INTEGRATED SPEED AND FLEXIBILITY:

DELIVERING CUSTOMER SOLUTIONS

ABSTRACT

A challenge for organization designers is to create an organization that can act with speed, flexibility and integration. Up until now, designers could create organizations that are characterized by any two of those features but not all three. Some companies, like Nokia and IBM, are beginning to be successful as they provide solutions to those customers who find their offerings to be valuable. These companies use company-wide councils, flexible resource pools, partners and management processes like portfolio planning to achieve their progress. Key talent categories like project managers are also identified. The experiences of the leaders show that it takes an aligned organization design of strategy, structure, processes, rewards and talent to be successful.

Over the past decade, companies have learned how to create organizations that rapidly develop new offerings and get them to market.[1] They have perfected techniques like "rapid prototyping" and the process for "follow the sun" development. Some companies have created organizations that are both fast and flexible. They break up into many small units, each of which can quickly turn on a dime. But today companies like investment banks and computer manufacturers are facing the challenge to be fast, flexible and integrated. Creating organizations that can deliver all three requirements is today's state of the art organizational design problem.

This challenge to companies like those in the computer industry arises when they attempt to deliver customer solutions. They are finding that some of their customers prefer to buy combinations of products and services rather than stand-alone products. They prefer solutions when a vendor can integrate the products and services more effectively than the customer can. For the vendor the challenge is to integrate the organizational units that provide the stand-alone services and products in a time frame that is desired by the customer. In this just-in-time world that desired time is becoming shorter and shorter. Then when the vendor has accomplished this rapid integration for one customer and solution, another customer will want a different solution requiring a different combination of products and services. The vendor in the solutions business must therefore have an organization that can combine and recombine the products and services from different units to create different

solutions in fast time frames. This paper describes what companies like Sun Microsystems, Nokia and IBM are doing to create organizations that are simultaneously fast, flexible and yet integrated.

These cases are selected from fourteen case studies conducted over the last three years. The selected cases represent the extreme cases and the extreme challenge from which we can learn the most and then apply those lessons to less extreme situations. The paper starts with a model of organization which will be used to describe the practices that the companies have evolved. Then the different types of solutions will be defined so that the extreme cases can be understood. The next sections will describe the organizational structures, processes and human resources practices that are being employed. The focus will be on the companies' ability to assemble and disassemble teams rapidly to capture solution opportunities and to execute the solutions projects when the capture is successful. The selected companies have evolved processes for just-in-time staffing and structures to provide flexible resources for projects. Finally, generalizations will be drawn for creating fast, flexible and integrated organizations.

Strategy and Organization Model

A model for linking different strategies to different organizations is shown in Figure 1 below.[2] It depicts an organization as consisting of four dimensions. The first is the structure, which determines the location of decision-making power. Second are the information and decision making processes. Third is the reward system that influences the motivation of people to perform and address organizational goals. And the fourth category of the model is the people dimension, which focuses on the human resources policies. These influence the employees' mindsets and skill sets.

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Figure 1 — The Star Model

The message of the Star Model is that these dimensions must be consistent with strategy and consistent among themselves. Our purpose here is to identify the different solutions strategies and the different combinations of organizational dimensions that characterize the fast and flexible organization that will integrate and deliver these solutions. In the next section we will define what the different types of solutions are that present the speed, flexibility and integration challenge.

Solutions Strategy

Different solutions strategies will result in different challenges for the fast, flexible and integrated company. There are four dimensions of solutions strategy that appear to make a difference to the organization. These dimensions are the type of solution, the scale and scope of solutions, the degree of integration of products constituting a solution, and the percentage of total revenue deriving from solutions. The scale and scope and the integration dimensions are the ones that challenge the fast and flexible organization.

Types of Solutions

There are two main types of solutions, horizontal and vertical. Horizontal solutions are generic and apply across customer categories. For example, Sun Microsystems creates and delivers a human resources portal solution. This portal can be used for the human resources function across all industries. IBM, on the other hand, delivers industry-specific solutions as

well. For example, e-Agency is a solution to put the agency network of an insurance company on the Internet. These industry-specific solutions are referred to as vertical solutions. Clearly, the vertical solutions require a more customer-centric organizational unit than do the horizontal solutions.

Scale and Scope

The strategic factor having the greatest organizational impact is the scale and scope of the solution. Scale and scope refer to the number of products and the number of different kinds of products that are combined into a solution. For example, a small scale and scope solution would be a local area network for a work group. A dozen desktop computers, a shared printer and disk storage could all be linked by an Ethernet cable and form a network. A larger scale and scope solution would be computer-aided design (CAD) system for an engineering department of several hundred engineers. This CAD solution would require desktops, servers, storage units, CAD software, database software, network software, installation and maintenance services. It may also require financing. This CAD solution comprises many more products and many different kinds of products, like software and services as well as the hardware products. At the extreme end of scale and scope, Mitsubishi Trading Company could order state of the art trading floors for 10,000 traders at six worldwide sites. This solution requires hardware, software, and services for computers, telecom, financing and training. Large turnkey projects such as these are an extreme challenge to the fast and flexible organization, and require a highly integrated approach.

Integration

A third dimension is the degree of integration between the components that comprise a solution. Integration varies from a loose assortment of products to a highly integrated combination. In between are combinations that use modular architectures. Little integration is needed between products supplied by agriculture firms to farmers. The firms try to bundle seeds, herbicides, insecticides and consulting. However, the farmer can easily buy each as a stand-alone product from a different supplier. An example of larger scale but also limited integration can be found at ServiceMaster. They try to provide as many simple services as possible. They provide one-stop shopping for security, catering, janitorial, parking lot management, landscaping, building maintenance and many other similar services. But each is a relatively independent service that could be provided by an independent service company. A more integrated offering is the set of solutions from computer companies. Figure 2 shows what Sun Microsystems calls "the Integrated Stack". The stack shows hardware on the bottom, software in the middle and services on the top.

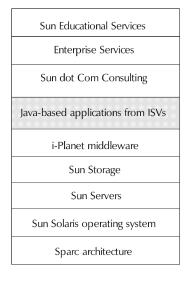| Sun Educational Services |
| :---: |
| Enterprise Services |
| Sun dot Com Consulting |
| Java-based applications from ISVs |
| i-Planet middleware |
| Sun Storage |
| Sun Servers |
| Sun Solaris operating system |
| Sparc architecture |

Figure 2 — Sun's Integrated Stack

All components have to operate in an integrated manner. But thanks to standards like the Java programming language, components using Java can be substituted for other components. For example, a customer could choose BEA's middleware and substitute it for Sun's i-Planet middleware. So components in the information technology industry must be able to operate with other components. By following standards they give the customer the choice of mixing and matching different components.

At the extreme are integral solutions in which the components are unique but are designed specifically to work together. A simple integral solution would be an anti-lock braking system (ABS) for an auto manufacturer. Each ABS is unique to an automobile model. Johnson Controls is a more complex example. The company designs and manufactures interiors for Toyota, Chrysler and other automobile OEMs. Each Toyota model has a unique interior comprised of unique parts. These parts cannot be used on a Chrysler interior. The significance of the integration dimension for the organization is the coordination required. The organization reflects the solution. The more interdependent the components, the more interdependent the organizational units responsible for those components and the larger the challenge to rapidly mobilize them.

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The combination of scale and scope with integration determine the coordination requirements and the organizational features to provide the coordination. Figure 3 shows this combination and some different solutions strategies that have been discussed.
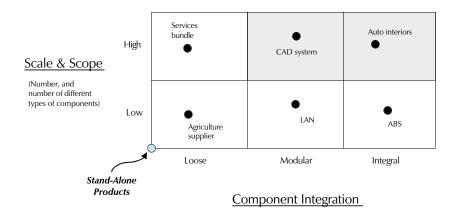

Figure 3 — Coordination requirements of different solutions strategies

Figure 3 shows that scale and scope and integration increase as the solutions move from the southwest to the northeast corner. The consequence is that the coordination requirements increase in the same manner. We will focus on the solutions in the north and east portions of the chart as indicated by the shading.

Revenues

The last strategic dimension is the percentage of total revenues that comes from solutions. If, like Motorola, solutions contribute 10% or less, the firm can simply add a solutions unit whose task is to integrate the firm's products into solutions. When the percentage gets higher, like at IBM, the company has sufficient volume to specialize the solutions units that serve different customer segments. Instead of one solutions unit, IBM has about twelve units, each specializing in a customer segment.

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Summary

A solutions provider desiring to respond quickly to customer opportunities faces greater challenges as its strategy increases in:

1)   the scale and scope of the solution provided,

2)   the degree of integration of the components comprising the solution.

Scale and scope increase the number of organizational units that must be integrated quickly. Integration relates to the coordination effort needed to accomplish the integration.

Structures

The companies in our study transformed themselves into solutions providers by changing three structural areas: they formed a single sales organization focused on customers and opportunities; they created a unit responsible for developing solutions; and they increased the flexibility of human talent. These companies had previously been organized by business units or product lines. The business units typically remained and continued to develop and manufacture their product lines. All of the companies continued to supply stand-alone products to those customers that desire them. In addition, they integrated products and services into solutions for those customers who preferred solutions.

Customer-Focused Front End Structure

The solutions vendors typically organized around customer opportunities.[3] They created single sales forces by combining the product sales people into customer-focused units. These units were organized around customers, customer segments and/or geography. Sun Microsystems is typical of the computer manufacturers in its organization shown in Figure 4. In July 2000, Sun combined its separate product sales forces into its Global Sales Organization.

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                                    │ CEO │
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                                       ├── Corporate Staffs

   ┌─────────────┐ ┌─────────────────┐ ┌──────────────┐ ┌────────────────┐ ┌────────────┐
   │ Global Sales│ │Enterprise Servic│ │Hardware Group│ │ Software Group │ │ Operations │
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Global Sales
— Time Zones
— Customers
  — Account Manager
— Partners
  — ISVs
  — VARs
  — SIs
— Solutions
  — Portals
  — Wireless
  — Payment Systems
  — Collaborative Computing
  — CRM

Enterprise Services
— Professional
  — Wireless
  — CRM
  — Time Zones
— Customer Services
— Educational Services
— Remote

Hardware Group
— Servers
— Desktops
— Storage
— Chips

Software Group
— Operating System
— Middleware
— Tools
— Java
— ISVs
  — Portals
  — Wireless
  — Payment Systems
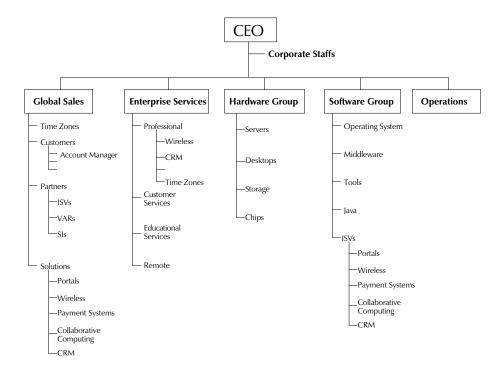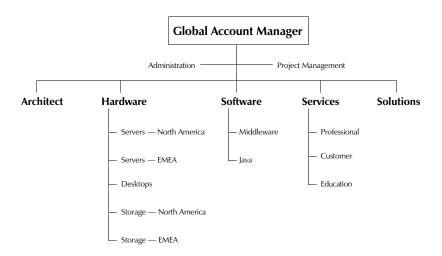 — Collaborative Computing
  — CRM

Figure 4 — Sun Microsystems Organization Structure (circa 2001)

The structure continues to evolve but it consists of four main units, two of which will be explained here. Most customers are handled through a geographic sales organization which they call Time Zones. Others are handled through channel partners like Value Added Resellers (VARs), Independent Software vendors (ISVs), Systems Integrators (SIs) and others. But somewhere around 20 large global customers are handled individually in a customer unit. IBM, which is ten times the size of Sun, focuses on 1,000 global customers and organizes the accounts into industry segments like Financial Services, Manufacturing, etc. And finally there is a Solutions unit that focuses primarily on horizontal solutions. IBM locates its horizontal solutions unit in Global Services. These customer and solutions units have the primary responsibility for speed, flexibility and integration.

The rest of the structure consists of the product lines for services, hardware and software. Each group is further subdivided into individual products like education services and desktops. The operations group is the manufacturing assembly operations that are increasingly outsourced.

1. <u>Global Account Management</u>

The largest and most profitable accounts, like Nokia and eBay, get a dedicated team to serve them. The team structure is shown in Figure five. The team is a re-creation of the company in microcosm. Each product line is

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                           ┌─────────────────────────┐
                           │  Global Account Manager  │
                           └─────────────────────────┘
                                        │
         Administration ────────────────┼──────────── Project Management
         ┌──────────┬──────────┬────────┴────────┬──────────────┐
      Architect  Hardware            Software      Services       Solutions
                   │                    │             │
                   ├─ Servers — North America  ├─ Middleware   ├─ Professional
                   │                           │               │
                   ├─ Servers — EMEA           └─ Java         ├─ Customer
                   │                                           │
                   ├─ Desktops                                 └─ Education
                   │
                   ├─ Storage — North America
                   │
                   └─ Storage — EMEA
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represented on the team.

Figure 5 — Global Customer Account Team

The team is to deliver all of the company's capabilities to the customer. They are to mobilize and integrate Sun's total offerings on behalf of the customer.

The team articulates a customer strategy and prepares a customer plan by product line, geography and solution. The sales people are the links to the product lines. The planning process builds the relationship with the product lines and educates everyone about the high priority customers. The plan also identifies investments to be made to win big solutions contracts. These opportunities, like a wireless application for a customer's sales force and field personnel, could be a $250 million global project and take three years of preparation and investment to win. Solutions are a patient money game. But the time allows the team to prepare all the product lines to act when the request for proposal is finally issued.

The key roles in this unit are the Global Account Manager (GAM), the Project Manager (PM) and the solutions sales person. The GAM is not just a sales person, however. Most GAMs are general managers for the accounts that amount to about $100 million per year. Growing and finding these general managers is a challenge and often limits how fast a company can transition to solutions. The other key role is the Project Manager. This person and the GAM marshal the resources from across the company to respond quickly to capture opportunities. The PM manages the proposal effort and the implementation when a proposal is won. Growing and finding these people is another human resources challenge. PMs who can manage the $250 million project mentioned above in 85 countries are rare. The other role is the solutions sales person who joins the team when a large solution opportunity is anticipated. So a wireless person would join for a time when the wireless opportunity is alive. Then a portal solutions person may join when portals become an opportunity. These people are part of the solutions unit and move from opportunity to opportunity.

2. Solutions Unit

The solutions unit is to develop and implement those solutions that the company has chosen to offer. The solutions vendor typically chooses to offer solutions at which it is superior and which can be replicated across multiple customers. The large companies cannot make money by offering solutions on a one-off basis. Sun has chosen about eight areas in which they offer replicable horizontal solutions like portals, wireless, payment systems, collaborative computing (computer aided design or CAD), electronic markets and customer relationship management (CRM). Each solution is a combination of products from Sun's hardware, software and services units, as well as software from ISVs like Oracle and Peoplesoft along with consulting, systems integration and outsourcing from firms like EDS and Accenture. The solutions unit is to select the best products from inside and outside of the company to combine into a solution.

The solutions unit shown in Figure 4 has a department for each chosen solution area. There is a champion for the solution who heads the department and a team of 6 to 10 people. These teams consist of 8- to 10-year company veterans who have a combination of marketing, engineering and sales backgrounds. One or two may come from outside the company to provide unique expertise. In each Time Zone there are salespeople who assist account teams in the capture of solutions opportunities, as shown in Figure 5. Each solution has about 15 to 20 people in the field for this purpose.

Each solution team has a Solutions Council that connects to the product lines or business units. Figure 6 shows the product lines that contribute a representative to the wireless Council.
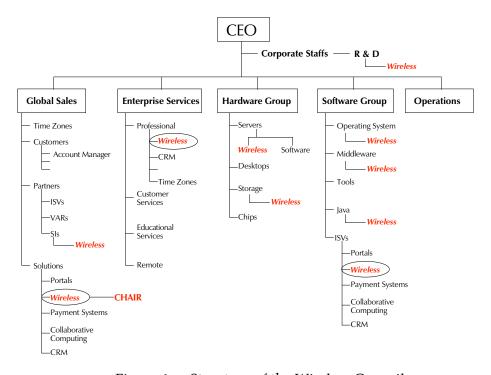
Figure 6 — Structure of the Wireless Council

These product lines have offerings that make up the solution. Some products, like servers in Hardware, may require some modifications to make the solution perform better. Figure 7 shows the Council for Payment Systems. These include systems sold to an oil company that wants to set up smart card pay stations at gasoline pumps connected the Internet. Each solution involves different product lines in the offering. The council system is intended to allow Sun to configure whatever products and capabilities it needs in order to form a solution. It does not create a separate business unit for a solution. It uses councils to configure and reconfigure the company's capabilities into solutions that customers value.

Figure 7 — Structure of the Payment Systems Council

Each product line also needs to create flexible resource units that can provide talent to swing into action when an opportunity arises.

Flexible Resource Units

The solutions vendors all created talent pools, both internally and externally, that could be tapped and organized quickly into capture teams or execution teams. They also found ways to leverage the talent and design the work to match the scarcest skills. And finally, they developed processes for allocating talent to the top priority opportunities. The talent allocation will be discussed in the section on processes.

1. Talent Pools

Each vendor created pools of talent that could be used flexibly and quickly in responding to customer opportunities. One pool that all of them created was a professional services unit. These units were staffed with mostly outsiders who were consultants in the solutions area and systems integration specialists. These professional services units were run like consulting firms. The talent moved from project to project. Each person had to be billable. The GAMs all had budget s and would buy time from these people for customer calls, workshops, conferences, project execution and proposal preparation.

The computer companies typically hired a partner from a consulting firm and gave them the responsibility to build the unit.

Another practice was the creation of quick response teams in the solutions units. These were professionals who were trained in the skills to support the solutions. At Sun the 15-20 people in the field were available for staffing capture teams in their solution's area. At IBM several hundred people were available for regional and even global assignments to capture and execute wireless solutions. IBM's size gives it the opportunity to create these specialized quick or rapid response units.

Figure 8 — Flexible Resource Units

At Sun the product lines all had business development units and growth goals to encourage them to respond to solutions opportunities. These units were staffed with marketing and engineering types who could be dispatched quickly and work on a capture team for four weeks and then return to another opportunity. For some large projects and for top priority customers engineers and architects in the business units may be pulled off of current work to capture opportunities. If these big opportunities can be anticipated to some degree, these people can be selected in advance and participate in the preparation of customer and solution plans. Then when the opportunity materializes, they can take their place on the capture team and be

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ready to run. This reserve capacity works best when there is some lead time to prepare the people. The reserves can then create a plan for filling in for themselves when they are called. In these ways flexible talent pools, both full time and reserve, are available for real time staffing of opportunities.

2.   <u>Leveraging Talent</u>

        The computer companies, investment banks and consulting firms all tried to leverage talent on a regional and global basis.[4] Sometimes leverage was achieved by changing organizational structure, sometimes by structuring the work and skills, and sometimes by moving work to the talent.

        In the early 1990s almost all consulting firms, investment banks and computer companies were organized by country. As a result, talent was locked up in country silos and the firms were unable to respond quickly enough on cross-border opportunities. By the late 1990s, these same firms had eliminated country profit centers and had moved to global accounts, as shown in Figure 5, and organized talent by regions, such as Europe Middle East Africa (EMEA). Both IBM and Accenture reorganized after they lost opportunities to EDS, which had a global customer and regional talent structure. IBM and Accenture simply could not move fast enough on cross-border opportunities, so customers subsequently awarded the contracts to EDS who could. Today global customer and regional talent structures are the rule for professional services companies and the services units of other companies.

        All firms providing solutions faced the challenge of leveraging specialist skills that were in short supply. In the late 1990s, Hewlett-Packard put together an e-commerce strategy for Europe. However, they could implement only a fraction of it. In Europe, H-P had only ten people who were qualified to install secure transactions over the Internet. And even though every bank in Europe wanted to implement an e-commerce program, no bank would sign a contract until they saw that one of the ten experts was going to work on their project. The consulting firms were limited first by scarce SAP-skilled programmers, then by XML programmers. When solutions providers take on large scale and scope solutions, there is a high likelihood of encountering a scarce skill that limits the opportunities that the companies can pursue.

        The firms in the study responded to the scarcity of talent in a number of ways. Most tried to increase the talent available. They ramped up their training of internal people, launched recruiting drives and searched for outsourcing partners (to be described next). In the short run they leveraged their existing talent by designing key roles for them and by adopting human resource practices to retain them. The talent in the limiting skill was usually

ranked from critical to normal and placed in two or three categories. The people in the critical category were then given their choice of projects. They were also paid at market rates, which were higher than normal company salary rates. These critical thought leaders would also float across projects and get in early on a project. Their early entry would usually lead to key guiding design decisions. Then they would move to the next project and normal talent could move in as the need for critical skills fell. These same people would be used in review boards to re-enter the project at key checkpoints. The early entry and re-entry at checkpoints allowed the scarce critical talent to be leveraged and to provide coaching to develop the normal talent.

Another way to leverage talent was to move work to where the talent exists. One way is to employ "follow the sun" development processes used by most software developers to reduce development time. Another example can be found in engineering and construction (E&C) firms like Fluor-Daniel. These turnkey project performers allocate their design and management work for maximum leverage. In one case an E&C firm was building a refinery in a developing country. The firm put the project management into its Calgary office. An experienced project manager was located there principally because the Canadian government provides funds at attractive rates when projects are located in Canada. The critical catalytic cracking design was assigned to the Irvine, California office where the center of excellence was located. Mechanical and civil work went to the Houston office where capacity was available. Then when the critical top 40% of the design work was completed, the remainder of the work was sent via satellite to the Philippines where it was finished at more cost effective rates. The Filipino engineers, many of whom had been trained in the U.S., completed the 15,000 isometric drawings to guide the refinery construction. Each of these allocations leveraged the E&C company's skill base. As CAD systems develop on the Internet, knowledge work can be moved to where the best talent exists.

So the electronic movement of work takes its place with work and organizational restructuring, all of which enable fast, flexible solutions firms to leverage talent.

3. Partners

The solutions providers always went outside for partners for talent. The large scope solutions always exceed the talent repertoire of even the largest firms like IBM. These partners are also a source of talent pools and scarce talent when responding to customer opportunities. The skilled solutions firm invests a lot of time recruiting, certifying, and building relationships with its partners. Sun is a good example of a sophisticated partnering firm.

The solutions unit at Sun is one hub around which the company's capabilities are gathered for the customer. A second hub is the ISV unit in the Software Group. The ISV unit identifies and recruits independent software vendors (ISVs) which can be gathered into the company's solutions. This unit has an identical structure to the solutions unit. There are the same departments for Wireless, Payment Systems, etc. The Wireless department identifies the top application software vendors for the wireless solutions that Sun chooses to offer. It works with these ISVs to get their software to run well on Sun computers. Another hub is the Systems Integrator (SI) unit in the Channel Partners group. Like the ISV unit, they identify the best SIs to be partners for solutions. Some are best for wireless in Financial Services applications, others for wireless in manufacturing applications. Some are best in Europe and others are strong in Japan. The solutions planning process, driven by the Solutions unit, is the forum in which partner selections are finally reached.

The selected partners then go through a process of certification. That is, a team from Sun audits the partner and certifies its capability to meet Sun's solution criteria and talent availability. The partner may then use the certification in its own advertising. Sun holds annual conferences for its partners where all participants in a solution can meet and discuss current practice and future developments. One of the issues the partners discuss is their common process for developing solutions. Then when a solution opportunity arises, the partners can focus on <u>what</u> to do having already agreed upon <u>how</u> to do it.

Sun works hard to develop a partner community. They select partners based on complementary competencies and on common values. The partners they select agree on non-compete areas and open systems standards. The conferences, common web sites, joint advertising, joint display booths at trade shows, common processes and common values all are important features in creating a community of partners, which Sun sees as an advantage. In addition, Sun pays commissions to the sales forces of community companies that make sales and generate leads for other community companies. And every year the CEO of Sun has "Summit Meetings" with the CEOs of Sun's major partners. In these ways, Sun builds and maintains a community of partners whose resources can be marshaled quickly to pursue solutions opportunities.

In summary, the case study firms moved to become integrated, fast and flexible by creating customer-focused units to address the customer opportunities and marshal the company's resources to meet them. They selected solutions that were valued by the customer and at which the company could excel. The company's capabilities were organized into councils to better enable the development of solutions and preparation of

plans. These councils were staffed with talent from pools that were organized to provide just-in-time staffing to respond to customer opportunities. These pools were both internal and external to the firm. Talent was leveraged across the firm with regional pools, critical talent programs and the electronic movement of knowledge work to where the best talent could be found. The mechanisms making this solutions system work were the management and business processes that were designed to deliver speed, flexibility and integration.

Processes

The solutions provider, like the company organized by business units, employs management processes, such as planning and budgeting, as well as business processes, such as new product development and supply chain management. But the solutions provider has some additional processes and modifications to the standard ones. In the planning process, the solutions provider has customer and solutions strategies and plans, as well as a reconciliation process with business unit plans. Solutions providers use a product portfolio planning process in addition to the new product development process. And finally, there is the opportunity management process. In this process there are key decisions of staffing the capture and executing teams and pricing the products and services comprising the solution. These processes are the primary vehicles through which management achieves the integration and the speed to deliver solutions to customers.

Strategic Planning

The strategic planning process lays the foundation on which the solutions provider can then move with speed and flexibility. In this sense, planning is indeed preparing to move opportunistically.[5] Even in these fast moving companies, activities are not 100% sense and respond. They plan when they can and respond when they cannot plan. They use planning to reconcile product and customer plans, develop solutions policies and arrive at priorities for customers.

The strategic planning process is to achieve the integration dimension. Like the business unit firm, the solutions provider prepares strategies and plans for product lines. But the solutions provider also prepares customer and solutions strategies and plans. These plans then need to be reconciled in order to achieve goal alignment prior to taking action. All of the firms used some type of spreadsheet as shown in Figure 9. For example, they would

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compare plans for server capacity and resolve differences so that product and customer goals were the same.

Customer/Solutions Units

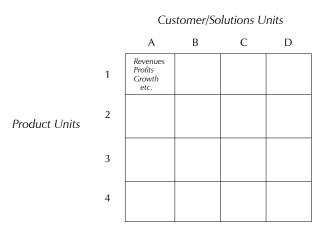|	A	B	C	D
1	*Revenues Profits Growth etc.*			
2				
3				
4				

Product Units

Figure 9 — Spreadsheet to reconcile solution and product plans

These discussions would also raise issues about solutions prices and product prices in a solution. The discussions would lay the ground work for the solutions pricing policy. Another issue might be whether a product line could opt out of a solution if it did not like the price given to its product. And if it could opt out, could the Solution unit use a competitor's product in its place. All of these are contentious issues. The function of the planning process is to raise, debate and resolve these issues prior to responding to opportunities. Planning allows the company to go on maneuvers before using live ammunition.

The other outcome of the planning process is customer priorities. A company cannot respond immediately and totally to every customer opportunity. So the solutions providers place priorities on customers based on profitability, ability to learn, or future profitability. They will respond to the top priority customers in a manner that is fast and integrated. The critical talent will be assigned to these customers' opportunities. Planning is the forum for the debates around which customers are top priority customers.

Product Portfolio Planning

Each product unit develops its own products but each unit's products must work together with the products of other units to provide a solution. The strategy dimension of component integration is important in determining how much effort must go into planning the entire portfolio so that the products will work together. For example, if Nokia is going to offer Third Generation equipment[6] it must have switches and transmission products, software, consulting practices, customer service contracts as well as handsets that all work together using 3G technology. The product units cannot independently develop their own product lines without a dialogue. A strong top management team is required to guide the portfolio planning process. The Nokia software product business may want to challenge Microsoft. However, Nokia will also need a totally integrated product line in order to provide customer solutions. Through the portfolio planning process, the software and other product groups have to develop a strategy that advances their product line as well as integrates the products into solutions offerings.

Many companies move to modular architectures and adopt industry standards. These practices loosen the integration of products required to form a solution. Business units can opt in and out more easily. Customers may want to choose which products make up a solution. Competitors' products meeting industry standards can then be substituted. The product portfolio process is the forum for deciding on standards and modular architectures.

Opportunity Management Process

The structuring and planning described above create a platform on which the solutions provider can then sense and respond.[7] When opportunities materialize, they are not always like the plan, at the anticipated price and usually the exact timing is different. The company must then match resources to opportunities in real time. This matching is the key management process in achieving speed, flexibility and integration. There are two aspects to this real time response to opportunities. One is pricing and the other, on which we will focus, is the assembly and disassembly of capture teams and execution teams.

The pricing decision was one of the issues debated in the strategic planning process. The output was a solutions price and prices for all products and services comprising the solution. More important was the pricing policy and opt in – opt out policy. But the real price is always different and the likelihood of disputes is high. The disputes slow the response to the customer opportunity. In order to move quickly, Sun put the pricing decision with the GAM and the customer unit. The P+L responsibility rests with the Global Sales Organization. The product lines are product development oriented cost

centers. At IBM, the final pricing decision rests with the Finance unit. They decide quickly so that everyone focuses on the opportunity and the customer.

The other challenging aspect is the real time staffing of teams to capture solutions opportunities and execute the projects when opportunities are won. The best case scenario is the one where the planning works. The GAM gets out ahead and learns that an automobile OEM is going to buy a collaborative computing (CAD) solution in 18 months. The account PM gathers a team based on the solutions unit's recommendations from the business development units of the product lines, from the chosen ISVs and from the SIs. They put together a preliminary plan as part of the annual planning process. Then when the customer issues its request for proposal, the team is reactivated and a more detailed and current proposal is created. A few months later the contract is awarded and the execution team swings into action led by the account PM. A few opportunities follow this optimistic scenario. More likely, they follow the realistic scenario.

Most of the time the actual opportunity is different than anticipated, is later than planned and the original team is busy on other projects. Some opportunities come out of the blue because of an acquisition or are postponed because of a revenue shortfall. There is often a surprise limiting skill area. Under these circumstances, the GAM, the PM and the customer priorities come into play. The PM goes to the scheduling unit for professional services, to the company yellow pages and web sites, and to the other flexible resource units. The resource units allocate available people to the opportunity. For high priority customers and large opportunities, the resource units may reassign the top people to the new opportunity and replace them with others who are available. When disagreements arise, the GAM may go to his or her network to persuade resource units to make their top talent available. Some staffing issues may find their way to higher levels in the hierarchy for resolution. All of the firms started with this informal process. But some thought there was a better way.

Some firms think that the best way to staff the attractive opportunities is to have an explicit process for allocating talent. They want to conduct real time, or just in time, staffing from a total company perspective. The informal process described above may take too long, there may be a large number of disputes about the limiting talent specialty and may result in suboptimal allocations. They want the matching of talent to opportunities to match the priorities and needs of the business rather than powerbase of the GAMs.

There were different processes chosen by a number of the firms, but they were all flexible as to when a decision-making group would be convened. IBM had the most regular process. The European Leadership Team (ELT) would meet weekly but the frequency could be increased to twice

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a week if the number of decisions required increased. The ELT would consist of the head of Europe and all of his direct reports. In addition to other issues, the ELT would match talent to opportunities for large solutions. This process allowed real time staffing on a regional basis.

The EDS process was conducted on a global basis. The top team, led by the CEO, would monitor and discuss the top 10 opportunities in the world. When one would be activated, the team would choose and dispatch the talent to the capture team location. The effectiveness of this process caused Accenture to reorganize. The Managing Partner of Spain informed Accenture's head of Europe of an opportunity in which Banco Santander was going to outsource its global information technology operations. Accenture agreed to put together a capture team to bid on the opportunity. The very next day the Spanish Managing Partner called the head of Europe to tell him that overnight 50 professionals from EDS had arrived in Madrid and were working on the proposal as they were speaking. The head of Europe was shocked. He had just begun negotiating with the country heads to free up talent to work on the Spanish opportunity. He figured it would take him another week to staff the team. Even then he could not be sure that the best talent was working on the opportunity. Banco Santander was impressed and EDS won the contract. A little later Accenture reorganized into customer industry groups and regional, not country, talent pools with a regional allocation process.

The challenge of implementing regional and global talent allocation processes is in accessing all the information needed to get a good match between the opportunities and the talent. The decision-making group needs to know the set of opportunities available, the scope of work at the projects for these customers and the nature of the talent available. It is the information about the talent that is particularly challenging. Most management teams are experienced at allocating money from a total company perspective. But talent involves three issues that make allocating it on a company-wide basis to be difficult. For starters, a dollar equals a dollar. But a software programmer does not equal a software programmer. It is believed that a good programmer can be ten times more productive than a mediocre one. So the decision-makers need to know the individuals, but there may be hundreds or more people in the talent pool. Second, dollars do not care if they are spent on R&D or advertising. But people care very much where the project is located and whether it is challenging or not. The top down assignment of critically skilled people to projects that they do not like will cause them to leave and join a competitor. So the decision-makers need to know the work preferences of the critical people. And finally, dollars do not care with which dollars they are combined to fund an initiative. For people, the co-workers are important. Again, the decision-makers need to know something about the chemistry

between key team members. These factors are all important to the effective functioning of opportunity teams.
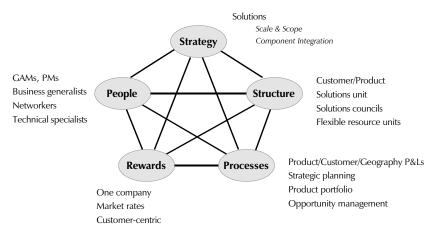
Some firms try to capture as much of this information as possible. Some of it can be captured in formal information databases to create a company "yellow pages" for talent that can be accessed by decision-makers. But much of it cannot be captured. So in order to bring all the data to the table, some consulting firms increase the number of people at the decision-making meeting. Ernst and Young (E&Y) Consulting would convene a regional task force for one or two days if needed to match talent to their opportunities. Like other consulting firms, E&Y used scheduling mangers at all of its large offices. For most projects the account managers, project managers and scheduling managers can arrive at acceptable staffing plans for projects. But in the late 1990s there was a shortage of programmers who knew the SAP application language. Then E&Y, at the initiation of the scheduling managers, would convene a task force when shortages developed. They would gather people who knew the customers, the projects and the talent specialties. They would even include some of the key specialists in the meeting. These people could choose assignments or have a voice in the assignments that they felt were attractive. The task force could involve 30 to 45 people in matching resources to opportunities. But in this manner, the firm was able to get a total perspective on the set of opportunities, the business priorities, the nature of the projects and the needs and desires of the talented people. (E&Y even experimented with a spot market for an SAP programmer for a week.)

These real time talent allocation processes are the current challenge for fast, flexible and integrated firms. It is difficult to get a total company perspective and also know the details of preferences of talented people and the chemistry of combinations of them. Yet this information is exactly what's needed to satisfy important customers and to motivate and retain the talent that services those customers. The consulting firms and investment banks are probably the most advanced in this area. The solutions providers need to advance their management teams to this level. The management teams are used to deciding global issues on a periodic, not real time, basis. They have learned to discuss talented people in assessing promotion needs of the company and development needs of the top 150. But matching talent to the top opportunities is a new challenge for them.

Summary

The fast, flexible and integrated company is one that has aligned its organization and strategy to attain these three attributes. While all companies

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are struggling with the challenge to become simultaneously fast, flexible and integrated, the solutions providers are a good source of lessons in how to do it. The most advanced firms are those offering solutions that have many and many different kinds of components, and integrating those components into valuable packages for the customer.

Solutions
Scale & Scope
Component Integration

Strategy

GAMs, PMs
Business generalists
Networkers
Technical specialists

People

Structure

Customer/Product
Solutions unit
Solutions councils
Flexible resource units

Rewards

Processes

Product/Customer/Geography P&Ls
Strategic planning
Product portfolio
Opportunity management

One company
Market rates
Customer-centric

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Figure 10 — Solutions Star Model

This strategy is matched with a structure that consists of business units plus new units for customers, solutions and flexible resources. There is usually a team connecting all units that form a solution. In addition to the usual management processes, there are modifications like reconciling business, customer and solutions strategies and additions like a product portfolio plan and an opportunity management system. The key element in this latter process is the real time matching of talent to opportunities. The reward systems are those that emphasize one company and customer metrics like retention and customer share. The human resource issues are the challenges of finding Global Account Managers and Project Managers, and creating and maintaining flexible talent pools. These units consist of people who like change and variety and operating in consulting firm environments. Collectively these policies combine to support the speed, flexibility and integration required to deliver solutions to customers who want them.

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Notes

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[1] See G. Stalk and T. M. Hout, *Competing Against Time* (New York: The Free Press, 1990).

[2] See Jay R. Galbraith, *Designing Organizations*, revised edition (San Francisco: Jossey-Bass, 2002)

[3] See Russell Eisenstat, et al, "Beyond the Business Unit," *McKinsey Quarterly*, no. 1 (2001).

[4] See Jay. R. Galbraith, *Designing the Global Corporation* (San Francisco:Jossey-Bass, 2000).

[5] See J. B. Quinn, *Strategies for Change* (Homewood, IL: Richard D. Irwin, 1980).

[6] Third Generation (3G) is a wireless technology that will permit handsets to connect to the Internet and to various company databases.

[7] See S. P. Bradley and R. L. Nolan, eds., *Sense and Respond* (Boston: Harvard Business School Press, 1998).