



Guide to Effectively Deploying IT Project Accounting Solutions in Midsize Organizations

How project-centric businesses organize people and technology to execute core business strategies.

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>> Introduction

You're a project-driven organization and your current financial accounting systems aren't designed to give you information about project profitability, resource utilization or project budgets to actual. Your project managers are accountable for budget overruns and staff utilization problems and the tools they've always used can no longer meet your current demands. You are not alone!

Today's project-centric companies are realizing the limitations inherent in financial accounting systems and looking for answers. The solution, especially in the mid-market, is an integrated project accounting solution (repetitive) providing standardized project and task coding linked directly to financial accounting. Integrated project accounting solutions provide both project and financial managers with tools to efficiently plan projects and control budgets together to maximize profitability.

However, project accounting is not defined or controlled to the same extent that financial accounting is with compliance to accounting standards. Businesses deploy project systems based on their own unique project management and decision support requirements, and seldom will two organizations even in the same industry implement the same project accounting application the same way. A clear understanding of the strategic objectives for the implementation, careful planning and a proven IT deployment methodology will be important elements to deliver the results you expect.

The goal of this guide is to provide a road map that has enabled other project-centric organizations to deploy integrated project accounting solutions with a low total cost of ownership by getting it done right the first time.

>> I. Elements of Successful Project Accounting Solutions

Clearly Defined Business Objectives

Project accounting systems are being successfully deployed across a variety of different industries and businesses, most with strategic objectives focused on managing the business project by project. It is particularly important for midsize organizations to understand the key elements for a successful implementation because there is a tendency to believe that a project accounting application's features and functions drive success. This is not the case, as any software consultant or experienced solution architect can tell you. The first step is to clearly define the business objectives for deploying a project accounting solution. Here are a few business objectives that are addressed with project accounting solutions:

- > Estimate, track, and control project costs and revenue
- > Accumulate and organize financial data to help managers rapidly respond to project issues
- > Maintain billing for contracts based on percentage of completion, scheduled billing, or time and materials as incurred
- > Maintain and manage capital or IT project budgets, including subcontractor change orders
- > Prepare customer-specific invoices using various formats, with invoice detail modified or appended for billing rates, notes and no-charge items
- > Maintain billing and cost rates assigned at the employee or job title level or overridden to comply with exception rates associated with a particular project
- > Integrate financial accounting systems to avoid double entry of actual costs incurred, and provide drill-down capabilities from the accounts payable, accounts receivable and general ledger systems

Process Improvement Model

The second step is to identify the business processes that will be supported by the project accounting system and define the technical and functional requirements needed to improve productivity. The following process improvement model provides an excellent framework for identifying strategic improvement goals for IT business solutions.

1	Define	Business processes of the targeted support systems to be improved are identified.
2	Measure	Determines the baseline and target performance of the process.
3	Analyze	Uses data to determine the technical and functional requirements that affect the performance of the process.
4	Improve	Identifies the improvements to optimize the outputs and eliminate/reduce errors.
5	Control	Documents, monitors and assigns accountability for continuous process improvement.

Defining Requirements

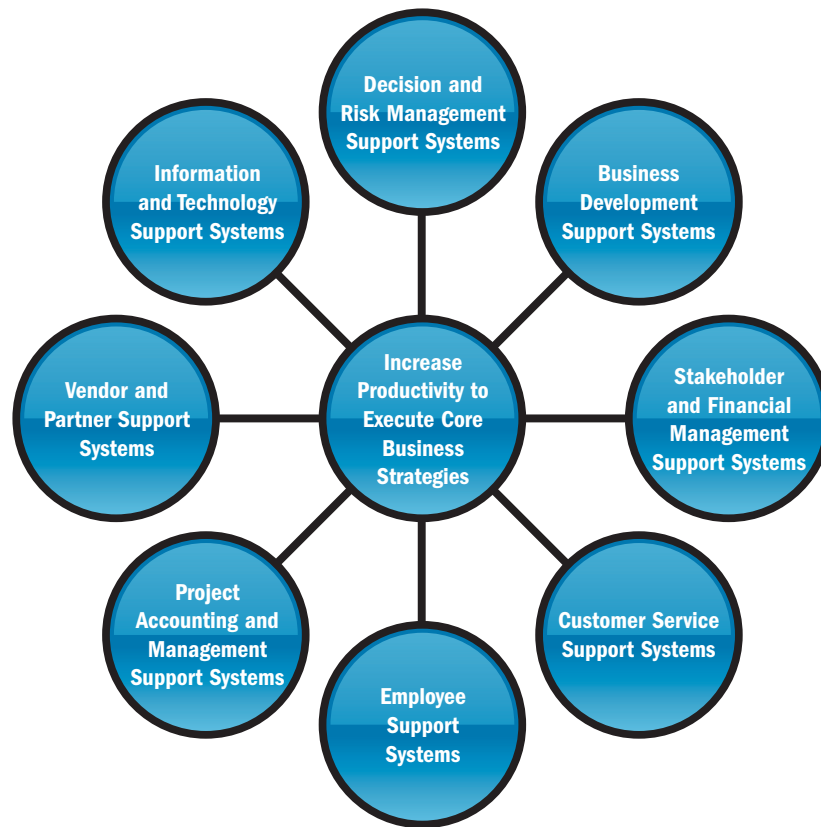
The technical requirements of project accounting systems should be defined in support of the data and information required to analyze and control the targeted performance indicators. Clearly defined technical requirements are important when selecting a project accounting system but seldom deliver a unique competitive advantage on their own.

For example, professional service organizations, in order to manage employee utilization to maximize project profitability, will have technical requirements for project and task coding schemes that provide accurate and relevant labor tracking against utilization goals by employee. An organization using project accounting to manage capital or IT project budgets will have technical requirements for structuring program and project budgets to track original budgets, estimates and forecasts at completion, and budgets to actual.

Functional requirements define how business processes are developed for people to do the work. Because of the unique way businesses organize people and processes to deliver products and services, clearly articulated functional requirements are critical for designing and configuring project accounting solutions to meet strategic objectives.

The professional services organization intent on optimizing employee utilization will have functional requirements for a project accounting system to provide fast and efficient time and expense reporting. The organization managing capital and IT projects will require budget and change order approval process controls to replace their totally manual processes.

Technical Requirements	Capture and deliver data and information needed to measure, analyze and control performance indicators for project management.
Functional Requirements	Deliver process improvement for people to do the work.



Enterprise Support Systems for Midsize Businesses

Business Processes of Project Accounting Support Systems

Although efficient workflow processes are critical for businesses to remain competitive, they are the most important factor for a successful deployment of project accounting solutions. The number one cause for poor satisfaction ratings on IT business solution implementations in midsize businesses is failure to fully develop and test technical and functional specifications for the business processes supported by the business solution.

The foundation of any business solution is the network of workflow processes that define how people get the work done. One of the primary objectives for investing in IT solutions is to increase productivity. This can be accomplished by deploying applications that leverage people and technology to make workflow processes more efficient. When people are empowered to query and report on valuable information stored in business databases with user-friendly procedures and tools, this improves productivity.

Sample Business Processes

Project and Task Maintenance

Employee and Resource Maintenance

Budget Revision and Approval

Project Change Orders

Committed Cost Entry and Approval - Subcontracts

Subcontract Payment Request Entry and Approval

Workflow processes combine the steps, decisions and outcomes of various business processes in order for people to do the work.

Process and Workflow Diagrams

Understanding how the core business processes of an organization interact and form the foundation of how work is done is the key to successfully defining technical and functional specifications for project accounting solutions. Although business processes in general are easy to identify, each organization creates its own unique way of defining how the people and processes interrelate. Even if there were a way to accurately identify out-of-the-box features and functionality required, the business application may still fail to deliver on the promise of increased productivity because of the unique way people and processes interrelate.

Flowcharting is a method developed to show the steps, decisions and outcomes of daily workflow processes. Using a tool like Microsoft Visio, process managers can easily develop flowchart diagrams made up of boxes, diamonds and other shapes, connected by arrows. Each shape represents a step in the process, and the arrows show the order in which they occur.

However, the flowchart diagram is not an end in itself – flowchart diagrams produced to understand and evaluate functional requirements act mainly as a focus for common understanding between the people involved. From this common understanding can come important process awareness and improvement ideas.

Creating workflow diagrams also helps system architects visualize the inter-relationships of the people and the IT systems. These inter-relationships form the basis of the design configuration and data elements necessary to meet both the technical and functional requirements of project accounting solutions. Flowcharts serve as road maps for developing transaction testing plans, identifying source documents and developing end-user training materials.

Plan Intelligently, Execute Effectively, Earn Accurately

Managing the deployment of a project accounting system can be a very challenging responsibility, especially if it's the first time project and financial managers have been required to jointly participate in identifying requirements for an IT solution. Financial managers have traditionally been bound to accounting standards that predominately define how accounting systems are configured. The chart of accounts conforms to generally accepted accounting principles for financial analysis of assets, liabilities, income and expenses.

Project managers will be responsible for establishing standardized project and task codes to capture and deliver data and information needed to measure, analyze and control performance indicators for project management. They will focus on designing systems that allow new projects to be easily created through the use of standardized project templates. Financial accountants will focus on audit trails and controls and will be responsible for defining how this information is accounted for in the general ledger.

An integrated project accounting solution will bring these two disciplines together but requires careful and thorough planning to assure the final solution delivers improved productivity to both.

Some common areas that may require careful consideration are:

- > **Standardizing project and task codes for analysis and reporting across the organization**
 - Project codes, cost codes, cost types, resource types, billing rules and rate tables, all of which must be designed in conjunction with the financial accounting rules
 - Identifying what metrics will indicate project profitability or enable effective project management
 - Defining rules and standards for skills-based resources
 - GL coding for income and expense typically cover only one or two levels, limiting the ability to adequately analyze project metrics
 - Financial year-ends compared to project accounting across fiscal years

- > **Identifying and defining cost allocation rules**
 - Projects with salaried employees charging more than 40 hours in a week to a project with billing rules based on time actually spent will need rules defined for allocating salaries across projects.
 - Overhead and other administrative expenses allocated across projects will require clearly defined and measurable allocation rules, especially when project managers are held accountable for overall project profitability.

- > **Defining cost and labor tracking code standards**
 - Identify accounting methods for resources based on actual costs or standards
 - Tracking labor costs in project accounting with standard rates versus actual labor costs tracked in the general ledger guards sensitive compensation information but complicates reconciliation between the two reporting systems.

- > **Planning for continuous process improvement**
 - Training and monitoring for effective coding, especially for labor
 - Defining roles and responsibilities for both financial and project managers
 - Communication plans for effectively managing for process improvement changes

>> II. Project Framework for Deploying IT Project Accounting Solutions

The following table lists the activities for each of the six project phases developed for successfully deploying IT Business Solutions in midsize organizations. The key to this framework is a focus on how strategic support systems can increase productivity. All technical and functional requirements are defined in terms of the business and workflow processes that people use to get their work done. Implementation project management tools are critical for assuring that complex processes, the people and the IT systems come together and deliver increased productivity to execute core business strategies.

Phase	Main Milestone	Main Tasks
1. Project Planning: the definition of goals and limits for the project.	Project Objectives, Roles and Responsibilities	Define the project by identifying stakeholders' goals, resource or time constraints and assumptions. Identify specific criteria for success (ROI) and how the results will be measured. Identify the project team and create a roles-and-responsibility matrix. Assess risks at a high level and determine the most important elements to manage for success: budget, scope or schedule. Prepare a preliminary project timeline schedule. Approve final budget and schedule resources.
2. Assess Requirements: review and define technical and functional requirements for targeted business support systems.	Strategic Support Systems and Related Workflow Processes Identified	Gather information from process owners and analyze current systems and workflow processes. Define technical requirements for project accounting objectives. Define functional requirements for core business processes. Define business information requirements: management reporting, financial reporting and data analytics.

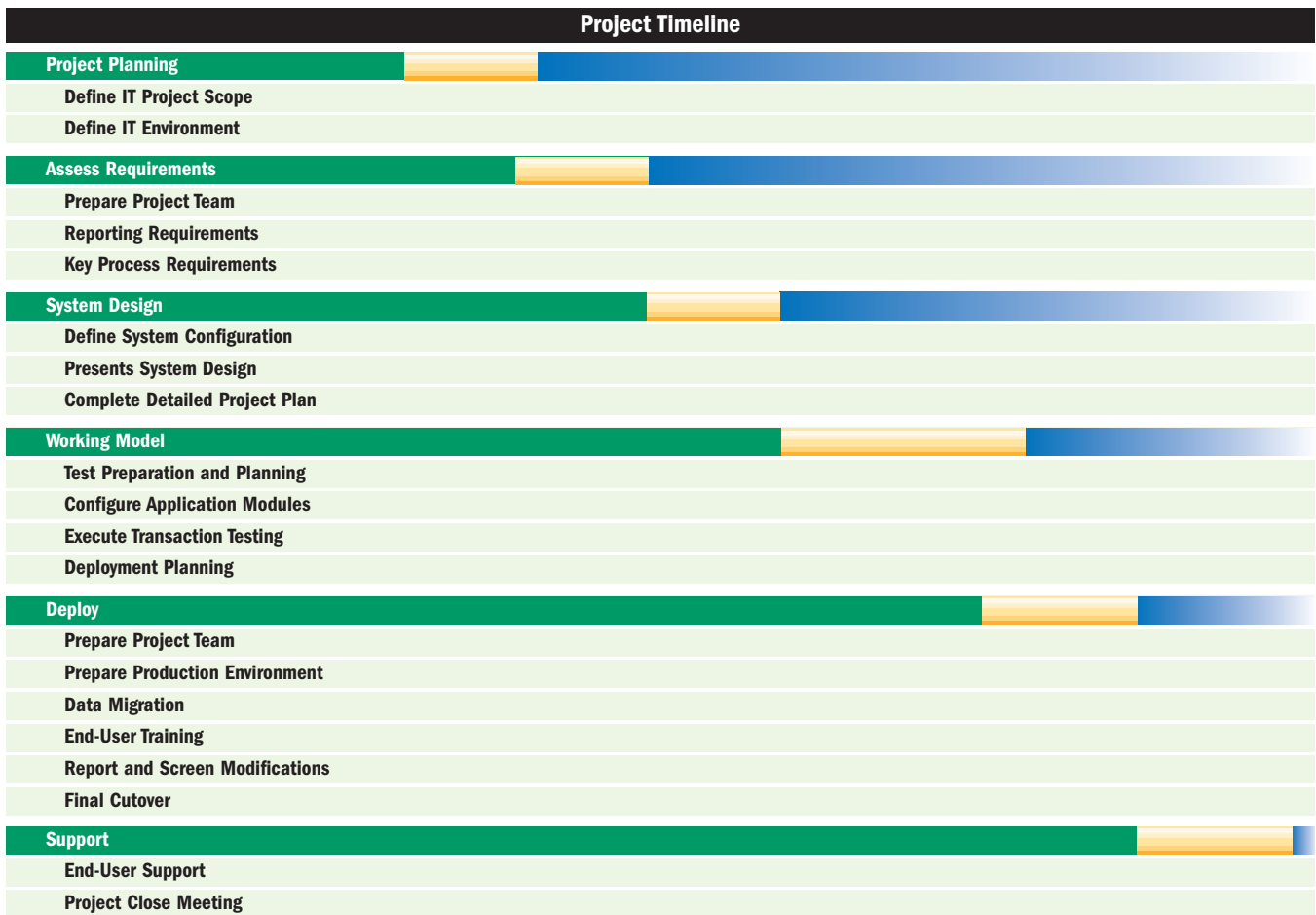
<p>3.</p> <p>System Design: develop technical and functional specifications for the system.</p>	<p>System Configuration and Implementation Planning</p>	<p>Develop and design the technical configuration of the application modules.</p> <p>Develop prototype to support functional workflow process requirements.</p> <p>Assess resources needed to complete the project.</p> <p>Build the project activity plans for testing, training and deployment.</p> <p>Schedule resources for working model phase and approve budget changes.</p>
<p>4.</p> <p>Working Model: building, testing and training.</p>	<p>Compliance and Assurance Testing and Approval</p>	<p>Configure and locate production servers, printers and workstations that will be used by the user (repetitive) community.</p> <p>Validate the setup design by testing each unique business transaction.</p> <p>Validate the workflow processes and finalize procedure documentation for end-users.</p> <p>Validate reporting requirements using test transaction data.</p> <p>Train key process owners and application administrator.</p> <p>Plan for deployment.</p>
<p>5.</p> <p>Deploy: making the new system available to users – cutover and go live.</p>	<p>Deployment Complete</p>	<p>Finish training administrators and all users.</p> <p>Final data conversion with opening balances.</p> <p>Cutover to the new system, then evaluate performance and correct any problems.</p>
<p>6.</p> <p>Support: end-user support through month-end closing.</p>	<p>Month-End Close</p>	<p>Monitor productivity; modify workflow processes as needed, update user procedure documentation.</p> <p>Support end-users with day-to-day activities as they become proficient with new procedures.</p> <p>Complete first month-end closing procedures with each process owner.</p>

>> III. Implementation Project Management Tools

- > **Project Timeline** for high-level perspective on work breakdown, timeline and milestones
- > **Project Team Responsibility Matrix** is a roles-based matrix used to assign responsibilities for both functional and technical requirements, and project management responsibilities
- > **Reports Digest** developed to record key management reporting requirements during the Requirements and Working Model phases and used to manage custom report requests and delivery
- > **Transaction Testing Plan** organized by workflow processes and their process owners
- > **Issues Log** maintained throughout the Working Model, Deploy and Support phases is used to track and assign responsibility for open issues as they happen

Project Timeline

A high-level perspective on project phases, work breakdown, timeline and milestones communicates appropriate expectations to the project team and all stakeholders. Project managers can use a tool like MS Project to further define the work breakdown structure, assign resources, develop labor budgets and manage the project over time.



Responsibility Matrix

A Responsibility Matrix defines the roles and responsibilities of your entire project team, including the consulting partner's team members who will be assisting you with the design and implementation of the project accounting solution. The matrix is segmented into areas of responsibilities related to technical requirements, functional requirements and project management. The line items may be customized to more appropriately represent your specific methods and tools.

During the initial project planning meeting, the individual team members are assigned to the project team roles. Then each line item is reviewed and the responsibilities for approval and execution are assigned for each line item. Other team members are identified who have requested that they be consulted or informed on technical or functional requirements or when key decisions are made. After completing the assignment of responsibilities, this document provides direction when unexpected issues arise and is also used for holding individuals accountable for the responsibilities they accepted at the onset of the implementation.

Approval (A)	This person has final Approval rights and is usually considered the "owner".
Execution (E)	This person does the work or leads the process.
Consulted (C)	This person must be Consulted on the technical or functional requirements.
Informed (I)	This person must be Informed on the decisions being made.

Project Team Responsibility Matrix													
		Client Project Team					MBS Partner Project Team						
Roles:		PjExec	PjMgr	SysAdm	Owner	AppSpec	AppSpec	Architect	PjMgr	ProdSpec	DBA	SysEng	PjAdm
Team Member:													
Technical Rqmts.	Reporting Rqmts	A	I		E	C	C	E	I	C	C		
	Information and data												
	Data Elements	I	I		A	C	C	E	I	C	C		
	Schema & code structures												
	Data Conversion	I	C		C	AE	AE	C	C	C	E		
	Conversions & integrations												
	Environment	I	I	AE	I	I	I		I		I	E	I
	Network & application support												
Functional Rqmts.	Functionality	C	A		A	E	E	E	I	C	I		
	Supports core processes												
	WorkFlow Processes	C	A		A	E	E	E	I	C	I		
	Process Workflow Diagrams												
	Reporting (Crystal or FRx)	I	E		A			E	I	C	C		
	Management Reports												
	End-User Training	I	C		A	E	E	C	I	E			
	End-User Procedure Documentation												
Project Management	Project Scope	I	AE		C				E				I
	Budget \$ / Change Orders	I	AE		C				E				I
	Project Schedule	I	AE		C				E				C
	Resource Scheduling	I	AE		C				C				E
	Issue Tracking	I	AE		I				C	E			I
	Status Reporting	I	AE	I	I	E	E	I	E	E			I
Key	A	Approval. This person has final Approval rights.											
	E	Execution. This person does the work or leads the process.											
	C	Consulted. This person is Consulted.											
	I	Informed. This person just wants to know what decisions are being made.											

Reports Digest

The Reports Digest is a tool used to record and track important management reports as they are identified during the Requirements and Working Model phases of the implementation. The important elements of this report are related to how will the information will be used and when is the report generated. To better understand these questions, information can be collected that will indirectly provide insight as to how the new system will capture and deliver data and information needed to measure, analyze and control performance indicators.

The specific columns on a Reports Digest should be customized for collecting the appropriate information and may also include a column for tracking the "Status" of the individual reports.

Reports Digest										
Rated	#	Existing Report Name	Functional Area				Current Source			
			PjMgmt	Sales	Svcs	Acctg	Owner	Source	When Generated?	Primary Date Element
Hi	1	Budget to Actual by Project	YES				Pam	Project Acctng	Month End	Project
Hi	2	Employee Utilization Report			YES		Tim	Project Acctng	Per Billing Period	Employee
Hi	3	Project Profitability by PM	YES			YES	Marsha	Project Acctng	On Demand	Proj Mgr
	4									
	5									
	6									
	7									

Issues Log

An Issues Log is used by the project manager to track and manage all open issues. During project planning, the project team should define what types of issues will be recorded in the Issues Log, who will record the initial item, and who will monitor and update as issues are resolved or escalated.

An example of an issue related to managing activities may be:

Issue: Develop internal expertise on Crystal Reports

Activity: Register Karen for Crystal Reports class

An example of a functional issue may be:

Issue: Time and expense reporting via the web

Activity: Document how labor will be recorded from home

An example of a technical issue may be:

Issue: Budget approval process not sending email

Activity: Review and test setup and configuration

Issues Log										
Item No.	Priority- High, Med, Low	Date	Owner	Status- Open or Closed	Next Action Date	Issue and Related Activity	Module	Logged By	Additional Notes	Due Date
						Issue is logged here	Issue			
						Activities for this issue are here	Activity			

Testing Plan and Schedule

Transaction testing is one of the most important activities for assuring that the solution architect and the business process owners designed the right system, and that the application specialists configured it correctly. The key to using this tool is to accurately identify all the workflow processes (Activity) and their process owners.

The Testing Plan and Schedule is used to track and manage the testing processes and record the date completed and results delivered. One way to manage for results is to identify the level of documentation expected from the testing process. The highest level is a hand-drawn workflow diagram which can then be developed in MS Visio once tested and approved. The next step is to document the sequential steps directly related to the workflow diagram. As process owners complete the workflow steps, they should document with screen shots how the different transactions are entered, the use of key fields and the results of the transaction. These transaction testing documents are the foundation for developing detailed end-user procedure manuals.

Tracking results by agreed upon levels of detail documentation will communicate expectations appropriately and provide the highest level of compliance assurance.

Sample Testing Plan and Schedule

#	Process Owner	Module	Activity	Date to Complete	Results
1	Project Managers	Proj Controller	Project and Task Maintenance		
2	Prof Svcs Manager	Time and Expense	Employee and Resource Maintenance		
3	Project Managers	Contract Mgmt	Budget Revision and Approval (setup new budgets)		
4	Project Admin	Project Budgeting	Project Change Orders (to Budget, EAC and FAC)		
5	Project Admin	Contract Mgmt	Committed Cost Entry and Approval - Subcontracts		
6	Project Admin	Contract Mgmt	Subcontract Payment Request Entry and Approval		
7	Project Admin	Purchasing	Committed Cost Entry and Approval - Purchase Orders		
8	Accounts Payable	Purchasing	Vendor Invoice Entry and Approval (PO Receipts)		
9	Consultants	Time and Expense	Timecard and Expense Entry and Approval		
10	Accounts Payable	Accounts Payable	Vendor and Subcontract Payment Entry		
11	Prof Svcs Manager	All	Reporting and Analytics		
12	Project Managers	All	Reporting and Analytics		

Instructions

- Assign each key business process an owner
- Map the process to the appropriate Module and Screen in Solomon
- Schedule dates to complete testing the process in Solomon
- Identify source documents to enter into Solomon

Results Examples

- Drawings complete
- Walk through Solomon complete
- Screenshots w/text complete
- Final diagram complete

Testing Steps

- Hand draw process diagrams
- Complete the process in Solomon
- Create screenshots with brief instructions
- Develop workflow diagrams



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