IBM Software
Thought Leadership White Paper

December 2013

Implementation guide for integrated workplace management systems

Plan each step, focus on goals and follow through on procedures for an on-time, on-budget deployment

IBM

Contents

Introduction

Facilities and other physical assets can account for some of an organization's largest expenses and most complex management tasks. So to get a handle on costs and to help ensure related operations run more smoothly, many organizations are implementing integrated workplace management systems. These solutions address a wide range of management needs, from real estate issues such as site selection or lease accounting, to facilities issues such as space allocation and workplace reservation management, to environmental sustainability issues such as energy consumption and disclosure of the organization's carbon footprint.

The results of a successful integrated workplace management system (IWMS) implementation can be stunning. With an improved view of its occupancy rates, one IBM customer found that it could consolidate more than 20 facilities in the United States down to one—for an annual savings totaling more than USD30 million. Using its integrated workplace management systems, the company could more easily track vacancies and conduct "what-if" scenarios for underutilized sites. In growth areas, it could identify sites requiring more space.

But the negative impact of a software implementation that goes awry can be severe—and, unfortunately, quite common. One recent study found that the average large enterprise software implementation runs 66 percent over budget, 33 percent over schedule, and 17 percent under the predicted benefits.[1]

For companies that successfully avoided these pitfalls, however, the study identified a number of common characteristics—chief among them: avoiding the temptation to view the project as an entirely technical undertaking; seeing beyond the purely financial benefits; focusing on business strategy throughout the project; and involving and meeting the needs of the full range of stakeholders.[1]

The process for implementing integrated workplace management systems, in other words, can be as central to success as the capabilities of the solutions themselves. In addition, a successful IWMS implementation provides a necessary foundation for increasing operational effectiveness and improving financial and environmental performance.

Consider the management scenario that many organizations face today:

- A mid- to large-sized organization can manage hundreds to thousands of locations.
- Facilities operating costs continue to climb, representing a top-four cost of business for two-thirds of organizations.[2]

- Yet many organizations use siloed business applications and ordinary spreadsheets to track real estate and facilities data.
- These niche and homegrown solutions lack scalability and integration of business processes to generate measurable savings.

The key to moving beyond such a limited management approach lies in integrated workplace management systems—made possible by integrated implementation practices. As increased facilities instrumentation continues to supply increased amounts of data, and as data analytics enables greater insight into facilities operations, the common databases and tools of an integrated workplace management system can make possible results such as lower software licensing and maintenance costs, increased functionality and support for industry best practices.

Getting started

As with any change, the better prepared an organization is for an IWMS implementation, the faster—and more smoothly—the implementation will go. But because integrated workplace management enables the organization to address multiple issues that impact its facilities and other physical assets, system implementation can be a complex undertaking.

As the project begins, the organization will need to decide which IWMS components to implement. The options typically cover areas including:

- Real estate management
- Capital project management
- Facilities management
- Facilities maintenance
- Environmental and energy management

And for each solution, organizations can expect to go through specific phases during the implementation. Typical phases include:

1. Organization, strategy and change management
2. Analysis and design
3. Data preparation
4. Development
5. Test and transition
6. Deployment

The IWMS components can be implemented in any order—or all together as a single, comprehensive implementation—according to the organization's needs. With the number of IWMS components available and the number of steps required for each one, however, an "all-together" approach can rapidly become overwhelming. And the larger the project, the greater the chance of cost and schedule overruns. Each year added to a long-term project, in fact, has been estimated to increase cost overruns by 15 percent.[1]

IBM recommends—and this guide describes—a phased approach for implementing IWMS components one after the other. For companies that prefer, an all-together approach can still be followed. Each solution area requires the same steps for its implementation, though extra care, coordination and project management will be necessary to ensure smooth functioning for more complex implementations.

Taking the recommended approach

A phased implementation approach allows the organization to focus on the IWMS components in a functional grouping and the implementation tasks at hand, rather than juggling tasks and running the chance of giving some areas insufficient attention or time—and incurring problems as a result. It is important to remember that even a focused task can balloon beyond original expectations. In addition to installing, configuring and testing new software, for example, the organization may also need to revamp related processes, policies and procedures to align with the new IWMS.

The organization should also note that a phased approach to implementing IWMS solutions does not extend the schedule by a proportional amount. That is, implementing solutions in all five functional components, one after the other, does not require five times as long as implementing one component. That's because data gathered, procedures put into place, or lessons learned from implementing one functional grouping can be applied to the next. Implementing the second functional grouping typically requires less time than the first, and the third may require less time than the second. Once all the elements of the process are firmly established, it may also be possible to overlap the implementation schedules, speeding implementations still more—all while keeping the project to a manageable scale.

In addition to shortening the overall timeline, implementing IWMS solutions as functional groupings creates a significant advantage that can be carried throughout the process—improved decision making. For each subsequent grouping, the team is positioned to make more-informed, better decisions based on its previous information gathered and experience gained.

Implementing software solutions for integrated workplace management

Successful implementation of integrated workplace management systems involves careful coordination across a wide variety of activities to get each system installed, functioning successfully and delivering the highest level of business advantage. There are a lot of elements to consider, but following the process outlined in this guide can help ensure the success of your IWMS implementation project—on time, within budget and to expectations.

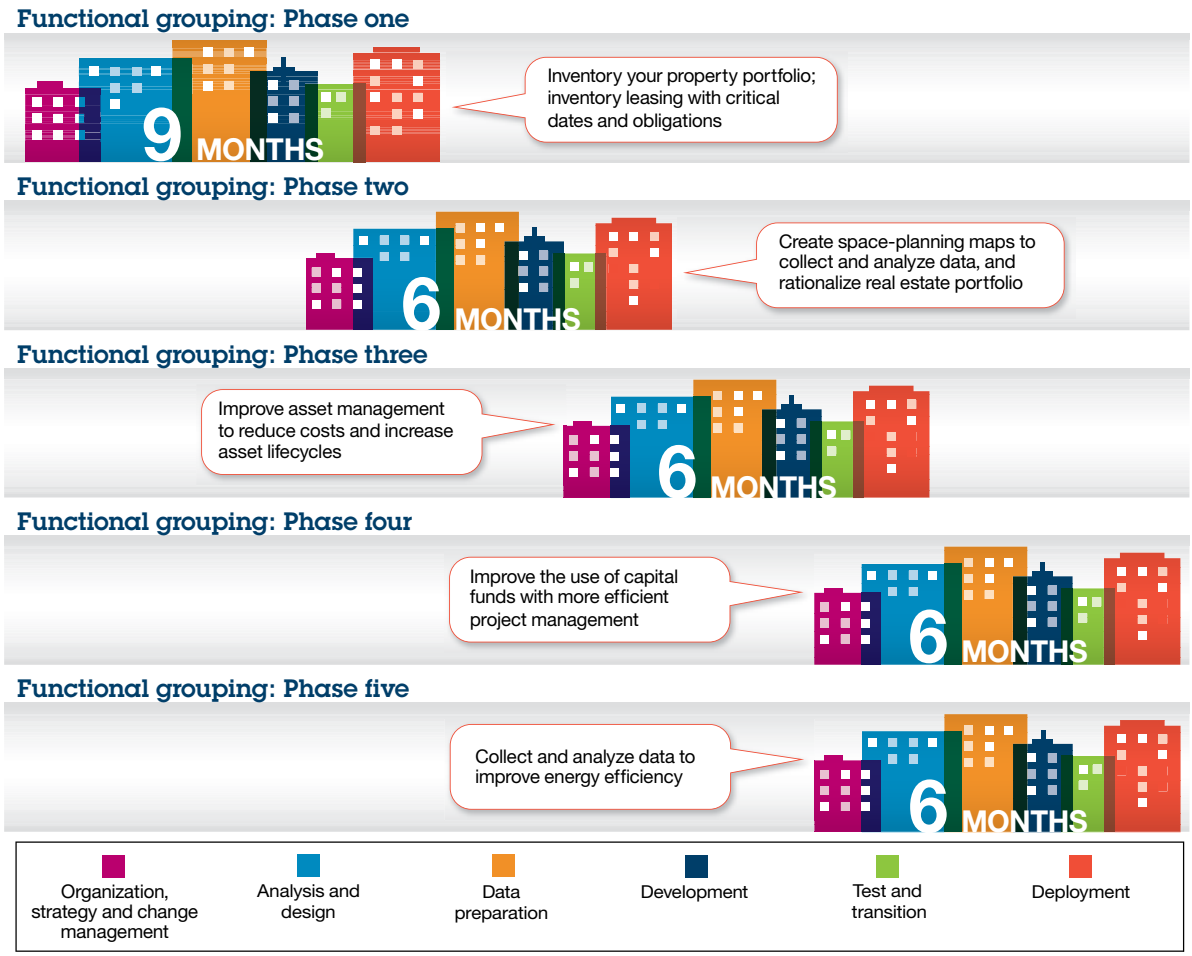
Having performed hundreds of successful implementations, IBM has identified the following phases and steps that organizations can expect to complete during the IWMS implementation process.

1. Organization and strategy phase

A Fortune 500 company first organized its real estate and facilities management teams to report to regional real estate directors. Then it shifted the model so regional personnel reported directly to the global organization. This change enabled a broad effort to standardize on a common workplace management system and the adoption of common processes, workplace standards and performance metrics, helping keep its implementation on time, within budget and to expectations.

Shortening the timeline for sequential implementations

An example of how projects go faster by leveraging established data and processes



Assemble the project team

A critical early step is to assemble a cross-functional project team for each or all of the five areas typically addressed by integrated workplace management systems—real estate, capital projects, facilities management, facilities maintenance, and environmental and energy management. At the highest level, it is important to involve senior management early and to keep them engaged throughout the project—for without active executive sponsorship, the likelihood of success will decrease. Approval and official signoff at the beginning of the project is not enough. Executives must stay involved and support the implementation team throughout the course of the project.

Team representatives work with the executives who will oversee the project and the IT staff who will implement the technology to select the functional areas that deliver the highest value; plan for the project; provide, enter, validate and test the information in the new system; and, ultimately, use the new system. Members of the team will also provide training to organization-wide end users once the integrated workplace management system has been implemented.

In putting together the project team, it is important to pay attention to each person's responsibilities and reporting lines. In some cases, functional managers may report into the same organization, but in other cases, they may be organized differently. It will also be important to include a range of skills and responsibilities among members—process experts and business unit executives, for example. An effective team will take advantage of the different viewpoints people from different organizations can bring, and of the fact that each manager and staff within the organization will ultimately benefit from sharing the same IWMS.

Establish communication

Once the project team is assembled, someone should be designated as a project manager. This person should facilitate clear and effective communication among team members so they are all fully aware of their individual roles and responsibilities, including how and when they should perform their tasks. A communication plan should establish who needs to know what and when, in case problems occur. Which team members are authorized to make decisions on behalf of the project? How is the team informed of the need for action? How does the team communicate its approvals? Effective communication within the team, along with an understanding of the required types and frequencies of communications, is critical for success.

At the same time, the project manager will work closely with the chosen software vendor or implementation partner to maintain project communications, set up regular project status meetings, review status reports and conduct other project-related activities.

Set a project schedule and budget plan

Every project needs a detailed, resource-loaded project schedule that describes all the tasks that need to be completed, estimates the time those tasks will require and lists the team members responsible for completion. The project manager can then use this list as a baseline to measure progress. Factors such as time and resources—each of which involves expense—can be linked to the budget to help ensure each element of the project remains within its projected cost as well as on its schedule.

Create procedures for governance and change control

If the project does run out of time, money or resources, an executive decision-making process will be necessary to establish priorities for next steps. Procedures for project governance may also prove necessary to help resolve conflicts between team members. For example, if disagreements occur over priorities or the use of resources, a governance plan established ahead of time can determine how the issue can be escalated and who is responsible for resolving the conflict so work can move ahead smoothly.

Establish organizational change management

A key to the success of every project is helping the end-user community understand and buy into the changes that will affect their processes and work. It is necessary, as a result, to put into place a change management plan from the beginning of the project to help ensure end users' support and help ensure they are comfortable with new processes and technology.

2. Analysis and design phase

Using a relationship management tool to manage more than 600 business relationships across its operating system and staff, a major European company enabled two-way dialogue between the organization and its business units, helping keep the implementation on time, within budget and to expectations by ensuring strong alignment between business and workplace strategies.

Evaluate the impact of implementation

To kick off the analysis and design phase, the project team must first determine which components of the IWMS are most important to the organization's strategic vision and which it should implement—real estate, capital projects, facilities management, facilities maintenance, or environmental and energy management. If more than one area is to be addressed, the team will need to determine the initial functional grouping to be deployed and the sequence to follow based on the value each grouping delivers to the organization and the impact it will have on business performance.

A key advantage of a phased implementation is the rapid time to value that it makes possible. By implementing an IWMS in smaller, more manageable pieces one at a time, the organization will be able to see results from each component as its implementation is complete. And components that fall later in the sequence will show results faster because their implementation can build on previous experience or data.

A significant return on investment

During the development of the business case to support its global implementation of integrated workplace management systems, a global manufacturing firm developed a matrix that reflected nine categories of targeted business improvement including optimizing space utilization, reducing vacancies and churn, and reducing missed critical dates.

A detailed cost analysis following IWMS implementation showed a one-year savings of nearly EUR14 million [USD19 million] through improvements in space utilization and real estate management, along with a 400 percent return on investment over five years.

As part of the analysis and design phase, the project team will also need to meet with the software vendor to review project requirements, discuss business processes and address questions or issues. The team will need to work with the vendor to create a draft project schedule and draft project plan based on the defined requirements of the project.

Determine functional design

Next, the software vendor will examine and explore the organization's system needs in order to determine design gaps between internal processes and new system capabilities. Choosing an IWMS with a robust standard configuration—one that sets the bar for internal processes going forward—can minimize the need for extensive system configuration. Together, the organization's project team and the vendor can work out priorities, issues, workflow designs, portals, application security, system interfaces and more, and also work out a strategy for data mapping and data migration. This phase typically results in a functional design document for the organization to approve.

3. Data preparation phase

A worldwide telecommunications company deployed data-mapping processes within an integrated workplace management system to support a broad array of space standards. To increase insight into its facilities and real estate environments, ensure it had the information necessary to manage assets, and achieve an implementation that was on time, within budget and to expectations, the company standardized purchasing and capital-approval processes within the system.

Prepare/collect data

After the organization and software vendor have collaborated to create a data-mapping and data-migration strategy and have agreed on the functional design of the IWMS, it is time for data preparation. The duration of this process depends on the size and complexity of the organization's facilities portfolio. It is typically not a fast process, but it is the foundation for establishing integrated workplace management capabilities.

This is the point where the project team asks pointed questions and captures fundamental information that is a prerequisite for establishing management capabilities. For example: What are the locations of buildings and other assets in the facilities portfolio? Who are the people responsible for them? What are the costs of managing these facilities?

Validate data integrity

Once the data has been collected, the project team must validate its integrity. The team should verify the accuracy and relevance of its facilities data by testing or auditing a portion of it—ideally, at least 10 percent of the data—against original records to make sure the information is complete (all necessary data is captured) and accurate (all necessary data is correct). This will help determine whether it is safe to migrate the existing data from the previous system, or whether it should be abstracted manually. If the data needs to be manually abstracted from the original records, third-party firms can help with this task. However, note that manual data abstraction will extend the implementation timeline.

4. Development phase

An IBM Business Partner worked with a leading chemicals company to configure and implement software to standardize data management and business processes across its capital projects and facility maintenance operations. The resulting IWMS solutions were designed so the company could incorporate industry best practices and international data standards across the enterprise, helping the organization keep its implementation on time, within budget and to expectations.

Design/build alpha system

There will be some natural overlap between the data preparation and the software development phases. While the organization is collecting and creating its asset inventory, the software vendor will work on the design and build of an alpha version, or prototype, of the management application. The alpha version should meet the requirements of the agreed-upon functional design—inclusive of as-shipped and configured capabilities—and will need to be heavily tested before the production version is created and deployed later in the process. The number of alpha system build reviews that occur during this phase will depend on the amount and complexity of configurations required of the system.

Load/migrate data subset

The project team will need to work with the software vendor to load/migrate an initial subset of the collected lease data—IBM recommends five to 10 percent of the total amount—into the development environment. Once loaded, the team and vendor will test the functionality of about 10 percent of this data subset, to verify that everything is working properly and as specified. The project team will provide signoff to the software vendor on the testing and acceptance once satisfied with the results.

5. Test and transition phase

Because of the myriad changes in roles, responsibilities, reporting relationships and processes involved with implementing its new IWMS software, a Global 1000 company needed substantial resources for training as well as constant collaboration among staff across business units. In the post-implementation phase, it required substantial support from the IT organization to ensure system tuning, testing and refinement—but the result was worth the work, helping achieve an implementation that was on time, within budget and to expectations.

Test alpha system

During the test and transition phase, which occurs in the development environment, the software vendor will run multiple tests on the alpha system.

First, it will perform *unit testing*—in which it tests the source code, computer program modules, control data, and usage and operating procedures to ensure that everything functions correctly.

Next, it will perform *system testing* on the complete IWMS to evaluate compliance with previously specified requirements. If the IWMS integrates with other critical systems, system testing includes *integration testing*, which detects inconsistencies between integrated software units in the development environment.

The software vendor will then review and approve the results of the unit testing and system testing against predetermined use cases.

Next is *user-acceptance testing* (UAT), perhaps the most critical testing thus far because, during UAT, a few software end users—typically members of the project team who have been pre-trained—test the alpha system to make sure it can handle required tasks in real-world scenarios, according to predefined specifications. This phase of testing is also designed to help gain end-user buy-in for the new system. Once UAT is complete and any encountered issues have been addressed by the software vendor, the project team will approve the alpha system for use in developing the production system.

Train initial user group

Application training can now begin. The software vendor should facilitate essential software training for a select user group—typically a few members of the project team—who will subsequently train the rest of the organization's users down the road. Training should cover how to use the new IWMS software, as well as policy, practice or process changes that will result from the IWMS implementation. The users who are trained during this step can also help perform testing on the full data load after the production system is in place, in the next phase of the process.

6. Deployment phase

A global supplier of electronics-testing equipment initially rolled out space management systems, then added maintenance and asset management capabilities—first in the United States and then in its locations in Costa Rica and the Philippines. The goal of deploying in phases across its 66 worldwide locations was to give employees a flexible physical environment that is responsive to evolving business needs—and to give the organization an implementation on time, within budget and to expectations.

Install production system and perform full data load

Once the alpha system has been completely installed, tested, adjusted as needed, and approved, the software vendor will install the production version of the IWMS. Then, when deployment is complete, the full data load can begin.

The full data load can consist of items as widely ranging as lease data, maintenance schedules, energy use per square foot or per user, meeting room requirements, occasional office space used by remote employees, or anticipated growth and needs for new construction. The software vendor will typically assist with this step to help speed the data entry and smooth the process.

Performing ongoing, post-deployment activities

Following IWMS implementation, the organization will need to continue certain tasks on an ongoing basis, taking advantage of post-deployment support provided by the software vendor as much as needed. The previously trained project team members can begin systematically training staff on how to use the implemented IWMS component(s), as well as on any updated policies, practices or processes. The organization should continue to create new reports, controls and processes as needed to facilitate effective facilities and asset management.

Conclusion

Before

"We were managing and analyzing space allocations straight from CAD drawings and had to print everything out. There was a lot of time and guesswork involved in answering basic questions."

After

"IBM TRIRIGA software takes a two-week exercise and boils it down to minutes. … Having this information readily available would not be possible without this system."

—Facilities manager and corporate architect, global electronic equipment supplier

Organizations that implement integrated workplace management systems can achieve significant advantages in their abilities to better control their facilities and physical assets. But advantages do not accrue on their own—organizations need to plan implementation processes carefully, focus their activities and resources, and follow through on procedures designed to smooth the way to on-time, on-budget, fully functioning IWMS deployments.

From the early stages of organization, strategy and change management to the ultimate deployment of IWMS solutions, a phased implementation can help the organization not only focus on the solution but accelerate its delivery by taking advantage of lessons learned and the ability to make better-informed decisions that it develops as it proceeds through the plan.

IBM can support IWMS deployment in two ways—with the comprehensive portfolio of IBM® TRIRIGA® solutions for integrated workplace management, and with the extensive expertise and experience of IBM Global Business Services® gained from hundreds of successful software implementations.

For more information

To learn more about IBM TRIRIGA solutions for integrated workplace management, please contact your IBM representative or IBM Business Partner, or visit: **ibm.com**/software/products/us/en/subcategory/SW22A

To learn more about IBM Global Business Services for IBM TRIRIGA, visit: **ibm.com**/services/us/gbs/ais/tririga-services.html

Additionally, IBM Global Financing can help you acquire the software capabilities that your business needs in the most cost-effective and strategic way possible. We'll partner with credit-qualified clients to customize a financing solution to suit your business and development goals, enable effective cash management, and improve your total cost of ownership. Fund your critical IT investment and propel your business forward with IBM Global Financing. For more information, visit: **ibm.com**/financing

IBM Corporation
Software Group
Route 100
Somers, NY 10589

Produced in the United States of America
December 2013

[1] Michael Bloch, Sven Blumberg and Jürgen Laartz, "Delivering large-scale IT projects on time, on budget and on value," *McKinsey and Company*, October 2012. http://www.mckinsey.com/insights/business_technology/delivering_large-scale_it_projects_on_time_on_budget_and_on_value

[2] CFO Research Services and United Systems Integrators Corporation, "The CFO Perspective on Corporate Real Estate," *CFO Publishing Corp*., September 2003. http://www.cfo.com/whitepapers/index.cfm/displaywhitepaper/10339491

Please Recycle

TIW14165-USEN-00