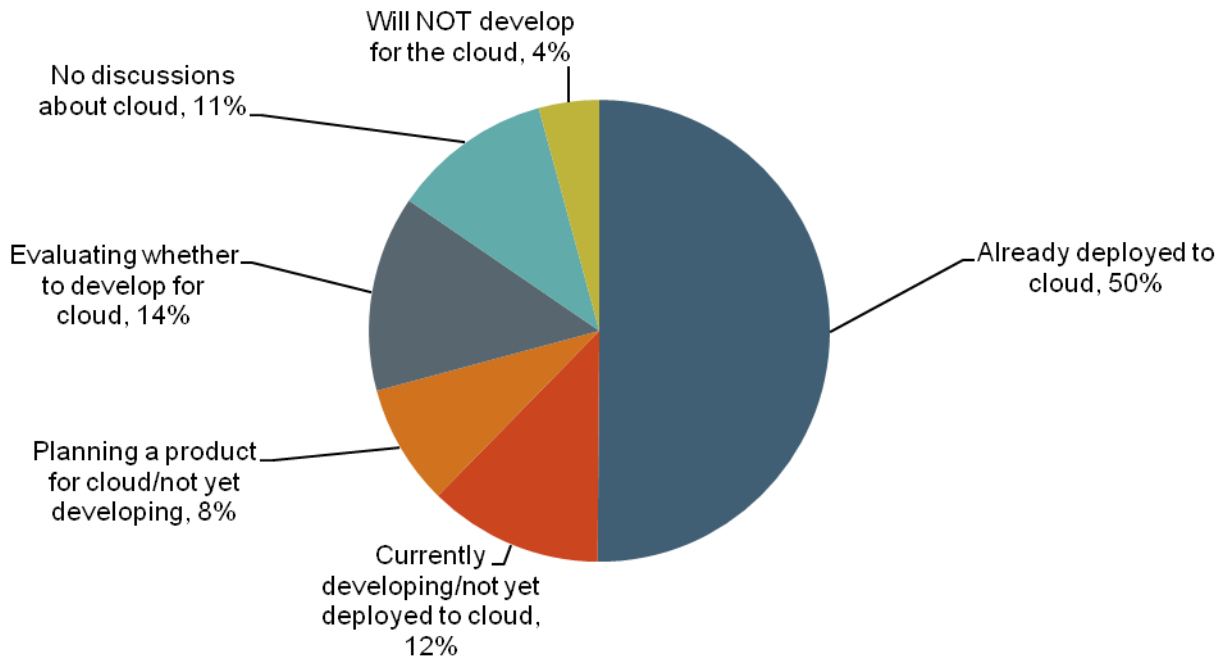


# WHITE PAPER: ADOPTION OF AND ATTITUDES TOWARD CLOUD COMPUTING AMONG US-BASED ISVS

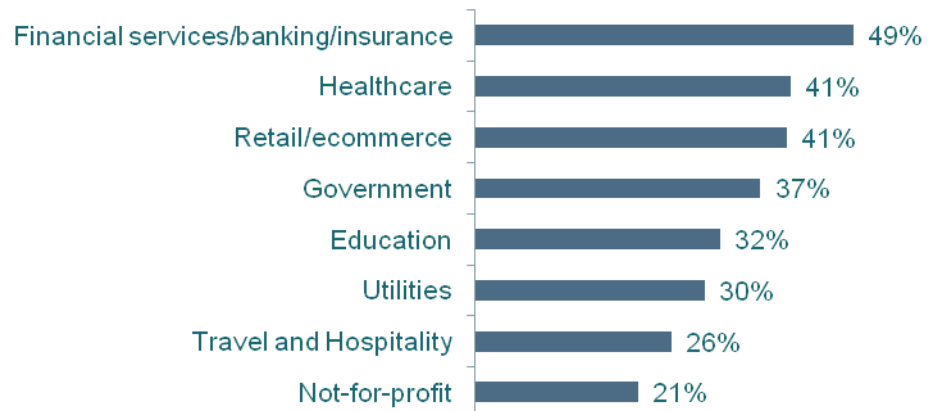
In the summer of 2009, Microsoft commissioned its research partner Market Strategies International to study the technical and business considerations of independent software vendors (ISVs) and their use and consideration of cloud computing. The following is a summary of key findings.

## ISVS AND THEIR STATUS REGARDING CLOUD AS A PLATFORM

Among US-based ISVs, half have already deployed at least 1 application to the cloud, and another 20% are planning or developing a product for deployment in the cloud. Only 4% say they have decided not to develop for the cloud.

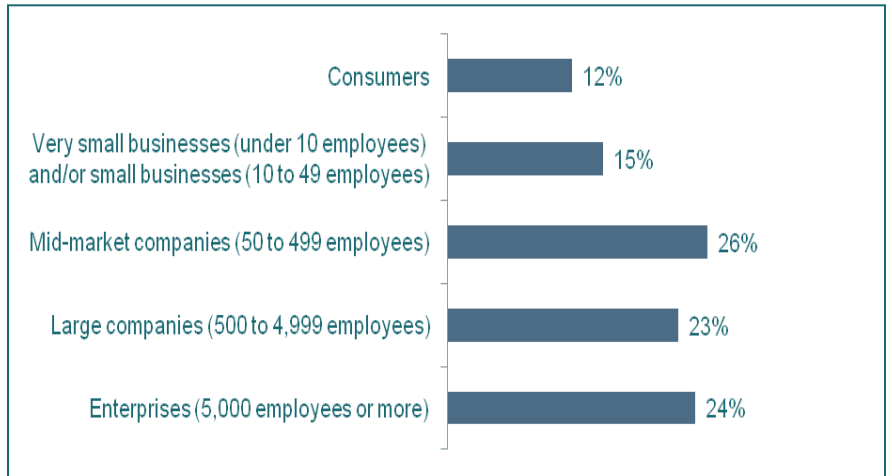


As they target the cloud for new business opportunities, ISVs are also focusing on certain customer types. Despite regulatory and data privacy issues, finance and healthcare, along with retail, are the top industry sectors targeted.

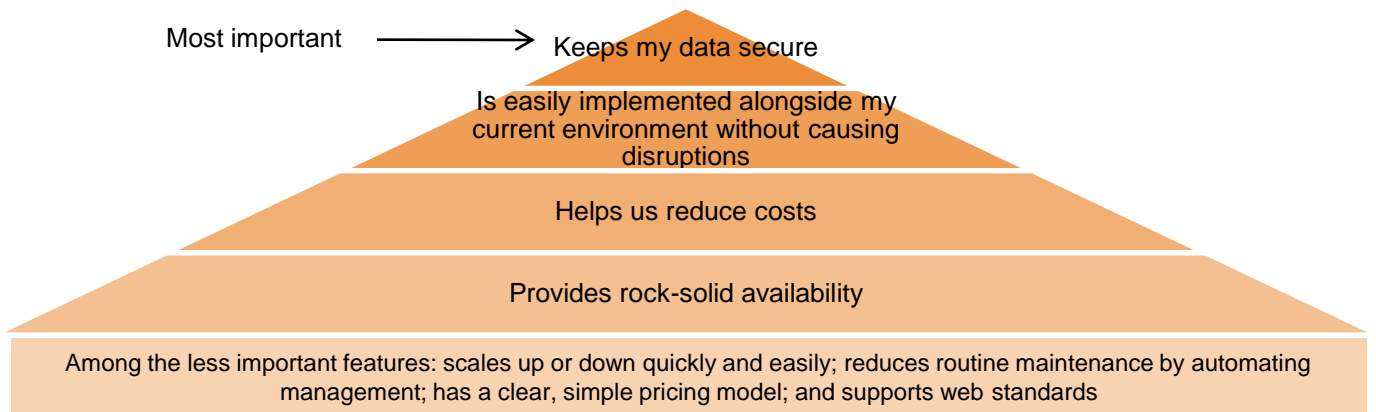


## Enterprise-Focused

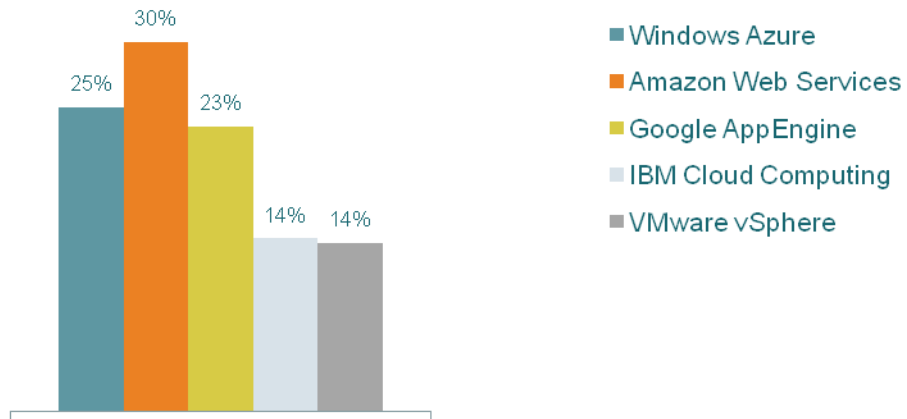
And when asked who the targeted end-users for their cloud platforms are, the results split between the less frequently targeted consumers and small businesses and the more commonly targeted mid- to top-tier companies. As you will see later in this white paper, the focus on small companies is much lower when the context is cloud computing (than as a general target for ISVs.)



When evaluating potential features or attributes of a cloud computing platform provider, developers and technology decision-makers consistently identify 4 features as most important:

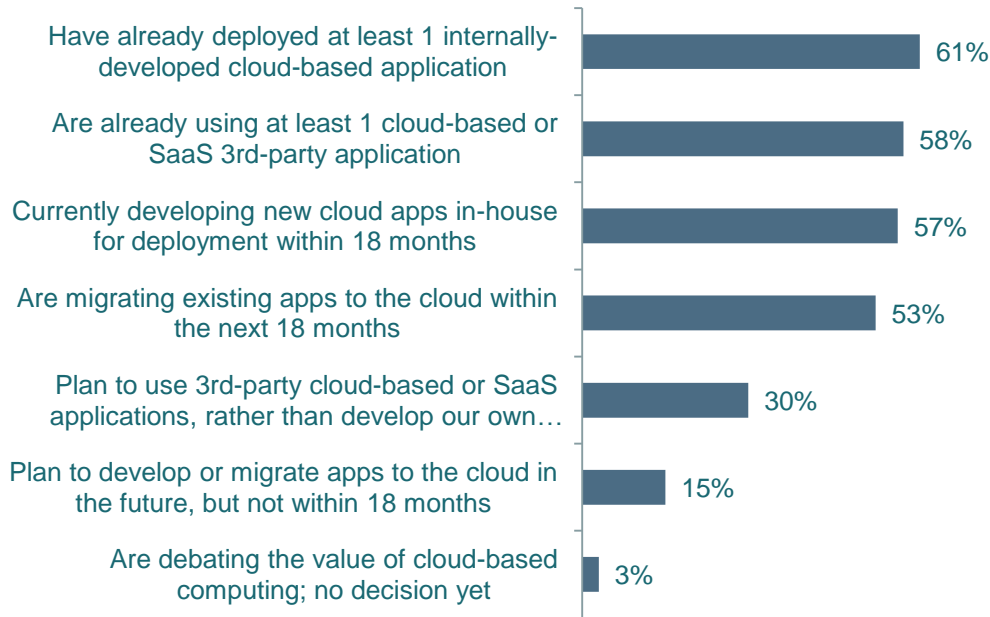


When asked about their awareness of several leading cloud technology providers, they are most familiar with AWS; Windows Azure and Google AppEngine follow closely behind.

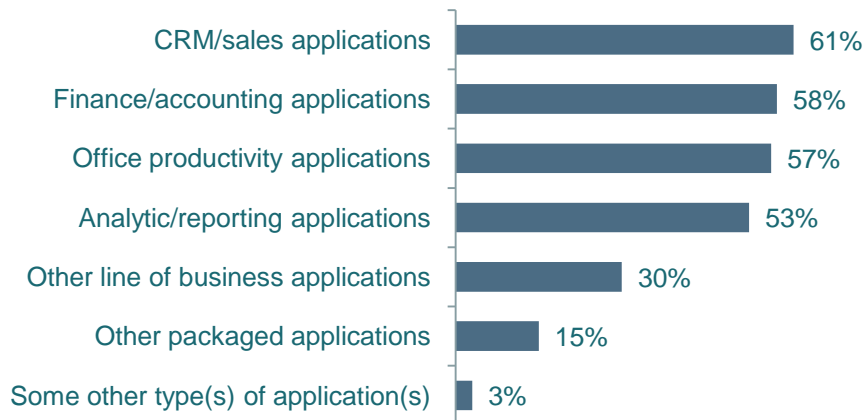


## ENTERPRISE STATUS REGARDING CLOUD AS A PLATFORM

The survey also interviewed developers and decision-makers in the Enterprise company space. When asked about their deployment plans, a majority are already using internally-developed and 3rd-party cloud apps, and similar numbers are developing or migrating existing apps to the cloud.



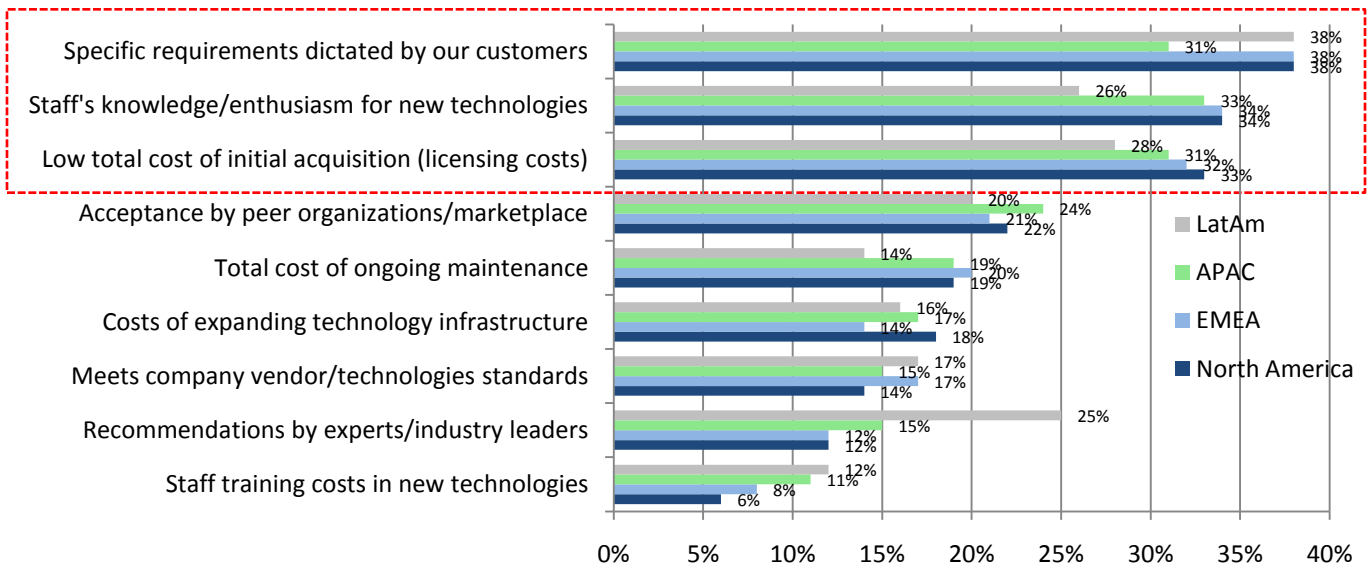
And when asked what type(s) of enterprise applications their company is already delivering or planning to deliver to employees via cloud computing, over half say they will deploy each of the top business workloads.



The following results are from an earlier ISV-oriented study conducted in 2008 and are included here to provide additional value to this white paper.

## HOW TECHNOLOGY PLATFORM DECISIONS ARE MADE

When asked to identify the most important criteria in selecting development platforms, ISVs say they are driven foremost by their customers' specific requirements. That's followed closely by existing staff knowledge and/or enthusiasm to work with new technologies and by low licensing costs.

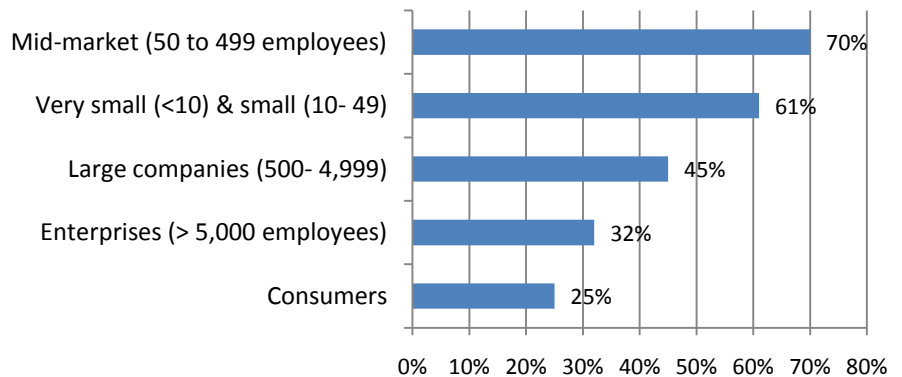


ISVs generally place lower priority on cost to train staff around new technologies and recommendations by experts or industry leaders, with the exception of Latin America, which places relatively higher emphasis on the latter than do other regions.

## WHAT MARKETS ARE TARGETED?

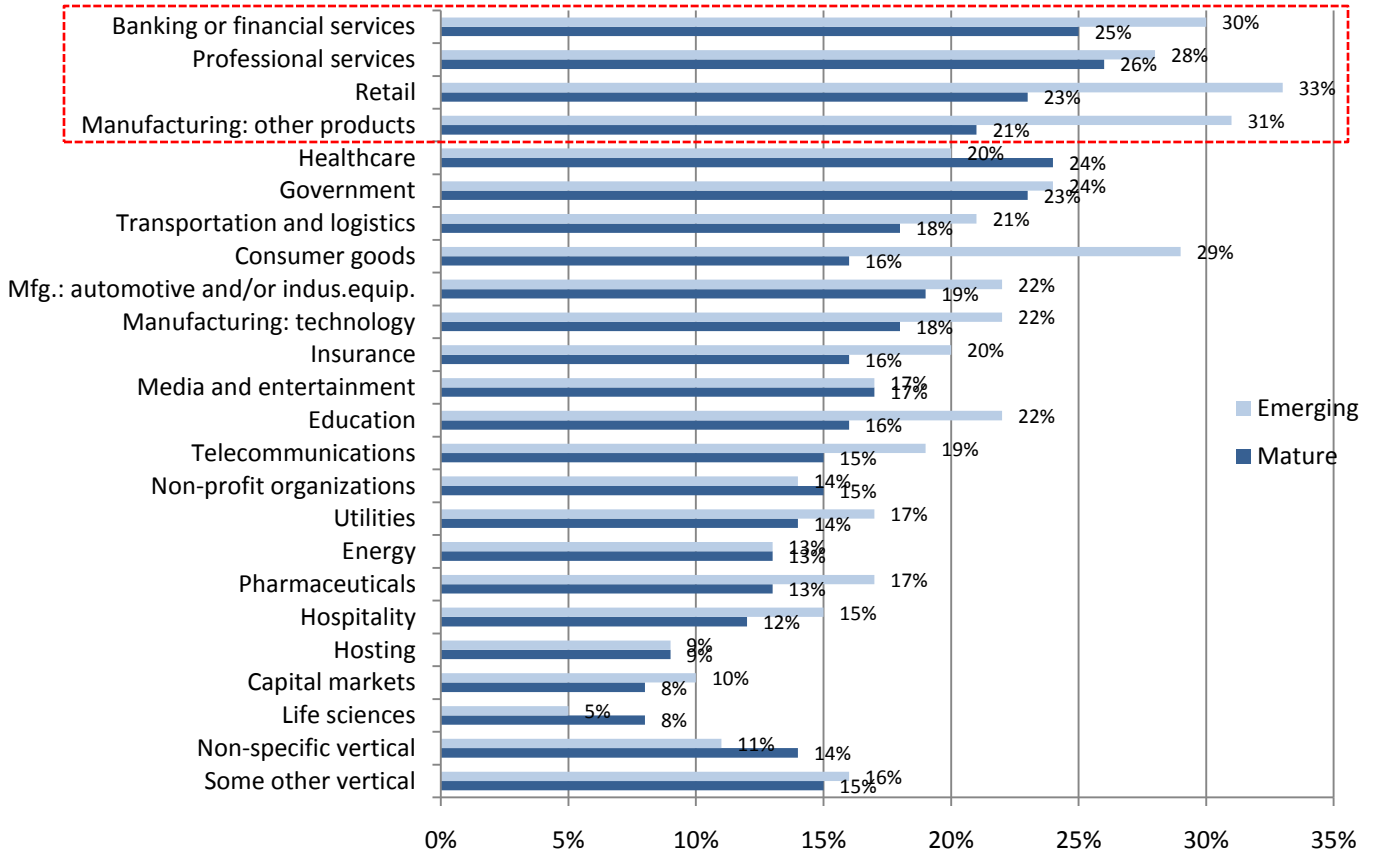
The sweet spot for the majority of ISVs appears to be mid-market companies (50–499 employees), followed by small businesses in the 10- to 49-employee range. Large enterprises represent a much more competitive market segment, with fewer ISV players. Consumers are least frequently targeted.

## Target Markets for Software Apps



## VERTICAL MARKET TARGETS GENERALLY REFLECT THAT SMALL-MIDMARKET TARGET ORIENTATION

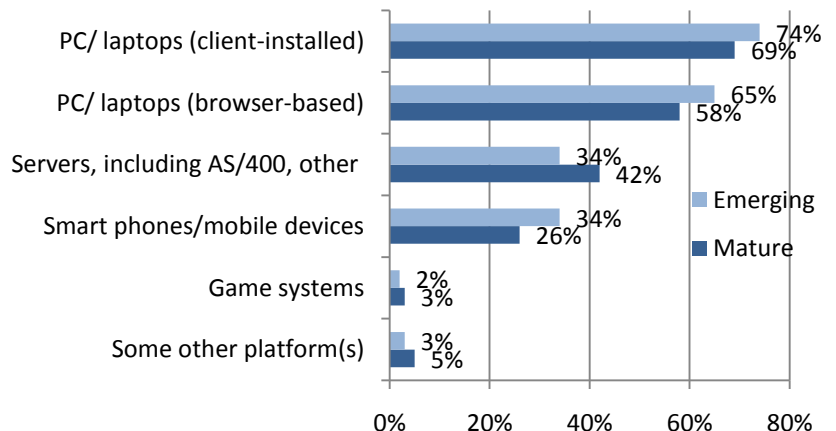
In both mature and emerging markets, banking, professional services, retail and non-heavy manufacturing companies represent dominant vertical targets. These businesses are typical of the mid-market and small businesses seen as the ISVs' predominant target sectors. However, if we focus only on the mature lines, we see a match with the cloud-specific information shown earlier.



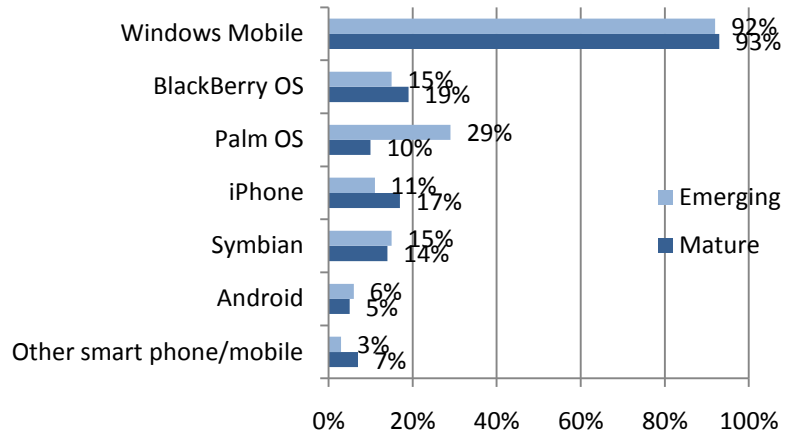
In emerging markets such as Latin America, we see a proportionally higher emphasis on retail, light manufacturing (“other products”) and consumer goods than we see in mature markets. In emerging markets, these verticals tend to be less dominated by large “enterprise” businesses than they are in mature, developed markets. This makes them a more approachable target for local ISVs.

## PLATFORM TARGETS

ISVs worldwide are predominantly focused on client-based and web (“browser-based”) applications. Mature-market ISVs tend to be more active in server-based development than emerging-market ISVs. Conversely, ISVs in emerging markets place greater emphasis on mobile applications, which is consistent with the relatively high incidence of cell phone usage in those areas.

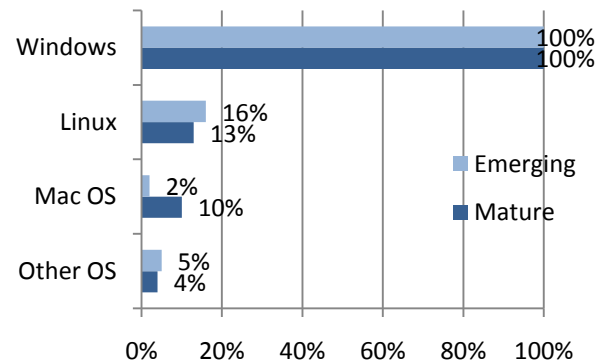


The fast-growing scope of mobile applications prompted us to ask developers which specific platforms they target. As the respondents in this research are Microsoft ISV partners, not surprisingly, virtually all are developing in the Windows Mobile platform. Palm OS, while no longer a major player in developed markets, continues to have a significant presence in emerging countries. The new iPhone platform is beginning to show traction in the developed, mature markets where it has been predominantly targeted.



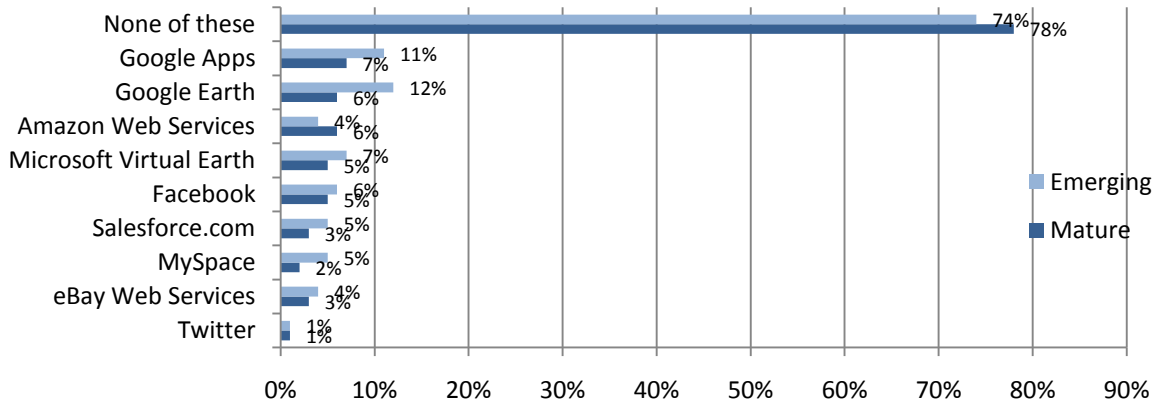
## PC OS TARGETED

Again owing to the nature of the sample (Microsoft ISV partners), all developers are developing for the Windows platform. Many are also developing for the open source platform, Linux. Fewer are developing for the Mac platform, with most of those in developed, mature markets.



## ARE ISV DEVELOPERS TAKING ADVANTAGE OF PROPRIETARY WEB-BASED APPLICATION PLATFORMS?

Popular web-based companies are seeking to influence developers to use their new and emerging development platforms. Their primary goals are to enable more widespread use of their proprietary tools and resources in private web applications, and to facilitate the build-out of specialized applications within their sites.

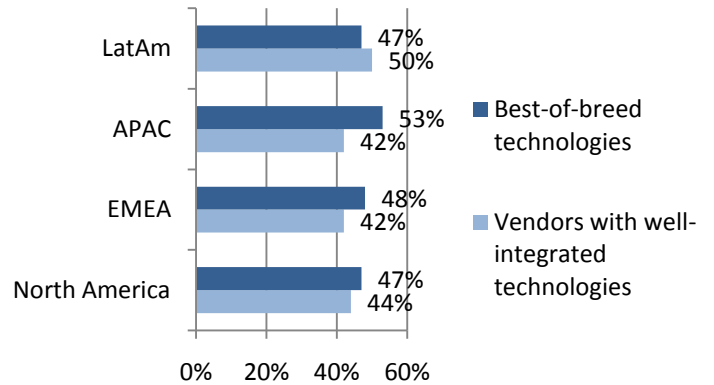


Results show that use of these opportunities is limited. These web-based platforms don't appear to have gained significant momentum among these professional ISVs, although they have relatively more momentum in emerging markets. They are possibly a more attractive opportunity for casual, non-professional developers.

## BEST-OF-BREED VERSUS WELL-INTEGRATED TECHNOLOGIES?

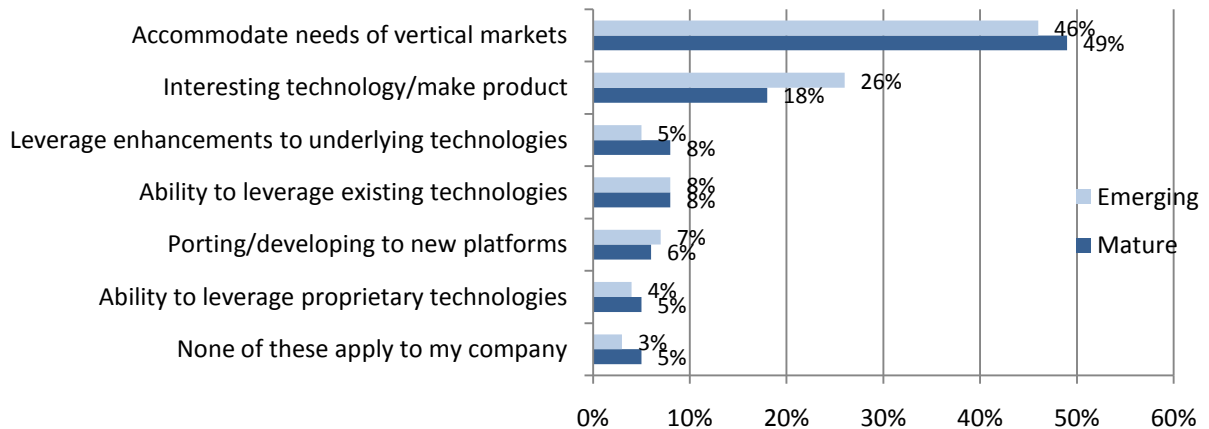
Developers are influenced in their choice of technologies by both the quality of specific technologies as well as how well vendors' overarching technology platforms are integrated. We asked them to indicate which aspect the major driver of their choices.

ISVs are roughly evenly divided in their perspectives, but "best-of-breed" appears to be slightly more influential in most regions, the exception being Latin America.



## HOW ARE NEW PRODUCTS INSPIRED IN ISVs?

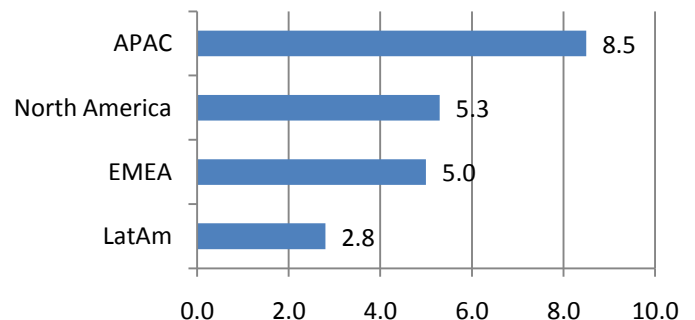
Not surprisingly, the majority of ISVs pursue new applications based on market needs ("accommodate the needs...of vertical markets"); they are driven by what they can sell. Interestingly though, a significant percentage also acknowledge motivation from the excitement of new technologies ("...figure out how to make a great product around it"), particularly in emerging markets.



## HOW MANY SOFTWARE AND WEB APPLICATIONS ARE SUPPORTED?

ISV developers in the Asia-Pacific region tend to support the highest average number of applications, almost double the number supported by other developers. North America and EMEA are very similar, with roughly 5.

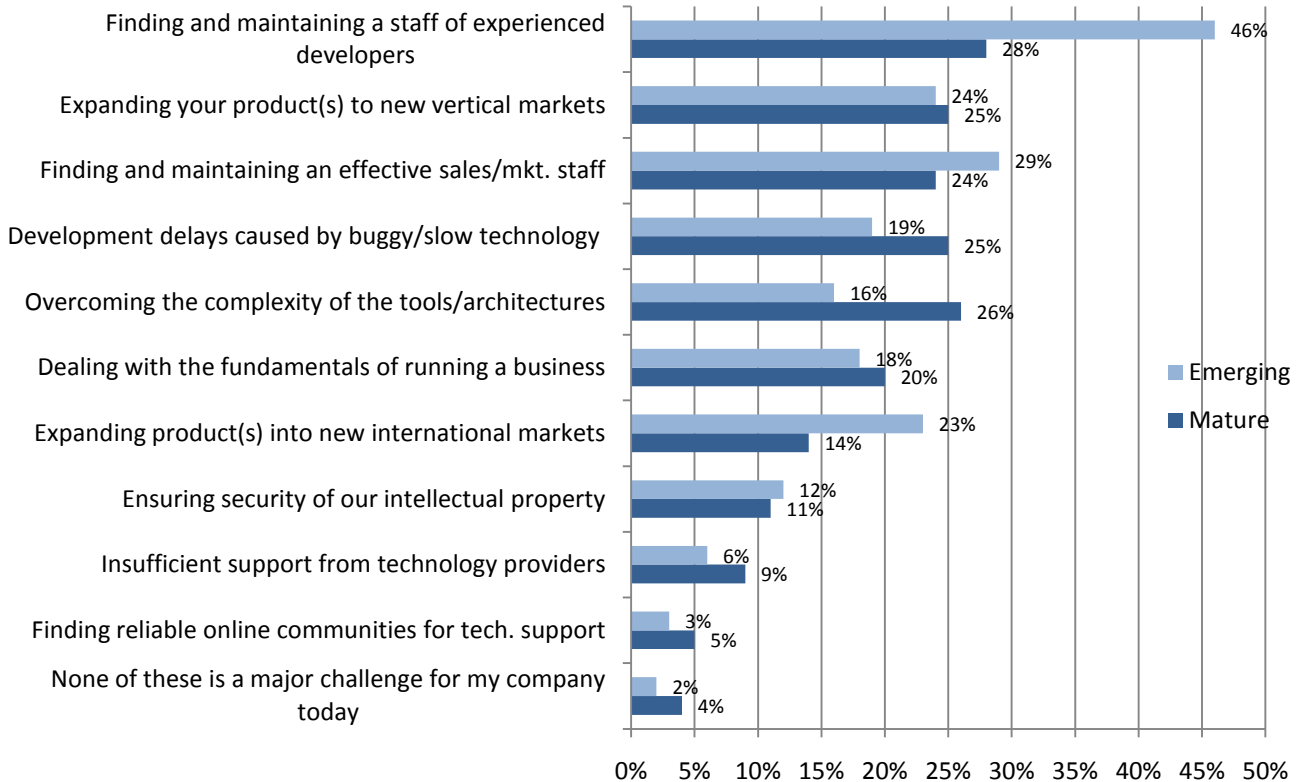
Latin American ISVs tend to have significantly fewer applications in their product offerings.



# WHAT ARE THE DOMINANT PAIN POINTS FOR ISVs IN DEVELOPING THEIR BUSINESS?

A primary goal of this research study was to understand what areas present the greatest opportunities to help Microsoft’s ISV partner community develop their businesses. ISVs were asked to identify their largest and second largest challenges. Both are combined in the graph below.

## Largest Pain Points



Overall, the predominant challenge is finding and maintaining experienced staff, with emerging markets indicating a disproportionate pain point here. Also, these less developed markets, seeking to leverage the value of their intellectual property, show considerable difficulty in expanding their products into larger international markets.

Mature-market ISVs show considerable sensitivity to overcoming the complexities of tools and architectures, and developmental delays from platform bugs. They may be more focused on these issues because fewer of their “most important” votes were cast for personnel availability issues compared to emerging markets.

Overall, the greatest challenge facing developers in growing their businesses centers around the technical complexities of development platforms, and the scarcity of experienced, knowledgeable employees in these areas. The key leverage point for growth in this sector is clearly expansion of the training pipeline for new professional developers.