

CIO2CIO Global Research Study

Business Intelligence and
Master Data Management (MDM)

**Prepared for
SAP, Inc.**

July 2007



Custom Solutions Group



Custom Solutions Group

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Survey Overview & Objectives

This global CIO2CIO research program was conducted for SAP, Inc. to gain insight into information management practices in various regions of the world. The research was conducted among IT professionals in the U.S., Europe and Asia. The topics discussed in this survey include:

- Priority attached to management of data as an enterprise asset
- Perceived benefits of well managed trusted information
- Current information management strategies and practices
- Solutions in place or under consideration as part of information management goals
- Top challenges inhibiting information management
- Challenges of aligning IT and business goals
- Individuals responsible for enterprise data quality, information management and defining KPIs
- Challenges of dealing with multiple information management tools
- Importance of standardizing BI and MDM solutions on one platform
- Systems relied up to provide a trusted information platform
- Importance and scope of search functionality
- Strategies for aligning enterprise information management with SOA/composition

The results from the research will be used as the basis for content for white papers and executive summaries recapping the enterprise perspective on the topics of business intelligence and Master Data Management (MDM).



Methodology

This study was conducted among IT management at companies with 500 or more employees (250 or more employees in non-U.S. companies).

The survey was administered online. Each sample member received an email invitation containing a URL link to access the survey, which they could click on or paste into their browser. Non-U.S. surveys were programmed in the native language of each country.

The U.S. survey was completed among qualified members of the *CIO* audience. Non-U.S. surveys were completed among an international panel of IT professionals.

The study was conducted between June 18, 2007 and July 13, 2007. A total of 400 surveys were completed online in the following regions:

U.S. - 100 surveys

EMEA - 100 surveys: UK (35), France (35), Italy (30)

APAC - 200 surveys: Singapore (40), Australia (40), Japan (40), China (40), Korea (40)

The margin of error for a sample of 400 is +/- 4.91 percentage points at the 95% confidence level.



Key Findings

- **The majority of respondents in all regions attach a critical or high priority to data management as an enterprise asset. *Improving operational efficiency* is viewed as the number one benefit of having well-managed, trusted information in every region (70% worldwide mention this benefit).**
- Worldwide, **information is most often managed on an enterprise-wide basis**, while roughly one-quarter of the respondents indicate that information is managed on a departmental basis at their companies. This remains fairly consistent across each region.
- **U.S. companies are more likely to be in the planning or consideration stages for initiatives such as MDM, content management, data quality and data governance**, while companies in EMEA and APAC are more likely to be currently implementing or piloting these initiatives.
- **In EMEA and APAC, responsibility for enterprise data quality is more likely fall solely on IT**, whereas in the U.S. one-half (50%) of the respondents indicate that both IT and Line of Business executives have responsibility for enterprise data management.
- **In the U.S., Senior IT management is most likely to have responsibility for information management strategy**, whereas in EMEA and APAC respondents are equally likely to report that Senior management or mid-level IT management have responsibility for these initiatives.
- In terms of defining *strategic* metrics or key performance indicators (KPIs), once again U.S. respondents are most likely to indicate that Senior IT management owns this responsibility. While Sr. IT and mid-level IT management are also the most likely candidates for this role **in APAC and EMEA, executive or corporate management is more likely to share responsibility for defining strategic metrics** in these regions.
- U.S. respondents are equally likely to report that Senior IT management and mid-level IT management have responsibility for defining *operational* metrics or KPIs, **Executive or corporate management is more likely to help define operational metrics in APAC versus other regions.**
- **The majority of respondents in all regions feel that BI and MDM platform integration is critical or very important.** In fact, one-quarter (25%) rate BI/MDM platform integration as critical and 48% rate it as important.



Key Findings (*continued*)

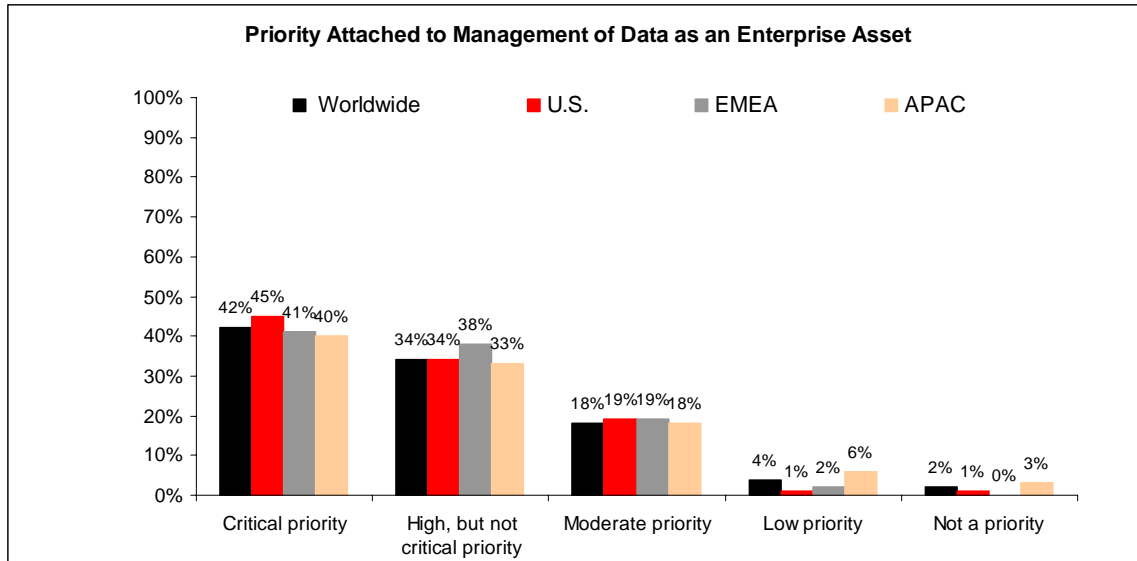
- **Companies in EMEA and APAC are much more likely than those in the U.S. to rely on MDM and content management solutions to help them build trusted information platforms.** U.S. companies are most likely to rely on data warehousing and ERP applications.
- **Forty-six percent (46%) of companies in APAC have a plan to reconcile operational and analytical MDM requirements** (versus 33% in EMEA and 28% in the U.S.), However, over one-third of the respondents in EMEA as well as in the U.S. indicate their companies are thinking about implementing such a plan.
- **Respondents in APAC are most likely to report that structured data and unstructured data are treated as one discipline** at their companies, In the U.S. and in EMEA, the majority of respondents indicate that structured and unstructured data are considered to be separate disciplines.
- *Search* is considered to be critical or important by the majority of respondents worldwide. In terms of the desired scope of the search functionality, **coverage of documents on the intranet is most often selected by respondents as a requirement of search.**
- **Companies in APAC are the most likely to have enterprise information strategies that are closely aligned with SOA/composition.**



Detailed Findings

Priority Attached to Data Management as an Enterprise Asset. Worldwide, 42% of all respondents claim that management of their organization’s data as an enterprise asset to be shared and reused across multiple software applications and systems, business processes and users throughout the organization is a *critical priority*. While 54% of respondents rate data management as either a *high priority* (34%) or *moderate priority* (18%), just 5% believe it is a *low priority* or *not a priority* at all.

Results are fairly consistent across the regions with over three quarters of the respondents in each region attaching a critical or high priority to data management as an enterprise asset.

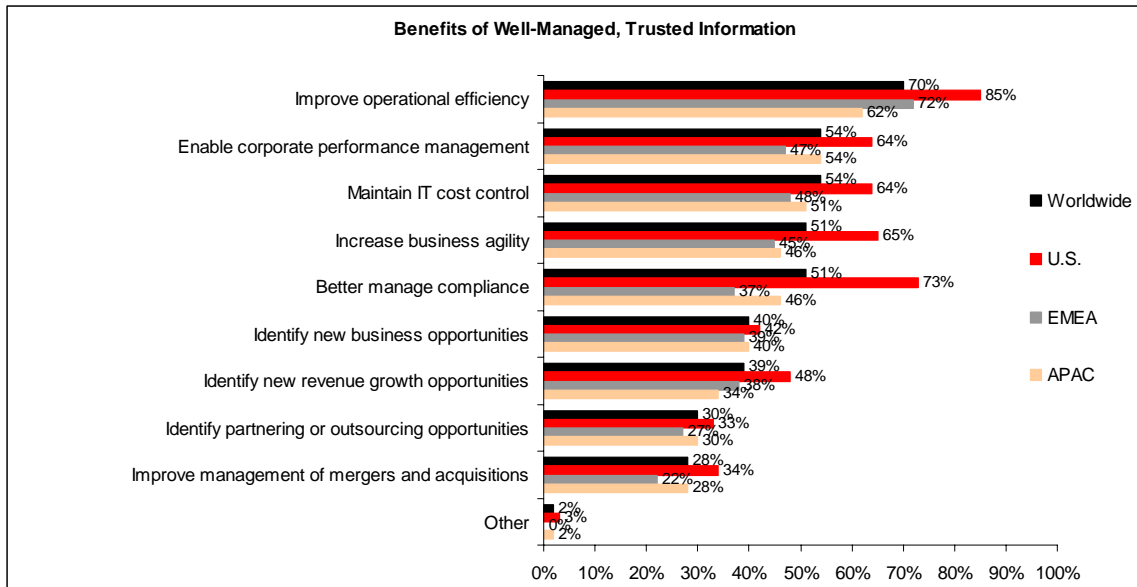


Base: Worldwide - 400; U.S. – 100; EMEA – 100; APAC - 200



Benefits of Well-Managed, Trusted Information. On a worldwide scale, almost three quarters (70%) of respondents indicate that a benefit of well managed, trusted information for their organizations is *improving operational efficiency*. Other benefits frequently mentioned include: *enabling corporate performance management (54%)*, *maintaining IT cost control (54%)*, *increasing business agility (51%)* and *better management of compliance (51%)*.

While all regions consider *improving operational efficiency* to be the number one benefit of well-managed trusted information for their organization, U.S. respondents are more likely than those in both EMEA and APAC to count this among the benefits. Respondents in the U.S. are also more likely than those in other regions to cite *enabling corporate performance management*, *maintaining IT cost control*, *increasing business agility*, *better management of compliance* and *identifying new revenue growth opportunities* as benefits of well-managed, trusted information.

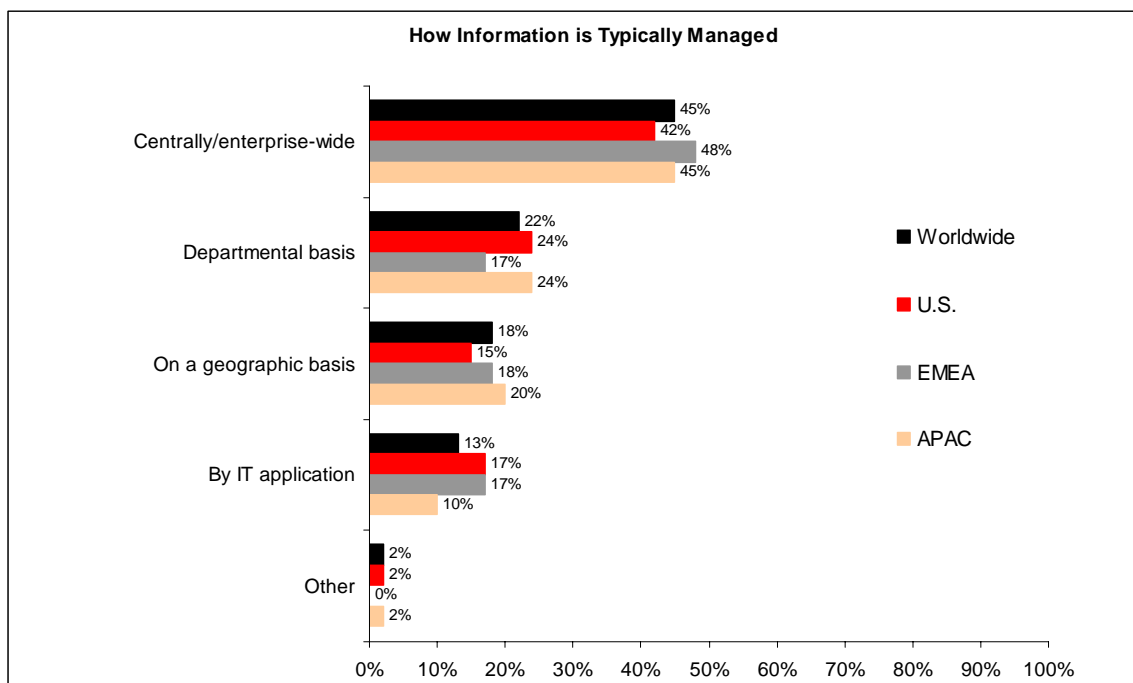


Base: Worldwide - 400; U.S. – 100; EMEA – 100; APAC - 200



Typical Information Management Strategy. Worldwide, information is most commonly managed *centrally/enterprise-wide* (45%). While 22% of respondents indicate that their companies' information is managed on a *departmental basis*, 18% of companies manage information *on a geographic basis* and 13% manage information *by IT application*.

Results are fairly consistent across the regions, with respondents in the U.S. and EMEA slightly more likely than those in APAC to report that their companies' information is managed on a departmental basis.



Base: Worldwide - 400; U.S. - 100; EMEA - 100; APAC - 200



Solutions/Initiatives Implemented/Under Consideration as Part of IM Goals.

Worldwide, respondents indicate that their companies have implemented or are piloting a number of different initiatives as part of their information management goals. These solutions include *data governance* (63%), *content management* (62%), *data quality* (61%), *MDM* (61%), *business intelligence* (53%), and *enterprise search* (50%).

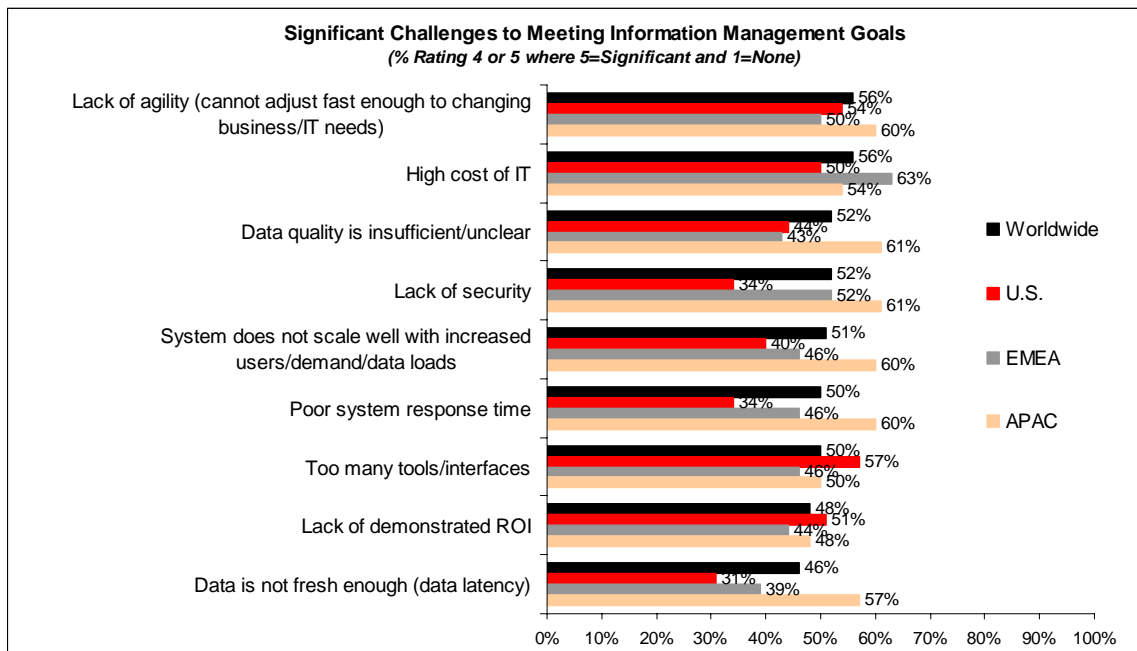
Regionally, the U.S. is below the worldwide average in terms of implementing or piloting *master data management* initiatives or MDM (39% in the U.S. versus 68% in EMEA and 69% in APAC). Respondents in the U.S. are also less likely to report that their companies are in the implementation or pilot stage with respect to *content management*, *data quality* and *data governance*. However, U.S. companies do also demonstrate a higher likelihood of being in the planning or consideration stage for these initiatives.

Business Intelligence	Worldwide	U.S.	EMEA	APAC
Implemented	32%	31%	37%	30%
Piloting/ Rolling Out	20%	16%	17%	24%
Planning	20%	28%	19%	18%
Considering	14%	14%	17%	13%
No Plans	13%	11%	10%	15%
MDM	Worldwide	U.S.	EMEA	APAC
Implemented	40%	24%	48%	44%
Piloting/ Rolling Out	21%	15%	20%	25%
Planning	18%	30%	14%	14%
Considering	11%	20%	6%	8%
No Plans	10%	11%	12%	9%
Content Management	Worldwide	U.S.	EMEA	APAC
Implemented	38%	30%	52%	36%
Piloting/ Rolling Out	23%	15%	19%	29%
Planning	19%	28%	15%	16%
Considering	10%	19%	7%	6%
No Plans	10%	8%	7%	12%
Enterprise Search	Worldwide	U.S.	EMEA	APAC
Implemented	30%	24%	31%	33%
Piloting/ Rolling Out	20%	18%	21%	20%
Planning	16%	17%	16%	16%
Considering	16%	21%	12%	14%
No Plans	18%	20%	20%	16%
Data Quality	Worldwide	U.S.	EMEA	APAC
Implemented	38%	28%	41%	42%
Piloting/ Rolling Out	22%	21%	24%	22%
Planning	18%	25%	15%	17%
Considering	12%	17%	12%	8%
No Plans	9%	9%	8%	10%
Data Governance	Worldwide	U.S.	EMEA	APAC
Implemented	42%	30%	51%	44%
Piloting/ Rolling Out	21%	20%	17%	23%
Planning	18%	26%	16%	14%
Considering	11%	16%	11%	8%
No Plans	8%	8%	5%	10%



Challenges to Meeting Information Management Goals. The most commonly cited challenge with respect to information management goals worldwide is *lack of agility* (56% rating 4 or 5 on a 5 point scale where 5=significant). Other challenges mentioned include: *high cost of IT* (56%), *insufficient/unclear data quality* (52%) and *lack of security* (52%).

Whereas respondents in the U.S. consider *too many tools/interfaces* (57%) to be the most significant challenge with respect to information management goals, EMEA respondents most often cite *high cost of IT* (63%). Respondents in APAC are more likely than those in other regions to consider *lack of agility*, *insufficient data quality*, *lack of security*, *poor scalability* and *poor system response time* as significant challenges.

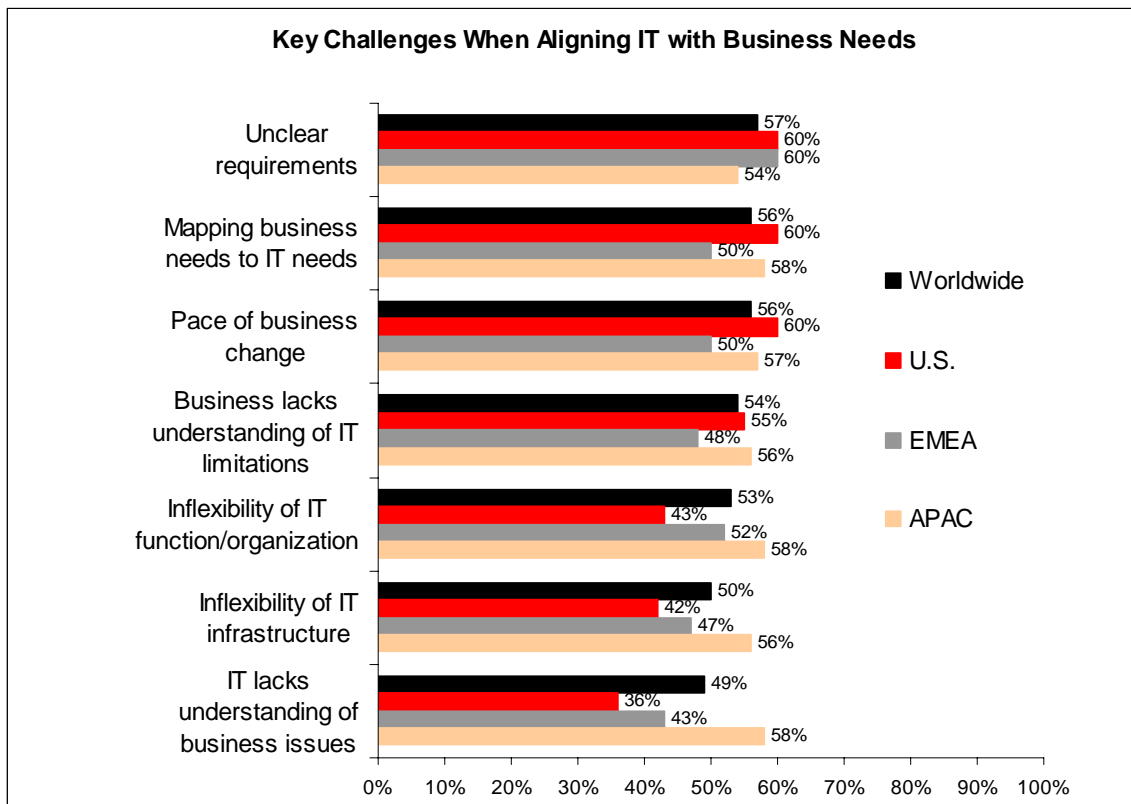


Base: Worldwide - 400; U.S. - 100; EMEA - 100; APAC - 200



Key Challenges Faced when Aligning IT with Business Needs: Worldwide, the most frequently cited challenge when aligning IT with business needs is *unclear requirements* (57% rating 4 or 5 on a 5 point scale where 5=significant). Other frequently mentioned challenges include: *mapping business needs to IT needs* (56%), *pace of business change* (56%), *business lacks understanding of IT limitations* (54%), and *inflexibility of IT function/organization* (53%).

APAC respondents are the most likely of all three regions to count *inflexibility of IT function/organization*, *inflexibility of IT infrastructure* and *IT lacks understanding of business issues* among the challenges of IT and business alignment, while U.S. respondents are the least likely to indicate that each of these issues poses a challenge.



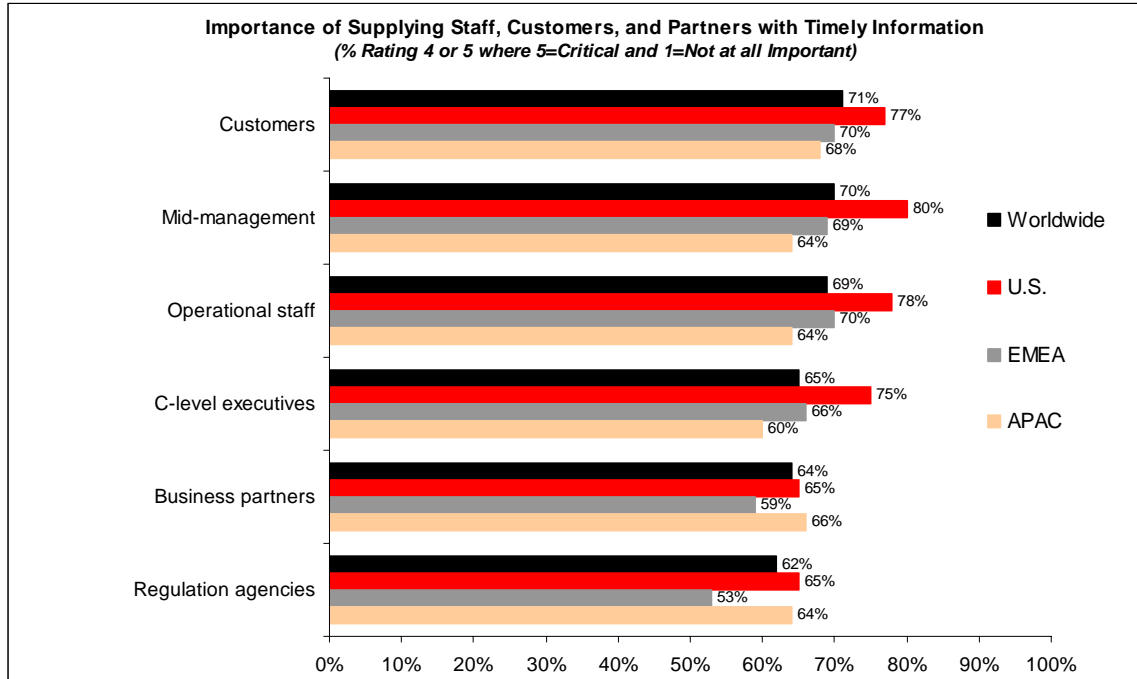
Base: Worldwide - 400; U.S. - 100; EMEA - 100; APAC - 200



Importance of Supplying Staff, Customers, and Partners with Timely Information.

Respondents highly rate the importance of providing each type of individual or group with timely information.

While *customers* are the top priority in every region, U.S. respondents are more likely than those in other regions to highly rate the importance of providing *customers, mid-management, operational staff* and *C-level executives* with timely information.

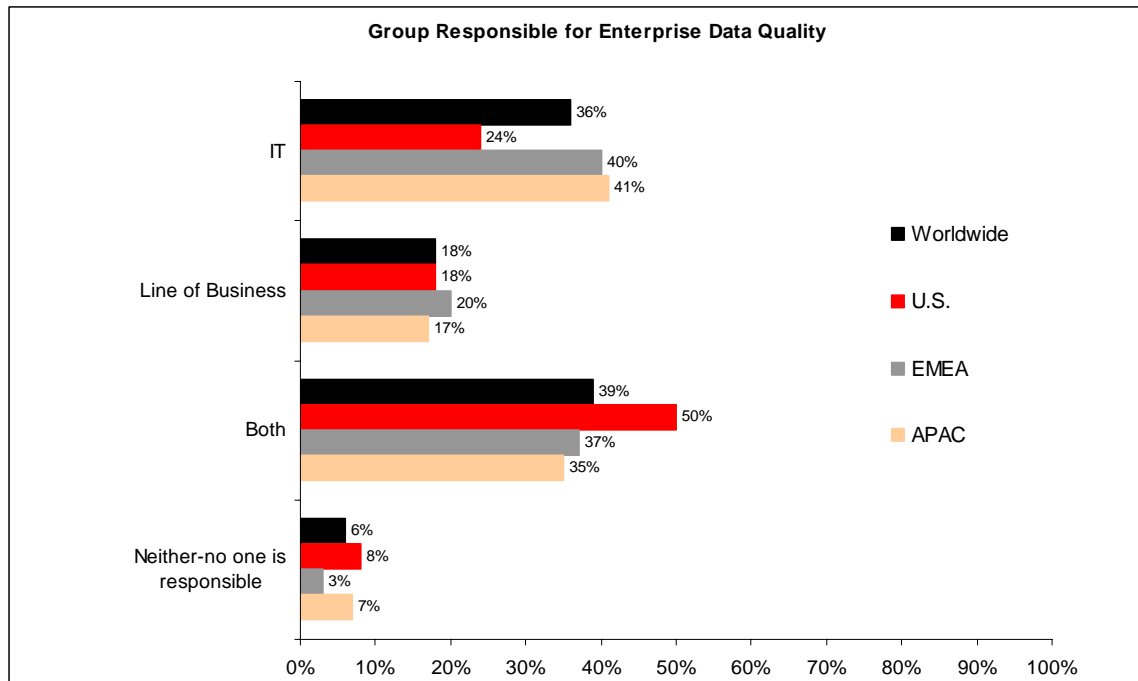


Base: Worldwide - 400; U.S. – 100; EMEA – 100; APAC - 200



Responsibility for Enterprise Data Quality. Respondents throughout the world most often indicate that both IT and Line of Business executives are responsible for enterprise data quality at their organizations (39%), while 36% indicate that IT alone holds this responsibility.

While in the U.S. half (50%) of respondents indicate that enterprise data quality is the responsibility of both IT and Line of Business executives, respondents in EMEA and APAC more frequently indicate that enterprise data quality is solely the responsibility of the IT department (40% and 41% respectively).

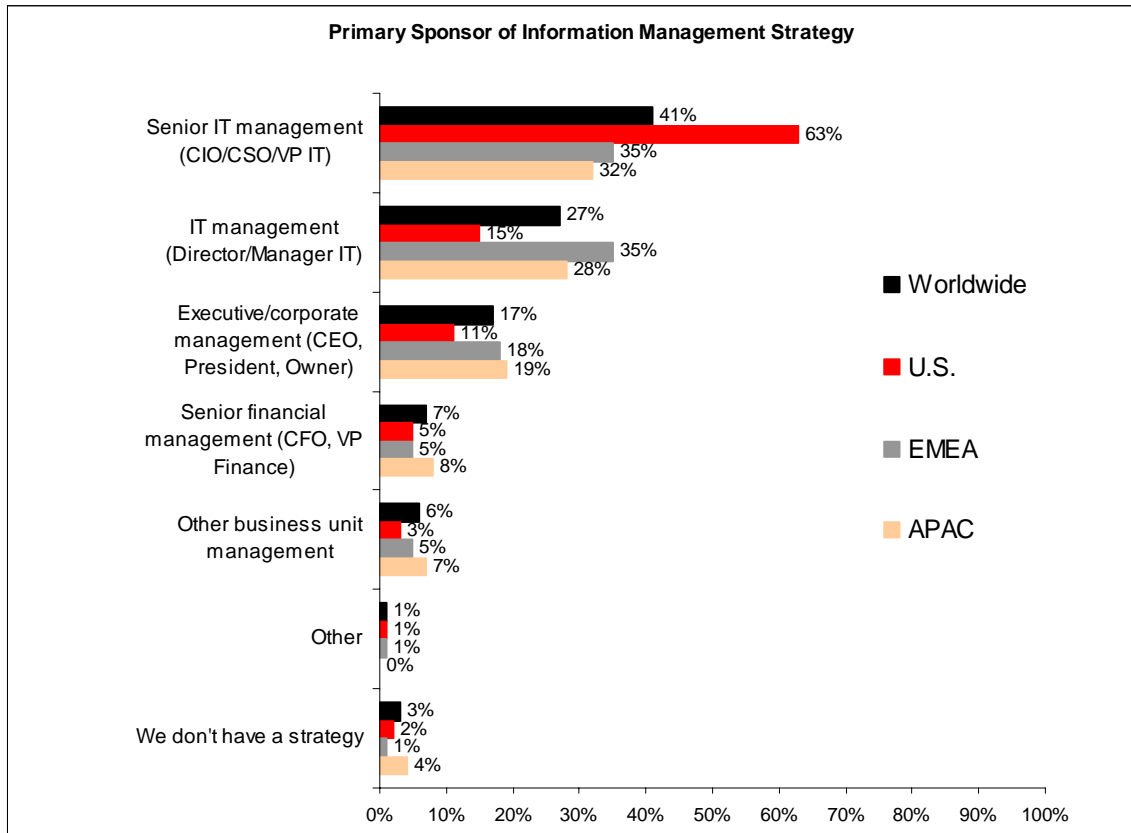


Base: Worldwide - 400; U.S. - 100; EMEA - 100; APAC - 200



Primary Sponsor of Information Management Strategy: Worldwide, respondents indicate that Senior IT management is the primary sponsor of their companies' information management strategies.

U.S. respondents are significantly more likely than those in other regions to indicate that Senior IT management is the primary sponsor of information management strategy, while respondents in EMEA and APAC are more likely than U.S. respondents to report that mid-level IT management is the primary sponsor.

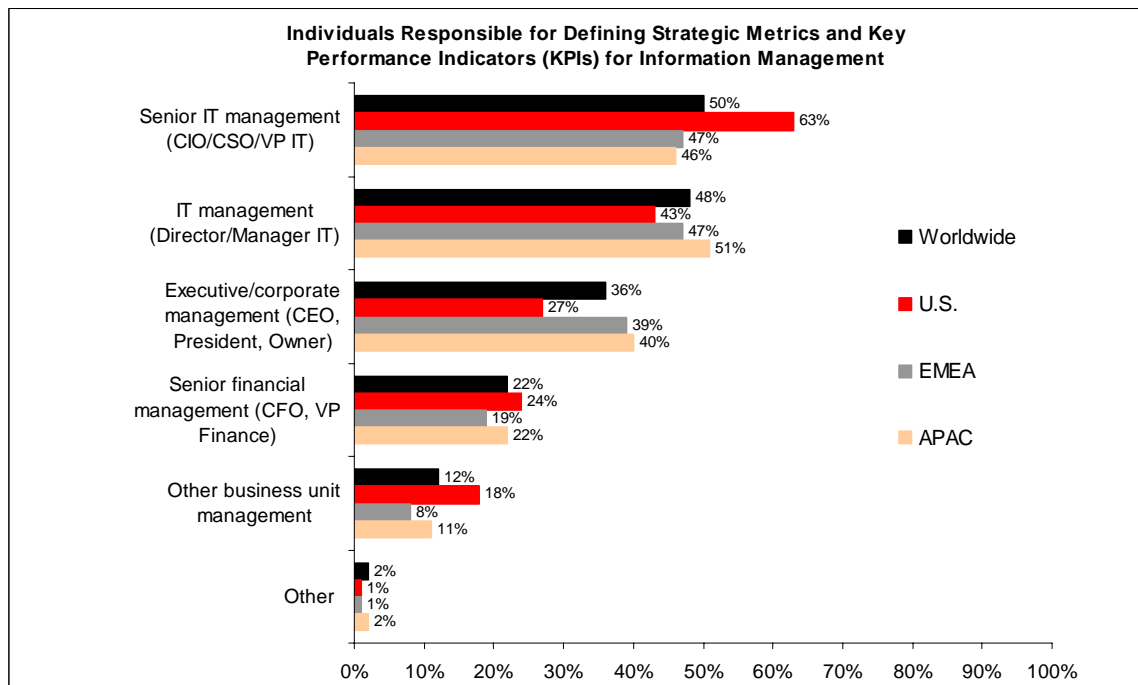


Base: Worldwide - 400; U.S. - 100; EMEA - 100; APAC - 200



Responsibility for Defining Strategic Metrics/Key Performance Indicators. One-half (50%) of all respondents worldwide indicate that Senior IT management is responsible for defining strategic metrics and key performance indicators (KPIs) for information management at their organization.

In the U.S., 63% of respondents indicate that Sr. IT management holds this responsibility. Roughly four out of ten respondents in EMEA and APAC report that executive/corporate management is responsible for defining strategic KPIs for information management, versus 27% of U.S. respondents indicating that executive/corporate management has or shares ownership of this function.



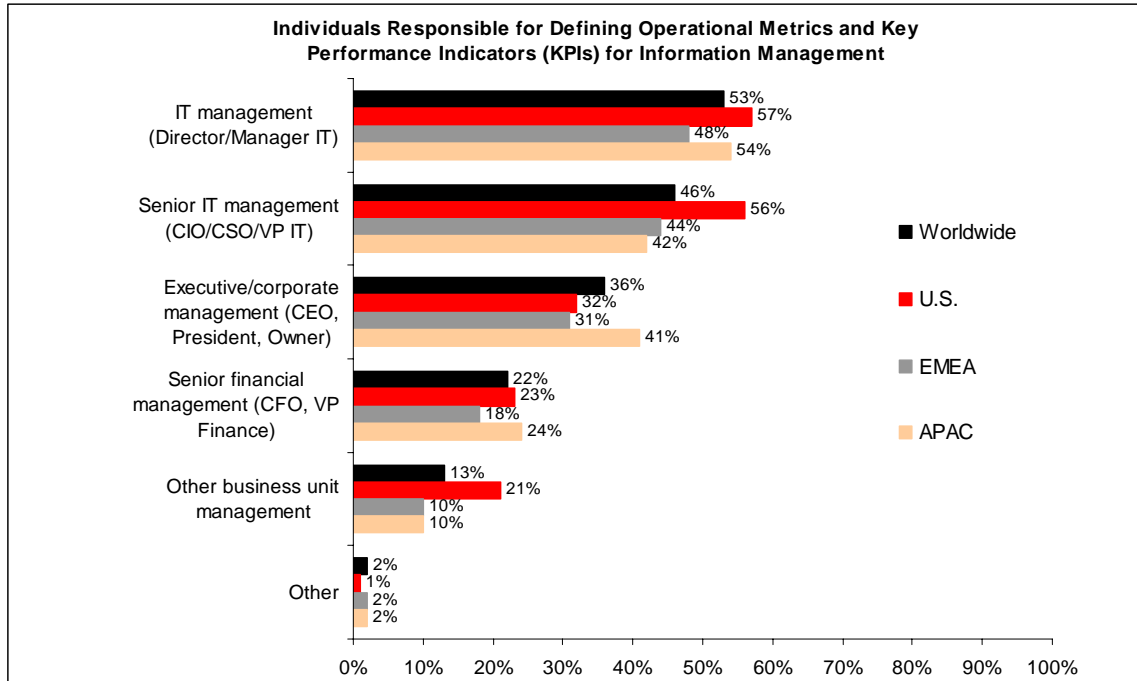
Base: Worldwide - 400; U.S. - 100; EMEA - 100; APAC - 200



Responsibility for Defining Operational Metrics/Key Performance Indicators.

Respondents worldwide most often indicate that mid-level IT management is responsible for defining operational metrics and key performance indicators (53%).

U.S. respondents are almost equally likely to report that the responsibility lies with Sr. IT Management or mid-level IT management. Respondents in APAC are more likely than those in the U.S and EMEA to indicate that executive/corporate management is responsible for defining operations metrics or KPIs for information management.



Base: Worldwide - 400; U.S. - 100; EMEA - 100; APAC - 200



Challenges of Dealing with Multiple IT Tools for Information Management: *Time to build new interfaces* is most often rated as a significant challenge of dealing with multiple information management tools among all respondents worldwide. Each challenge measured was rated as a 4 or 5 by at least half of all respondents, on a 5-point scale where 5 is significant and 1 is not significant.

The most commonly cited challenge in both the U.S. and EMEA is *time to build new interfaces*. In APAC, the most frequently specified challenge is *effort for troubleshooting*. In the U.S., just 31% rate *supplier relationship management* as a significant challenge (versus 54% and 56% in EMEA and APAC, respectively).

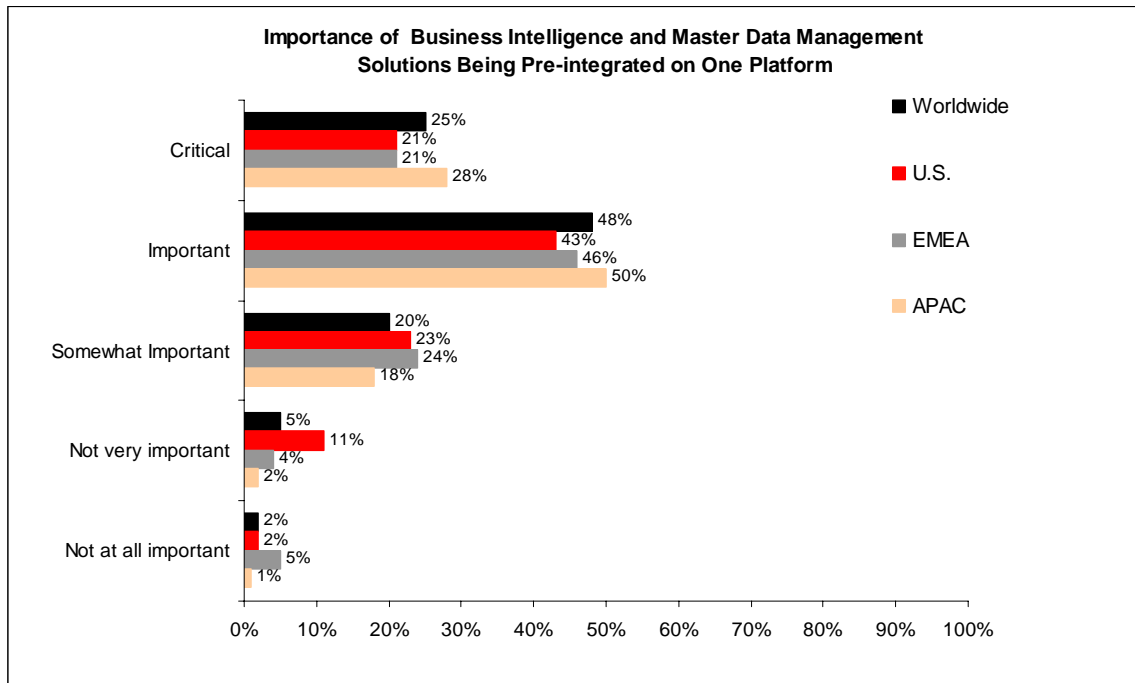
Key Challenges of Dealing with Multiple Tools for Information Management (% rating 4 or 5 where 5 is significant and 1 is not significant)				
	Worldwide	U.S.	EMEA	APAC
Time to build new interfaces	65%	73%	63%	62%
Cost to maintain custom interfaces	62%	65%	60%	60%
Cost to build new interfaces	62%	69%	61%	60%
Managing upgrades	62%	65%	53%	64%
Data redundancies	61%	66%	57%	60%
Effort for troubleshooting	60%	53%	55%	66%
Impact on data quality due to interfaces	60%	57%	54%	64%
Supporting multiple tools for end users	60%	63%	55%	60%
Effort required by end users to understand and juggle available tools	60%	63%	49%	63%
Functionality redundancies	58%	58%	54%	60%
Supplier relationship management	50%	31%	54%	56%

Base: Worldwide - 400; U.S. - 100; EMEA - 100; APAC - 200



Importance of BI and MDM Platform Integration: Almost three-quarters (73%) of respondents worldwide indicate that it is critical or important that business intelligence and master data management solutions are pre-integrated on one platform. Only 2% claim this is of no importance.

Regionally, 78% of respondents in APAC, 67% in EMEA and 64% of U.S. respondents rate the importance of platform integration as either critical or important.



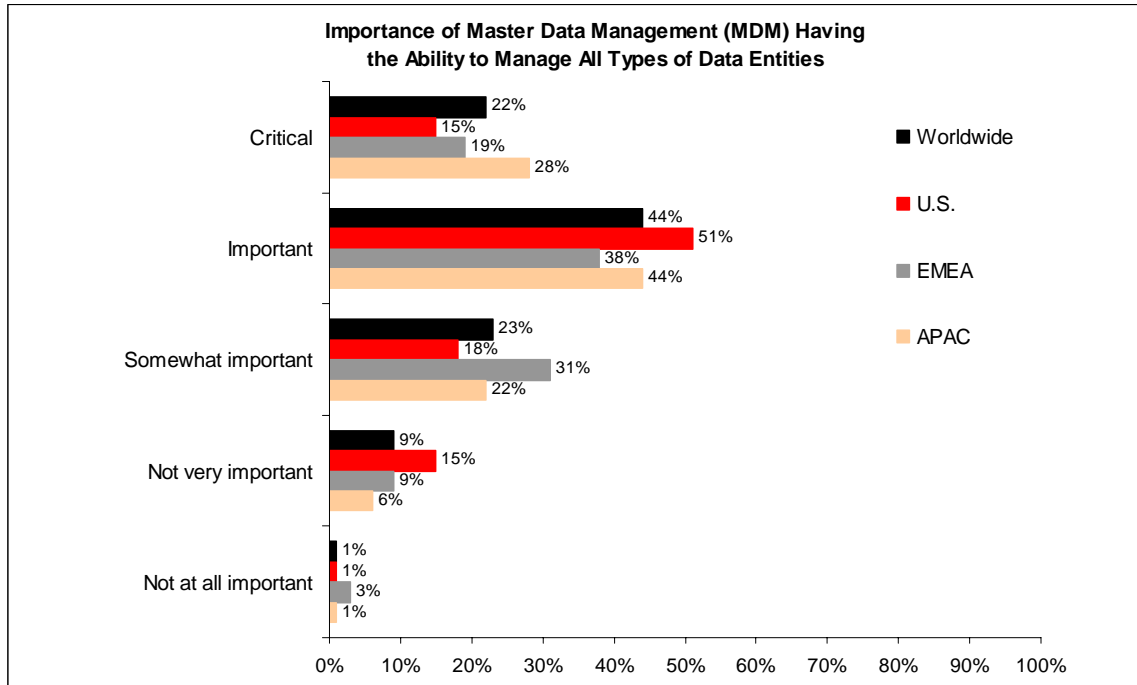
Base: Worldwide - 400; U.S. - 100; EMEA - 100; APAC - 200



Importance of MDM Solution’s Ability to Manage Various Types of Data Entities.

Over two-thirds (66%) of respondents worldwide indicate that it is critical or important that a master data management (MDM) solution be able to manage all types of data entities. Only 1% feels this is not at all important.

The majority of respondents in each region believe that the ability to manage all types of data entities is critical or important (72% in APAC, 66% in the U.S., and 57% in EMEA)

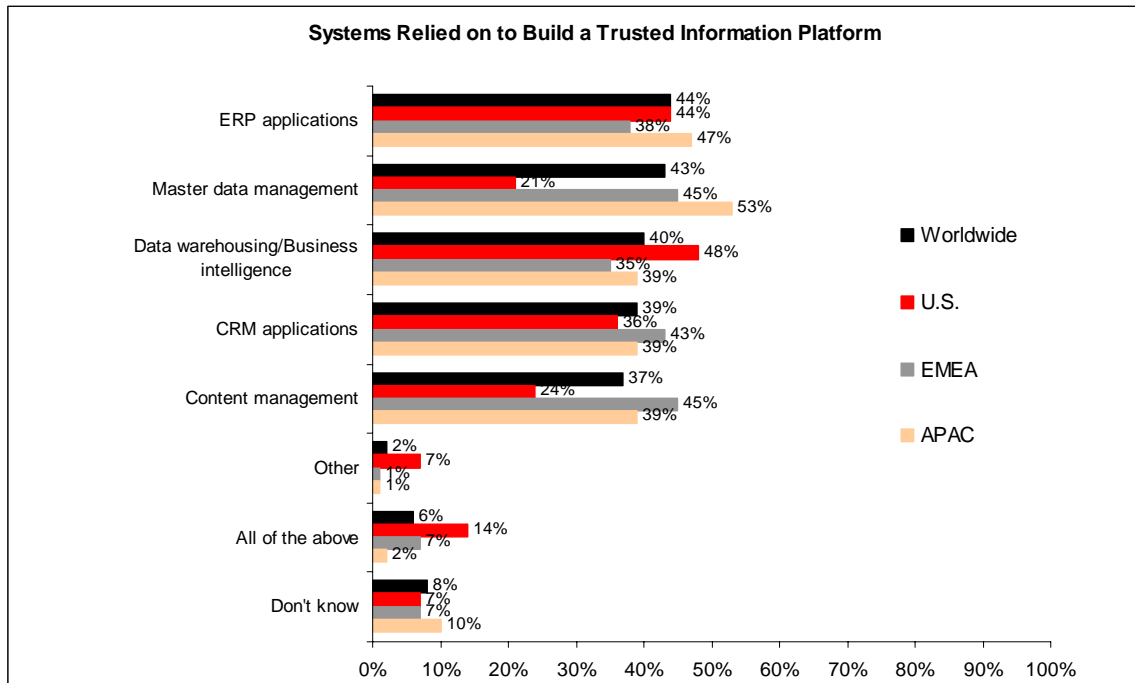


Base: Worldwide - 400; U.S. – 100; EMEA – 100; APAC - 200



Systems Relied on to Build a Trusted Information Platform. Forty-four percent of (44%) respondents worldwide indicate that their company relies on *ERP applications* to build a trusted information platform to drive business processes innovation and improve decision making. Other top mentions include: *master data management (43%), data warehousing/business intelligence (40%), CRM applications (39%) and content management (37%).*

In the U.S., respondents are much less likely to rely on *MDM and content management solutions* to help them build trusted information platforms, and are more likely than other regions to rely on *data warehousing/business intelligence*. Respondents in APAC are most likely to rely on *master data management* systems.

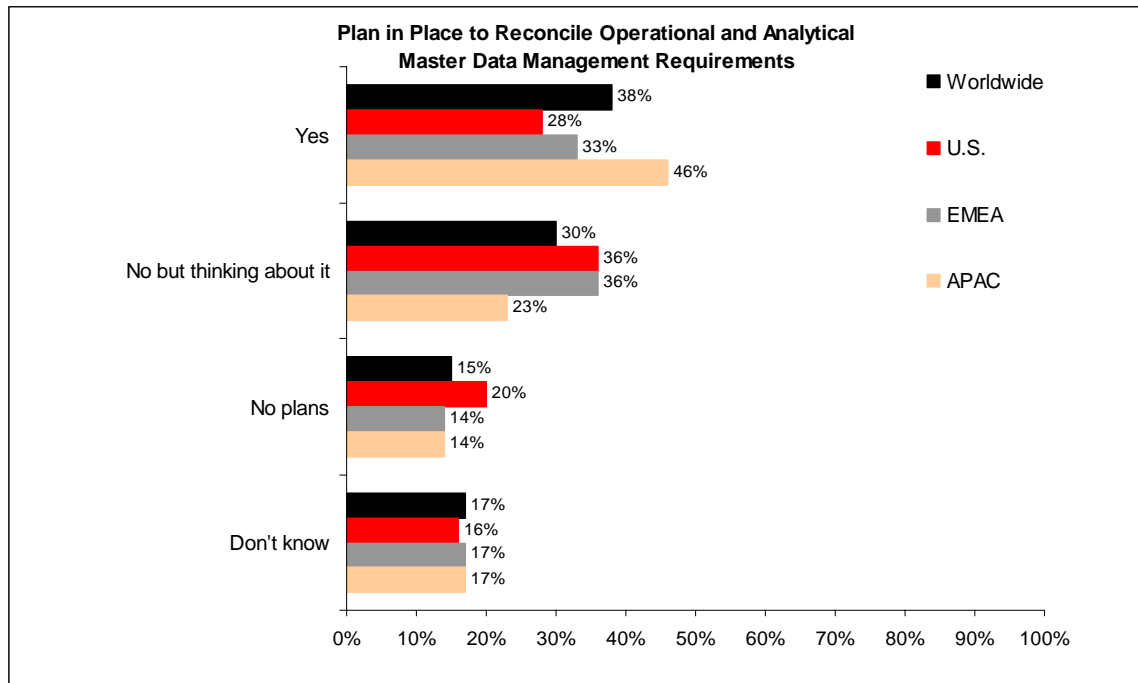


Base: Worldwide - 400; U.S. - 100; EMEA - 100; APAC - 200



Plan to Reconcile Operational and Analytical MDM Requirements. Nearly four out of ten respondents worldwide (38%) indicate their companies already have plans in place to reconcile operational and analytical master data management requirements, while 30% are considering these plans and 15% have no such plans. An additional 17% are not sure whether their organization has such a reconciliation plan in place.

Companies in APAC are most likely to have this type of plan in place currently (46% versus 33% in EMEA and 28% in the U.S.), while the U.S. and EMEA are more likely to be in the consideration stage with regards to these plans.

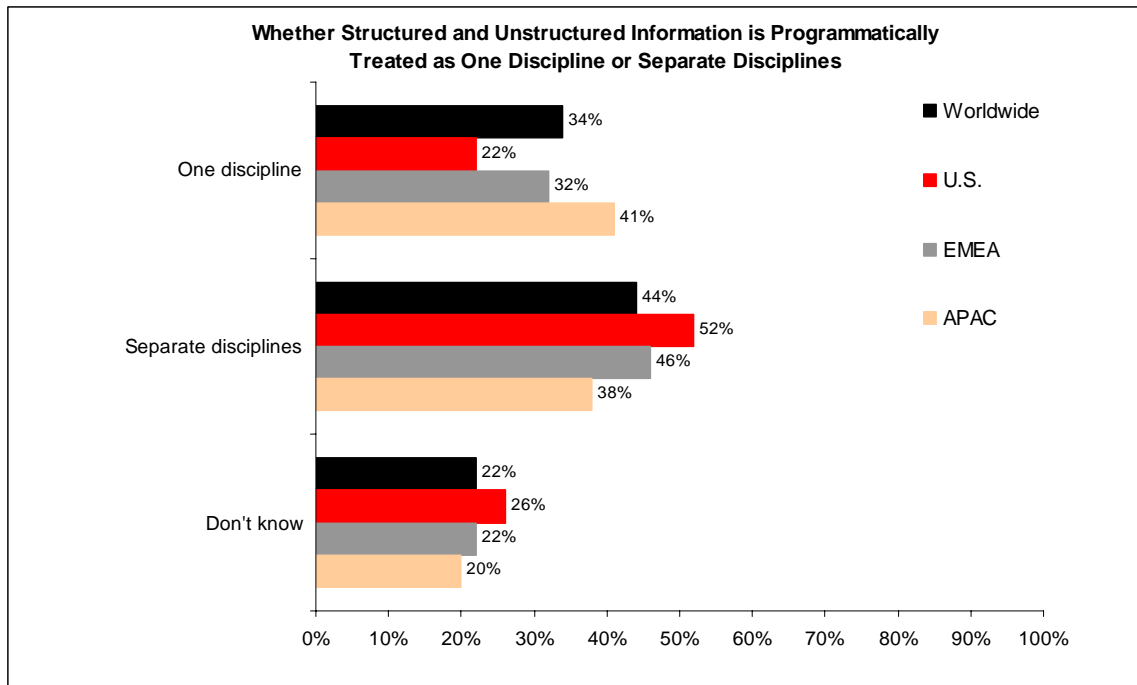


Base: Worldwide - 400; U.S. - 100; EMEA - 100; APAC - 200



Treatment of Structured versus Unstructured Information. Forty-four percent (44%) of all respondents worldwide treat structured and unstructured information programmatically as separate disciplines. While 34% treat these as one discipline, 22% are unsure how their organization treats structured versus unstructured information.

Companies in the U.S. and in EMEA are most likely to treat structured and unstructured information as separate disciplines (52% and 46% respectively), while in APAC companies are more likely to consider structured and unstructured data as one discipline (41%).

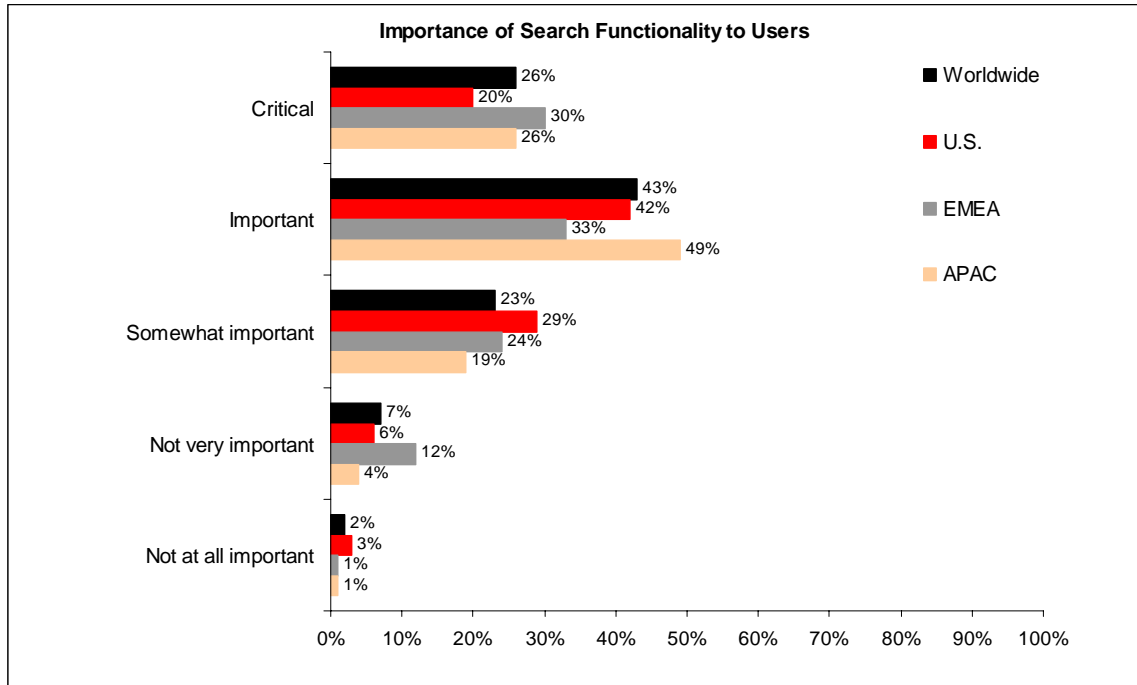


Base: Worldwide - 400; U.S. - 100; EMEA - 100; APAC - 200



Importance of Search Functionality. Sixty-nine percent (69%) of all respondents worldwide indicate that *search* is either critical or important to their organization's users. Only 2% indicate that *search* is not at all important.

Regionally, respondents in APAC are the most likely to rate *search* as critical or important to users (75% versus 63% in EMEA and 62% in the U.S.).

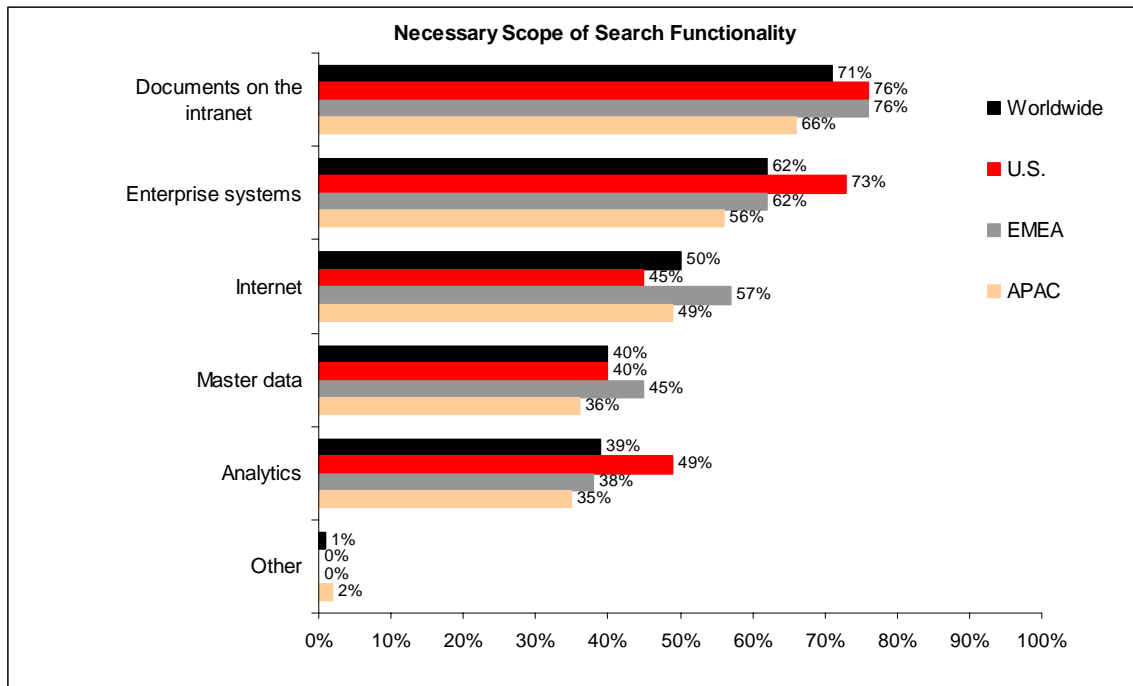


Base: Worldwide - 400; U.S. - 100; EMEA - 100; APAC - 200



Desired Scope of Search Functionality. Almost three-quarters (71%) of respondents worldwide indicate that search functionality must cover *documents on the intranet*. This is followed by *enterprise systems* (62%), *Internet* (50%), *master data* (40%) and *analytics* (39%).

Coverage of *documents on the Internet* is most important to respondents in EMEA, while U.S. respondents are more likely than those in other regions to indicate they would like search to cover *enterprise systems* and *analytics*.



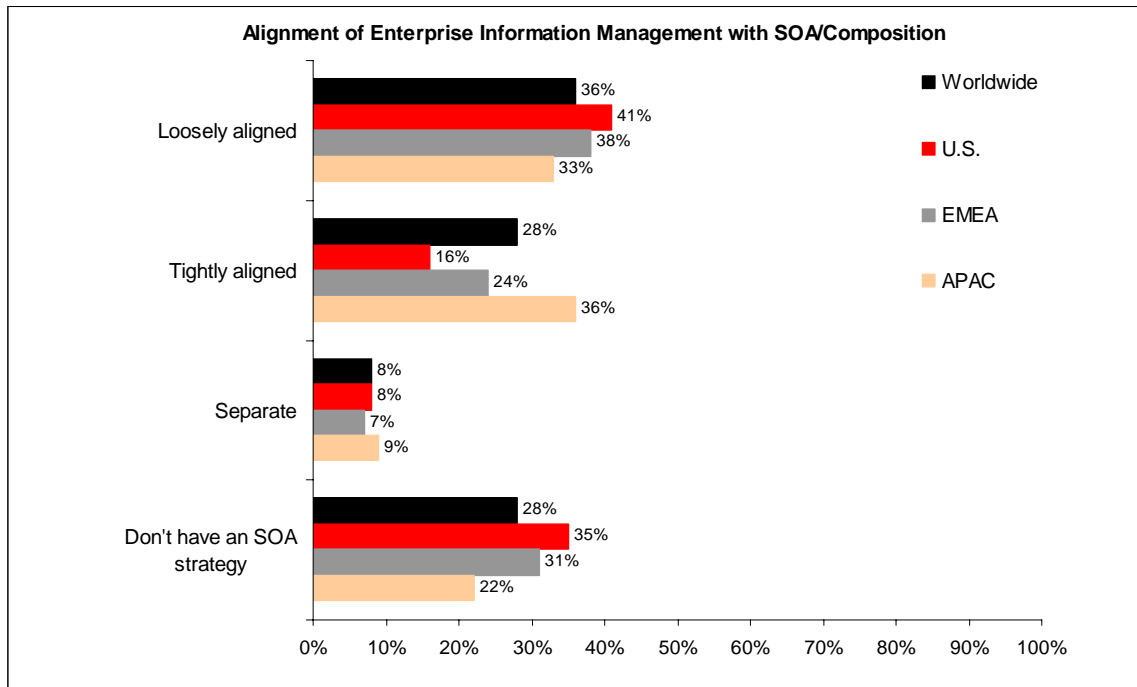
Base: Worldwide - 400; U.S. - 100; EMEA - 100; APAC - 200



Alignment of Enterprise Information Management with SOA/Composition.

Worldwide, 36% of respondents indicate that enterprise information management is loosely aligned with SOA/composition at their companies. Just over one-quarter (28%) report these strategies are tightly aligned, and 8% indicate they are separate, while the remaining 28% do not have an SOA strategy within their organizations.

U.S. respondents are the least likely to have an information management strategy that is tightly aligned with SOA/composition, while over one-third of respondents in APAC (36%) indicate their companies' information management and SOA/composition strategies are tightly aligned.



Base: Worldwide - 400; U.S. - 100; EMEA - 100; APAC - 200



Custom Solutions Group

Respondent Profile

Worldwide Profile:

- Respondents are most often employed as IT Directors/Managers (29%), VP-level IT management (32%) and CIOs/CTOs/CSOs/CISOs (15%).
- Average number of employees is 25,054
- Top industries: *IT/Computer (25%), manufacturer of non-computer related products (16%), financial services (13%), and manufacturer of computer related products (9%).*

U.S. Profile

- Respondents are most often employed as IT Directors/Managers (50%), VP-level IT management (14%) and CIOs/CTOs/CSOs/CISOs (13%).
- Average number of employees is 36,757
- Top industries: *healthcare/medical services (17%), financial services (17%), IT/Computer (13%), and manufacturer of non-computer related products (12%).*

EMEA Profile

- Respondents are most often employed as VP-level IT management (39%), CIOs/CTOs/CSOs/CISOs (18%), and IT Directors/Managers (16%).
- Average number of employees is 24,212
- Top industries: *IT/Computer (30%), financial services (15%), manufacturer of computer related products (9%), and telecommunications (8%).*

APAC Profile

- Respondents are most often employed as VP-level IT management (38%), IT Directors/Managers (24%) and CIOs/CTOs/CSOs/CISOs (15%).
- Average number of employees is 19,622
- Top Industries: *IT/Computer (29%), manufacturer of non-computer related products (22%), financial services (10%), and manufacturer of computer related products (9%).*



Contact Information

CIO Custom Solutions Group (CSG)

The **CIO Custom Solutions Group (CSG)** creates powerful turnkey programs to match marketing needs. From content creation, circulation development to project management and production, CIO's award-winning Custom Solutions Group truly leverages the strength of the CIO brand. Extending the value and reach for IT marketers to communicate with their prospective customer base, CSG provides in-depth, content-rich vehicles in an integrated program of print, online, events and marcomm collateral tailored to meet an IT vendor's objectives. For more information, please visit http://www3.cio.com/marketing/media_kit/cio_custom_media.html.

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