Organization Modeling
Aligning Relationships, Boosting Enterprise Effectiveness

Today's business environment is complex. To compete, organizations have to adapt quickly and dynamically. An organization is defined by its people. And it is the relationships between people that make an organization effective.

Most leading Human Capital Management (HCM) solutions view an organization as a single, strict hierarchy. That view is inadequate for describing the relationships in today's organization. Matrix management, collaborative efforts (such as cross-functional project teams), dotted-line reporting and "wearing many hats" has become the norm rather than the exception. Yet leading HCM vendors still cling to the antiquated model of the organizational structure. By taking this approach, the resulting HCM implementation does not accurately reflect the inner workings of the company.

As a result, org charts are hopelessly out of date. Each system that includes a workflow component must replicate the reporting structure within its own "silo." In addition, companies are at risk of violating Sarbanes-Oxley, because the system can't decompose reporting lines to reflect fiduciary responsibilities for compliance requirements.

Fortunately, there is a new class of software that provides Organization Modeling. It:
- captures worker relationships in multiple contexts, in both hierarchical *and* matrix structures.
- is integrated with the HCM system, so updates can occur as part of the HR lifecycle of the worker.
- leverages the self-service model to empower the people closest to the information to keep it up-to-date.

This white paper will explore in depth the scope and ramifications of this all too often ignored problem. It will detail the benefits the solution provides. Finally, it will discuss the three tiers of the Business Automation Vision, and demonstrate the vital role that Organization Modeling plays.

The Problem

The larger and more complex the company, the less likely it has a true handle on its organizational structure. This is because:

- Human Capital Management systems (HCM) represent the organization structure as a single hierarchy. This is called a "fully articulated tree structure." It means that the CEO is a single entity at the top. All other workers can be traced up the tree to the CEO. There can be no breaks in the chain. While this is a valuable view of the organization, it doesn't account for vacant positions, or positions in which a dual role exists. But most important, it is by no means the *only* structure of reporting relationships in the company. And, the leading HCM doesn't even enforce that the single structure is fully articulated.
- Organizations have several structures, including but not limited to:
  - The basic managerial reporting structure – fully articulated tree structure, as discussed above.
  - The financial reporting structure – the structure of the organization from a charge back point of view.
  - Human resources responsibility – hiring managers have responsibilities for on-boarding new employees. In large organizations, there can be many people responsible. Assigning the responsibility would ensure that no tasks "fall between the cracks."
  - Financial approval structure – who has approval authority for financial expenditures.
  - Time and labor approval – who approves whose time sheets.
  - The departmental structure – some companies are organized by a hierarchy of departments, which serve different functions depending on the organization.
- Many relationships in a company are not hierarchical at all, but rather matrix or network structures. This management organization became popular in the 1980's and has rapidly gained popularity. It allows for more agile resource allocation. A resource can be used by several business areas to maximize their effectiveness. The strict hierarchical structure requires redundancy of resources, which deliver suboptimal effectiveness. The inflexibility of these systems reflects that lack of thought leadership among vendors.
- The team concept – some of the most successful businesses are the ones that can quickly assemble cross-functional teams to tackle critical projects. The team may be a temporary, permanent, or semi-permanent construct. Some individuals may serve on several project teams concurrently. Yet in most HCM's, there is no way to designate the concept of a project team…yet this is a fundamental way in which work is done!

Why is this important?

- **Workflow software depends on reporting relationships for approvals.** Companies employ many software products in their "application stack", both enterprise-wide and point solutions, to address different business needs. Some of these may include: helpdesk management, procurement, time & labor, provisioning, as well as the HCM and Enterprise Resource Planning (ERP) systems. Many of these products include a workflow component. Yet how is each software product supposed to know the reporting structure? The answer, all too often,

is that parts of the organization structure are replicated in each "silo," where it's unlikely to be maintained effectively. Even if the software leverages a common repository, the problem of the single structure reemerges. Would you route the approval of a time sheet to the same person as for a capital expenditure?

- **Regulatory compliance.** Sarbanes Oxley is all about controls and accountability. In today's regulatory environment, it is essential that those responsible receive the correct training to ensure compliance. Also, it is necessary to demonstrate that these people received the training that they need. *How can an employee comply with this requirement if that individual is unaware of the company's structure, or if the structure stored is not relevant to financial compliance?*
- **Know your workers.** An organization is an abstract concept. It is defined as a group of human beings who work together to achieve a shared goal. Yet the software that is concerned with managing those humans, HCM software, does a poor job of defining the relationships between the humans, which is tantamount to how shared goals are achieved! As a result, roles and responsibilities are often ambiguous or misunderstood. At best, they are understood implicitly, which means there is no consistency when people change roles. Yet this happens all the time in organizations. A less tangible, but at least equally important result of this solution is to formalize the relationships in an organization. By formalizing them, organizations gain a better understanding and can align their resources to optimize effectiveness. An example of this is creating a bonus structure tied to group accomplishments. Organizations can't properly track employee performance if they don't understand their team roles and responsibilities across the enterprise – and then reward or penalize them for reaching (or not reaching) goals!

The Solution

To solve these problems, there is a new class of software called **Organization Modeling Software**. This allows HR managers to effectively model the relationships between human beings in an organization; much like Database Management Software allows database developers to model the relationships between information in an organization.

This software has been developed an implemented at a large, global financial organization, as a custom solution. It came out of the compliance need, but the other benefits were quickly recognized. It was developed to be integrated with the (PeopleSoft) HCM, in order to take advantage of the HR lifecycle maintenance of the individual and the self-service model, and to leverage the inherent scalability of the HCM. The information is stored in a repository which makes it available to the entire enterprise. Although developed as a custom application for this particular company, the concepts proposed in this paper have been generalized to apply to a wide range of companies' requirements.

Who benefits the most?

Large, complex, geographically dispersed companies stand to benefit the most from this type of solution. They are less likely to have a good understanding of their organization's structure,

and a greater need in order to manage effectively. Companies that are in acquisition mode, or which reorganize frequently also benefit because of the software's ability to dynamically alter the organizational model quickly and intelligently.

The Benefits

This section will detail the benefits of the solution, as well as what features a fully-functional Organization Modeling solution should possess. It is not intended to describe any particular product, but rather discuss the benefits of the class of software.

Multiple contexts

The solution must allow the ability to specify relationships in multiple contexts. The term *context* is used here, but often the term *'managerial roles'* is used as an alternative. For the sake of consistency, this paper will use the term *contexts*.

Supports multiple structures

The solution should be able to support hierarchical reporting structures, as well as matrix, or network structures. It should be able to distinguish between a fully articulated tree structure, and hierarchical reporting relationships that do not require full articulation. It should be able to handle peer, as well as supervisor-subordinate relationships. Lastly, it should be able to handle structures in which more than one person fills a role (such as when an upper manager reports to an executive committee). There should be an ability to have a person temporarily occupying a context, or proxy ability. If a person is on vacation or out sick, business doesn't stop. Someone else assumes his or her responsibilities, at least temporarily.

Groupings of people

The solution should support ways to group individuals. For the purposes of this paper, these will be called: *spheres*. Spheres can be created based on business rules, for instance: all salesmen in location *xyz*, who are paid on commission, or as a handpicked group of individuals. As such, the user should have the ability to create a sphere, for example: 'Payroll Implementation Project Team.'

Some manager contexts are only relevant for certain groups of people. For instance, the context of 'Union Representative' is only relevant for union employees. Therefore, a sphere of 'Union Employees' will exist, which will have visibility to the context of 'Union Representative.' There are business rules that go along with the context (such as: "all union employees *must* have a union representative assigned"), which should be able to be modified based on the intersection of contexts and spheres (such as: "union employees in Germany are *not required* to have a union representative assigned").

Spheres can also exist as subordinate to a reporting context. For instance, the aforementioned sphere of 'Payroll Implementation Project Team' will contain several team members, and report to the context of 'Project Manager' as a group, rather than requiring each individual team member to be assigned to the project manager individually. In this way, groups of

workers can be reassigned on a macro level (for instance during reorganizations) without having to be reassigned person by person.

Acquisitions and Reorganizations

This type of tool is absolutely invaluable for acquisitions and reorganizations. An Organization Modeling solution should provide mass change functionality so that reorganizations can occur quickly. The use of spheres accommodates this quite will. In addition, "What if" capability, whereby the user has the ability to visualize changes to the organization structure before the transaction is committed to the system, is useful. This is part of the modeling process: seeing the alignment of relationships that optimize the company's effectiveness.

Visualization

This pertains to what is typically referred to as "Org Charting." It is a way to visualize the organization structure, and allow one to drill up or down to get a micro or macro view of the organization. Once you start defining several contexts in both hierarchical and network structures, the organization can get pretty complicated—which is the reality of most organizations. It becomes imperative that there is a tool available which can slice the organization into chunks that can be more easily understood.

There are many competing products on the market that have this capability, with varying degrees of comprehensiveness. However, some of them fail to accurately represent a matrix structure—instead represent it as a series of one-to-one hierarchies. Most don't allow the updating of relationship information, but rather leverage the information from somewhere else. None of them are integrated within the HCM. Still, they offer a valuable function.

Integration with HRMS

When defining the organization structure, you are essentially maintaining a repository of the people relationships in the organization. *The absolutely right place for this repository to exist is in the database of the Human Resources Management System.* Keeping the repository in the HRMS' database has the following advantages:

- **Ancillary human resources information is accessible** – the people relationship information by itself is not very useful, but becomes extremely valuable in combination with the other information and processes related to the people.
  For instance, if the organization structure is to be used for succession planning, information about the person's job and career path already exists in the HRMS and is easily accessed.
- **Published to downstream systems** – the HRMS database should act as the clearing house of information relating to Human Capital. The security to determine who has access to what is already in place and doesn't have to be replicated. Earlier in this paper, the use of organization structure information used by software with workflow components was cited. This information can be extracted for use by any software product in the company that has use for it. This can be done in several ways:
  - **Batch feeds** – this is the typical legacy way of achieving a point-to-point interface solution and the least desirable. The reason is that a separate batch

feed has to be created and scheduled for each recipient system. The runs have to be scheduled, monitored and maintained.

- o **Reporting database** – a better solution is to replicate a portion of the organization structure that is deemed *public* information, and let any system extract whatever it needs. This would involve only one daily extract from the HRMS, and place the onus on the downstream system to develop and maintain its own extract.
- o **Publish a web service** – this is the most desirable solution. It involves defining and publishing an interface using the standard protocols of XML and SOAP. The advantages are:
  - No batch extract is required
  - Information is real-time, not end of day
  - Access security can be imposed
- **Maintained as part of Human Resources Lifecycle** – more on this in the subsequent section.

Maintenance

By far the biggest push-back about this type of software relates to the maintenance of the information, because it is constantly changing. In fact, one of the biggest problems with existing Organization Charting software is that it doesn't get maintained. Org Charts are stale the moment that they're published. That is why it is *imperative* that the repository be part of the HCM system. To address the issue, an Organization Modeling solution should combine the following two ways of staying current:

- **Maintained by Human Resources** - Human Resources maintains all other information relating to a person as he or she go through his or her lifecycle with the company. It makes perfect sense that this should be considered and addressed as any other indicative information relating to the worker. For instance, when a person is transferred or promoted, HR must enter new location, job title, and compensation information. HR should also be responsible for noting all of the changes in reporting relationships. All changes to the organization structure, wherever they are initiated from, are saved for audit purposes. Therefore, the organization structure at any point in history can be recreated.
- **Employee/Manager Self-Service** – who knows about reporting relationships better than the individuals involved? The best way to keep this information current is to empower the stakeholders to maintain their own information. Workflow approvals are required to make the transactions permanent, however. For instance: Joe looks at his own reporting relationship using the tool provided. He notices that he is assigned to Harry as a direct report, whereas he knows that he really reports to Julia. He enters a transaction to correct the information. A workflow approval is sent to Harry, the "losing" manager, and Julia, the "gaining" manager. Once they *both* approve it, Joe's record gets updated in the system. Spheres and contexts are defined by a subject matter expert, however. Joe, Harry nor Julia has the authority to create contexts or apply them to groups of people. This way, the organization becomes more like an organism, self-maintaining, with all parts working toward a common goal.

The Business Automation Vision

Change is the only constant in the information industry. Over the last several decades there have been many significant shifts in the way information is processed, and consequently, business is conducted. But, arguably, there has been no shift greater then the advent of the World Wide Web.

The first generation of web based applications changed from static web pages to business-to-consumer (B2C) e-commerce. This was evident during the boom of the late 1990's. However, post-"bust" is when the real revolution is occurring. This is due to standards such as XML and related technologies. XML describes what the information in a document *means*, in contrast with HTML, which describes how the information should *appear*. The use of standards means that for sharing information, the recipient doesn't have to be told about the format, because the information is self-describing. Despite several attempts to create "universal interfaces" in the past, interfaces have always required knowledge on both sides as to the format and meaning of the information. This acceptance of standards is spawning a revolution in business-to-business (B2B) e-commerce, which will make the B2C era look like the tip of the iceberg!

These technologies and standards are allowing an age-old technique to become possible, even commonplace: **Service Oriented Architectures (SOA)**. With Service Oriented Architectures, software is viewed as an array of discrete services that perform specific tasks, rather than all-encompassing systems. The advantage to this is that services from disparate vendors can be integrated in a way that serves the needs of business processes. It also encourages reuse of software, because services can be invoked from anywhere, rather than recreated within each system.

Services Oriented Architectures allow easier integration of disparate software components.

Service Oriented Architectures represent the first tier of the Business Automation Vision.

Since the Application Integration puzzle is being solved, IT managers can focus on the needs of business, rather than the intricacies of software. Business processes combine automated functions performed by systems (not necessarily of the same type), and manual functions performed by people. This need is served by a relatively new class of software called **Business Process Management (BPM)** software. BPM software combines *Enterprise Application Integration (EAI)*, using Service Oriented Architectures, with *Automated Workflow*. Enterprise Application Integration ensures that services from different systems are made available to the business process. Automated Workflow ensures that people involved in the process get the piece of work routed to them at the right time, so that they can approve a transaction or add value in some other way. Automated Workflow is a very complex subject, and beyond the scope of this paper. There are several BPM software products on the market now. It is a quickly maturing field. The important thing to realize is:

Business Process Management allows organizations to focus on business processes, rather than the systems that support them, by leveraging Enterprise Application Integration and Automated Workflow.

Business Process Management is the second tier of the Business Automation Vision.

BPM enables the routing of the right *information* to the right *person* at the right *time*. The missing

piece of this equation (until now) is how to determine who the right person is for the transaction, given the task within the business process, the type of information, and the timing? The answer is: **Organization Modeling.** This completes the picture and is the third tier of the Business Automation Vision.

Organization Modeling defines the relationships between the people in an organization.

Thus, the **Business Automation Vision** consists of the following three tiers:
- **Service Oriented Architectures**, which enables the creation of automated services by integrating software based on accepted standards.
- **Business Process Management**, which allows focus on business processes, using Enterprise Application Integration and Automated Workflow.
- **Organization Modeling**, which determines the participants in a workflow process by defining the relationships within the organization.

Organization
Modeling

Business Process
Management

Service Oriented Architectures
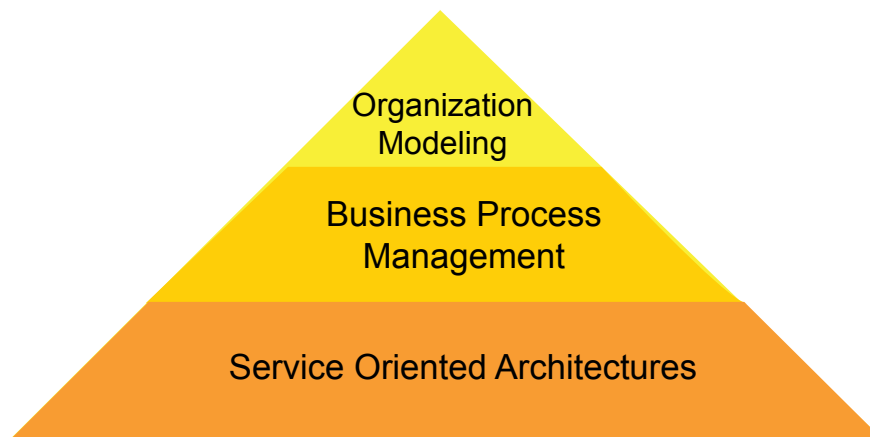
Through the Business Automation Vision, businesses can evolve beyond their burdensome legacy processes, and achieve efficiencies and effectiveness heretofore unknown. Each tier of the Business Automation Vision builds on the principles of the previous one. None of the tiers can exist without the others.

Just as the World Wide Web was a significant paradigm shift in terms of how information is accessed and processed, each of the three tiers of the Business Automation Vision are paradigm shifts in their own right, because they significantly change the way things were done before they existed, and offer benefits that couldn't be realized without them.

Organization Modeling is the latest paradigm shift in the information industries. Its benefits are limited only by the creativity and inventiveness of its practitioners!

Conclusion

An organization can be defined as a group of people who work together to achieve a common goal. It is how those people work together that determines if, and how effectively they will achieve that goal. Optimizing the way humans interact to add value has been the vision of business management, and specifically the concern of Human Capital Management (HCM) practitioners.

Up until now, software typically used for HCM has done an inadequate job of defining the multiplicity and types of relationships in an organization. As a result, information systems meant to solve business problems are not being used to their ultimate effectiveness. Huge sums of money are being wasted on inefficient business processes and erroneous decision making. Companies are at risk of violating regulatory issues.

Fortunately, the solution is at hand. Organization Modeling software holds the promise of increasing efficiencies and effectiveness, avoiding compliance risk, and gaining a better understanding of the relationships among a company's greatest assets: its people.

Earlier in the information industry, Database Management software allowed database manager to model the relationship between groupings of information. More recently, Business Process Management software exposed the relationship between business processes. Today, Organization Modeling software describes the relationships between the people in an organization. Its widespread acceptance is necessary and inevitable.

About the author: Roy Altman is the president and founder of Peopleserv, Inc. (www.PeopleservInc.com), makers of the Organization Modeling solution: PanGea. He has been designing business application software for over 26 years. For over 11 years, he as focused on Human Capital solutions.