HR-XML CONSORTIUM

Guide to SIDES

Staffing
Industry
Data
Exchange
Standards

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TABLE OF CONTENTS

What Is SIDES?

Staffing Industry Data Exchange Standards – commonly known by the acronym "SIDES" – is a comprehensive suite of data exchange standards that offers new efficiencies and cost savings for staffing customers, staffing suppliers, and other stakeholders in the staffing supply chain.

Staffing Supply-Chain Automation

More and more companies recognize the benefits of automating their supply chains. The staffing industry has a particular problem in that most procurement and related systems are designed for inventory items. These systems do not provide for the unique and iterative nature of staffing services transactions.

Automating the staffing service supply chain has many advantages. However, today, the up-front cost of engineering connections between staffing customers, staffing suppliers, and intermediaries is extremely high due to the diversity of systems and the lack of agreed-upon mechanisms for integrating data across systems. Because of this diversity and the lack of standards, each connection between a staffing customer, staffing supplier, or intermediary requires the development of a custom interface. Connecting disparate systems in this way is inefficient and expensive. In addition to high costs, staffing customers and suppliers often find that proprietary connections make it difficult to share rich and meaningful data across a range of systems.

The Origin of SIDES

In April 2001, a number of leading companies within the staffing industry began to examine the question of how staffing suppliers could provide the supply-chain automation customers desired while greatly reducing integration costs. They concluded that an open, freely available suite of data exchange standards for staffing could dramatically improve efficiencies and reduce costs for staffing companies, customers, and other stakeholders.

After some preliminary discussion, six leading staffing companies – Adecco, Kelly, Manpower, Randstad, Spherion, and Vedior – began a collaborative effort to create a "strawman" draft of Staffing Industry Data Exchange Standards (SIDES). The SIDES specification was based on the extensible mark-up language (XML). Booz Allen Hamilton and its subsidiary company Aestix were retained to assist with the technical strategy and documentation. The companies formed a working group made up of both business and technical members from each of the six staffing companies. The draft specification developed by these firms was donated to the HR-XML Consortium in August 2001 for further refinement and development.

The HR-XML Consortium is an independent, non-profit organization with widespread international membership and support from staffing companies, software vendors, employers, consultants, integrators, and others interested in HR data interchange. After further development of the SIDES strawman specification, the HR-XML Consortium approved and released SIDES 1.0 in May 2002.

The Anatomy of SIDES

There are eight major modules that make up SIDES 1.0:

- ***StaffingOrder*** describes a staffing customer's servicing need – for example, position requirements, start and end dates, estimated bill rate, etc. The StaffingOrder XML document moves from the staffing customer to the staffing supplier and this transmission marks the beginning of the business processes addressed by SIDES.

- ***HumanResource*** describes a staffing resource available from a staffing supplier – for example, the person's skills, work experience, cost, etc. The HumanResource XML document moves from the staffing supplier to the staffing customer, usually in response to a StaffingOrder XML document.

- ***Assignment*** confirms the work to be done – for example, the agreed upon individual to perform the work, the agreed upon bill rate, etc. This XML document marks the end of the order/selection section process, and the beginning of the actual work-performed section

- ***StaffingSupplier*** contains information about the staffing company – for example, government-issued employer identification number, branch addresses and contacts, information about where to make payments, etc.

- ***StaffingCustomer*** includes hierarchical information describing a customer – for example, government corporate identifier, Duns numbers, billing addresses and contacts, specific facility addresses, work environments, etc.

- ***StaffingAction*** provides a basic communication mechanism between staffing customers, staffing suppliers, and intermediaries. It has uses throughout the lifecycle of the transaction – for example, interview request and response, assignment extension, etc. The StaffingAction XML document can move in either direction as required.

- ***Extended TimeCard*** communicates the actual time worked by a staffing resource on an assignment over a particular time period. It also captures any expenses related to the assignment. SIDES uses an extended form of HR-XML's TimeCard standard.

- ***Invoice*** transmits amounts billed by a staffing supplier or suppliers to the StaffingCustomer. Invoice is designed so it can associate the time worked shown on TimeCard, with the bill rate as confirmed in Assignment.

Within the main modules listed above, there are several smaller components that are reused throughout SIDES:

- ***CustomerReportingRequirements*** allows for reporting and tracking of data significant to, or required by, the customer. It contains an enumerated list of the 20 most frequently requested fields including purchase order numbers, supervisor names, and cost center numbers. This list can be expanded as needed.

- ***Rates*** defines pay rates, bill rates, and expenses, as applied to a specific position, assignment, or individual.

- ***ContactInfo*** contains contact information such as a person's name, postal address, contact method, and organization name.

- ***ResourceScreening*** describes pre or post-hire screening data for an individual – for example, credit checks, education verification, reference checks, etc. It captures the screenings required by a customer and allows the staffing company to report basic information about the results of completed screenings. In most staffing scenarios, privacy regulations require that only the fact that a screen or check was done, when it was done, and the generic result (requirement met or not met) may be passed to the customer.

- ***StaffingShift*** provides a mechanism for exchanging shift information between trading partners and within internal applications.

How SIDES Leverages HR-XML Specifications

The SIDES development team used the HR-XML Consortium's existing specifications wherever possible. SIDES incorporates HR-XML's "Cross Process Objects" (CPOs), which are small building blocks used throughout HR-XML specifications. The consistent use of CPOs simplifies data exchange with trading partners and enables the re-use of code. The big benefit for implementers of SIDES and other HR-XML specifications is that they have a consistent view of data across different functional areas. They will be able to handle names, dates, addresses, and other common objects the same way across many different business processes.

SIDES also incorporates other key schemas produced by other HR-XML Consortium workgroups, including:

- Competencies. HR-XML has developed a highly flexible specification for capturing information about competencies (knowledge, skills, abilities, and other employment-related characteristics). SIDES' use of HR-XML's competencies specification will enable staffing customers to more reliably and consistently compare the skills of individuals against assignment requirements. HR-XML's competency specification also will make it easier for SIDES implementers to share rich and meaningful information about competencies among HRIS, applicant tracking, performance management, assessment, "360 degree evaluation," training, and similar systems.

- Resume. HR-XML's Recruiting and Staffing workgroup has developed an enhancement to the resume definition that was included in its Staffing Exchange Protocol (SEP) specification. The new resume definition was developed using XML Schema Definition Language, which makes it more flexible and extensible than its predecessor. It now supports reusable modules such as Employment History, Education History, and Military History. SIDES implementers will be able to leverage the same set of tools to process and analyze resumes regardless of whether the resumes are sourced from a staffing firm, a job board, or another type of recruiting venue.

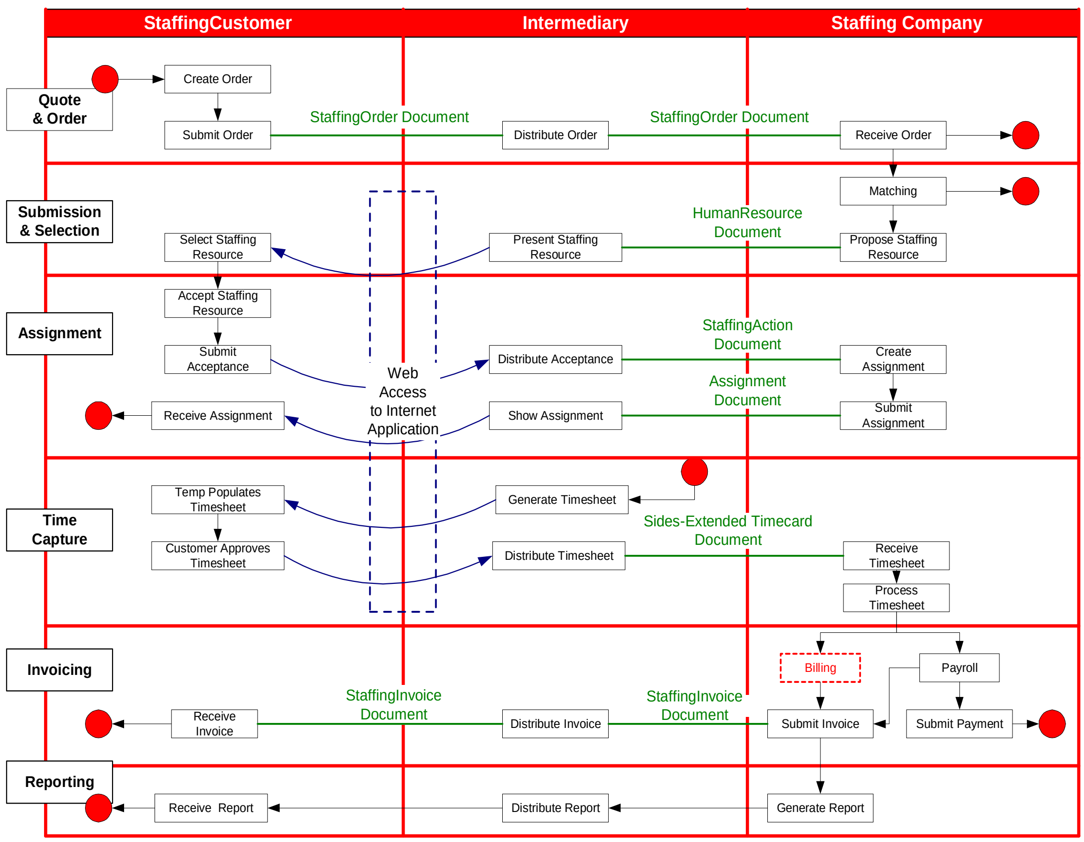
- TimeCard. HR-XML's TimeCard specification provides a simple definition of the elements required to report time worked and expenses incurred. SIDES uses the HR-XML TimeCard with an extension that allows staffing firms to insert reference detail to ensure time and expense data can be reliably tracked by referencing associated rates, assignments, orders, staffing customers, etc.

- WorkSite and WorkSiteEnvironment. These specifications developed by HR-XML's Job and Position workgroup, also are incorporated within SIDES StaffingOrder and StaffingCustomer specifications. WorkSite provides a basic definition of information necessary to identify a work site. WorkSiteEnvironment provides a flexible way to capture information about work site characteristics.

Business Processes Supported by SIDES

The diagram below reflects a generalized, high-level view of the overall staffing process. Each “swim lane” shows a system-to-system transmission of information – standardized by the use of SIDES. The comprehensiveness of SIDES 1.0 accommodates many, many variations on this process.

SIDES Overall Process



SIDES was built in a modular fashion so that it can be implemented by a wide range of organizations. All modules can be used together to support full, end-to-end processing, or SIDES can be broken into modules to fit component-by-component implementations.

Business processes supported in SIDES 1.0 include the ability to exchange:

- Order information between a staffing supplier and a staffing customer or its intermediary
- Information describing a staffing resource between a staffing supplier and a staffing customer or its intermediary
- Other basic request/response communication between a staffing supplier and a staffing customer or its intermediary
- Assignment information between a staffing supplier and a staffing customer or its intermediary
- Timecard and expense information between an individual, a staffing supplier and a staffing customer or its intermediary

- An Invoice between a staffing supplier and a staffing customer or its intermediary. Note that the SIDES invoice is an extended version of the invoice developed by the Open Applications Group (http://www.openapplications.org).

Processes Considered for Future Development

There are other staffing-related processes that are not addressed in SIDES 1.0, but that will be considered in future SIDES development:

- Post-assignment/placement evaluation;
- Reporting (while not a separate SIDES 1.0 module, it is enabled and enhanced by data from all SIDES 1.0 modules);
- Accounting and payment processes; and
- Sub-contractor or affiliate vendor contracts.

Out-of-Scope Processes

Finally, there are processes that are intentionally outside of the scope of SIDES 1.0:

- Recruiting, intake, assessment and matching methodologies performed by staffing suppliers prior to the submission of an individual to a customer or intermediary for consideration (SIDES will not address these internal processes directly, but it may improve results because of the rich, structured data that SIDES enables organizations to capture.);
- Skills taxonomies;
- Payroll processing;
- Guidelines for message delivery (SIDES may be implemented within a variety of messaging frameworks); and
- Data security (This responsibility resides with system integrators during implementation of data exchange systems).

SIDES Process Efficiencies

Millions of staffing transactions occur globally each day. The use of SIDES gives implementers the ability to increase the efficiency and effectiveness of a wide range of related business processes. From the initial requisition to the final invoice, having a standard way to define the elements involved in the staffing lifecycle offers substantial business efficiencies.

Below is a step-by-step example that details a typical staffing transaction and illustrates how SIDES would be used. It shows how often information is passed from system to system and how many opportunities there are to benefit from data exchange standards.

The example assumes the following scenario:

A company has an immediate need for four data entry clerks to work for three months on a special project.

The Quote/Order Phase

1. The supervisor fills out a requisition detailing the requirements of the position in the company’s internal procurement system and submits it to HR for approval and

fulfillment. *(A SIDES StaffingOrder document with four positions is created.)*

2. HR approves the requisition and decides to get a quote from three different staffing suppliers. *(The approved SIDES StaffingOrder document is transmitted to each of the staffing suppliers.)*

3. Each staffing company receives the request for quote. Two of them decide to bid on the order, one may decline. *(Each transmits a SIDES StaffingOrder document back to the customer. The customer's system accepts each one and can tell which company sent what information.)*

4. The HR person selects one of the suppliers. *(The SIDES StaffingOrder document is sent, to the selected supplier accepting the quote, and a rejection of the quote is sent to the other.)*

The Submission and Selection Phase

1. The selected supplier begins the process of recruiting and screening candidates for the customer. This process is unique to each staffing supplier and being a key competitive differentiator is not standardized. However, the supplier may choose to store the candidate information in a front office system using HR-XML and SIDES standardized structures, so time is saved and accuracy ensured by not having to re-enter data from one system to another. In addition, the information relevant to the customer's requirements is already in XML format, so more efficient matching of skills to requirements is enabled resulting in faster fill times.

2. The staffing supplier selects four staffing resources to submit to the customer for review. *(Four SIDES HumanResource documents are created and transmitted to the customer, referencing the order to which these documents relate.)*

3. The customer reviews the candidate's information and decides to schedule meetings with each one. *(HR creates and transmits a SIDES StaffingAction document, with the contact information for the supervisor who will be interviewing along with a date and available times to meet.)*

4. The staffing supplier arranges the meetings and sends a response SIDES StaffingAction document confirming the schedule and indicating which candidate will fill which time slot.

5. The interviews take place and the customer decides to accept all of the candidates. *(The SIDES HumanResource documents are transmitted back to the staffing supplier indicating that the candidates have been accepted.)*

The Assignment Phase

1. The staffing supplier confirms acceptance with the staffing resources and creates the assignments in its front office system. *(The SIDES Assignment document is transmitted to the customer as a confirmation of staffing resource, bill rate, start date and time, etc.)*

The Time Capture Phase

1. The staffing resources use the staffing supplier's time capture system to record their working hours. *(SIDES Extended TimeCard documents, with references to their respective assignment and rate information, are transmitted from the time capture system to the customer's tracking system for approval.)*

2. The customer approves the time cards. *(The SIDES TimeCard information is transmitted to the supplier's payroll processing system for payment.)*

The Invoicing Phase

1. The supplier pays the staffing resource. *(The staffing supplier's payroll system sends the relevant SIDES Timecard data to the supplier's back office system, and a SIDES Invoice with all required data fields is created and transmitted to the customer's Accounts Payable system.)*

2. The customer pays the supplier.

Summary

In the scenario just outlined, there were at least six different systems that were able to seamlessly interact with each other by adopting the SIDES standards. Without this option, separate interfaces would have to be built for each point-to-point transaction resulting in substantial expenditures of time, money and resources.

Saving Time and Money With SIDES

SIDES facilitates data exchange between staffing customers and suppliers. Today, many procurement and related systems have difficulty handling the specialized requirements of human capital procurement and the highly iterative nature of staffing transactions.

Integration Scenarios Today

There are a variety of integration scenarios in which SIDES is useful. Large staffing customers often require direct one-to-one supply relationships with staffing suppliers. Other customers may use intermediary software or vendor managers that eliminate point-to-point integrations between staffing customers and staffing suppliers, but that do not eliminate the need for custom, proprietary interfaces. Sub-supplier relationships that require the exchange of data between staffing companies are another integration bottleneck.

What are the typical time periods and costs of connecting the systems of staffing customers and staffing suppliers? Currently, without data standards, integration specialists must be employed to develop custom interfaces between systems. Typically, there is a lengthy discovery and analysis period during which the integration specialist must determine how to map data from one system to the other. Depending on the technology, software licensing, middleware, consulting fees and labor requirements, costs can range from US $250,000 upwards. Custom integrations typically take around four months from concept to sign-off. A project that involves several company divisions and multiple points of integration might cost upwards of $1 million.

Integration With SIDES

SIDES improves upon the current state of staffing supply-chain automation in several ways:

- SIDES provides trading partners with a common data dictionary, so that each partner is able to map its data to a predetermined common specification. This greatly reduces the time and costs related to investigating the data model used by each partner and figuring out how to map data between systems.

- SIDES standardizes interactions between organizations along the entire human capital supply chain, including requisitions, orders, rates, assignments, time and expense capture, and invoicing. Because SIDES is comprehensive and flexible, it significantly reduces integration costs and time needed to deliver solutions.

- SIDES provide a robust definition of the information required for each business process. SIDES encapsulates a tremendous amount of industry knowledge. The SIDES schemas include extensive built-in enumerations and precise data typing.

- SIDES is maintained and controlled by HR-XML, a non-profit and vendor-neutral organization. All schemas are available from the HR-XML website (http://www.hr-xml.org).

- No license fees are attached to the use of SIDES. Staffing companies have access to the specification at no cost even if they are not members of the HR-XML Consortium. To independently produce an equivalent specification would easily cost hundreds of thousands of dollars.

Calculating Cost Savings

In spite of heavy investments in Web-enabling their systems, most organizations still build unique interfaces for each connection with a trading partner. Typically, each interface is designed and coded for a unique purpose. This results in an unbounded growth of interfaces.

The Open Applications Group, Inc. has developed a mathematical model for sizing the growth (and costs) of unbounded interfaces. Under the OAGI formula, the number of possible integration points between any two objects (assuming two way integration) grows at a rate of n(n-1) where "n" represents the number of components to be integrated. For 2 software components, the minimum number of connections between them is 2. Thus, 4 components equals 12 interfaces, 10 components equals 90 interfaces, 20 components equals 380 interfaces, and so on.

Assume that an organization needs to maintain connections between 20 components and will devote resources of 0.025 of a full-time employee (a half-day per month) per interface. Under the OAGI formula, integrating 20 components with an unbounded number of interfaces amounts to a total of 380 interfaces. The effort required to maintain the interfaces for 20 software components would be 9 fulltime persons (0.025 x 380).

Integrating via a standard, such as SIDES, controls the unbounded growth of interfaces. SIDES changes the "many-to-many" integration equation, to a "many-to-one" equation. Interfaces grow, but at a flat rate of n x 2. Thus, using the same assumptions in the preceding example, integrating 20 components would result in a total of 40 interfaces (20 x 2 = 40). Multiply 40 times 0.025 full-time employee and the result is 1 full-time employee.

For further information, see *Plug and Play Business Software Integration: The Compelling Value of the Open Applications Group*, http://www.openapplications.org

As software vendors, staffing companies, and customer IT departments become familiar with and adopt the advantages of SIDES, there will be fewer differing points of integration. The costs of staffing companies integrating with customers (directly) or through third parties (indirectly) and with sub-suppliers (directly) will be contained or reduced dramatically.

Encouraging Compliance with SIDES

The more organizations within the staffing supply chain that embrace and implement SIDES, the more all firms – staffing customers, staffing suppliers, and intermediaries – will begin to enjoy cost savings and increased efficiencies.

Benefits of SIDES increase exponentially with each compliant implementation by organizations within the staffing supply chain. Thus, it is in the interest of the SIDES sponsoring firms, as well as the entire industry, to create awareness, interest, and compliance with the standards.

For example, the CEOs and other top executives of the sponsoring firms that donated the SIDES draft to HR-XML have individually and jointly signed a letter of endorsement and encouragement in the use of the standards. The letter calls for the earliest possible compliance internally within the sponsoring firms, and encourages others in the industry to quickly take advantage of the opportunities presented by the standards. To review this letter, visit http://www.hr-xml.org/sides/

Staffing companies, clients, suppliers, human resource professionals, CIO's and others should support and encourage the adoption of SIDES and other HR-XML standards as quickly and comprehensively as possible. Firms should require that suppliers adhere to SIDES and HR-XML standards. Contracts, RFQs, purchase orders, and other procurement documents should be modified to include reliance upon SIDES and HR-XML standards as a condition for doing business with the requesting firm.

Action Steps for Staffing Suppliers and Intermediaries

It is critical that staffing suppliers and intermediaries begin to build support for SIDES within their organizations. When building the business case internally, staffing suppliers should consider the following questions:

- How is your firm addressing customer desires for supply-chain automation? What are the direct and indirect costs of a piece-meal approach to integrating with customers?
- How is the unbounded growth of unique interfaces affecting your company's bottom line?
- Is integration "friction" preventing your organization from moving forward with new business and new partnerships?
- What is your company's technology vision? Is your company prepared for low-friction, self-organizing e-business – or is it consumed with merely keeping systems "glued together"?
- Does your IT infrastructure support or hinder opportunistic partnering?
- Does your current IT direction contribute to your company's resiliency and flexibility? Is it aligned with emerging technologies?
- Is your IT department, software vendors, and IT solution providers capable of supporting SIDES? Are they conversant with XML, SOAP, and web services? Are they members of the HR-XML Consortium?

Action Steps for Staffing Customers

To receive the full benefit of the SIDES standards, staffing customers should ask their staffing suppliers or vendor managers the following questions or incorporate the questions into request for proposals (RFPs):

- Does the vendor's systems support XML?
- Has the vendor implemented, or does it plan to implement, HR-XML's Staffing Industry Data Exchange Standards (SIDES)?
- Is the vendor a member of the HR-XML Consortium?

The HR-XML Consortium plans to make it easier for customers of staffing services to find SIDES-compliant solutions. Over the next year, the Consortium plans to roll out a certification program for SIDES implementers. Under the program, SIDES implementers will be able to self-certify by registering their SIDES-enabled capabilities in a registry maintained by the HR-XML Consortium. Approved companies will be able to display an "HR-XML

Certified" logo on their website. A full description of the company's SIDES capabilities would be available through a publicly accessible website.

Meeting Country and Regional Requirements

The SIDES development team endeavored to make SIDES 1.0 useful in many countries. The HR-XML Consortium's SIDES workgroup included representation from Australia, UK, Germany, Spain, The Netherlands, France, and the United States.

The SIDES team will continue to identify additional country and jurisdictional requirements. Wherever possible, HR-XML's methodology requires workgroups to develop generalized models that are useful across many different jurisdictions and cultural contexts. However, country-specific components will be developed when it is not feasible to develop generalized models. For example, it may be difficult to develop generalized models to describe data related to country-specific taxation, labor law, and social insurance schemes. Extension mechanisms built into the SIDES specification may be valuable for handling jurisdiction-specific requirements.

The SIDES team also will explore the translation of SIDES into other languages where there is demand for such translation. This will be accomplished using a registry or other structured means so that semantically equivalent components can be maintained across different languages.

Certain optional components of SIDES may be extraneous or inappropriate within a given jurisdiction. Subsetting and/or constraining the SIDES standard schemas using mechanisms prescribed by HR-XML can be useful in creating interoperable "profile schemas" suitable for different jurisdictions. This mechanism would allow SIDES implementers to remove components that are extraneous or inappropriate within a given jurisdiction without compromising the standard.

Contact Information

If you have questions about SIDES, if you want to discuss technical details, or if you need help making the business case for SIDES within your organization, send an email to AskSides@hr-xml.org

To be alerted to the latest developments regarding SIDES and the Consortium's other activities, sign up for the HR-XML updates and announcement list at: http://www.hr-xml.org

HR-XML's staff also is available to assist you. Staff contacts are:
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How To Get Involved

Membership within the HR-XML Consortium is open to HR professionals, vendors, consultants, and other users or providers of HR systems and services. To join HR-XML or to obtain information on membership options, please visit http://www.hr-xml.org/channels/join.cfm

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