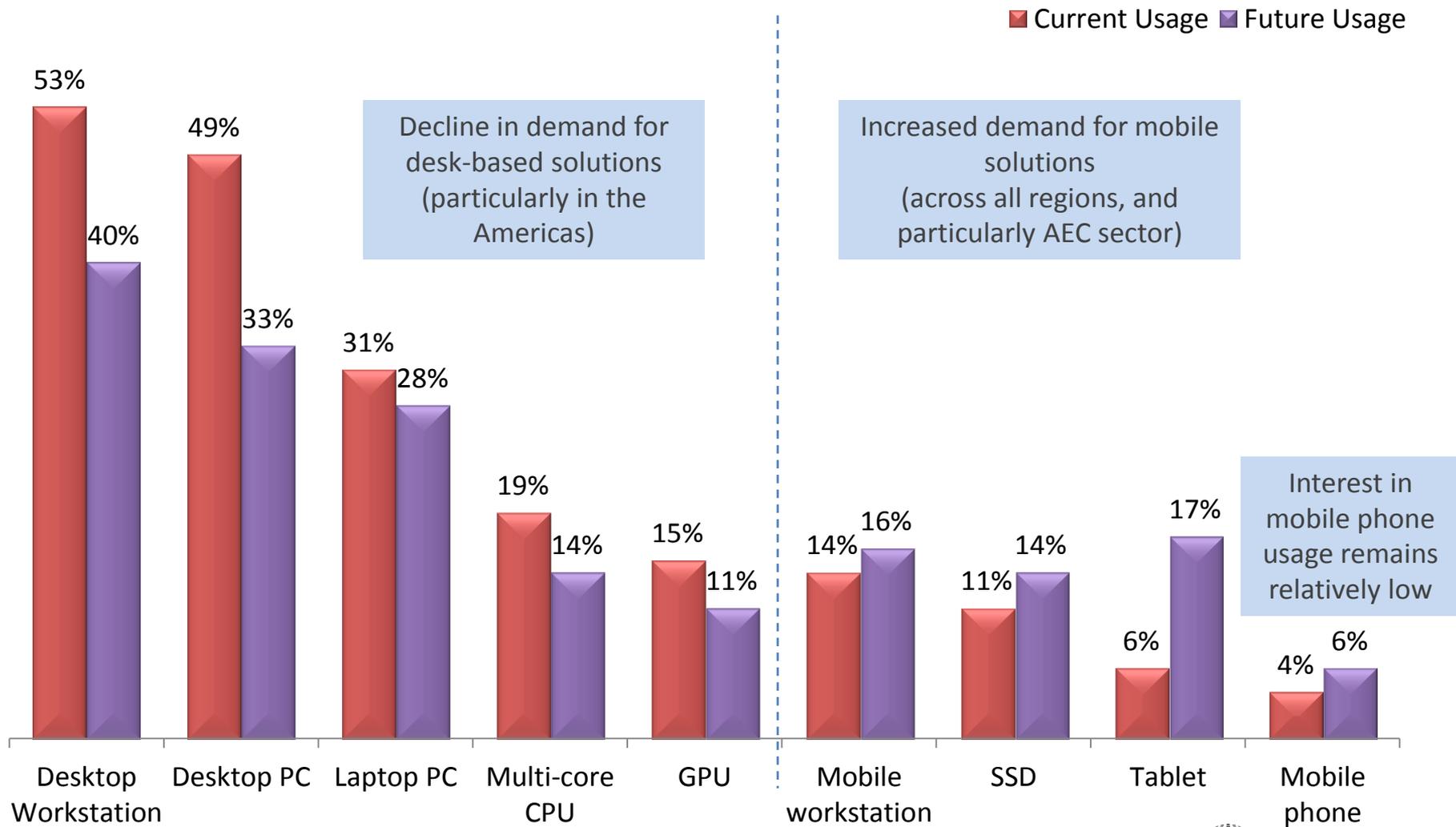
Is there Value in Software Upgrades?

Just over half of those surveyed had upgraded, changed or added to their CAD software in the last 12 months, so were asked a series of questions around productivity during transition.



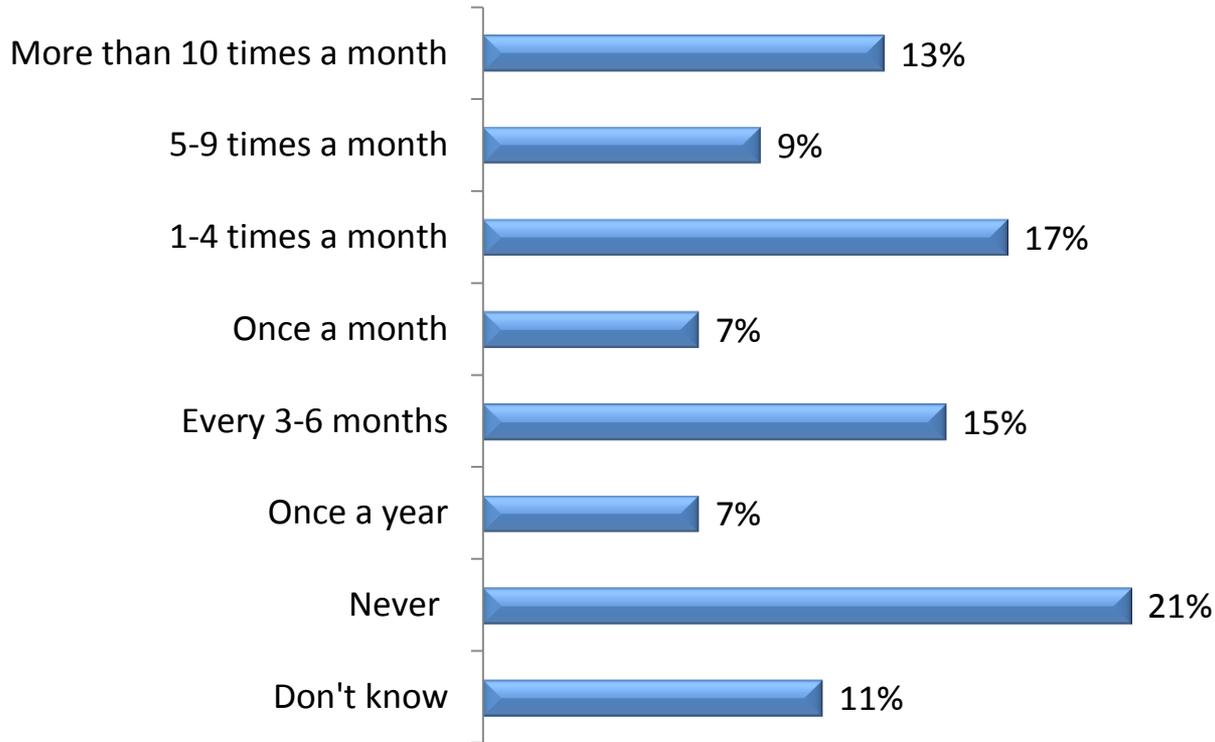
These results show that **on average CAD upgrades break even (in productivity terms) in less than 3 months** and thereafter can continue to produce productivity gains.

What Hardware is being used, and what will be used next?

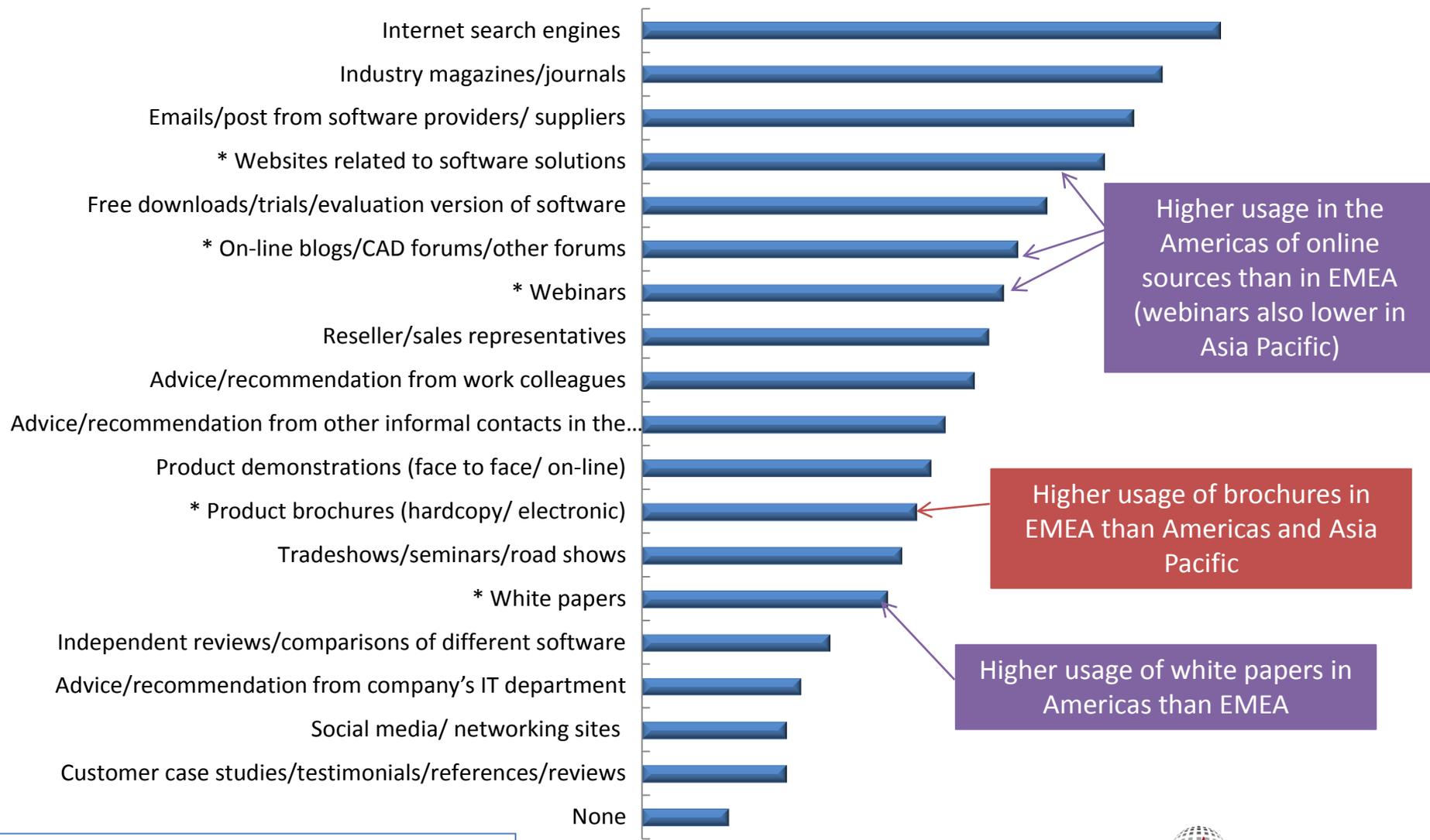


Who is downloading 3D models?

Two thirds of users state that they download ready-made 3D models at least once a year, with the majority doing so at least monthly



What are the sources of information in the market?



Higher usage in the Americas of online sources than in EMEA (webinars also lower in Asia Pacific)

Higher usage of brochures in EMEA than Americas and Asia Pacific

Higher usage of white papers in Americas than EMEA

* Shows significant difference between regions



APPENDICES

Technical Survey Information



- In looking at future usage, we have made the assumption that current usage will continue, therefore future usage is an incremental addition to current usage
- All differences mentioned within the report are statistically significant at the 95% confidence level



Please get in touch with us for further information or customised reporting



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