



## **Intellor Research Summary**

# **XML Adoption: Benefits And Challenges**

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## Situation Analysis

This research summary reviews the responses of executive and IT professionals from an Intellor Group survey they completed about their XML initiatives as they relate to current and future IT projects. The respondents provided insight into the acceptance, motivation, implementation, application, challenges, business benefits and vendor selection of XML and XML-related technologies. This particular research summary focuses on two questions from that survey—a question on the *benefits* and a question on the *challenges* of XML adoption.

Intellor Group shall publish additional research summaries on the impact, acceptance, understanding, implementation, and priority of XML adoption. These research summaries will be made available at no cost to members of Intellor.com.

## Background

### The Focus

This Intellor Research Summary is not going to teach you what XML is or what it can do for you. The goal of this research is to analyze the *perceived* benefits and challenges that IT professionals attribute to XML. It can be taken as a measure of how effective XML marketing hype has been and how discerning the IT audience has been at separating the wheat from the chaff in truly understanding the role of XML. In other words, how can XML be applied to maximum benefit while avoiding the pitfalls that over-eager early adopters are liable to stumble over.

Bear in mind that this survey did not require the respondents to have any significant XML implementation experience. Therefore, to a large degree, this survey has measured educated and informed opinion that is not necessarily rooted in specific real-world experience. The respondents are, however, seasoned IT professionals. As XML adoption becomes widespread and commonplace over the next 24 months, it will be an interesting follow-up exercise to repeat the survey and analyze the differences in results, if any.

The 232 respondents were all attendees of the Wilshire Meta-Data Conference and DAMA Symposium on March 4-8, 2001. This analysis does include people who “did not know” or made no response. Therefore, the percentages shown in the following graphs are all percentages of the total number of respondents (232).

## Background (continued)

### The Questions

Attendees were asked to indicate their responses to the following questions:

#### 1) Rate the degree of benefit of these XML business drivers in your organization

- A common data format that facilitates participation in B2B exchanges or supply chains with suppliers, customers or partners
- An EAI-enabling technology that simplifies application integration within an organization
- A cost-effective EDI replacement
- Data conversion cost reduction
- Reduction of application development time
- Common data access techniques for structured and unstructured data
- Enable rapid adoption of new and future client devices, such as PDA's, etc.
- Other

#### Responses were selected from

- Do not know
- No Benefit
- Minimal Benefit
- Major Benefit
- Critical Importance

#### 2) Rate these *challenges* to your organization that XML adoption is likely to present

- Lack of qualified IT staff
- Security
- Immature standards
- Organizational resistance to XML
- Competing and overlapping standards
- Credibility gap created by XML hype
- Other

#### Responses were selected from

- Do not know
- No Concern
- Minimal Challenge
- Major Challenge
- Critical Concern

### Respondent Demographics

The respondents represent over twenty-five (25) different industries ranging from Aerospace to Utilities. No single industry provided more than 20 percent of the respondents. Government is the single largest category with 16 percent of the respondents. Respondents are split 52 - 48 percent between companies with annual revenue

## Background (continued)

above or below \$1 billion. Titles range from CEO to IT programmer, and 14 percent of the respondents have a title of director or higher.

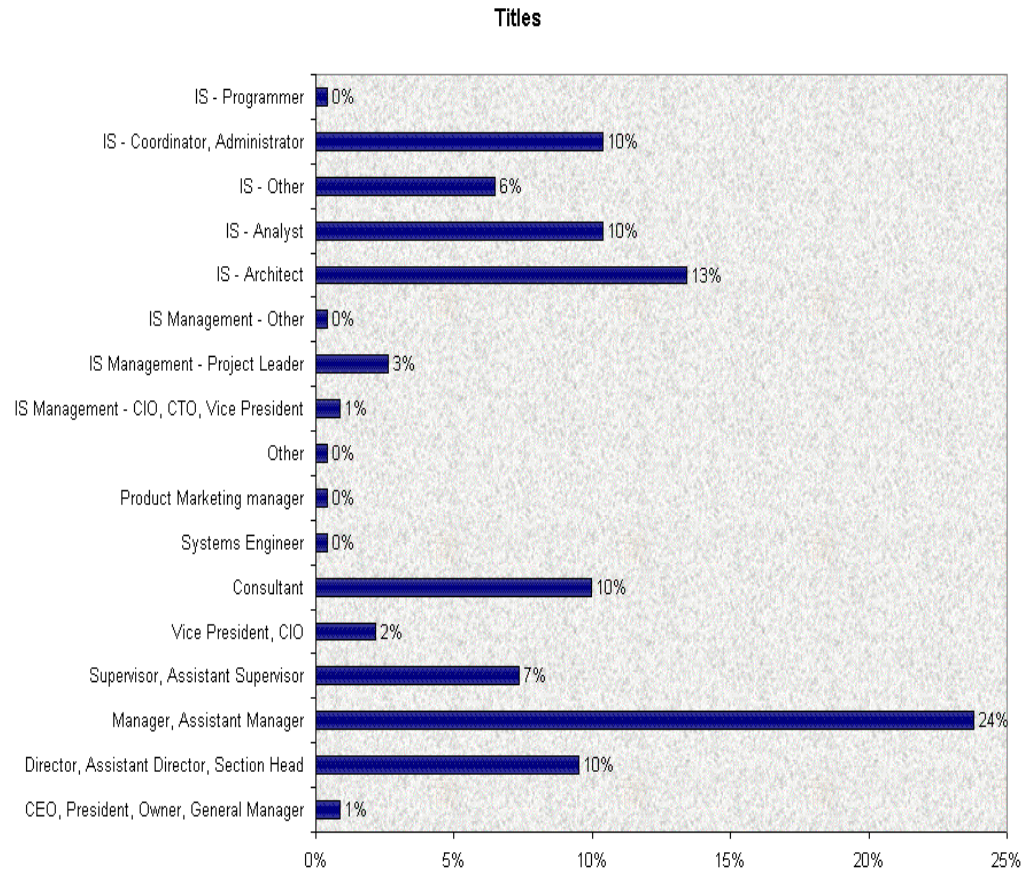


Figure 1 -  
Respondents by Title

## Background (continued)

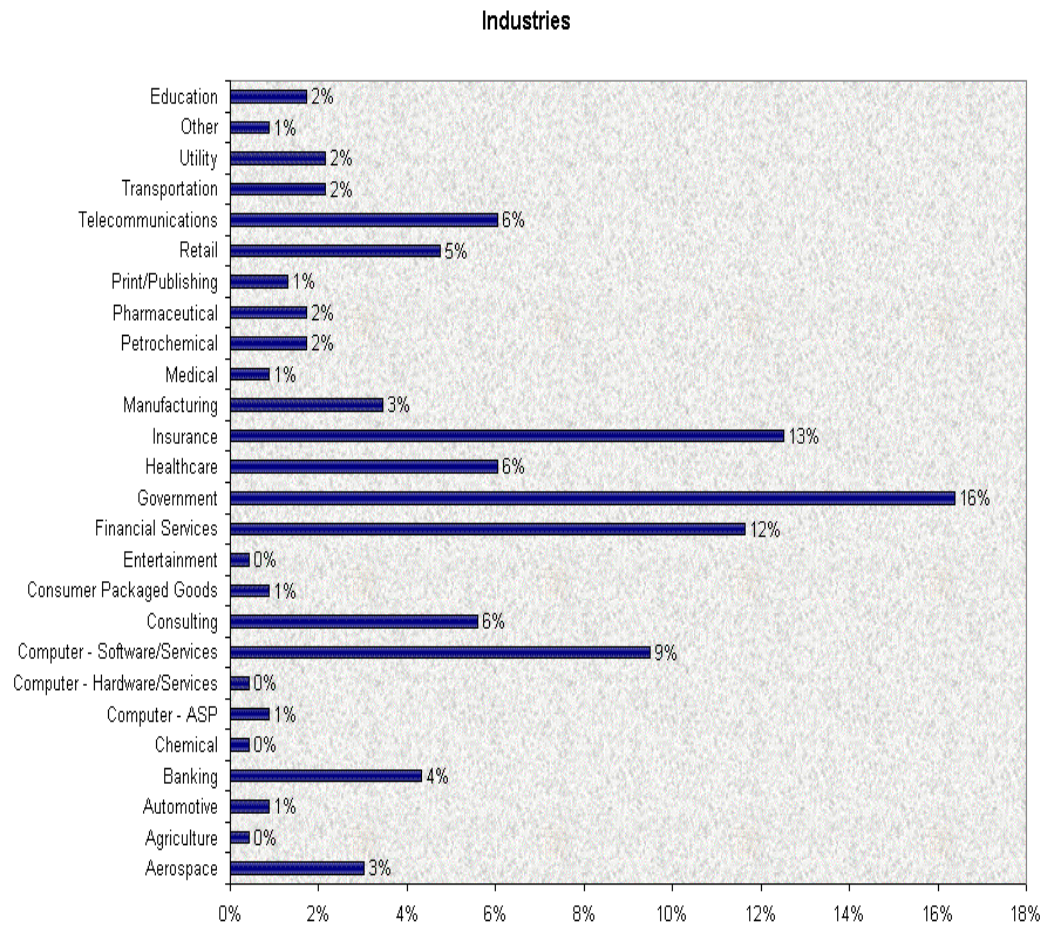


Figure 2 -  
Respondents by Industry



## Background (continued)

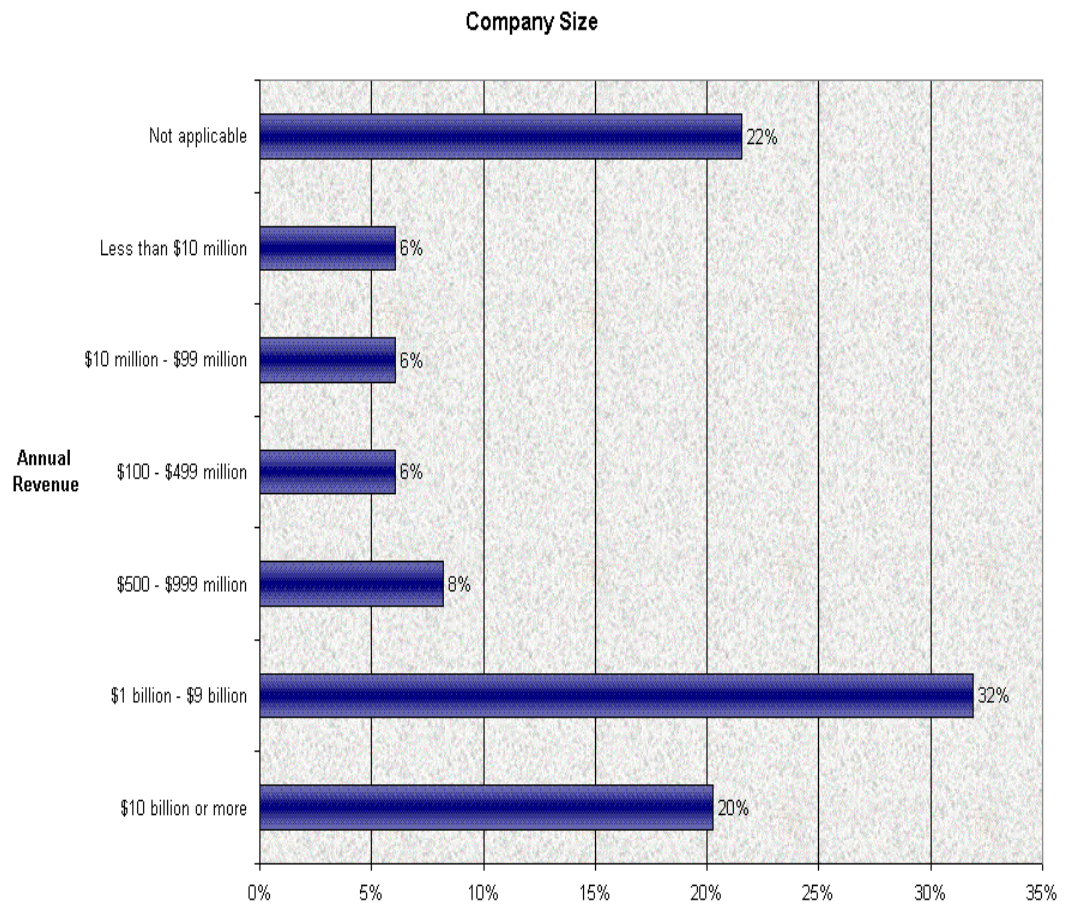


Figure 3 -  
Respondents by Company Size

## Benefits

### So...What Are The Benefits Of XML Adoption?

Several potential benefits of XML adoption were presented to respondents in this question. To gain a clearer impression of the outcome, the totals of the respondents who rated these benefits as a “major benefit” and those who rated them as “of critical importance” are combined together to provide an overall benefit rating.

In first place in this combined rating, **66 percent** of the respondents rated **“a common data format that facilitates participation in B2B exchanges or supply chains with suppliers, customers or partners”** as the leading benefit of XML adoption. Trailing by 8 points in second place at **58 percent** is **“common data access techniques for structured and unstructured data”**.

Completing the top three was **“an EAI-enabling technology that simplifies application integration within an organization”**, which was rated beneficial by **53 percent** of respondents.

Having the top three benefit slots linked to back-end data access, B2B- type applications is probably no surprise to most given the huge vendor push behind these initiatives. However, at the same time, it must be something of a disappointment for the original formulators of the XML standard who envisioned much more of a front-end role for their brainchild.

**“Data conversion cost reduction”** and **“reduction of application development time”** were next—rated beneficial by 41 percent of the respondents.

They were followed by **“enable rapid adoption of new and future client devices, such as PDA’s”** with a 32 percent beneficial rating and **“a cost-effective EDI replacement”** with a 24 percent score. This last result is surprising given the traction that EDI to XML conversion and integration efforts have garnered and the huge potential for simplification in this market that XML offers.

Finally, with 22 percent is **“bridging technology between the .NET and Java worlds”**. The .NET platform is new and not deployed yet, and this rating reflects the general lack of awareness that surrounds it. We believe that this perceived benefit could change in future. If this survey were repeated in 12 months, we think there is a strong likelihood that the data shall show that the undoubted benefit of a common access technology between .NET and Java shall gain recognition and acceptance and push this benefit much higher in the list.

## **Benefits (continued)**

### **What Other Benefits Were Suggested?**

This survey was constructed so that respondents could submit their own benefit suggestions if they wanted to augment the list provided above. The following additional benefits were submitted. None of these benefits was suggested more than once.

- Standard, portable format to transfer meta-data
- Useful content management infrastructure technology
- Suitable basis for eGovernment initiatives—especially delivery of information to the public
- Portable data format for data transfer from/to CASE tools, repository and DBMS
- Standard format to integrate technology of multiple ISV's
- Sought-after technology expertise, which can increase a consultant's marketability
- A standard messaging syntax
- An easy interface to multiple distribution channels, which allows us to concentrate on differentiating ourselves on quality of service



## Benefits (continued)

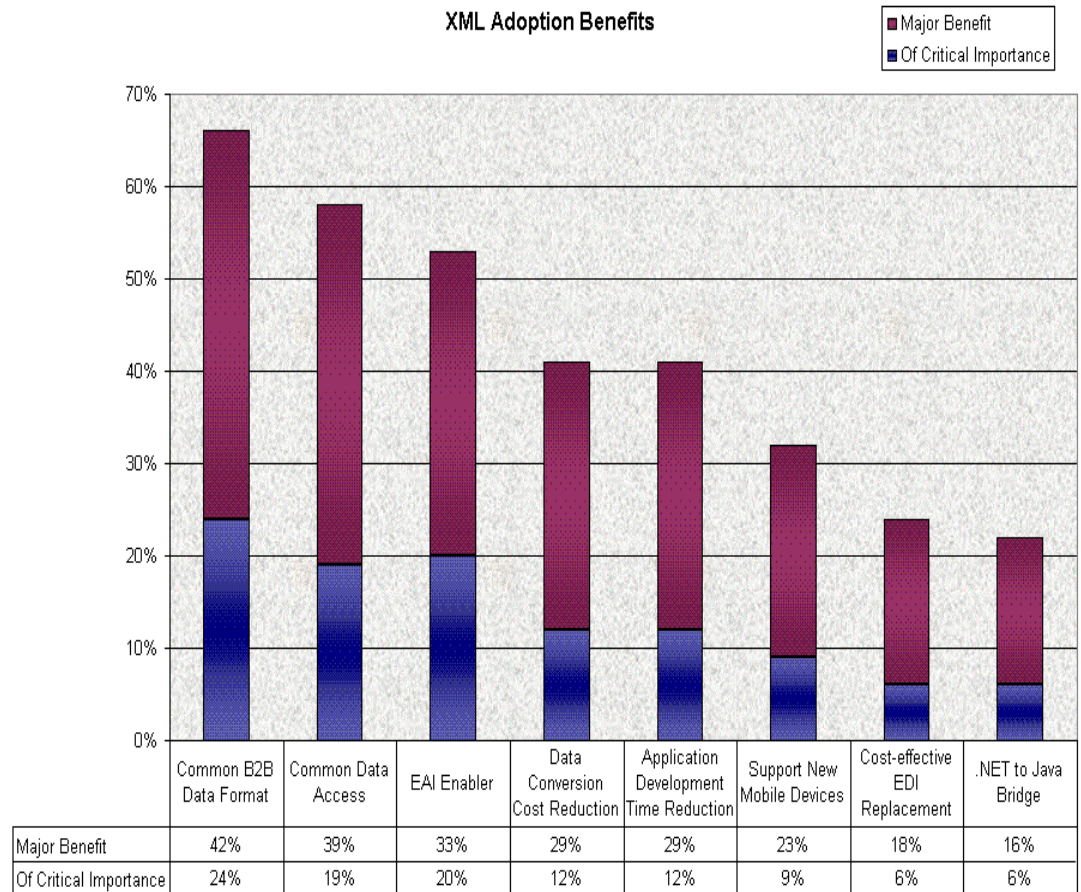


Figure 4 -  
Respondents' Perceived Benefits of XML Adoption

Figure 4 shows "major benefit" and "of critical importance" ratings for each benefit combined into a single column so that the benefits can be compared.

## Challenges

### So...What Are The Challenges Of XML Adoption?

In this question, several potential challenges to XML adoption were presented to respondents. To gain a clearer impression of the outcome, the totals of respondents who rated these challenges as a "major challenge" and those who rated them as of "critical concern" are combined to provide an overall challenge rating.

In first place in this combined rating, **64 percent** of respondents rated "**immature standards**" as the leading challenge of XML adoption. In second place at **61 percent** is "**lack of qualified IT staff**".

## Challenges (continued)

“**Competing standards**” is rated a challenge by **53 percent** of the respondents and took third place.

### **Immature Standards**

To anybody who follows the XML circus of conferences, press coverage and XML developer discussion forums, the outcome of “Immature standards” rated as the predominant XML challenge tallies with the broad consensus that is emerging from within the XML world. XML tools vendors and early adopters are being asked to develop and deploy products that are based on proposals that have not yet been ratified as standards.

XML Schema is a good example of a crucially important XML proposal, which is too complex for even many XML experts to understand completely. It is very near to the date when it is to be ratified as a standard. However, because of opposition and submission of competing, simpler (thank goodness!) proposals, it is not clear whether it should be standardized in its current form. In the meantime, myriad vendors are hard at work, bringing XML Schema conformant products to market, and it is unlikely that they will easily accept significant changes in the proposal. A summer of negotiation, compromise and fudged solutions is likely to ensue.

Ultimately we expect sanity to prevail and the standards process to stabilize, and the long-term outlook is not gloomy.

### **Lack Of Qualified IT Staff**

All this complexity helps frame the second-place challenge that confirms the results of an earlier Intellor Research Summary about IT staffing (See [www.intellor.com/links/?pg=RS1](http://www.intellor.com/links/?pg=RS1) ). It is simple to understand XML conceptually, but it takes concentrated effort to understand the components such as XML Schema and XSLT that really make it viable. Overtaxed IT staffs were already struggling to keep current with technology before XML showed up on the horizon. Whether they have the bandwidth to devote to XML is doubtful, so consulting organizations will likely be called on to pick up the slack.

### **Competing Standards**

Having multiple organizations and consortiums influencing XML is inevitable given the strategic emphasis that vendors have placed on this new technology. A significant 53 percent of respondents consider this a challenge to XML adoption. The concern may be over-rated. The two most influential XML frameworks are Microsoft’s Biztalk and ebXML from OASIS. Many organizations are likely to fall into one or both of these camps. When you consider the broad front that XML is advancing on, the real-world

## Challenges (continued)

reality that one size does not fit all and the existence of XSLT, which facilitates efficient translation between different XML business process definitions, the competing standards challenge should recede over time.

### How Were the Other Challenges Rated?

**“Security”** is the next challenge in line with a rating of 40 percent of the respondents. Since most of the impetus behind XML adoption is driven by e-business initiatives, security is an obvious concern. Digital signature capability is being built into XML standards so that XML documents sent across organization boundaries can be authenticated. Adoption of these and other security measures by XML vendors should see security become less of a concern as these tools start to reach the market.

This was followed by **“credibility gap created by XML hype”** with a 38 percent challenge rating and **“Organizational resistance to XML”** with a 22 percent score. Both of these challenges should recede over time as XML moves from the “over-hyped silver-bullet” to mainstream, powerful technology that we can do useful things with to facilitate business. To quote Software AG’s Michael Champion in a recent Intellor Interview (See [www.intellor.com/links/?pg=MCII](http://www.intellor.com/links/?pg=MCII) ), “ We’ve seen XML used to justify some extremely visionary scenarios presented by prominent software executives. Now, the reality that XML is basically a way of describing data in a simple, interoperable way is becoming more obvious. “

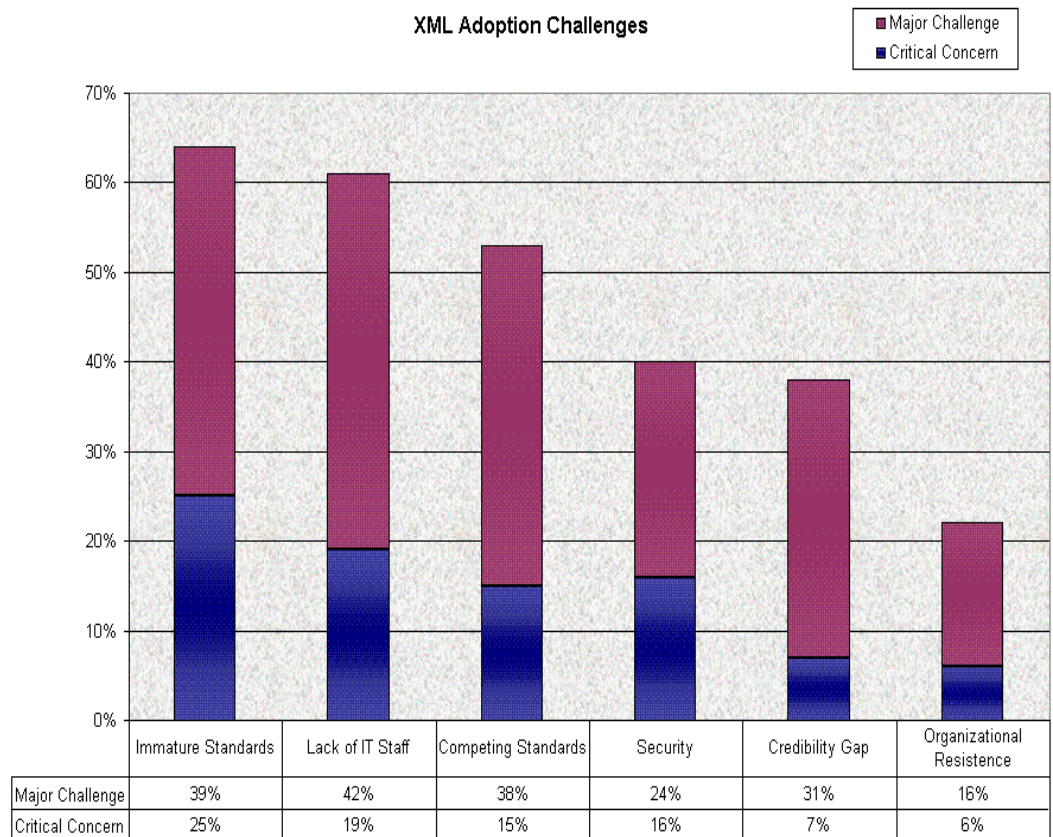
### What Other Challenges Were Suggested?

This survey was constructed so that respondents could submit their own challenge suggestions if they wanted to augment the list provided above. The following additional challenges were submitted. None of these challenges was suggested more than once:

- Lack of clear guidelines and direction on where to apply XML technology
- Complexity of managing XML Data
- Lack of overriding, imperative reason to implement
- Lack of XML understanding
- Complexity and time-consuming nature of converting legacy data into XML

## Challenges (continued)

- Perception that XML is a silver bullet which will go the way of most technology silver bullets
- Lack of enterprise meta-data management capability
- Performance of XML tools
- Immature XML tools



**Figure 5 -  
Respondents' Perceived Challenges of XML Adoption**

Figure 5 shows "major challenge" and "critical concern" ratings for each challenge combined into a single column so that the challenges can be compared.



## Conclusion

This examination of the benefits and challenges of XML adoption, as reported by our 232 survey respondents, suggests that the future of XML is positive and encouraging. The benefits are well understood and tangible, and the challenges are recognized and likely to recede over time. Using Gartner, Inc.'s oft-paraphrased adoption curve and to quote Michael Champion again, XML is "probably just past the 'peak of inflated expectations'", which is when reality sets in and universal, productive solutions start to emerge.

## About Intellor Group, Inc.

### About Intellor Group, Inc.

Intellor Group, Inc., located in Gaithersburg, Maryland, is an independent knowledge exchange company focused on promoting the success of organizations' e-business initiatives in the e-Business Intelligence and Integration (eBII) marketplace through the rapid and comprehensive exchange of knowledge.

Intellor Group's unique business model connects companies seeking knowledge with vendors, thought-leaders and peers who can provide that knowledge. Intellor Group provides a next-generation learning environment for Information Technology (IT) users and solution providers that surpasses the capabilities of traditional learning methods by combining the input and dissemination power of the Internet via an Internet community-based knowledge exchange – [www.intellor.com](http://www.intellor.com) – with real-world education and in-depth, community-based research and analysis.

For more information about Intellor Group's knowledge exchange offerings, visit Intellor Group at [www.intellor.com](http://www.intellor.com), or call 301-208-6766, x116. **To register to become a member of the Intellor.com eBII Web community visit [www.intellor.com](http://www.intellor.com) . Membership is FREE to IT professionals.**

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- Interact with your peers who have solved your challenge(s) before.
- Get the no-marketing-hype scoop on products, services and solutions.
- Eliminate time-consuming Internet surfing to research technologies and solutions.

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(continued)

- Access to real critiques of products and services from people like you.
- Aid your decision-making process, and reduce your technology investment risk.
- Expedite approvals and funding for projects through access to the information necessary to make your business case.
- Get opinions from industry experts.
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