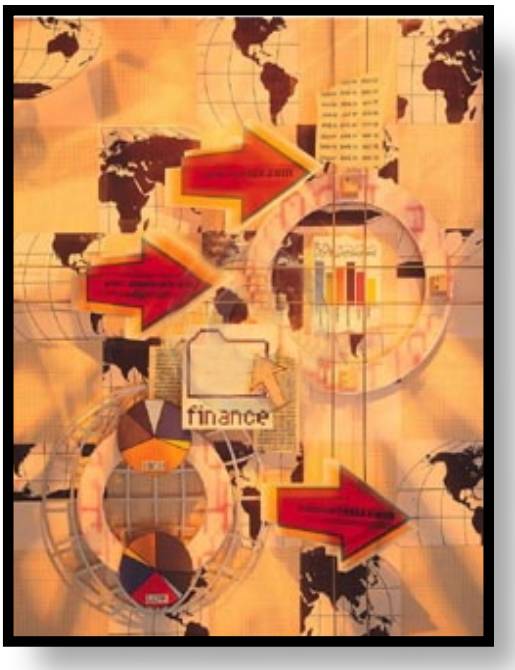

The Value of Standards

A Delphi Study

June 2003

Standards = Liquidity

There is a clear and sudden shift in attitudes towards software standards. The climate of economic constraint and risk aversion along with the mandate to integrate systems on both sides of the firewall has created a sea change in the sense of imperative to adopt software standards.

In this climate standards create liquidity -- the ability to leverage IT investment in unforseen ways.

In this groundbreaking study, Delphi gathered the responses of more than 800 end users, software vendors, and service providers to identify the current attitudes and expectations for software standards.

The results portray a shifting landscape where standards will provide the foundation for long term advances in the way software is built, bought and deployed.

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What It All Means

In a nutshell:

> The research, follow-up interviews, and analysis for this study all point to one overwhelming take-away: *Standards have shifted into high gear, not only garnering attention from business buyers but more importantly, they are being seen as a mandate for competitive stature, cost effective IT and operational excellence.*

Software standards have always been the subject of much controversy. In an industry characterized by a myriad of proprietary alternatives, haphazard collections of point solutions, fiefdoms of incompatible applications, and severe integration standards have been an elusive target.

The results are clear in their portrayal of a shifting landscape where standards will provide the foundation for long term advances in the way software is built, bought and deployed.

Although standards have been promoted from the outset as a panacea for this chaotic landscape, it is not until recently that the forces of connectivity, uniform platforms for cross-enterprise/industry applications and IT industry consolidation have created a climate where standards can live up to their promise.

In this groundbreaking study, Delphi gathered the responses of more than 800 end users, software vendors, and service providers to identify the current attitudes and expectations for software standards.

The findings of this study present the clear portrayal of a shifting landscape. The economics of integration and the mandate for controlling the cost of software ownership present a strong business imperative for standards. The maturation and adoption of software development standards will provide the foundation for long term advances in the way software is built, bought and deployed.

The responses to the survey which underlies this study clearly point to a greater need for the role of software standards.

The attitudes reflect a practical understanding of the role that software vendors and standards bodies will play in the symbiosis that allows foundational standards to evolve. The opportunity for significant change in operational excellence, supply chain interactions, and new market opportunities from the adoption of standards is just as clear.

Among our group of survey participants, half indicated participation in a software standards body. This is not difficult to accept given the

While tactical thinking does indeed predominate in today's conservative spending climate, the lack of enterprise integration has created such a costly infrastructure that it represents an immediate and pressing mandate for standards. Compliance with standards in software development is not simply a strategic direction, but a business imperative.

repercussions and move away from the legacy of rampant software deployment in the past that relied on proprietary platforms. Billions of dollars have been spent on software that represents closed, dead end solutions. Although it may have taken an economic crisis for standards to take center stage in the minds of organizations, we do not see a return to prosperity diminishing the trend.

Increased interest in the role of componentization of applications and the availability of standardized directories for building on-demand applications will fuel the intent evidenced by IT users and developers of IT solutions to build interoperability.

The historical pressure to mitigate the risk of picking the wrong standard will dissipate rapidly as the risk of not integrating enterprise and, more significantly, value chain solutions, increases. Customers, partners and suppliers will push hard to demand greater flexibility and reliability in the business processes that are supported by technology. This will translate into an intense market scrutiny of software vendors' ability to work in synchrony, a mode far removed from the hardwired patchwork solutions that typify today's value chains.

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Leveraging the underlying data and the information systems investment that has been made in repositories of customer, market, and transactional data will be brought to the center of every software evaluation. Proprietary repositories and datastores will be deemed a competitive liability. This is plainly illustrated as an underlying theme in many of the interviews we conducted for the study, which spoke to the historical risk and cost of migrating from applications that held data and information in proprietary vaults.

The current economic pressure to deliver tactical applications may have caused strategic planning to take a back seat. However, standards and integration are not luxuries in this sort of an environment. The study results show that standards are very much front of mind for end users and software developers.

While tactical thinking does indeed predominate in today's conservative spending climate, enterprise integration has created such a costly infrastructure that it represents an immediate and pressing opportunity for standards. Standards also provide options for agility in choosing and deploying solutions that have not been available in the past. The free market dynamic this introduces is essential to nearly every other aspect of a business – it is long overdue for buyers of IT solutions.

What remains to be achieved in the standards game is establishing a solid perception that the software industry is placing its bets in obvious and visible fashion on organizations which are going to be central to the industry's success.

Respondents were overwhelmingly in favor of standards that provided interoperability between business partners, and saw this as critical for long-term economic health and prosperity. The economies introduced by standardization also reduce dramatically the tooling, skill reusability and competency of the work force.

Standards lacking the perception of widespread support and demand will fail to capture a critical mass of support by commercial software vendors.

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While this point may appear obvious to some, it attests to the need for the visibility of standards adoption. Reestablishing trust through a visible commitment to standards is critical to both the buy-side and the sell-side of the software industry. Organizations such as OASIS, W3C, and IETG will be essential in achieving that goal. In the absence of such a coherent vision, the IT industry will continue to flounder with or without economic recovery.

Finally, as with any investment, standards will require more established benchmarks of return and payback. While survey respondents wholeheartedly acknowledged the inherent payback in adhering to standards, the actual metrics were harder to come by.

In many ways the best standard may well be the one that nobody questions - its cost is part of the price for survival. That state of standards, however, is still beyond reach in the software market. Near term solutions will require role models, benchmarks, and substantive analysis. This was best characterized by one respondent in a follow-up interview:

"Historically, our systems have been highly proprietary systems built almost entirely internally. By adopting and adapting standards that are not encumbered by excessive IP claims and that are achieving traction with both software vendors and end users, we are realizing a number of benefits:

- ***more use of commercial off-the-shelf software in our system***
- ***larger pool of skilled job applicants in the market; lower learning curve to make new staff productive***
- ***shorter development times because we benefit from the analysis & design efforts of experts that is embodied in the standard (otherwise, we'd go through the same exercise ourselves)***
- ***faster agreement on interface/exchange requirements with both suppliers & customers***
- ***improved ability to distribute work between our staff and outside contractors"***

Large Global Information Services Firm

Executive Overview

Key Findings of This Study

A clear and sudden shift in attitudes towards software standards as enablers of organizational liquidity.

Standardized Software approaches have been an elusive target.

It is not until recently that a climate evolved where standards can live up to their promise.

Standards will provide the foundation for long term advances in the way software is built, bought and deployed.

There is an increasing expectation for the role of software standards.

Vendors and standards bodies must play together in a symbiosis that allows foundational standards to evolve.

Billions of dollars have been spent on solutions that represent closed, dead end solutions.

Componentization and on-demand applications will fuel standards.

The risk of picking the wrong standard will take a back seat to the risk and cost of not integrating.

There will be intense market scrutiny of software vendors' ability to work within integrated environments.

Proprietary repositories and datastores will be deemed a competitive liability.

Standards and integration are not a luxury.

Standards provide options for agility in choosing and deploying solutions with a lower cost of ownership.

The economies introduced by standardization also reduce dramatically the tooling of the work force.

Without a coherent standards vision, the IT industry will continue to flounder with or without economic recovery.

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Analysis & Observations

In May of 2003 Delphi conducted a survey intended to identify the perceptions and experiences of software providers, integrators and end users regarding the value of software standards. The survey resulted in 800 verified responses. The analysis of that survey provides insight to the benefits, obstacles and attitudes towards standards.

The population represented a fairly even split of IT and non-IT respondents and an even split of US and non-US respondents. Except for the intentional emphasis on software providers, computer software vendors and IT services, the organizations participating represented a balanced cross section of the economy by industry and by size.

One of the more interesting initial findings was that, despite the large representation of IT industry professionals and widespread acknowledgment of the value of standards compliance, more than half of the respondents did not indicate participation in a software standards body. This speaks to the rampant deployment of software in the past that relied on proprietary platforms, protocols, and hardwired interoperability. In follow-up interviews, however, respondents who indicated they were not participants acknowledged, consistently, that the market was now exerting extreme pressure on them to move towards standardized approaches to integration across applications and platforms.

The standards most often cited as required for compliance within the respondent's organization were also those most often mentioned in the industry press, the highest ranking being XML. Interviews demonstrated a strong inclination on the part of the respondents to favor standards which were not only highly visible but also critical to e-business and web-based applications. Although respondents indicated a preference for practical standards, such as XML, interviews did point to an increased interest in the role of componentization of applications and the availability of standardized directories for building on-demand applications.

There was a high correlation among respondent communities (users, vendors, integrators) with respect to the reasons not to participate in a standards effort. The lack of critical mass, in terms of adoption, was the most often stated reason for not participating or complying with

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standards. Other practical reasons, such as cost and difficulty in achieving compliance, also ranked high. In follow-up interviews, it became clear that much of this was near term pressure to reduce costs and mitigate the risk of picking the wrong standard.

In considering the value proposition of software standards, the principal value as perceived by respondents was clearly the integrity of the underlying data and information systems investment, along with the resulting liquidity. This illustrated an underlying theme in many of the interviews that spoke to the historical risk of migrating from applications that held data and information in proprietary vaults. It is our opinion, based on the survey and follow-up interviews, that this will continue to be the highest priority for end-user organizations in selecting standards.

Longer term strategic promises of value chain integration and swapping of applications rated much lower in comparison with the basic objective of data preservation when viewed in the survey data analysis. However, it is important to introduce a caveat here. Current economic pressure is on tactical applications. Strategic planning has taken a back seat. Respondents were overwhelmingly in favor of standards that provided interoperability between business partners, and saw this as critical for long term economic health and prosperity. While software vendors were cautious about admitting to the value of this sort of interoperability, they admitted that in the absence of such standards only a handful of enterprise software vendors could survive - limiting innovation and market choices. The conclusion, although not always articulated in precisely this way, was that standards were an absolute mandate if the IT supply side is to support the vast majority of current players.

Portability of Data and leveraging IT investments for the future were overwhelmingly the most significant benefits in using standards for software development. In follow-up interviews, respondents were consistent in their observation that, although these benefits are not a new and sudden realization, the imperative to leverage standards in realizing these benefits is. While, in the past, lock-in may have been considered a bitter pill that one had to swallow in order to deploy a solution rapidly, it is no longer acceptable. The increased value and liquidity of data and applications that result from standards has become much clearer to both IT and business buyers.

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The benefit of reusable skill sets, associated with prior generations of standards, such as SQL, ranked lowest among benefits selected by respondents. Although odd at first glance, respondents indicated that this was in part due to the much larger talent pool available in today's market. Again this is an economic factor that could easily change attitudes.

Interestingly, the results shift with some drama when the question is modified to ask about the respondent's actual experience with standards. Experience seems to run contrary to anticipated benefits, with skill set reuse now being ranked by 61% of respondents as having benefitted through standards. Clearly, there is high value here even if the current economic cycle is masking it temporarily.

The increased value and liquidity of data and applications that result from standards has become much clearer to both IT and business buyers.

There is a high correlation among respondent communities (users, vendors, integrators) regarding the perceived threats to software standards. The notable exception is that software vendors acknowledged the difficulty in verifying compliance, picking a standard, and supporting a full range of options in compliant software. The biggest threat to software standards is the proliferation of competing software standards. The old adage that "the good thing about standards is that there are so many of them to choose from," rings true in this observation. The threat is better stated as an absence of critical mass around most standards efforts. Software vendors and users want to see committed large scale efforts on the part of cornerstone software vendors and standards bodies to invest in specific standards before committing their own organizations to them.

Time to market pressure on software vendors also represents a significant threat to standards since it is resulting in software released prior to its being adequately compliant. Interestingly, standards are not perceived as a competitive threat to software vendors by respondents.

Despite widespread recognition of commonly accepted vendor specifications, the overwhelming factor in standards participation was software vendor neutrality. The respondents had difficulty reconciling the two differing views. Comments ranged from, "in the ideal world, standards

would not favor any one software vendor," to "without a large player's selfish interests, a standards body will not create the critical momentum needed." SQL was often raised as an example of IBM's strong self interest in DB2, which in turn spawned Oracle's success with its own RDBMS.

The practical side of this debate is the Catch-22 of any standards effort, creating critical mass among participants. Without a *perceived* preponderance of support, a standard will not attract participation according to respondents. Respondents want to see this preponderance of support in the form of a visible commitment, and that often comes from a particular cornerstone software vendor's efforts prior to the achievement of a real critical mass.

In practice, respondents voiced what can be characterized best as a *First* and *Second Order* approach to the issue of neutrality. The First Order was to ensure that the standard had sufficient backing to allow it to be reliably used. In this case a vendor carrying the flag was considered acceptable. The second Order's priority is to validate acceptance of the standard across vendors so that portability and extensibility would be available as the software deployment evolved.

Wherever you see the magnifying glass above it indicates that the chart adjacent to it is a closer analysis of the preceding chart. Usually this means that we selected only certain key variables to analyze which highlight the most interesting aspects of the responses.

Reusability of software was the most frequently cited "single greatest benefit" anticipated from participation or compliance with standards. This was reflected across each of the respondent communities. It also spoke to the stated trend towards componentization that many respondents noted in their follow-up interviews.

Finally, it was consistently the case that respondents, both in the survey and in follow-up interviews, whole hartedly acknowledged the inherent payback in adhering to standards. Even those respondents who took a very practical approach and stated that standards might slow down their efforts initially, agreed that in the long run, the presence of a standard represented a much more secure investment.

Despite this, the vast majority of respondents did not or were not able to measure the benefit of standards. As one participant stated, "We did not compute the actual value. That the value is overwhelming is obvious."

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Bridging the Information Archipelago

Key Findings

The principle value of standards was clearly in leveraging the underlying data and information systems investment, thereby increasing the liquidity of their investments in the future.

Longer term strategic promises of value chain integration and swapping of applications rated much lower in comparison with data preservation.

Analysis & Observations

In their classic 1983 HBR article "The Information Archipelago", McFarlan, McKenney, and Pyburn laid out a thesis that has defined the IT community for the last two decades. In many ways, we are still living among islands of information. But these islands are now best characterized as continents. Enormous investment has gone into their creation and enormous value lies not only in each of these collections but, more importantly, in the connections between them. One only has to look as far as the recent failing of USA homeland security in bridging the challenging disconnects between agency repositories to see this.

The principal value of standards, as perceived by respondents, was clearly leveraging the underlying data and information systems investment. This illustrated a recurring theme in many of the interviews that spoke to the historical risk of migrating from applications that held data and information in proprietary vaults. It is our opinion, based on the survey and follow-up interviews, that this objective will continue to be the highest priority for end-user organizations in selecting standards.

Longer term strategic promises of value chain integration and swapping of applications rated much lower in comparison with the basic objective of data preservation when viewed in the survey data analysis. However, it is important to introduce a caveatee here. Current economic pressure is on tactical applications. Strategic planning has taken a back seat.

The issues of portability and value fall into what we would term *liquidity* -

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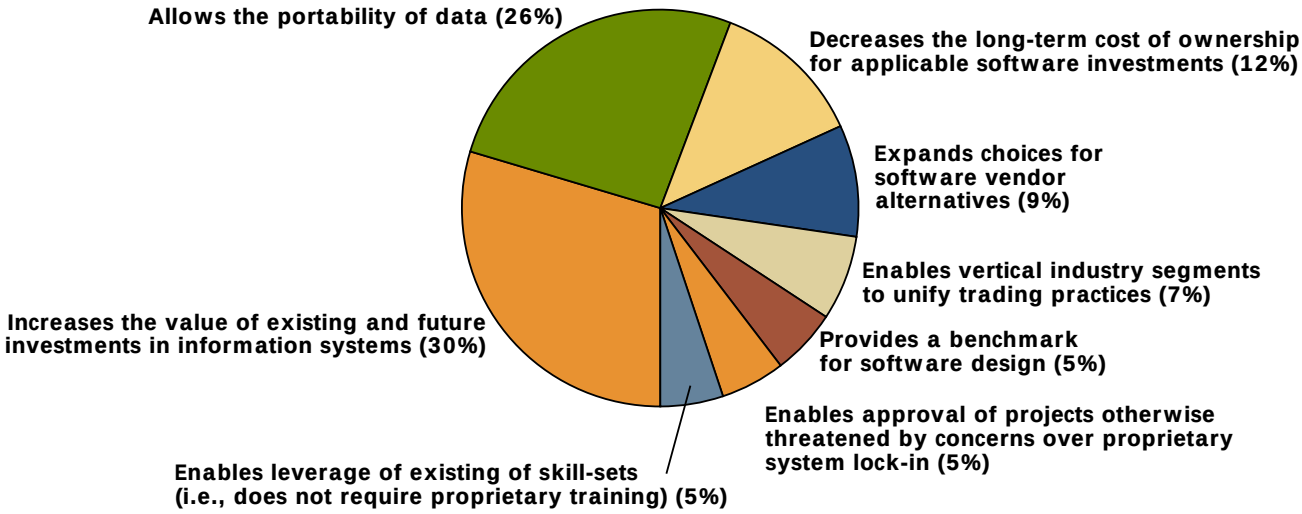
Which of the following do you believe to be the single greatest benefit offered by approved standards in software development?



the ability to leverage IT investment in novel and unexpected ways. The advent of the internet has brought this sort of reusability into the limelight, giving business people as well as technologists a much better appreciation for the value of standards.

Respondents were overwhelmingly in favor of standards that provided interoperability between business partners, and saw this as critical for long term economic health and prosperity. While software vendors were cautious about admitting to the value of this sort of interoperability (not surprising when considered from a parochial competitive standpoint) most admitted that in the absence of such standards only a handful of enterprise software vendors could survive -- severely limiting innovation and market choice. The conclusion, although not always articulated in precisely this way, was that standards were an absolute mandate if the IT supply side is to support the vast majority of current players.

The Benefit of Standards: and the Winner Is...

Key Findings

Once again data portability and leveraging the underlying information systems was noted as the principle benefit offered by standards.

The benefit of reusable skill sets, associated with prior generations of standards such as SQL, ranked lowest among respondents.

However, the results shift with some drama when the question is modified to ask about the respondent's actual experience with standards. (facing page)

Experience seems to run contrary to anticipated benefits, with low ranked skill set reuse now being ranked by 61% of respondents as having been benefitted through standards.

Analysis & Observations

The recurring theme is that standards provide a fulcrum to leverage IT investments and create liquidity. Contrasting this with the lower ranked benefit of cost reduction demonstrates that the experience of the respondents points to a critical benefit of revenue enhancement over direct cost savings. Standards provide a platform for realizing opportunities that would otherwise remain hidden. Follow-up interviews with respondents frequently indicated that ROI was not just a matter of cost savings but more importantly new ways of working within the organization or with partners.

The benefit of reusable skill sets, associated with prior generations of standards such as SQL, ranked lowest among benefits selected by respondents. Although odd at first glance, respondents indicated that this was in part due to the much larger talent pool available in today's market.

Interestingly, the results shift, with some drama, when the question is modified to ask about the respondent's actual experience with standards.

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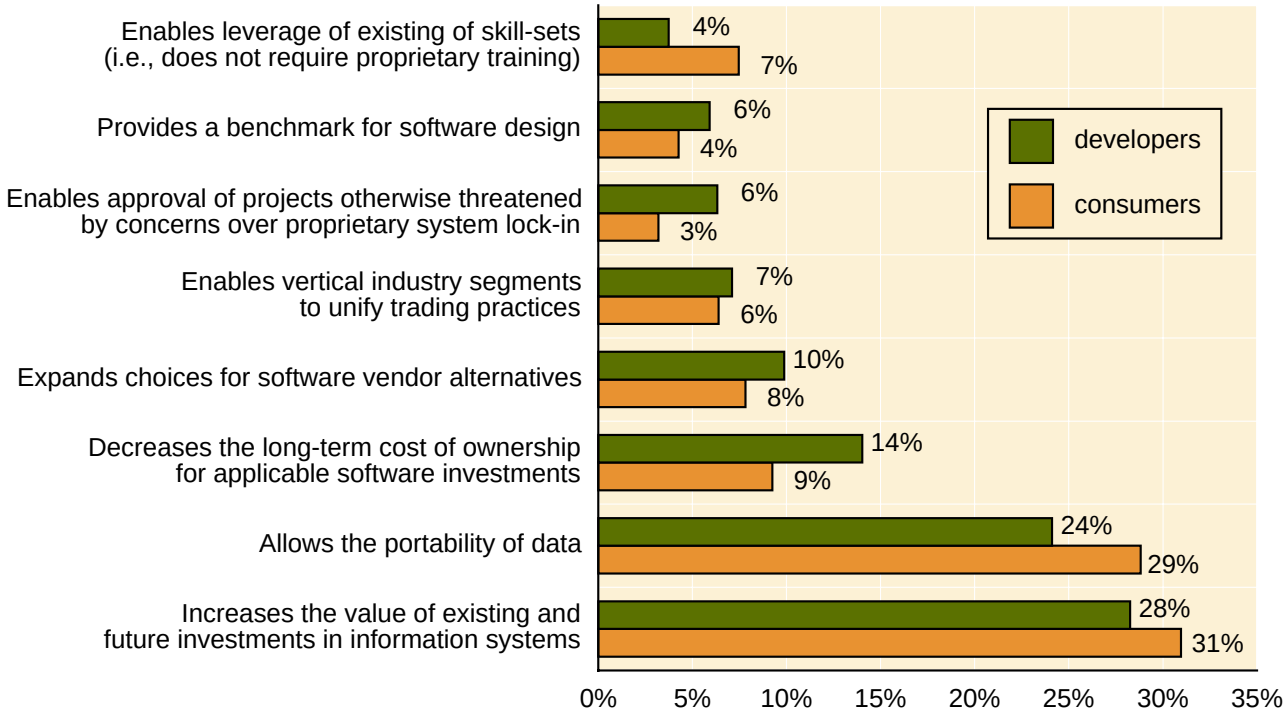
Which of the following do you believe to be the single greatest benefit offered by approved standards in software development?



Experience seems to run contrary to anticipated benefits, with skill set reuse now being ranked by 61% of respondents as having been benefitted through standards. Clearly, there is high value here even if the current economic cycle is masking it temporarily.

Portability is a fundamental aspect of ROI and payback for the deployment and adoption of standards. Comments from survey participants back this up with hard evidence of standards having impacted bottom line results in quantifiable and qualitative ways, as shown in the comments on the facing page.

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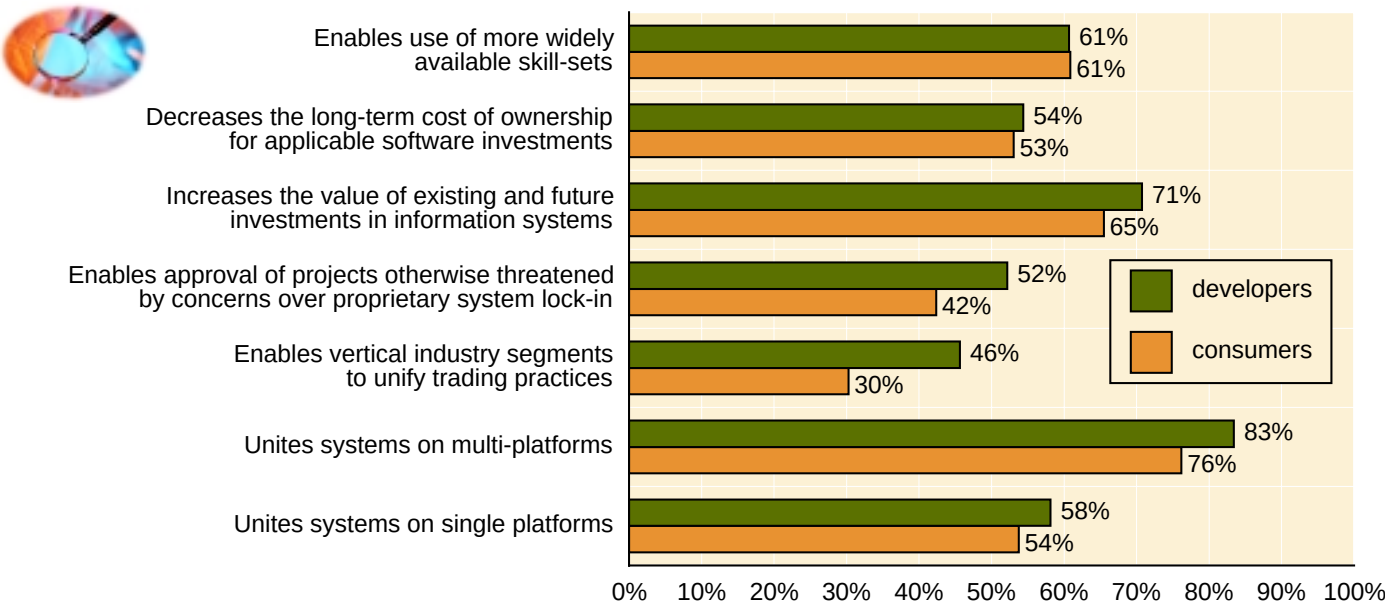
...Or Is It?

Which of the benefits derived from open approved standards have you or your organization experienced directly?



"Our metrics show that specification cost is cut by 30%, conception is reduced by 50%, while semi flow analysis (data mapping between an application and the data structure) stay the same. Using (a standards-based approach) compared with classical development, time is reduced by 45%. Maintenance is reduced by 20%."

"The standards play has a very important role to ensure reusability : it has a legitimacy that is recognized by other companies. We estimated 60% of the project implemented on a standard will reuse the solution, compared to about 20% usually."

"We meet the standards compliance as mandated by our customers. We have measured that we would have lost over 60% of our sales by not being compliant with the designated standards. This is measured through tracking each closed sale as described by the sales person."

"We measured total cost of ownership ... it would have cost 4 or 5 times the amount if delivery had been implemented without standards."

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Narrowing the Field, Increasing the Odds

Key Findings

Respondents rank the biggest threat to software standards as the proliferation of competing software standards for the same issue or objective.

Half of all respondents do not believe that standards are likely to increase deployment time or investment.

Time to market pressure on software vendors represents a threat to standards since it is resulting in software released prior to its being adequately compliant.

Standards compliance is not perceived as a competitive threat by software vendors.

Analysis & Observations

There is a high correlation among users, integrators and software vendors regarding the perceived threats to software standards. A notable exception, however, is that software vendors acknowledged the difficulty in verifying compliance, picking a standard, and supporting a full range of options in compliant software.

The biggest threat to software standards is the proliferation of software standards. The old adage that "the good thing about standards is that there are so many of them to choose from," rings true in this observation. The threat is better stated as an absence of critical mass around most standards efforts. Small to mid size software vendors and users told us that they want to see committed large scale efforts on the part of cornerstone software vendors and standards bodies to invest in specific standards before committing their own organizations to them.

What surprised us in this, however was the value that respondents placed on an independent third party's role in validating compliance. We even had one respondent go so far as to suggest that there be government regulations with respect to software standards. His point being that this is how important it is to preserve the investments made here. While it was an interesting argument, most respondents reacted with concern over a legislated approach and still felt strongly that standards should be a free market phenomenon, yet still verified by some sort of accountable body.

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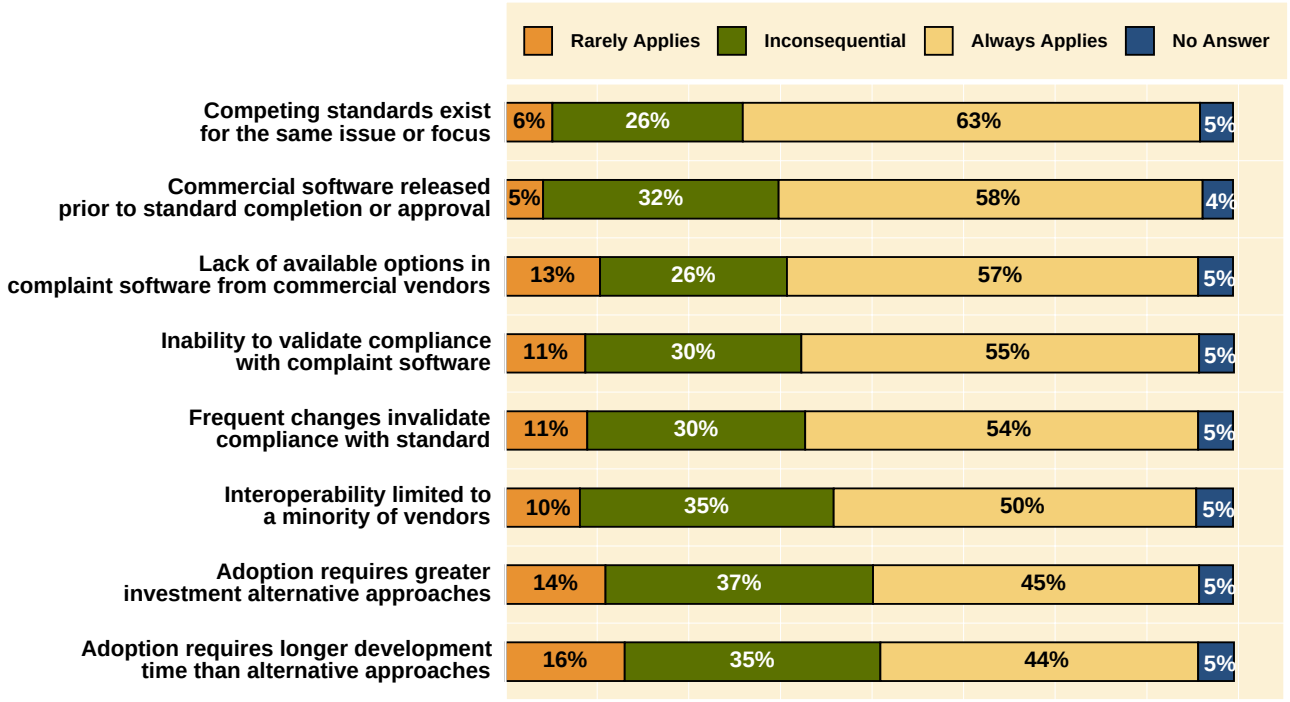
Time to market pressure on software vendors also represents a significant threat to standards since it is resulting in software being released prior to its being adequately compliant. End users also pointed out that this same free market dynamic can cause software vendors to release software before it is compliant in order to speed time to market. Software vendors, on the other hand, told us that standards and software development must both be considered evolutionary in that neither can stand still waiting for the other in the early stages of a new technology or a new standard. This did not discount the perception of standards but rather acknowledged earlier views that a standard must reach critical mass in market demand and perception of support in order to warrant delays in software release cycles - as also reinforced by the perception that adoption requires longer development times, expressed by nearly half of all respondents.

Interestingly, standards are not perceived as a competitive threat to software vendors by respondents. This is a positive shift in perception owing to the market attitude towards standards as a necessary force in preserving IT investments. We see this as a critical finding in that it does represent the emergence of a new attitude on the part of software vendors towards standards.

Greatest Shortcomings & Threats to Standards



Shifting out of Neutral

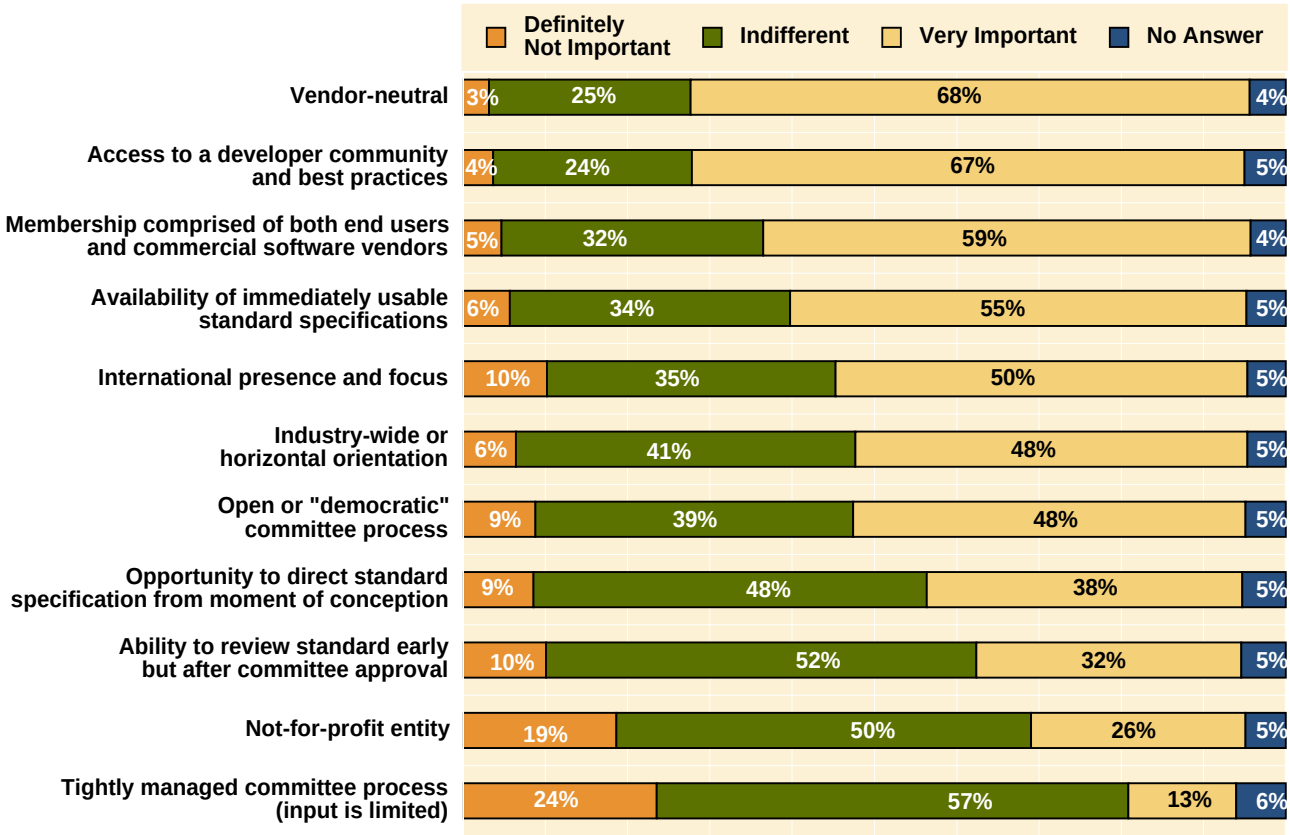
Key Findings

The overwhelming factor in standards participation was software vendor neutrality - more dramatically evidenced in the charts on the facing page.

Analysis & Observations

In practice, respondents voiced what can be characterized best as a *First* and *Second Order* approach to the issue of neutrality. The First Order was to ensure that the standard had sufficient backing to allow it to be reliably

Factors Driving Participation in a Specific Standards Body



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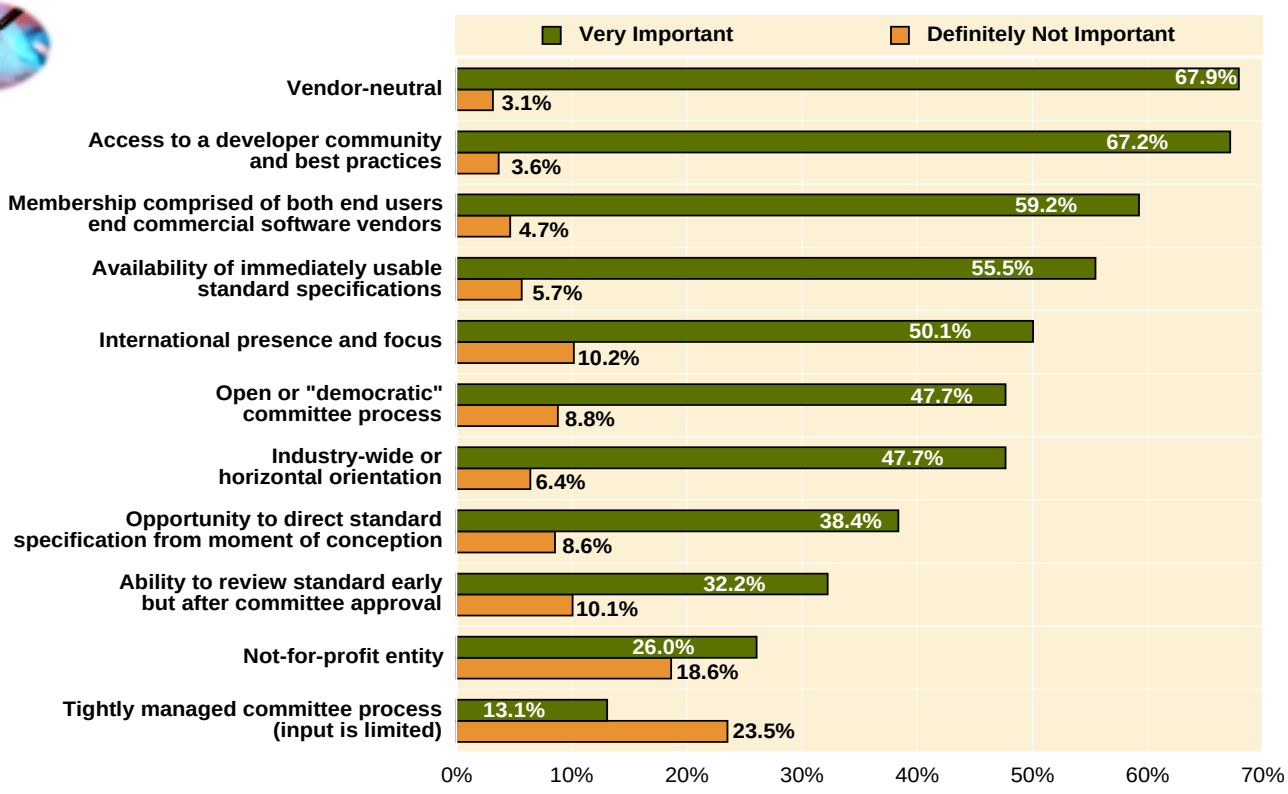
used. In this case a vendor carrying the flag was considered acceptable. The Second Order's priority is to validate acceptance of the standard across vendors so that portability and extensibility would be available as the software deployment evolved.

What was especially insightful in follow-up interviews was the degree to which the overall administration of the standards process by some sort of committee was discounted. In most cases respondents saw this as the "fat" in a standards process. Immediacy of the standards body and its ability to sequence incremental and regular enhancements was seen as key to creating both visibility and momentum for a standards effort.

Factors Driving Participation in a Specific Standards Body (cont.....)



Playing the Perception Game

Key Findings

Lack of critical mass in terms of adoption was the most often stated reason for not participating or complying with standards.

The Catch-22 of any standards effort is creating critical mass. Without a perceived preponderance of support a standard will not attract participation according to respondents.

Interestingly, standards are not perceived as a competitive threat by respondents.

Analysis & Observations

Practical reasons such as cost and difficulty in achieving compliance ranked highest, while lack of critical mass, in terms of adoption, was the most often stated reason for not participating or complying with standards. In follow-up interviews it became clear that much of this was near term pressure to reduce costs and mitigate the risk of picking the wrong standard. With the trend moving towards consolidation in the IT industry, as well as the imperative to integrate existing systems, we expect these priorities to change in the near term.

The practical side of this debate is the Catch-22 of any standards effort, creating critical mass among participants. Without a *perceived* preponderance of support, a standard will not attract participation, according to respondents. Respondents want to see this preponderance of support in the form of a visible commitment. This may seem to be a contradiction -- critical mass is often defined in terms of support by one or more cornerstone software vendors, and yet buyers clearly seek vendor neutrality in standards. Further development of this notion among study participants, however, validates that *compliance* by top vendors is ultimately necessary to its validation, but that standards development must be an open and democratic process.

Regarding their own participation in a standards body, it was clear from respondents' views that lack of speed, high cost and low adoption were the common impediments. However, what was not shown in the survey data was the bearing that a standards perception of having achieved (or

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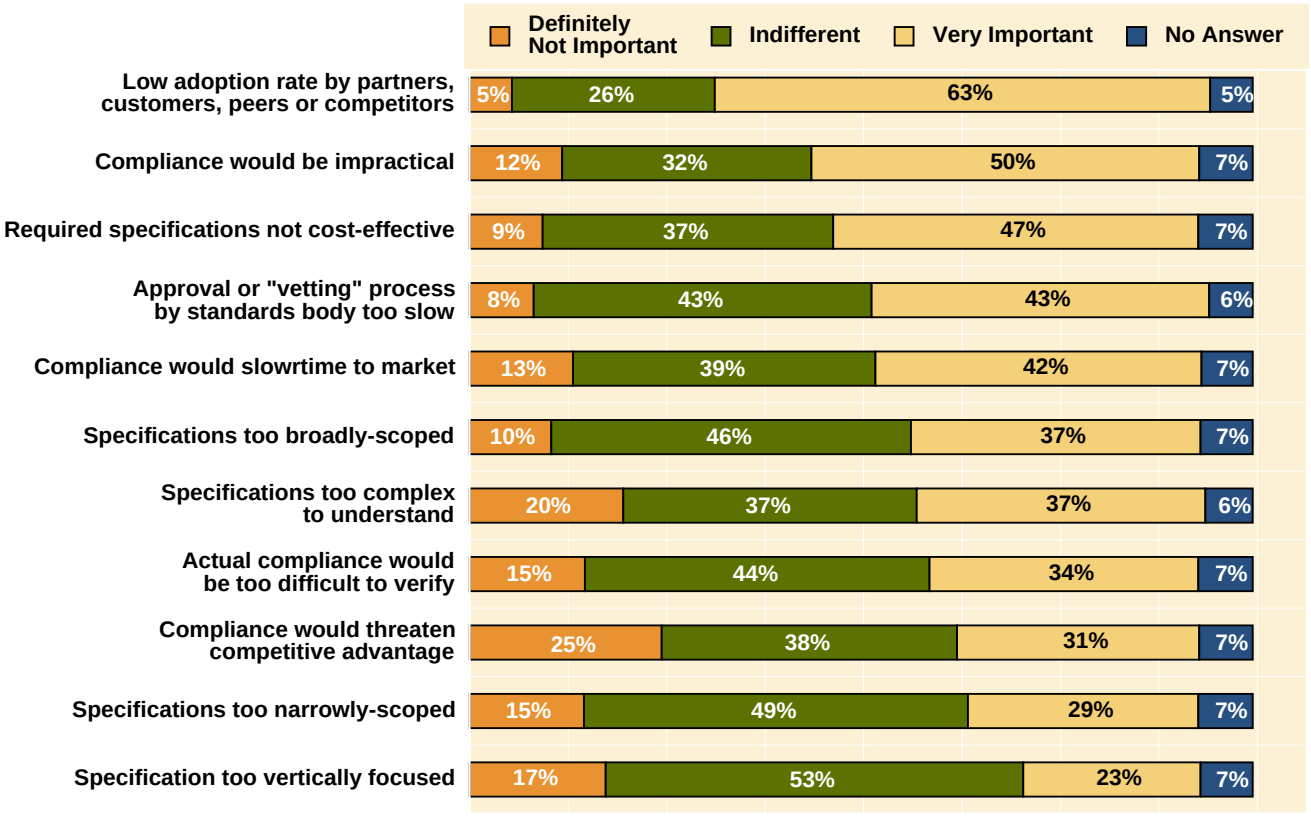
Reasons Cited NOT to implement or Comply with Standards



likelihood of achieving) critical mass had on these impediments. In other words, the adoption variable has two distinct components; perception of success and actual adoption. An example used by some respondents was that of UNIX vs. Windows (albeit admittedly not standards, but offer an analog to the standards development process).

UNIX had a very long ramp up and was considered to be a costly initial port for software vendors as well as end users. Despite the promises of long term cost savings, UNIX languished for some time and decisions to port to it were postponed by a perpetual wait-and-see attitude in the market. While there was low adoption for some time there was also a perception of risk in its ever achieving critical mass for enterprise applications.

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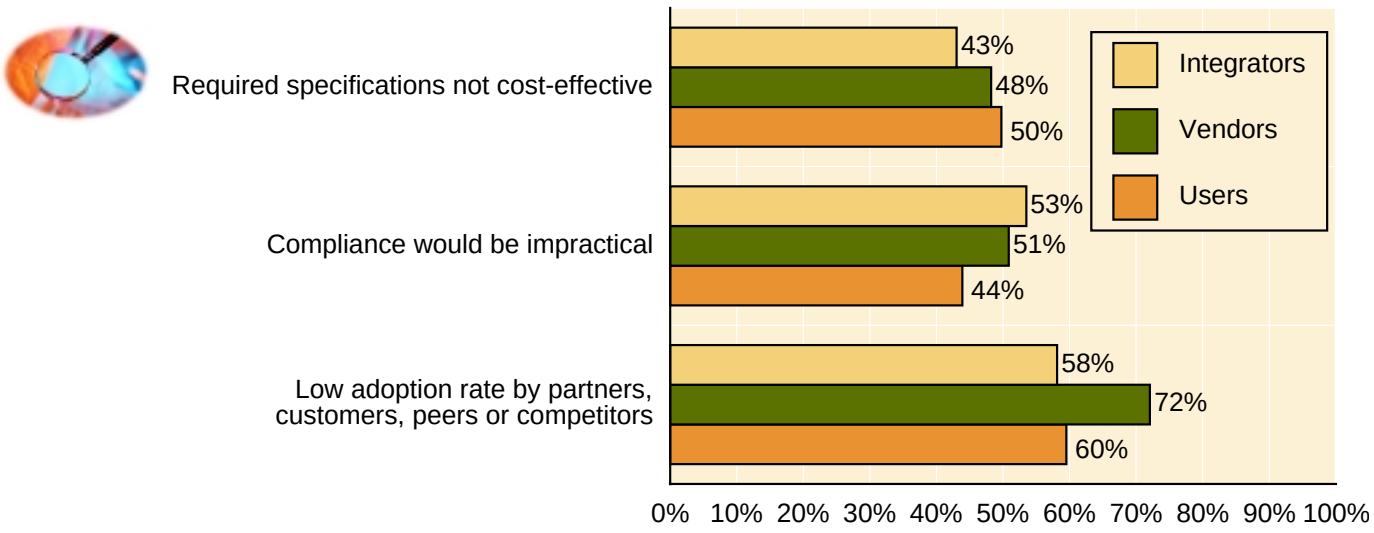
Windows also had a its share of naysayers. In enterprise environments, it suffered a similar fate of slow adoption. However, perception differed dramatically in that Windows was seen as a more likely platform despite its apparent enterprise limitations.

According to respondents, achieving a critical mass ultimately relies more on this issue of perception. Respondents believed that this perception was the result of influence exerted on line of business professionals rather than IT professionals. In fact, most follow-up interviews revealed that it was a business function that set the agenda for standards in their organization. In the case where a CXO was noted, the CEO as standards czar outnumbered CIOs in the same capacity by a margin of 4-1!

What this means to standards bodies and participants in standards efforts is clear. Visibility among business buyers and influencers is essential to achieve if a standards effort is to have longevity and substantial impact.

Reasons Cited NOT to Participate in or Comply with Standards



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Exceeding Expectations

Key Findings

One of the most overwhelmingly consistent responses showed up in this survey question.

Reusability of software was clearly the single greatest benefit perceived by respondents from participation or compliance with standards.

Analysis & Observations

Reusability of software was clearly the single greatest benefit perceived by respondents from participation or compliance with standards. This was reflected across each of the respondent communities. It also spoke to the stated trend towards componentization that many respondents noted in their follow-up interviews.

"Thanks to our compliance with the specifications, we can develop in one hardware/software architecture and implement in others quite different without previous knowledge or training."

Very Large Software Vendor

It was consistently the case that respondents, both in the survey and in follow-up interviews, wholeheartedly acknowledged the inherent payback in adhering to standards. Even those respondents who took a very practical approach and stated that standards might slow down their efforts initially, agreed that in the long run the presence of a standard represented a much more secure investment.

"[calculating the benefit of standards] would be an equation like that of a call option: you pay a price for the right to get the benefits of a standard, if [the one you choose] is finally dominant, you reap earnings from it."

Mid Size Software Vendor

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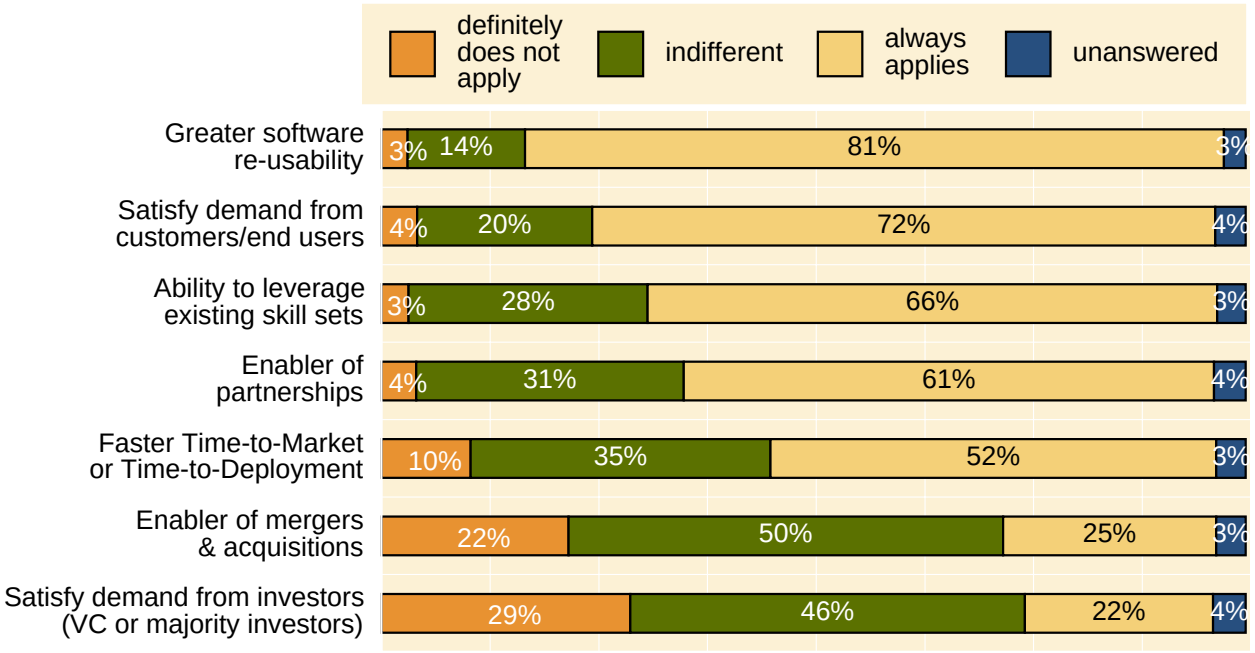
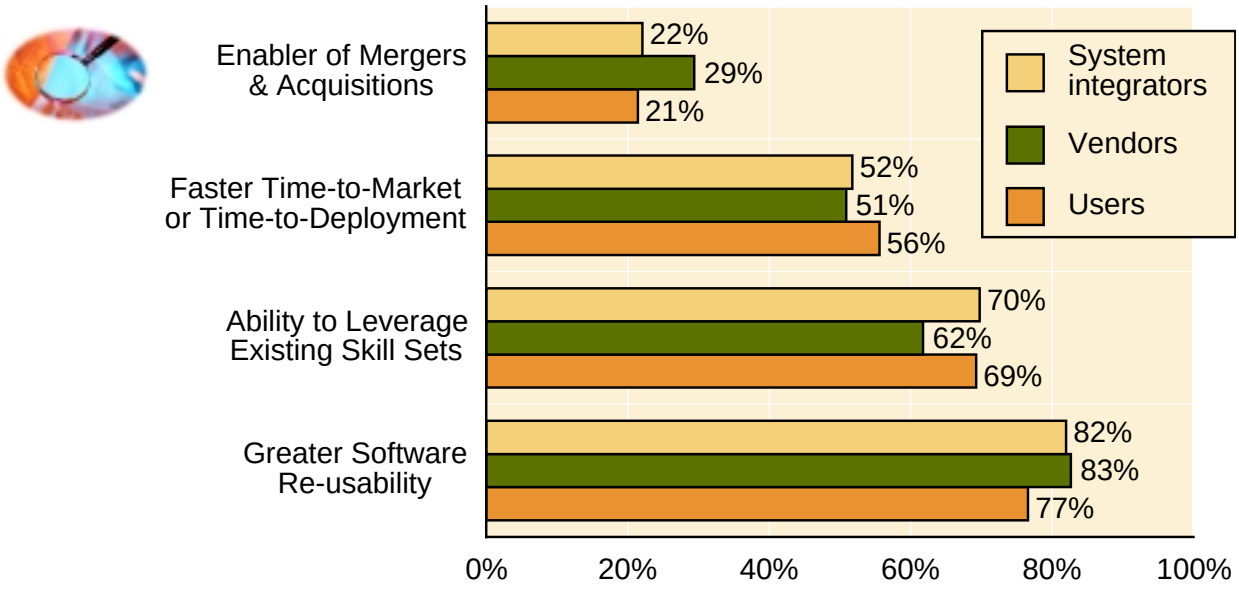
Benefits Expected from participation or Compliance with Standards





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Just One More...

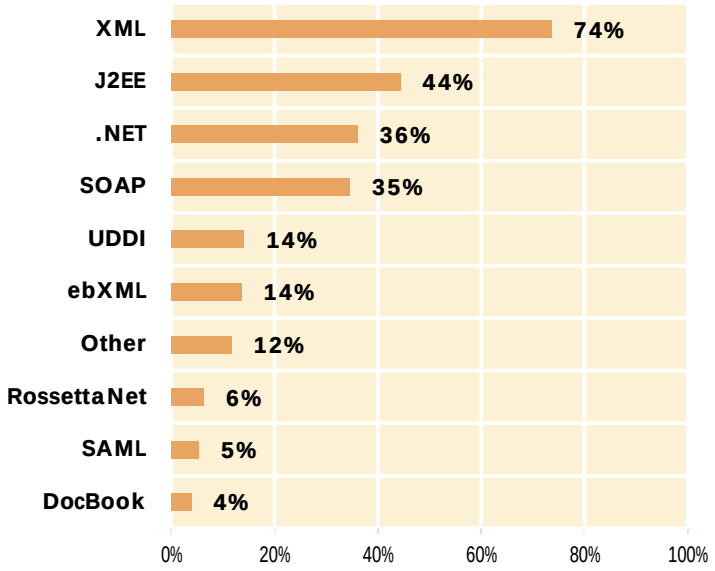
Key Findings

The standards most often required for compliance with the respondent's organizations were also the most often mentioned in the industry press, with two having their origin in software vendor specifications - Sun's J2EE and Microsoft's .NET.

Analysis & Observations

Finally, the standards most often cited as required for compliance with the respondent's organizations were also those most often mentioned in the industry press, with two having their origin in software vendor specifications – Sun's J2EE and Microsoft's .NET. The highest ranked standard was XML. Interviews demonstrated a strong inclination on the part of respondents to favor standards which were not only highly visible but also critical to e-business and web-based applications. Although respondents indicated a preference for practical standards, such as XML, interviews did point to an increased interest in the role of componentization of applications and the availability of standardized directories for building on-demand applications.

For which of the following do you/your firm require compliance with from your commercial software suppliers?



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Profile of Survey Respondents

Key Findings

The data is based on 800 survey respondents.

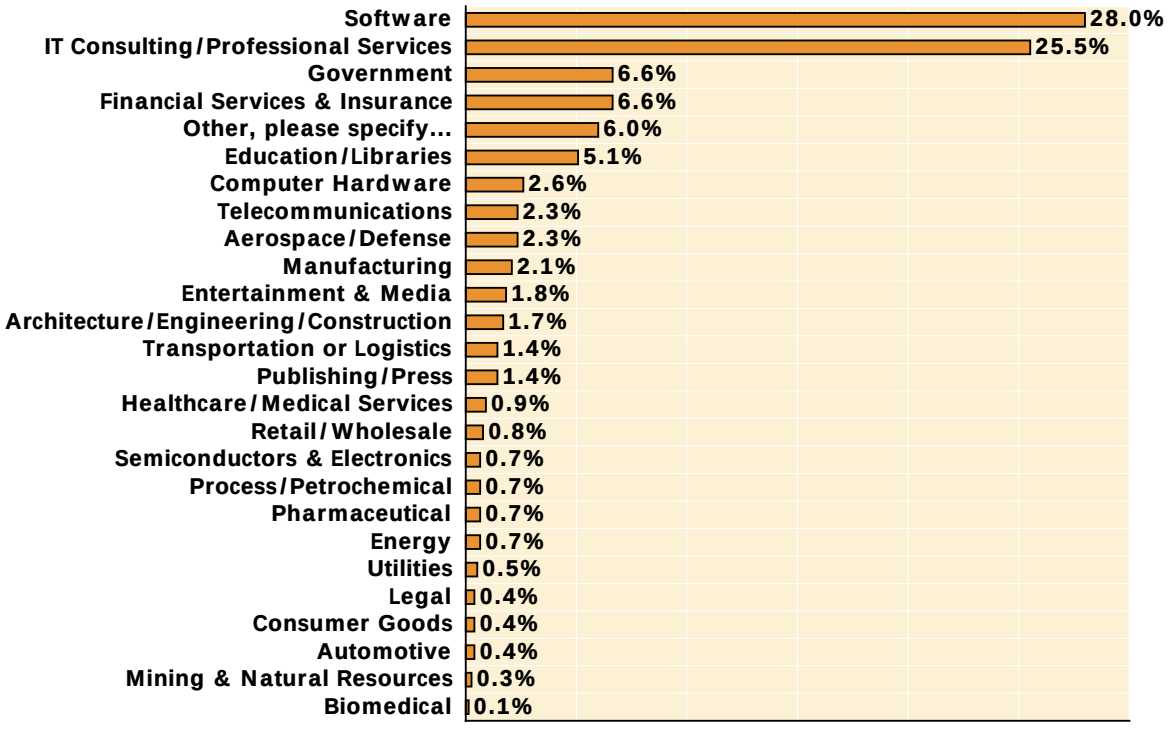
There was a fairly even split of IT and non-IT respondents.

There was an even split of US and Non-US respondents.

The respondents' organizational size was representative of a balanced cross section of the economy.

Analysis & Observations

The population of respondents represented a fairly even split of IT and non-IT professional and an even split of US and Non-US respondents.



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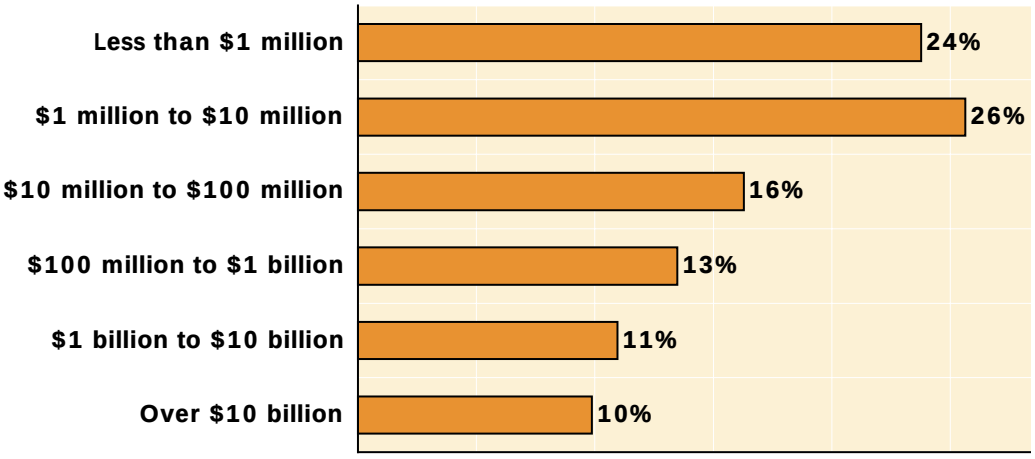

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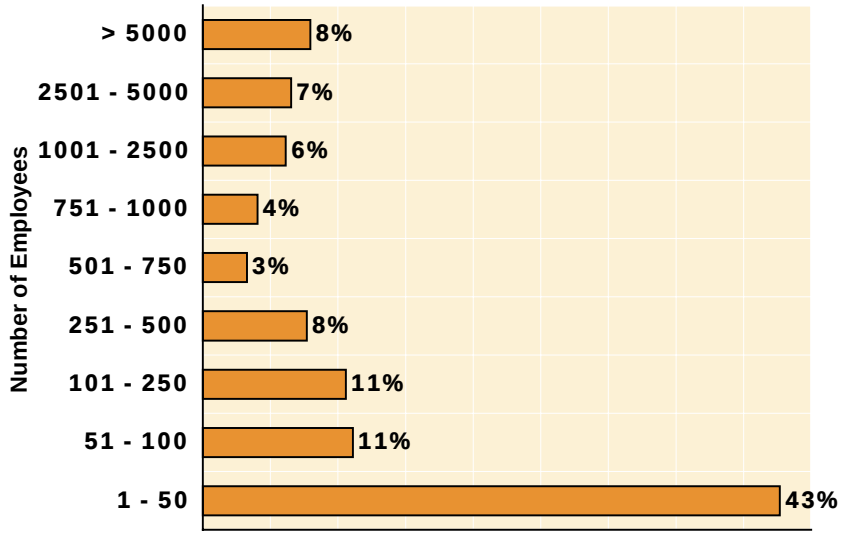

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Except for the intentional emphasis on software providers, computer software vendors and IT services, the participating organizations represented a balanced cross section of the economy by industry and by size.

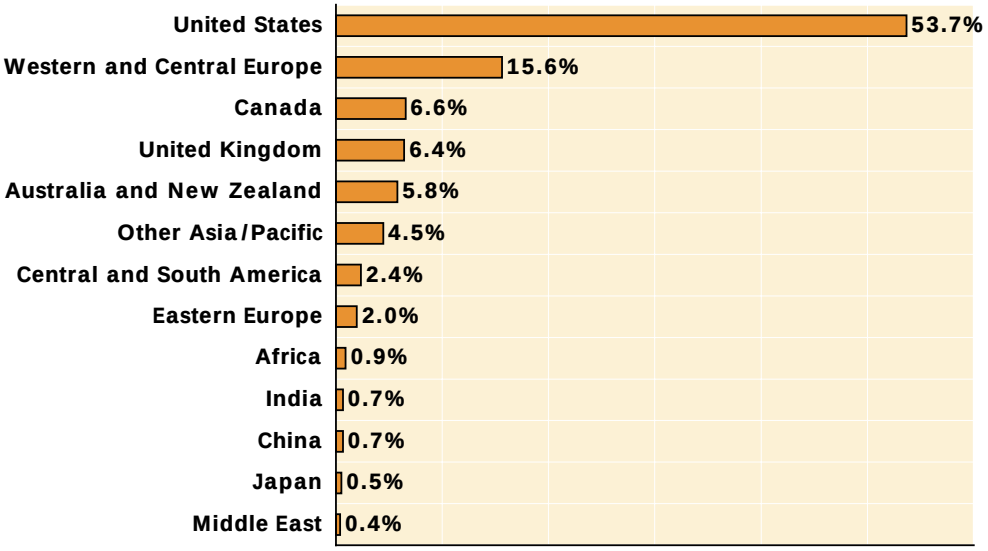
One of the more interesting initial findings was that, despite the large representation of IT industry professionals, more than half of the respondents did not indicate participation in a software standards body. This speaks to the rampant deployment of software in the past that relied on proprietary platforms, protocols, and hardwired interoperability.

In follow-up interviews, however, respondents who indicated they were not participants in a standards effort acknowledge consistently that the market was now exerting extreme pressure on them to move towards standardized approaches to integration across applications and platforms.

Software developers and systems integrators represented the largest respondent communities. However, in order to best characterize the respondents, it is important to note that broad categories can be misleading, as shown in these charts.

For example, many respondents fell into multiple categories as both developers and users of software.

While there was a substantial representation of end users, the majority of respondents where somehow involved in the software or services industry.



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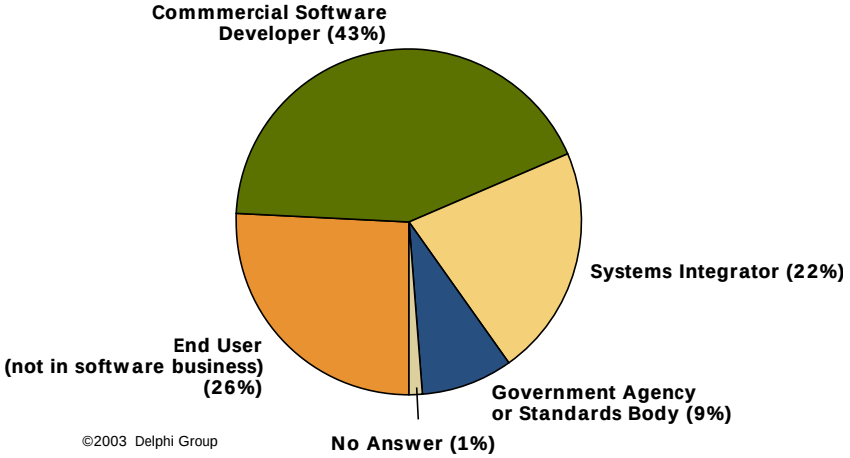

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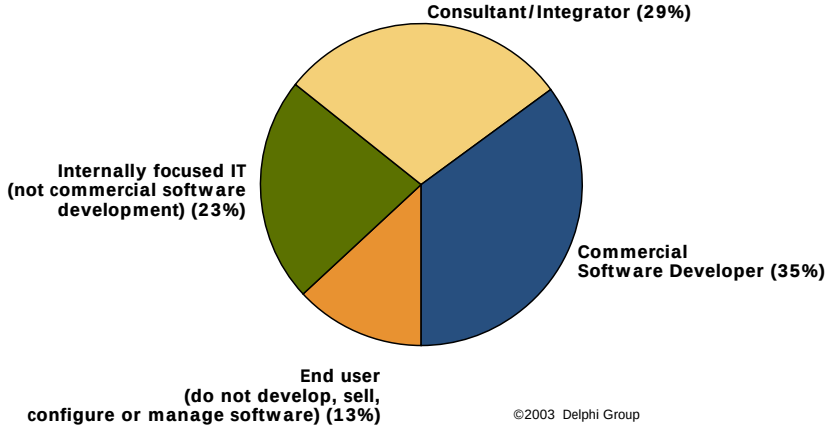
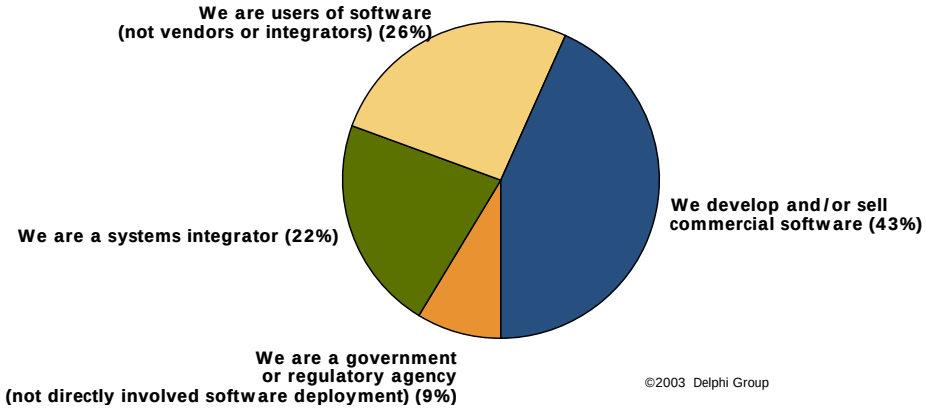
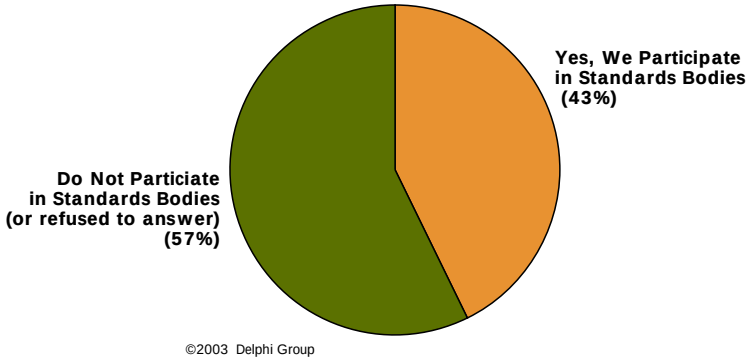
Key Findings

Despite the large representation of IT industry professionals, more than half of the respondents did not indicate participation in a standards body. Yet standards compliance is acknowledged by the vast majority of respondents.







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