Fourth4Link™

White Paper

Re-Integrating IT in the Professional Services Firm

How spreadsheets and unconnected systems have created inaccurate, unsecure environments which drive up costs and limit growth and what can be done about it.

About the Author

Kenneth Leeser has spent the bulk of his professional career assisting professional service firms in the selection and implementation of integrated management information systems. As the founder of two companies, Ken has focused on helping clients replace out-moded, un-connected legacy systems with more modern database-supported, integrated solutions allowing them to reduce costs and develop accurate, timely management information.

Ken earned Bachelor and Masters degrees in engineering at The Johns Hopkins University and also holds an MBA from the Graduate School of Business Administration at Harvard University.

Re-Integrating IT in the Professional Services Firm

Introduction

In what seems like a technological heartbeat, business computing has been transformed from a highly centralized function performed on castle-sized equipment and overseen by wizards and magicians to desktop-based distributed systems easily manipulated by the average office employee. In fact, one would be hard pressed to find an office environment today where anyone on the clerical or professional staff does not perform their daily duties using a screen and a keyboard.

While the benefits of inexpensive, distributed personal computing are evident - inexpensive accounting systems, self-developed reports, and easily modifiable and retrievable documents, to name a few. But there are also significant drawbacks to the distributed model. These include:

- high rates of inaccuracy
- major security deficiencies
- delays in providing information to those whose responsibility it is to make the decisions that direct the enterprise

In this white paper, we explore the costs, both tangible and intangible, of un-connected systems and discuss the benefits of replacing them with centralized, integrated software solutions.

Systems in the Typical, Growing Professional Services Firm

Many growing professional services firms typically rely on a hodgepodge of systems and spreadsheets to inform resources, collect time, record project costs and prepare management information resulting in inaccurate billing, lost revenues, reduced utilization and poor decision support.

These problems are aggravated by multiple data entry points and multiple data repositories which create reconciliation issues and lead to misinformed decisions.

For most firms, the first step in their automation journey was the implementation of a computerized accounting system. Firms have typically availed themselves of one of a myriad of solutions from low-end Quickbooks and Peachtree to mid-range Great Plains and MAS-90 to higher-end, industry specific packages like Thomson-Elite, Thomson-CS and CMS-OPEN.

At their core, each of these systems provides the same basic functionality:

1. Production of bills to be sent to customers and the concomitant recording of those bills in an Accounts Receivable ledger.
2. Cash Receipts/Write Off tools to keep the A/R ledger up to date and assist the firm in their collection efforts.
3. Recording of invoices from vendors and the posting of those invoices to an Accounts Payable ledger. (In the more sophisticated solutions project related expenses are simultaneously recorded in a project cost ledger.)
4. A check writing facility to pay vendors, maintain the A/P ledger and help manage cash flow. And most importantly,
5. An integrated General Ledger which accepts inputs from the various sub-ledgers as well as journal entries to produce financial statements for the firm.

Among the unique problems typically not addressed by these accounting software solutions, but important issues to Professional Services firms, are tools to assist in scheduling resources, capturing billable time and maintaining the project cost ledger.

Focusing first on capturing billable hours, firms understand that a key to their success is maximizing the billablilty of their professional resources. But the busier that professionals are, the less time they have to report and record time. Further, in many businesses, professionals are often assigned to client sites and rarely, if ever, report to a company office location. With limited, remote “time entry” tools firms created ad-hoc systems to help collect billable hours.

These informal methods often involve a “survey” of field resources on a periodic basis so that time can be reported. The time is then typically entered by clerical staff into the billing module of the accounting system. In some firms spreadsheets have been developed to facilitate this process whereby a partially-filled-in worksheet is e-mailed to each resource on a weekly or monthly basis. But this method often requires hounding the resources to fill the spreadsheets in accurately and timely plus an additional process (manual or electronic) to transfer time to the billing system.

Firms that use this methodology now have an additional problem: How do they track the success of their projects, their people and even the firm as a whole? Project success (especially in an environment where projects are quoted on a fixed-price basis) is generally defined as “did billings exceed costs?” Was the job “profitable?” In a well managed firm, project budgets would be established and jobs would be monitored so that mid-course adjustments could be made to mitigate anticipated losses. However, without an integrated project ledger, firms have no tools to establish project budgets, no methods to post time and/or expenses to them in order to monitor progress, and no system to evaluate the profitability of completed projects.

Once again, the spreadsheet to the rescue. In lieu of a full-featured integrated project accounting system, it is not atypical for firms to maintain separate spreadsheets for individual engagements wherein they can establish budgets, record progress and evaluate profitability.

Now let us return to the scheduling dilemma. In the smallest firms a scheduling system is rarely needed. Informal communications generally suffice. As firms approach 15 resources, it becomes more of a challenge to track personnel and assign them appropriately. But what does *appropriately* mean? Generally firms look at some or all of the following criteria:

- Availability
- Client Experience
- Minimization of Travel
- Skills/Credentials

Rarely have firms implemented software solutions to manage the trade-offs between these various criteria. So, what do they do? Most often they build yet another elaborate spreadsheet system to display each resource and their schedule with little, if any, attention paid to any criteria other than availability. Some firms utilize Microsoft Outlook™ to assist in this function but it is rare that these tools seamlessly incorporate the assignment, time capture and project tracking functions in one integrated system.

As firms grow over 50 resources additional complexity is introduced: How are requests for assignment communicated from project management to the scheduling team? How does the scheduling team communicate assignments to field personnel? How do field personnel acknowledge receipt of their assignments? How do rejected assignments get re-assigned or re-scheduled? Generally, the communications function is ad-hoc, supported by e-mail or phone and not integrated with any firm systems.

To recap, then, today's growing professional services firm has built their business on a stand-alone scheduling tool, often spreadsheet or Outlook™ –based, with no integrated communications tool. The project management/scheduling team relies on one to one communications to discover, offer and confirm assignments and often scrambles to adjust to last minute schedule changes. Once work is completed, the field staff must be badgered to send project and hours information to the home office where it is re-keyed by office staff into both a billing system and a project ledger. And finally, in order for management to derive meaningful information from the data, they resort to additional manual methods to collate it and present it.

A Note on Spreadsheets[1]

Spreadsheets are inaccurate, un-secure, difficult to maintain and unreliable as key components of an IT strategy.

Spreadsheets have exploded in popularity, not because they filled a need that was not being met by other technologies, but because they were an alternative to enterprise-wide, IT-backed reporting, planning and analysis. They have become indispensable tools for getting the informational work done in organizations by empowering non-technical people to develop their own work environments, processes and tools. But they have significant drawbacks.

<u>Spreadsheets are expensive.</u> The cost of developing, and updating spreadsheet models are often hidden because non-IT staff are the ones creating and maintaining them. A large population of business users are devoted solely to entering data by hand or extracting data manually from other systems.

[1] Exerpted from "The Managed Spreadsheet Environment". White Paper, Neil Raden

Spreadsheets are inaccurate. One research study has shown that as many as 90% of spreadsheets contain errors in data and/or logic while another reports that “most spreadsheets have errors in one percent of their cells”. This is especially risky because spreadsheets commingle data and logic in a way that makes it very difficult to spot errors. Contrast this with an application that employs a database and a separate set of tools for building and extracting data. The abstraction between data and logic is absent in spreadsheets and is a primary source of errors.

Spreadsheets are not secure. Besides being susceptible to undetected errors, standalone spreadsheets lack logs that capture and store changes. It is routine to send copies of spreadsheets by mail or e-mail and changes made are not easily detected. Personal computers and laptops are frequently left unattended or stolen, allowing sensitive information to be lost or leaked.

Spreadsheets are personal. That is, the inherent logic is ‘owned’ by the developer, is generally undocumented and is difficult to support should the author leave the firm.

In summary, spreadsheets are a weak link in the chain of accountability. People without solid training in software design, data integration and data quality are likely to make costly errors of design or omission. The risks are not limited to excessive cost, but potentially expose organizations to loss of customers, loss of key personnel and disastrous decisions.

The Costs of non-Integrated Systems

A mid-sized ($30 million/yr revenue) professional services firm loses $1.5 million/yr in lost profits due to the inefficiencies of non-integrated systems.

Let’s examine what a 100-person professional services firm that bills, on average, $200/hr and has typical projects with $75,000 (375 hours) of billings might be losing on an annual basis if they continued to rely on ad-hoc spreadsheets for scheduling and time reporting, with limited project ledger capability, manual time entry, no automated communications and no reporting system:

Cost of poor communications. Let’s say that once per year, each professional loses a day of billing because they weren’t notified properly, a client cancelled and the resource could not be re-booked, or they had a scheduled day off that the home office was unaware of. With this conservative measure of one mis-scheduled day per year, our hypothetical firm is **losing $160,000 each year**! (8 hours x 100 professionals x $200/hr)

Cost of lost/inaccurate time entry. If each professional is experiencing a 2% loss of billable hours due to late time that can't be billed or due to re-keying errors it is **costing the 100 person firm $600,000 per year**! (1500 billable hours/yr x 2% x $200/hr x 100 professionals).

Cost of reduced project profitability. If the organization could improve the profitability of each project by 2% by taking early action to adjust staffing or by monitoring the cost of resources assigned, the firm would stand to gain **$600,000 per year**! (400 projects x $75,000 x 2%)

Cost of overhead. If the firm could reduce overhead staffing by one administrative person (be it a data entry person, a scheduler or a report developer) the firm would save an additional **$75,000 per year**!

Cost of data inaccuracy. The hypothetical firm has billings of about $30 million. One bad spreadsheet or one data inaccuracy could easily cost the firm **$100,000 per year**!

FourthLink's Resource Process Manager™

Designed as an integrated solution, FourthLink's Resource Process Manager™ is a centralized software application which assists professional services firms who have become frustrated with the cost of inaccurate and unsecure environments and the limits these environments impose on their growth.

FourthLink provides an integrated software solution which simplifies the scheduling process, streamlines communications, enhances time capture, helps improve utilization and provides reports with accurate, actionable information.

Simplifies Scheduling
With RPM, project teams can be created on the fly based on a wide variety of criteria. Managers and schedulers can view assignments and availability with FourthLink's Visual Resource Management module and utilize on-line scheduling tools to streamline the iterative processes necessary to maximize utilization.

Improves Communications
With automatic e-mail notifications, resources are notified of assignments and managers are notified by the system of critical events. Actions can be taken in real time minimizing frustrating follow up and delays.

Captures More Billable Time—Faster!
FourthLink provides a simple, easy-to-use on-line timesheet which displays project and task assignments. Time can be entered with ease and, with a single click, posted to your accounting system. No more lost emails or re-keying of data from spreadsheets.

Time is always current and project data is always up to date because one entry, by the resource,f simultaneously posts to the accounting system and to the project ledger.

Improves Resource Utilization
FourthLink's sourcing tools help increase utilization as well as customer satisfaction by reducing downtime and by providing simple methodologies to assist schedulers in matching the right resource to the right task. Resource Process Manager™ helps firms establish resource skill sets and correlate resource availability with project task requirements.

Provides Timely, Actionable Reports
Unlike non-integrated systems that isolate information on individual desktops, FourthLink provides a common platform for resource and project data. Everyone views, updates and shares information in real time from any Internet-connected computer. FourthLink provides the tools needed to keep planners informed of skills, training and special qualifications as they grow and change and firm management with the reports they need to react swiftly in order to enhance profitability and accelerate growth.

About FourthLink, Inc

Founded in 2006, FourthLink, Inc. has established proven leadership in the demanding world of resource scheduling, delivering enterprise applications to the foremost professional services firms. The company has gained a reputation for commitment to service, combined with leading-edge technical expertise.

FourthLink's products are written using industry standard tools, allowing customers to receive superior support, achieve rapid deployment and swift response to changing needs.

To find out more about FourthLink Resource Process Manager™ visit www.fourthlink.com, or call 617-597-1720, or email us at info@fourthlink.com.