The Core of Centralized Management:
Integrating Project Management with Other Business Processes

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Introduction

Accountability is changing how Information System and high-tech organizations structure themselves, their processes, management responsibilities, and financial practices. In the old days, projects were about meeting project goals within agreed time and budget constraints. In the new world, project management is the core competency in an integrated solution of centralized management that leverages organizational resources to bring maximum profitability and success across the whole enterprise. But at the core of centralized management, before Enterprise Resource Planning (ERP) or Customer Relationship Management (CRM) can even be useful, we believe that resource-focused project management is the first initiative that must be completed. This paper uses examples from the Solutions Process Optimization initiative of Reuters Trading Solutions (RTS), which was implemented in three major phases starting with resource and project management.

This new drive to accountability affects multiple roles in the organization, and often requires communication and collaboration across geographically distributed offices. Resources are limited, and managers are being held accountable for how wisely they're used. Customers of organizations are asking for visibility on the value of their major projects as well as their service and support work. Business units that were once content with just approving a project charter and budget now demand updates to plans and to see metrics proving actual performance.

Advanced project management techniques must also acknowledge that high-value knowledge workers drive today's business evolution. People are becoming known by their skills and proficiencies and how that supports the intellectual property of the organization. The work pipeline is being compared to the staff's skills and capacity and driving new business, recruitment, and outsourcing. Those organizations who offer the knowledge and services of their people for revenue, as is the case with the RTS group of Reuters in London, want to be able to model resource capacity as they pursue new business development to ensure they're not contracting for something the organization can't provide.

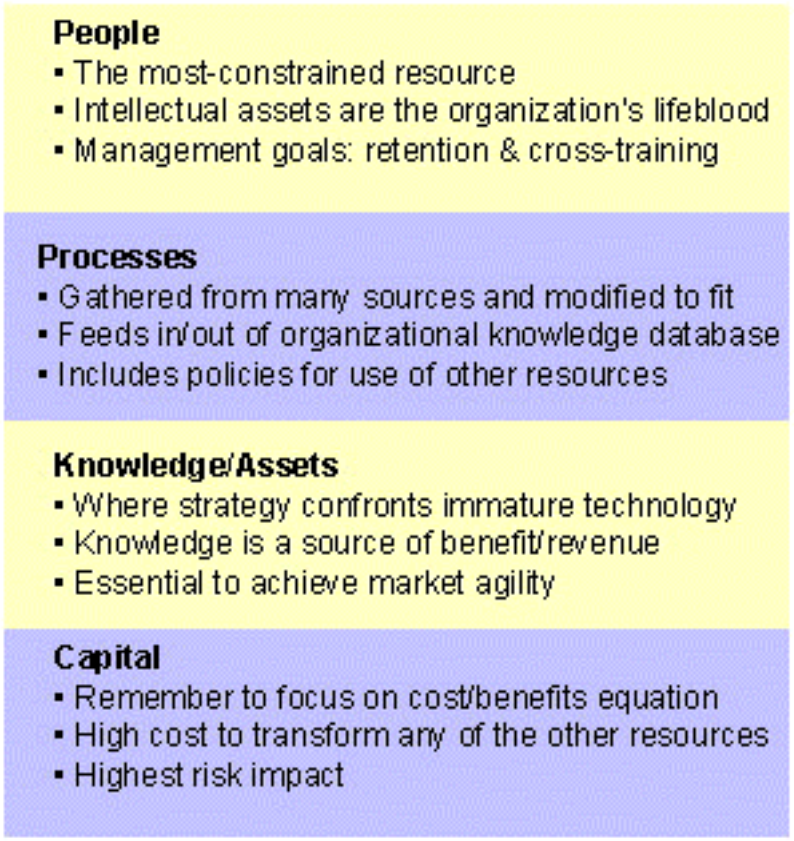

Exhibit 1: The Four Major Organizational Resources

The Four Major Organizational Resources

The days when a project manager could just concentrate on bringing a project in on-time, on-budget, and with agreed-upon deliverables are fading. Though these are good basic goals, the horizons of project management are expanding. Project managers must look to how they bring value to the whole organization. We believe that organizations have four types of resources at their disposal, and that wise project managers with organization-wide responsibilities learn to optimize the return from each of them.

1) **Capital** = Funding for project and other work, and for resource acquisition, which is typically allocated and tracked through organizational and project budgets. This is typically the resource that "makes up" for shortfalls in the other resource categories. A modern management solution integrates project accounting and budgeting with organizational budgeting for allocating and tracking actual spend.
2) **People =** The skills and availability for work of an organization's staff, as well as those of its contractors and subcontractors. This is almost always the most-constrained resource an organization has, yet many organizations have no clear concept of the resource capacity of their organization. The shortage of highly skilled resources has also helped to create a new type of workforce, one that is nomadic, virtual,

telecommuting, contracting, etc., and so requires new methods to communicate with, collaborate with, and monitor.

3) **Processes =** The governance, roadmaps, and culture of the organization, which can include its policies and procedures, roles and responsibilities, best practices (both internally generated and those purchased or leased), and workflow.
4) **Infrastructure =** For the purposes of this paper and its audience at PMI2002, we'll address the infrastructure element that project and resource management in the new Millennium can help create and should leverage--that of knowledge. For RTS as for many IS and professional services organizations of the world, their revenue stream is built around their organizational knowledge. It's also useful to note that technology is another infrastructure resource, but one that is dynamic and a major contributor to the chaos of IS and high-tech projects. Yet it's also an enabler; the nomadic workforce covered in #2 above couldn't have evolved if networking and communication hadn't also evolved to support the use of virtual project teams.

Reuters Case History

Reuters is a key example of a global organization addressing the issues of accountability. It is the world's largest private information network, with offices in 215 cities in 98 countries. When the Reuters Trading Solutions was spun off as its own entity, it recognized that global work management--which it called Solutions Process Automation (SPA)--was critical to drive revenue and profitability. They also had a merger & acquisition situation, where the software and services of TIBCO needed to be integrated and leveraged. Underlying all this was a new philosophy for Reuters: they wanted a culture change that recognized the value of their people. This resource focus is another key trend in business management for e-Business organizations.

Reuters had been using a software tool for global resource, project and service management at some of their USA offices to good effect. The RTS group in London began investigating Professional Services Automation tools in late 2000 for a number of reasons:

1) To support the move of the Reuters Trading Solutions towards being a solutions business (Product + Consulting = Solution)
2) To start a culture change in Reuters about the value of their people
3) Because it is a profitable business in its own right

They identified some of the issues they felt that basic, enterprise-level project management didn't address or didn't address efficiently enough:

- Value of professional services provided to clients not recognised
- Not able to mobilise skilled staff efficiently and globally
- Inadequate project scoping/budgeting
- Incomplete billing for the service and product provided

- Weak "knowledge management" processes
- Inability to repeat successful solutions
- Poor profitability management when delivering solutions

RTS, as has other world-class organizations, made a decision that supported their goal to provide depth of management in three key areas: identifying opportunities, managing their work and resources, and creating more project profitability. This is being accomplished at RTS by integrating three software tools to provide centralized management across project lifecycles. This paper details one way the practices and processes of effective project and resource management are evolving to address the challenges of a global and e-Business economy. At RTS, the techniques of project management form their core functionalities.

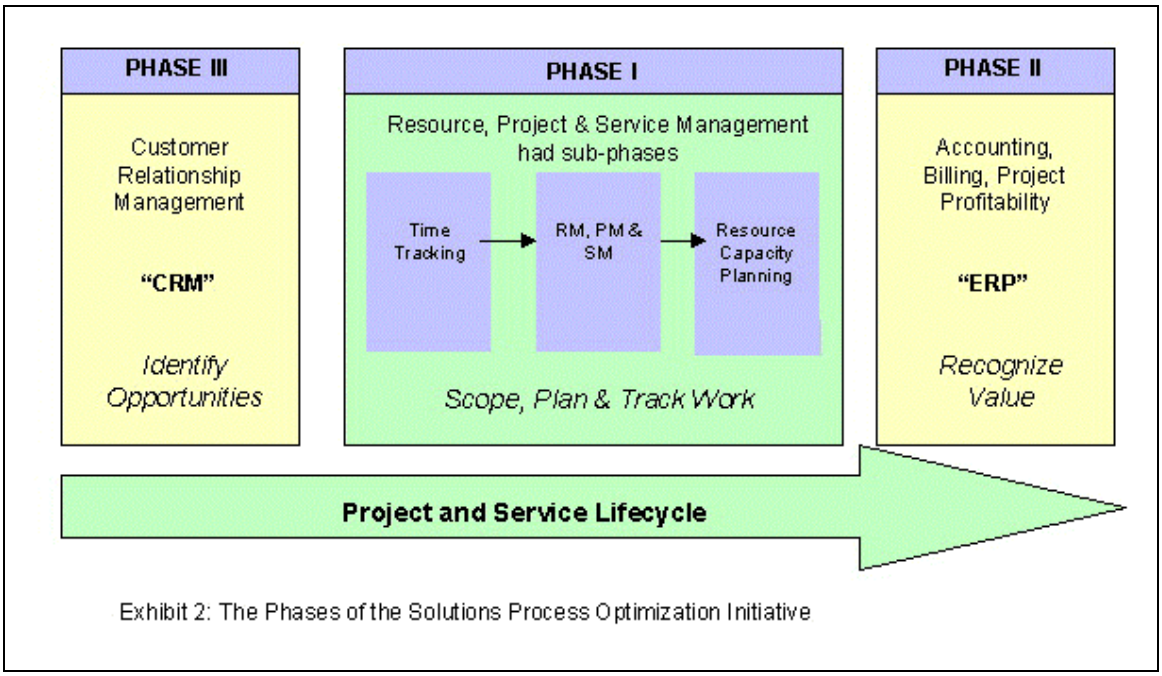

Exhibit 2: The Phases of the Solutions Process Optimization Initiative

The Phases of the SPA Initiative

Phase I:

Implementing resource-based project management, which included global skills scheduling, and tracking time and expenses to projects and service-level agreements. Resource management also includes resource development, with resumes (called Curriculum Vitae's in England) tracked in the resource database in the central repository. RTS distinguished between its staff (what it called "core people") and its many subcontractors. The information on core people was highlighted and leveraged for engagement assignments. Projects and service work had cost center numbers assigned for ease of billing the time and expenses tracked to them. The individual resources were also assigned cost center numbers. Integrated into the management processes were issues tracking, formal risk escalation, and change management. Documents were attached to work and resource files and saved in the common central database so multiple users could have access to such things as: resumes, project charters, engagement terms, etc.

Phase II:
This was the project profitability phase. It involved integrating the processes and metrics from Phase I with a project accounting system (also typically called an Enterprise Resource Planning, or ERP, system), to drive timely, accurate, and full invoicing for services. This was also the phase where RTS performed revenue and profitability analyses that was improved over their previous efforts because they were now analyzing real, auditable metrics.

Phase III:
Integrating the contract management and work and pipeline analysis processes of Phase I with an opportunity and sales management system (also called Customer Relationship Management, or CRM) so that new business was based on resource capacity planning and the skills of their workforce. The goal of this phase, which is still underway, is end-to-end project process integration with their CRM software.

Project Management + Financial Management

Quick and accurate billing for services performed is critical for professional services organizations such as RTS. Using the same accurate metrics that had allowed them to automate their project and service management progressing also helped them to reduce their billing cycle time and recognize revenue quicker. These project and service accounting functions also updated the administrative systems for general ledger, accounts receivable and accounts payable. Reuters has implemented the same work breakdown and cost breakdown structures at all their IT services locations. This allows project accounting information to be rolled up consistently to the ERP system for global financial analysis reconciliation. Though RTS doesn't use it, the same time and expense metrics can be exported to HR and payroll systems to generate data for employee compensation.

Our theory on extending our management and tracking tools through to the billing and financial systems was to provide a Financial Repository. The Financial Repository extracts information from our real-time central repository of opportunity, work and resource data and converts it to consistent "as-of data" needed to drive accounting reporting cycles. This data is stored in SQL tables on a database server, where it can be easily accessed and imported to the ERP and other accounting software. The information can also be exported in a comma-delimited text file. The Financial Repository also does consolidation and correction of the data, as needed. Though it is possible to extract information directly from our database schema, this requires extensive knowledge of the database design and the ability to "denormalize" the data into a form useful to accounting software. The Financial Repository system performs these tasks and places the data in a few, easy to map tables.

Opportunity Management + Project Management

At RTS, project planners own the resources, so they use their project and resource management tool during feasibility analysis to estimate the requirements on their staff. A Project Planner can also make a request of

another's resources. CRM applications enable organizations to create a single source of customer information that makes it easier to sell to, market to, and service customers across multiple channels. By blending the critical customer focus of CRM with the work and resource management and tracking features of our software, RTS should be able to:

- Consolidate customer information, including prior engagements, current contracts, projects, service agreements, issues & risks, changes and current opportunities into a single information system.
- Increase revenue and profit by applying tools and techniques that keep resources productive and on the right work.
- Improve project performance through shared best practices, integrated knowledge management and appropriate, real-time information sharing.
- Improve risk and change management by keeping management and customers focused on the key issues and giving management the tools to mitigate risks.
- Improve pipeline management and resource management through organization-wide forecasts by work and skill.
- Improve customer satisfaction by integrating customers into the work management processes.

Our efforts to support this integration include creating an Opportunity Workplace. The key to the database information is the customer ID, and data is stored by contract and project. Functionally, the control points for integration come out of a Statement of Work, whether that is a customer, contract and project or service-level agreement or combinations of them.

Integration Technologies

There are a number of technical tools to make integration of enterprise systems simple and direct. The exact technical architecture at any customer site will vary based on their unique conditions. Following are the key tools that are typically applied for enterprise integration.

Application Programming Interface. Like many best-of-breed software companies, we have a strategy of supporting seamless integration and a tool kit to implement it. Our API is a tool for programmers, is COM (the Microsoft standard) based, and is available through an ActiveX server. Using the API, a developer can perform safer development, knowing that the business rules of the software provider are being supported. The API also speeds development, and helps to ensure the interfaces will be upgradeable for future versions of the software. In 2000, we offered an XML gateway as the "front end" on our API.

Web Tools. The Web has opened up a number of technologies that make for easy integration. Defined addresses (URL) allow one system to call another for information. The use of active server pages allows the user to query a database and get real-time displays of information in HTML or other techniques.

PHASES OF PROJECTS & SERVICE					
Find work⇒	Scope work⇒	Manage work & resources⇒	Track utilization & expenses⇒	Recognize revenue / benefit of work	
↓	↓	↓	↓	↓	
	RESOURCE, PROJECT & SERVICE MGMT				
	Expand to include opportunity management	Core=Project management. Expand to service & resource management	Expand to include time & expense accounting & budget management		
Issues & Points of Integration Acronym	Customer Relationship Management CRM	Opportunity Workplace OW	Central Repository CR	Financial & Budget Repositories FR / BR	Enterprise Resource Planning ERP
Competencies and uses	Contact management, sales force automation, sales analysis, partner management	Scoping opportunities, feasibility analysis, skills pipeline, work pipeline, partner management, contract management	Project mgmt, service mgmt, resource mgmt, time and expense tracking, collaboration, risks mgmt, change mgmt, contract mgmt	Project budgets, billing and invoicing support, financial compliance, analysis metrics, contract mgmt	Billing and chargebacks, financial analysis
Common keys for possible integration of tools & processes	Customer, contact, opportunity, contract	Contract, project, service-level agreement	Resource breakdown structure, work breakdown structure, contract	Contract, project, service-level agreement, resource	General ledger, contract, project, service-level agreement

Exhibit 3: Expanding the Core Functions of Project Management for Integration

XML. eXtensible Markup Language is a standard protocol for exchanging information that supports both batch and "just-in-time" information exchange, including the ability to update information in the database. Using this standard, simple user interfaces can call very powerful business processes and perform complex multi-system updates that let organizations share both the format and the data in their databases. To create our XML document gateway, we partnered with our German client, Allianz Lebensversicherung, the world's largest insurance organization. At the time they were involved in a major data warehousing project to cull strategic information from their many software systems implemented at offices across the globe. Allianz has now successfully been leveraging its XML gateway since the summer of 2000.

SOAP. SOAP (Simple Object Access Protocol) is a protocol from Microsoft that uses the XML syntax to transfer text commands over the Internet and access objects on the web.

Conclusion

Now almost two years into the SPA initiative of Reuters Trading Solutions, some of the challenges that are being met include: Clients (in some cases, other Reuters departments) now recognize the value of the

professional service they receive. They receive real-time status information in the central repository of work and resource data, and quarterly chargeback reports (or through invoices, in the case of outside customers). Staff is being mobilized globally, with virtual project teams helping to leverage skills that were once being underutilized. Profitability is being managed more effectively when delivering their solutions. Billing cycle time is reduced and global financial reporting is improved. Business intelligence and data warehousing initiatives are helping RTS to manage their knowledge and intellectual capital better.

Of particular interest to the attendees of PMI2002, this trend shows how project management practices are finally taking their rightful place as the center point for far-reaching business-process improvements to the organization.

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