2000

Methodological Issues in Systems Management Suites Deployment

J. Art Gowan, Jr.
University of North Carolina at Wilmington, gowanj@uncwil.edu

Chris Jesse
Tangram Enterprise Solutions, chrisj@tangram.com

Richard G. Mathieu
Saint Louis University, mathieur@slu.edu

Follow this and additional works at: http://aisel.aisnet.org/amcis2000

Methodological Issues in Systems Management Suites Deployment

J. Art Gowan, Jr., Dept. of ISOM, Univ. of North Carolina at Wilmington, *gowanj@uncwil.edu*
Chris Jesse, Tangram Enterprise Solutions, Inc., *chrisj@tangram.com*
Richard G. Mathieu, Dept. of DS & MIS, Saint Louis University, *mathieur@slu.edu*

Abstract

The promise and failure of systems management suites has become a critical issue for organizations attempting to gain control of the distributed enterprise. These expensive suites (solutions that perform enterprise management functions, such as software distribution, inventory, network management, etc.) promise to provide a single integrated solution that can address a complete set of enterprise management needs. A survey of IT professionals was used (1) to identify organizations' commitment to suite technology and/or best-of-breed point solutions, (2) to assess organizations' ability to implement suite technology throughout the enterprise, (3) to examine the costs associated with suite deployment, and (4) to identify the essential steps and key obstacles to suite deployment and management. Results of the survey indicate that until the issues of deployment methodology, asset inventory management, and deployment costs, organizations may not realize the full potential of system management suites.

Background

The distributed enterprise of workstations, servers, bridges, routers, hubs, etc., is critical to corporate productivity. These assets are at the core of every business process, allowing organizations to support e-commerce, make strategic business decisions, and manage mission-critical applications. In fact, business is so closely tied to technology that organizations' ability to effectively manage the enterprise could be the dividing line between success and failure.

Systems management suites are designed to perform the mammoth task of managing the critical distributed enterprise, which includes a myriad of disciplines, such as inventory, software distribution, software metering, network management, remote control, security, and so on.

Adding to the complexity of these diverse disciplines are the following constraints:

- Each suite application is unique and has its own set of memory, disk space, and other prerequisites.

- The applications are typically installed in a complex production environment, containing thousands of diverse workstations and servers that are regularly moved, upgraded, and retired. Additionally, all of the applications must work together without adversely affecting the business mission of the desktop.

- The suites depend on a standard, tightly controlled desktop configuration. Consequently, they often require upgrades to many other applications to prevent conflicts. This means that organizations must be able to determine the conflicts and interdependencies between their current applications and the suite components. Then, once the conflicts are identified and the desktops are upgraded to fit the standard, organizations must ensure that ongoing desktop changes do not introduce new problems that cause the suite to malfunction.

Because of the above constraints, suite vendors are often criticized for providing complex, costly solutions that are extremely difficult to deploy and integrate with other enterprise applications. This complexity has led many organizations to adopt a point solution strategy—as revealed by the results of this survey.

Research Methodology

A survey of IT professionals was used (1) to identify organizations' commitment to suite technology and/or best-of-breed point solutions, (2) to assess organizations' ability to implement suite technology throughout the enterprise, (3) to examine the costs associated with suite deployment, and (4) to identify the essential steps and key obstacles to suite deployment and management.

A four-page questionnaire was mailed to 2,300 senior IT executives at Fortune 1000-level firms, government entities, and educational institutions. The survey questions were primarily close-ended (aided response) and took approximately 15 minutes to complete. Within the data collection time allotted, 194 responses were received. The result is a net response rate of 8.4%. Respondents to this research effort are senior-level IT executives (Chief Information Officers, Vice Presidents of Information Systems, and Information Technology Managers). The majority of organizations responding

(85%) have more than 5,000 employees, with 8% employing more than 50,000. The annual revenue of 75% of the respondents is greater than $500 million, with 17% indicating an annual revenue exceeding $5 billion.
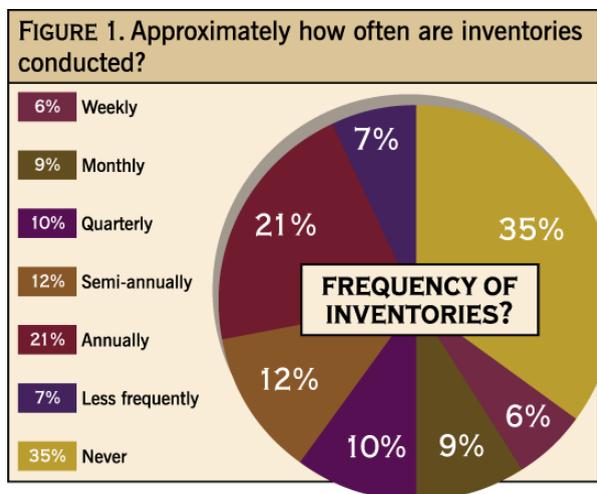
Survey Results

1.   Asset Management

Anyone who has tried to install software knows that you must have a clear picture of the targeted desktop before you even attempt the installation. You need answers to the basics, such as: How much memory and disk space are available? Is the desktop running the correct operating system?   This fundamental asset information is critical to suite deployment.   With this information, a suite implementation team can ensure the targeted desktops meet the suite prerequisites (memory, available disk space, etc.) prior to installing the suite components.   If the prerequisites are not met, then additional components can be purchased beforehand and installed during the suite deployment process, preventing the need for multiple visits to the desktop.

However, many of the respondents indicate they do not have current asset information:

- 35% of the respondents do not conduct asset inventories (see figure 1).

- 28% of the organizations conduct inventories only once a year or less frequently.

FIGURE 1. Approximately how often are inventories conducted?

6% Weekly
9% Monthly
10% Quarterly
12% Semi-annually
21% Annually
7% Less frequently
35% Never

FREQUENCY OF INVENTORIES?

7% 21% 12% 10% 9% 6% 35%

These survey findings are crucial as they uncover a fundamental problem—most organizations are trying to deploy and manage suite solutions without an accurate picture of the enterprise. The distributed enterprise is comprised of a highly fluid asset base. In fact, 69% of the respondents indicate that the software on typical desktops changes at least every six months, and 68% indicate that

the hardware changes at least every twelve months. Given the dynamic nature of the enterprise, annual inventories may prove to be inadequate or misleading when planning suite implementations and managing the suite technology to avoid conflicts with other applications.

Compounding the problem of inaccurate asset information—or no asset information at all—is the fact that many organizations are trying to deploy suites without understanding the solution prerequisites and potential conflicts with other applications

- 31% of the respondents have not identified the platforms that are currently supported by the suite (see figure 2a). And many of those who did, found that enterprise-wide support may not be realistic (see figure 2b).

- 39% of the respondents do not have a list of prerequisites that are necessary to support each suite component (see figure 3).

- 59% of the respondents have not identified the known conflicts between the suite and other applications in the enterprise.

FIGURE 2A. Have you identified the platforms that are currently supported by the suite?

NO - 31%
SUPPORTED PLATFORMS IDENTIFIED?
YES - 69%

FIGURE 2B. What percentage of the platforms is not supported?

PLATFORMS NOT SUPPORTED?

>75% 5%
51-75% 5%
26-50% 6%
10-25% 20%
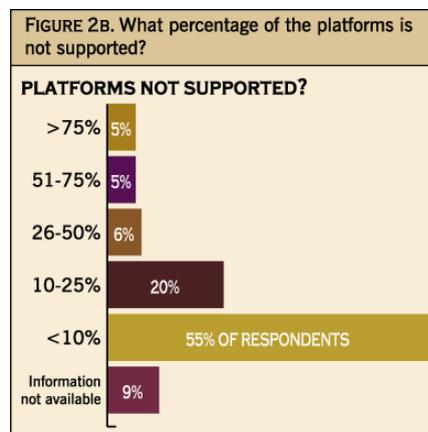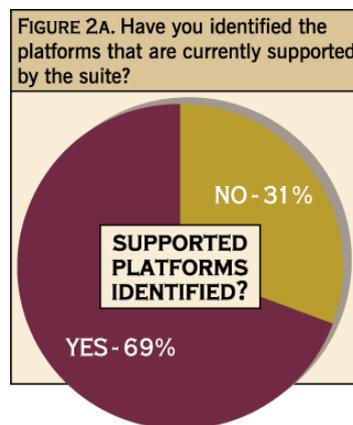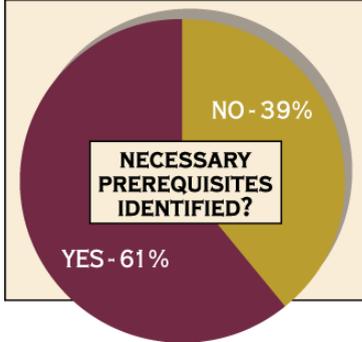<10% 55% OF RESPONDENTS
Information not available 9%

FIGURE 3. Do you have a complete list of all prerequisites that are necessary to support each suite component?
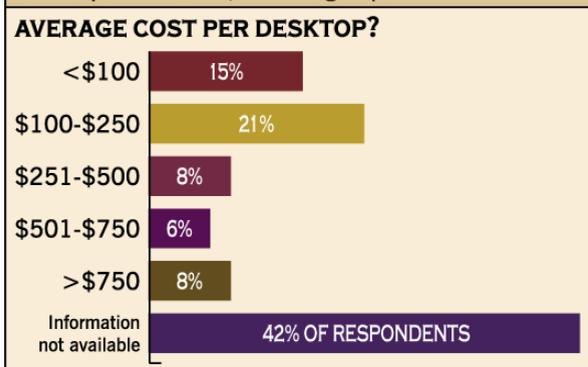
NECESSARY PREREQUISITES IDENTIFIED?

NO - 39%
YES - 61%

Systems management suites are designed to provide a single solution that controls the entire enterprise. However, if any number of desktops are not supported, organizations must identify other methods for managing these desktops—distributing software upgrades, monitoring end-user problems, and so forth. Moreover, since suites are inherently complex, they must work in a continually changing enterprise, and they must be integrated with an existing base of mission-critical applications. Without a list of known conflicts, organizations will undoubtedly run into compatibility issues.

2. Suite Implementation Costs

It has been widely reported by industry analysts and trade publications that suite solutions carry a high price tag. Unfortunately, the true cost of suite implementation may remain a mystery for many organizations until more of the suite components are actually fully deployed.


FIGURE 4. What is the average estimated cost per desktop of the suite, including implementation costs?

AVERAGE COST PER DESKTOP?

<$100	15%
$100-$250	21%
$251-$500	8%
$501-$750	6%
>$750	8%
Information not available	42% OF RESPONDENTS

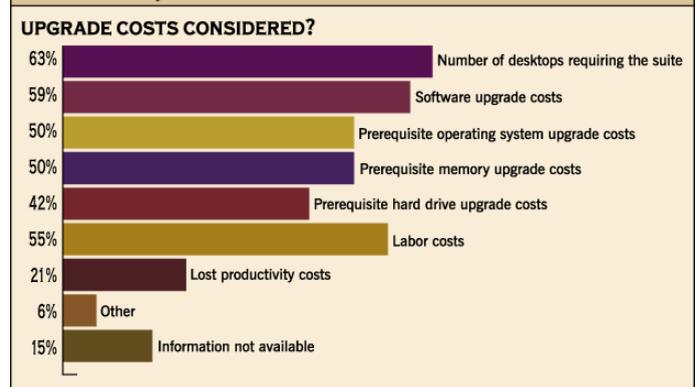- 42% admit they cannot estimate the true cost of suite deployment at this time (see figure 4).

- 43% of the respondents indicate the suite solution (including implementation) costs at least $100 per desktop (see figure 4).

- 49% of the respondents do not have sufficient information on the desktops in the enterprise to request a fixed-price implementation.

- 56% admit that the suite may not or will not be implemented within budget (see figure 5).

FIGURE 5. Will your suite solution be implemented within budget?

IMPLEMENTED WITHIN BUDGET?

YES - 44%
NOT CERTAIN - 39%
NO - 17%
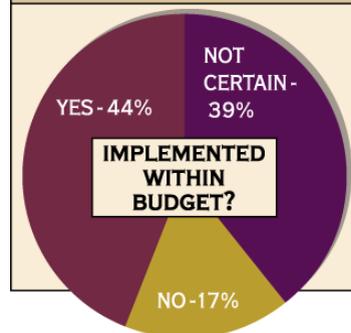
Since most organizations lack both a clear understanding of the suite prerequisites and a current inventory of their desktops, their estimates cannot accurately reflect all of the implementation costs. Furthermore, many organizations are not including prerequisite components or labor in their calculations (see figure 6).

FIGURE 6. When estimating the cost of upgrading desktops to support the suite, which items do you consider?

UPGRADE COSTS CONSIDERED?

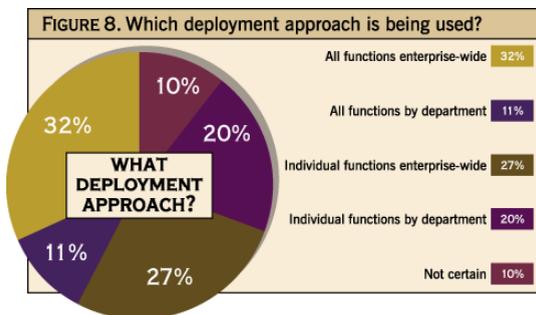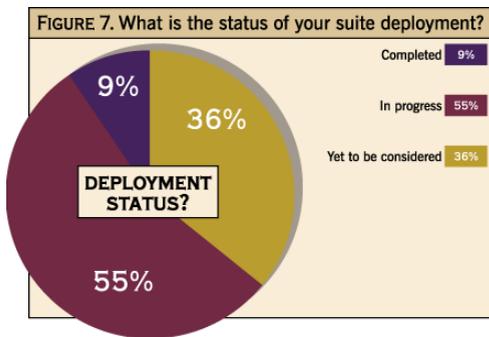|	
63%	Number of desktops requiring the suite
59%	Software upgrade costs
50%	Prerequisite operating system upgrade costs
50%	Prerequisite memory upgrade costs
42%	Prerequisite hard drive upgrade costs
55%	Labor costs
21%	Lost productivity costs
6%	Other
15%	Information not available

3. Deployment Strategies

The deployment process for system management suites is moving slowly at best.

- Only 9% of respondents have actually completed a suite deployment (see figure 7); 55% indicate deployment is still in progress.

- 32% of the respondents are planning to deploy all suite functions enterprise-wide (see figure 8).

FIGURE 7. What is the status of your suite deployment?

DEPLOYMENT STATUS?

9%
36%
55%

Completed	9%
In progress	55%
Yet to be considered	36%

FIGURE 8. Which deployment approach is being used?

WHAT DEPLOYMENT APPROACH?

10%
20%
32%
11%
27%

All functions enterprise-wide	32%
All functions by department	11%
Individual functions enterprise-wide	27%
Individual functions by department	20%
Not certain	10%

The limited implementation progress may be explained by several factors. The lack of information on suite prerequisites and current desktop configurations will undoubtedly lead to multiple desktop visits, which impedes implementation progress. Additionally, the executives' deployment strategies may be contributing to the delays. By deploying all functions enterprise-wide, organizations are vulnerable to unanticipated conflicts that are difficult to pinpoint and correct. Furthermore, it is not clear that every department requires each suite component. In fact, 42% of the respondents indicate they have not evaluated each function against each department's needs to determine essential functionality.

Conclusion

The survey results make two points clear— organizations are not ready to realize and suite providers are not ready to deliver the promise of suite technology. Simply stated, suites are still too complex, and organizations are not prepared for the deployment. The survey respondents have made limited progress in the suite implementation process, they lack sufficient information on their own enterprises, and they are not asking the suite vendors the right questions to facilitate the deployment. Moreover, the respondents have underestimated the financial and human resources required to implement this complex technology throughout the enterprise.

What does this mean for organizations contemplating suite implementations? Before attempting the deployment, fundamental questions must be answered:

1. Which functions of the suite are required to meet the demands of each department in the company? Is each function essential, or could some departments benefit from partial functionality?

2. What are the prerequisites of each suite component, and which desktops require additional components to meet the suite's prerequisites?

3. What are the known conflicts that will cause the suite components to malfunction?

4. How many desktop visits are required to deploy the suite, and what resources can be allocated to the deployment effort?

5. What is the true cost of the suite deployment, including prerequisite components and labor?

6. How can the implementation process be monitored and controlled, ensuring the team is meeting anticipated time frames?

Without accurate answers to these basic questions, enterprise suite deployment will remain a frustrating and thorny undertaking, making point solutions a more viable option for enterprise management. When organizations have fundamental enterprise information in hand and when the suite technology matures, business leaders will be ready to pursue the promise of systems management suites.

References

Boardman, Bruce. "Network/Systems Management— Managing Your Enterprise Piece by Piece." *Network Computing* , May 17, 1999.

Gillooly, Caryn. "Mismanaged." *Information Week* , Feb. 16, 1998.

Jesse, C. *A Journey Through Oz: The Business Leaders' Road Map to Tracking Information Technology Assets.* Kendall/Hunt Publishing Company, Dubuque, Iowa, 1999.

Sturdevant, Cameron. "Suites Rein in Enterprise Systems: LAN-based Management Packages Know Who Has What and Where, But Don't Yield Data Without a Fight." *PC Week*, April 18, 1999.