

Decision Support—Do You Have It?

Toby Hatch, William Stratton, Raef A. Lawson, and Denis Desroches

To study the ability of companies to make decisions using a cost and profitability system (CPS), and also to identify other issues related to the design and use of a CPS, the authors formed the Business Research and Analysis Group (BRAG) and conducted a survey sponsored by several professional associations.¹ Exhibit 1 shows the distribution of survey respondents by region, type of unit, and business sector. Data were collected during the period of March–November 2008. Of the more than 400 responding organizations surveyed, slightly more than half were located in North America. The survey was most frequently completed from the perspective of the respondent's entire entity. Fifty percent of the respondents were in the service sector, and 35 percent were from manufacturing. The position held by respondents was fairly evenly distributed among executives (16 percent), directors (13 percent), senior managers (16 percent), analysts (19 percent),

Many organizations want to be able to make better decisions using their cost and profitability system, yet are thwarted from doing so for a variety of reasons. This article shows how organizations can improve their current systems. It discusses some unachieved goals, and also demonstrates how you can successfully support business decisions using a cost and profitability system.

© 2009 Wiley Periodicals, Inc.

managers (23 percent), and others (14 percent).

DECISION-SUPPORT BENEFITS

While some² have identified 80 different decision-support tools, there is actually no generally accepted definition for decision-support systems (DSSs). But we believe that an organization's cost and profit measurement system is a key DSS. We define a cost system as a system established to monitor an organization's costs, providing management with information on operations and performance. A profitability system is established to measure and monitor the profitability of an organization or subset thereof (i.e., profitability by products, services, or customer). Other subsets include by

channel, transaction, or value-chain profitability.

We began our investigation of CPSs by asking respondents for a general statement about whether their CPSs yielded significant benefits. We noted with some surprise and concern that only 44 percent of all organizations that responded agreed

or strongly agreed that they had received *significant* benefits from their CPSs.³ We expected this percentage to be much higher given our expectation that organizations develop their CPSs based on identified benefits. A CPS is intended to be a major source of useful and relevant information from which to make operational, financial, and strategic decisions. If 56 percent of the surveyed organizations' managers believe they do not receive significant benefits, what quality of information are they obtaining, and what is causing this lack of usefulness for decision making?

Beyond a general statement about benefits, we asked for information concerning specific benefits. Exhibit 2 lists the most

Exhibit 1

Demographics of Survey Respondents

By geographic region:		Percent
North America		52%
Middle East		14%
Asia		13%
South America		12%
Africa		7%
Europe		2%
By organizational level:		Percent
Whole company		54%
Department		16%
Group/division		9%
Subsidiary		9%
Plant		5%
Unit		4%
Branch		3%
By business sector:		Percent
Services		
Financial		11%
Wholesale/Retail Trade		8%
Business		7%
Consulting		7%
Communications/Utilities		5%
Computer/Software		4%
Healthcare/Medical/Legal		3%
Transportation		3%
Education		2%
Manufacturing		
Metal/Rubber/Plastics		8%
Electronics		7%
Food/textiles		6%
Machinery		6%
Chemicals		5%
Paper/Printing		3%
Public Administration/Government/Not-for-Profit		6%
Conglomerate		2%
Other		7%
Total		<u>100.0%</u>

frequently cited benefits. Of the 11 benefits included with the question (there was also a free-form answer), only 50 percent

agreed that their CPS is *helpful* for product/service profitability analysis. Between 41 and 49 percent of organizations indicated

that they received the next seven benefits:

1. Provides an accurate assessment of costs;
2. Helps for customer-profitability analysis;
3. Helps us make operational improvements;
4. Helps us control costs;
5. Provides good information for managerial decision making;
6. Helps us make product decisions (e.g., pricing, design, and outsourcing); and
7. Helps us perform budgeting, planning, and evaluation.

Finally, only approximately 25 percent of organizations indicated that they had received the following three benefits from their CPS:

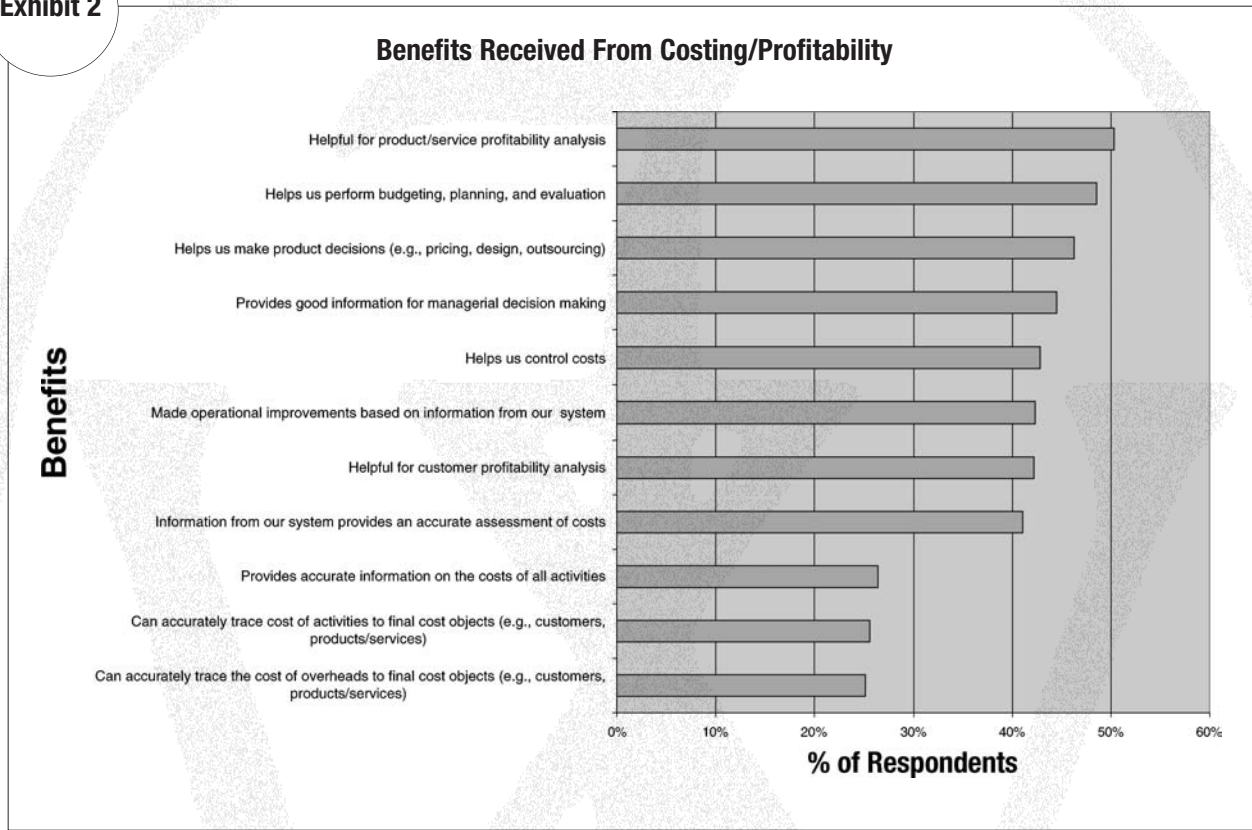
1. Accurately traces the cost of overheads to final cost objects (e.g., customers, products/services);
2. Accurately traces cost of activities to final cost objects (e.g., customers, products/services); and
3. Provides accurate information on the costs of all activities.

In this study, the term *accuracy* had a very specific meaning. It did not mean being precise to a number of decimal places. Rather, it was defined as being:

- relevant—it must make common sense;
- reliable—it must have a valid cause-effect relationship; and
- reasonable—it must pass the cost/benefit test.

With this definition in mind, the results of the last three benefits are very worrisome, because 75 percent of the organizations

Exhibit 2



that responded said they could not accurately trace overheads or activity costs to their final cost objects, and could not get accurate cost information on the cost of their activities. In order to make sound business decisions, these three attributes of cost and profit information are quite crucial. The argument can be made that information on activity costs should be *absent* in any CPS that is not using an activity-based cost method. However, while almost all types of CPS perform some form of overhead-cost allocation, only about half actually *use* an activity-based cost method. We conclude, therefore, that lacking the ability to accurately trace the cost of overheads to final cost objects in a relevant, reliable, and reasonable way is a primary cause of the lack of benefit from CPS.

USEFULNESS OF CPS

To investigate the usefulness of cost/profit information, we asked what kinds of decisions managers *were* able to make. Sixty-three percent of respondents felt able to make significant financial decisions using their existing systems. Fifty-nine percent felt able to make significant operational decisions, while only 49 percent indicated the ability to make significant strategic decisions based on their current CPS.

Exhibit 3 lists those decisions related to profitability that organizations felt they could and could not make with their current CPS. Although there are many organizations that indicated they could make most of the desired profitabil-

ity decisions that were listed in the survey, 40 percent or more of the organizations felt that they could *not* make the following profitability decisions with their existing systems:

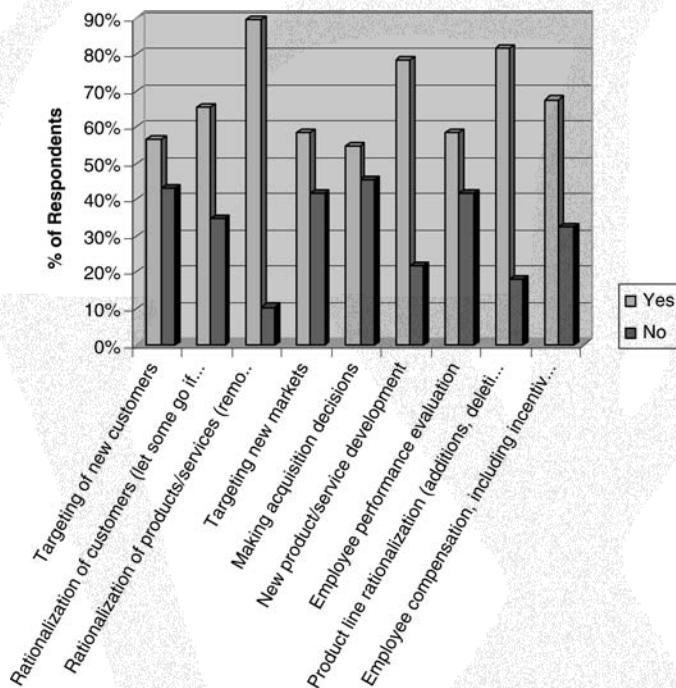
- targeting new customers,
- targeting new markets,
- making acquisition decisions, and
- writing employee performance evaluations.

Between 18 and 35 percent of respondents indicated they could not make these profitability decisions with their existing systems:

- product-line rationalization (additions, deletions);
- employee compensation, including incentive pay;
- new product/service development; and

Exhibit 3

Current Decisions Made With a Profitability System



- rationalization of customers (e.g., let some customers go, if need be).

Since many of these decisions are also strategic in nature, it is possible that current CPSs are lacking in capability and perhaps the flexibility needed to produce necessary information. It is also possible that the information is available, but management simply chooses not to act upon it.

Taking this examination a step further, we asked respondents what kinds of capabilities they felt their systems ought to provide—in other words, to think about their ideal CPS. Exhibit 4 indicates that most organizations wanted all of the suggested capabilities. They also wanted other capabilities. For example, a few companies suggested that being able to look at

costs both with and without corporate overhead would make understanding costs and making profitability decisions much more straightforward.

It is interesting to see that there is a substantial difference between what CPSs of today offer and what organizations feel CPSs need. The two largest gaps relate to information about customers—targeting new customers and customer rationalization. This result was expected because of the relatively recent development of methods to measure customer profitability. Organizations should explore the various methods now readily available to identify and measure customer cost and profitability.

Costing Decision Support

Let's look more closely at the types of costing decisions

organizations felt they could and could not make. Exhibit 5 shows that respondents to the survey could make many kinds of costing decisions. However, there were still between 26 and 34 percent of organizations that could not make the following types of decisions using their current costing system:

- process improvements,
- headcount levels,
- resource utilization and capacity,
- inventory levels, and
- outsourcing decisions.

Additionally, 17 percent of the respondents indicated they could not make pricing decisions for products or services. The inability of CPSs to support this type of decision making is cause for concern because these types of strategic costing decisions are fundamental to running a business and to deciding which way to go strategically.

When we asked what the ideal costing system should look like, organizations again wanted to be able to make all the suggested types of decisions, and they added a few more. Exhibit 6 indicates the difference between what the CPSs of today offer and what organizations still feel they need.

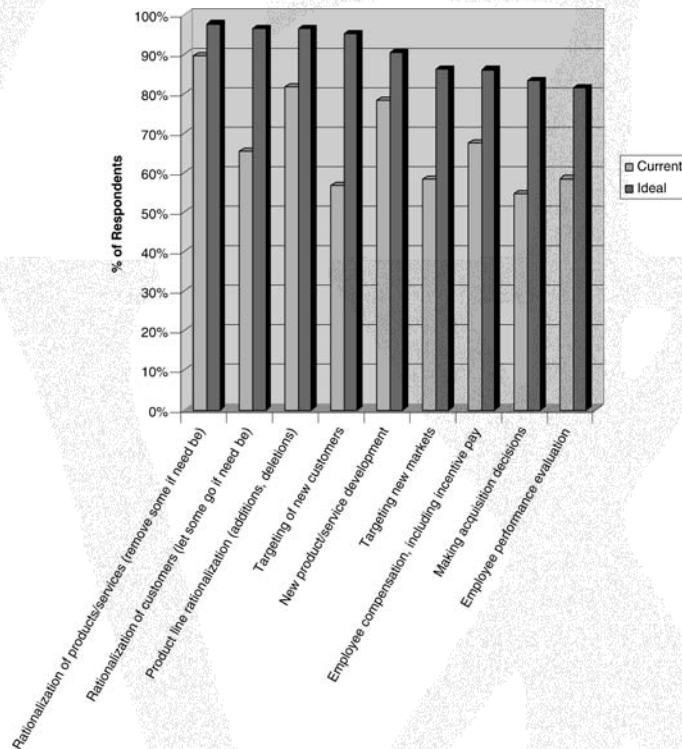
The difference is not quite as dramatic as for profitability decisions, but it is still noteworthy.

FACTORS HINDERING CPS EFFECTIVENESS

To identify the key factors that hinder CPS effectiveness, we asked respondents to identify their concerns with their CPS (see Exhibit 7). Respondents were given a set of ten capabilities and a free-form field. At least half of the

Exhibit 4

Comparison of Current and Ideal Profitability Decision Support



respondents indicated that the following seven capabilities were either a major or moderate concern:

1. We need better ways to allocate cost accurately.
2. Allocations do not reflect how our business processes consume resources.
3. We cannot make timely business decisions based on it.
4. It is difficult to update the model with new results data.
5. It is difficult to design, build, or maintain the allocation calculations.
6. We cannot allocate precisely enough (bad allocations basis).
7. The reports do not provide useful information.

The top two concerns (up to 65 percent of the respondents) are the need for better ways to accurately allocate costs and the fact that their current allocations did not distribute costs the same way their business processes consume resources. Again, these two capabilities are crucial to making sound business decisions. Without them, organizations can make serious business errors.

The results in Exhibit 7 clearly indicate that organizations are not satisfied with the capabilities of their current CPSs for decision support. Not surprisingly, allocation is the most frequently identified concern (contained in six of the ten concerns in Exhibit 7).

Timeliness of Data Collection and Recalculation

From the list of concerns (Exhibit 7), it is clear that respondents are frustrated with trying to make timely decisions and that updating data and recalculating cost with their current systems is difficult. With this in mind, we asked survey respondents how frequently they update and recalculate a variety of costs with their current system, and how frequently they would want to update and recalculate costs with their ideal system. The costs included:

- activity costs per unit driver,
- individual customer,
- customer group,
- individual product/service,
- product/service group, and
- individual activity.

Exhibit 8 compares the current frequency of data collection and recalculation to how frequently they would want to collect data and recalculate with their ideal system.

From these results, it is apparent that organizations want to calculate more costs more frequently. We conclude that organizations do not currently obtain updated information often enough to support their decision-making processes. As product and customer life cycles have shortened, the need for timely data in support of decision making has increased. CPSs must address this issue if they are to meet the decision-support needs of managers.

Cost-Allocation Method

Accurate cost allocation and the relationship between allocations and resource consumption

Exhibit 5

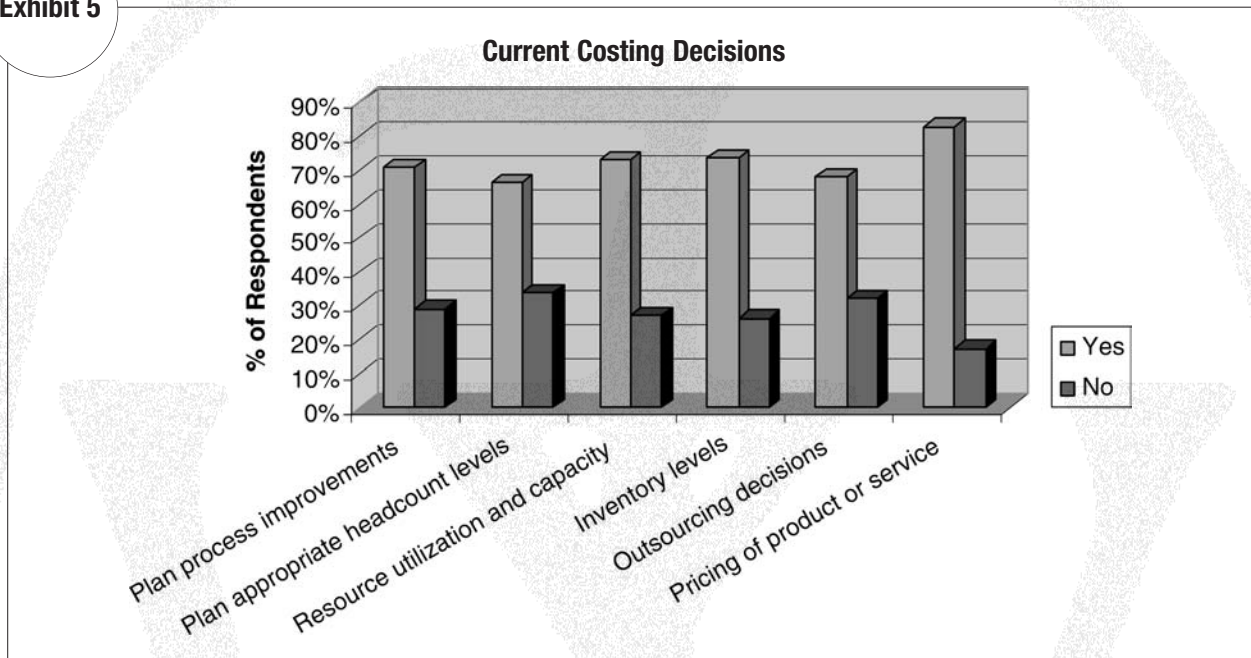
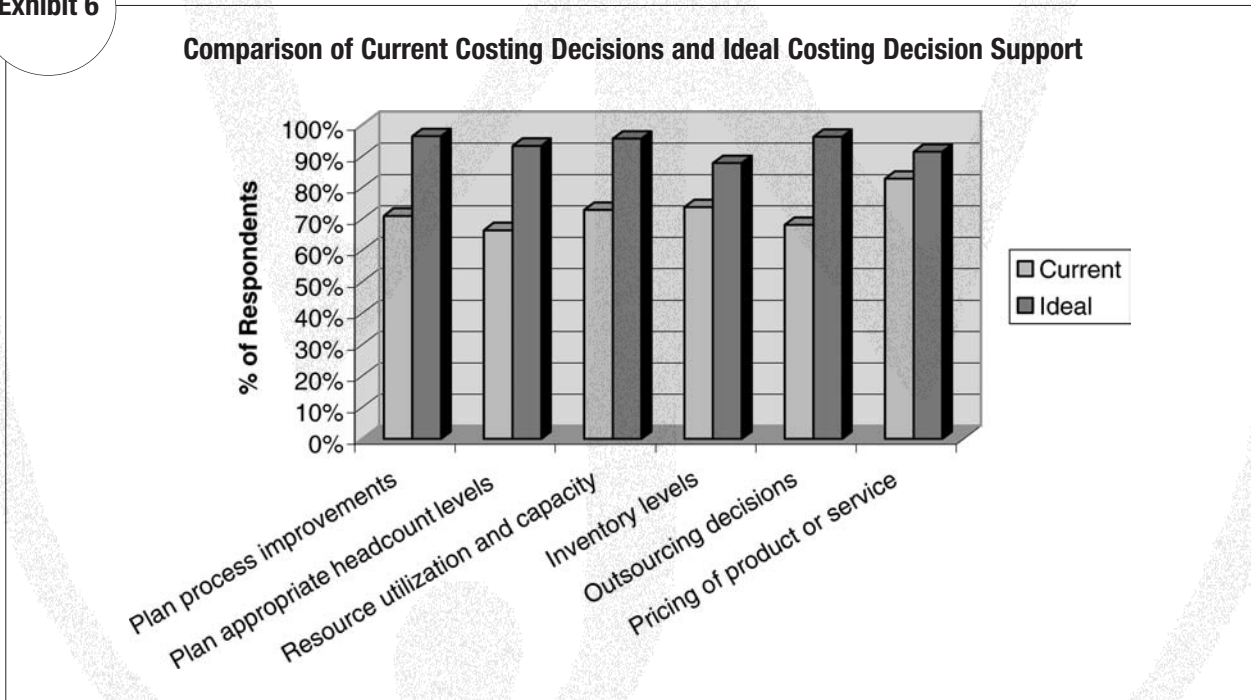


Exhibit 6



are the largest concerns (see Exhibit 7) of managers. Does the primary method of cost allocation used have an impact on the ability to make deci-

sions? Exhibit 9 shows the primary cost allocation method by the companies surveyed. (We offered seven choices as well as the opportunity to

write in additional methods. Very few "alternative methods" were provided, so they have not been presented in Exhibit 9.)

Exhibit 7

Concerns With Current Cost/Profitability Systems

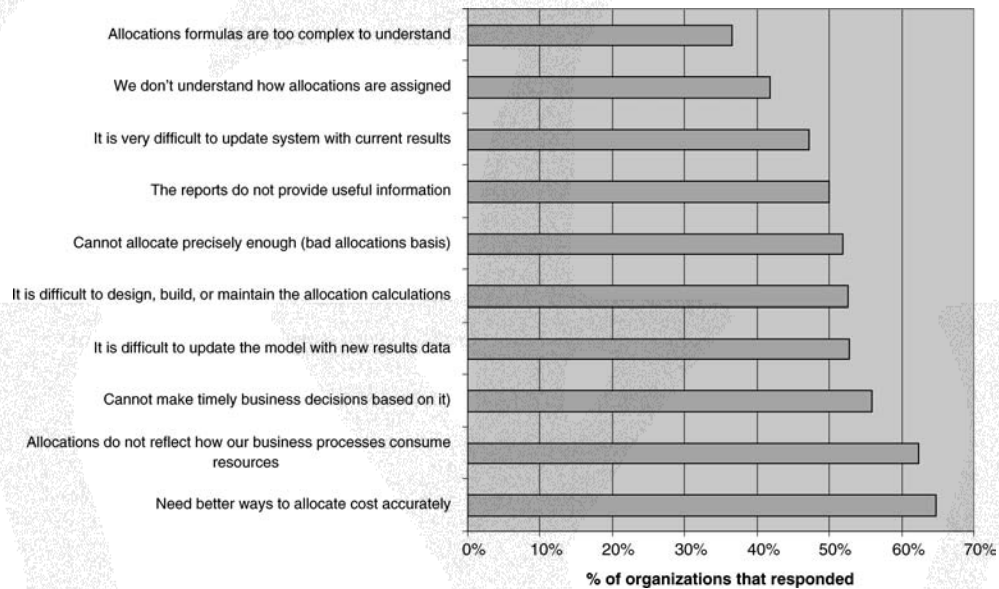


Exhibit 8

Current and Desired Frequency of Cost Calculations in CPS

	<i>Current Frequency of Cost Calculations</i>					
	<i>More Than Monthly</i>	<i>Monthly</i>	<i>Bimonthly</i>	<i>Quarterly</i>	<i>Semiannual</i>	<i>Annual</i>
Individual customer	14%	31%	2%	16%	7%	30%
Customer group	17%	39%	4%	13%	5%	22%
Individual product/service	13%	44%	3%	13%	5%	22%
Product/service group	16%	40%	1%	15%	4%	23%
Individual activity	15%	43%	1%	17%	3%	21%
	<i>Ideal Frequency of Cost Calculations</i>					
	<i>More Than Monthly</i>	<i>Monthly</i>	<i>Bimonthly</i>	<i>Quarterly</i>	<i>Semiannual</i>	<i>Annual</i>
Individual customer	26%	41%	3%	26%	4%	9%
Customer group	27%	39%	1%	20%	5%	8%
Individual product/service	22%	42%	3%	22%	3%	8%
Product/service group	27%	42%	2%	19%	4%	6%
Individual activity	25%	42%	2%	21%	2%	7%

Exhibit 9 indicates that 57 percent of the respondents currently use activity-based allocations to some extent, as compared to 90 percent that would

include use of this method in their ideal system. This result indicates that organizations want to use activity-based costing to help them with their cost allocations.

Decision-Support Tools

Finally, we looked at the tools that are being used to perform cost and profitability

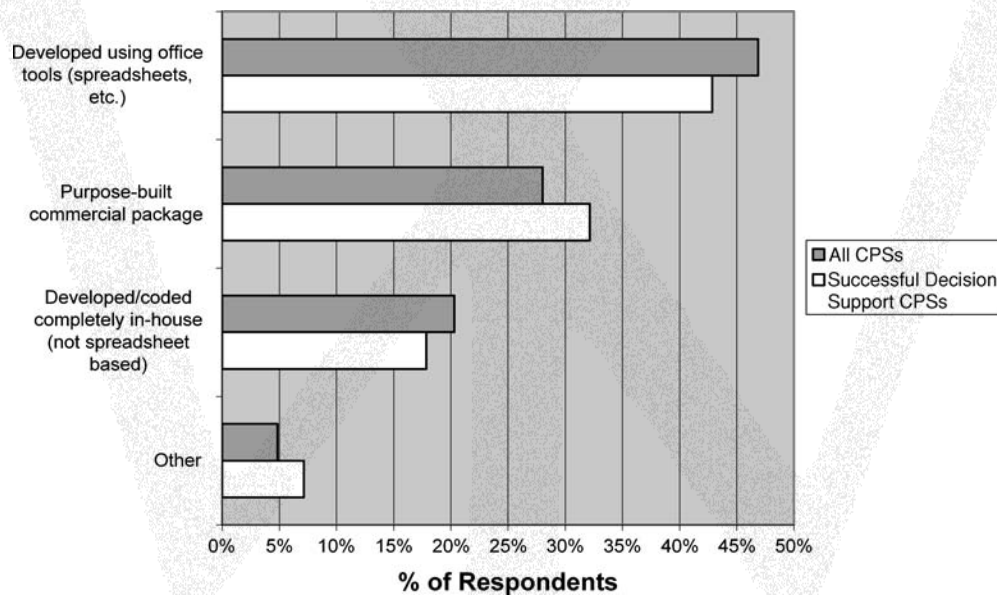
Exhibit 9

Cost Allocation Methods Used: Current and Ideal

	Equal Allocation Only	Activity-Based Allocation Only	Output-Based Allocation Only	Equal Allocation and Activity-Based	Activity-Based and Output-Based Assignment	Equal and Output-Based Assignments	All Three Are Used
Current	15%	14%	22%	4%	22%	7%	17%
Ideal	3%	29%	4%	4%	32%	4%	25%

Exhibit 10

Software Comparison of All CPSs to Successful Decision Support CPSs



calculations and provide results that support decision making. While the results are not dramatic, it is interesting to note that of the organizations that indicated their system successfully supported their decision making, slightly fewer of them used spreadsheets and in-house designed systems, and more used commercial packaged applications (see Exhibit 10).

CONCLUSIONS

With respect to cost and profitability systems providing decision support, it appears that while some organizations are having success, a significant number of organizations are not. In order for your organization to have success with decision support, some concerns need to be addressed. They fall into two main categories: appropriate

methods of allocation for business relevance, and frequency and ease of data updates.

Appropriate Methods of Allocation for Business Relevance

- There needs to be ways to allocate costs accurately (that is, in a relevant, reliable, and reasonable manner).

- Allocations must reflect how your business processes consume resources.
- Allocation calculations must be easy to design, build, maintain, and understand.
- Reports must provide useful information.
- You need to be able to allocate accurately enough to make appropriate decisions.

Frequency and Ease of Data Updates

- You must be able to make timely business decisions based on up-to-date system information.

- It must be easy to update data models with current results data.

In summary with respect to desired cost-allocation methods, consider the use of some form of activity-based costing to increase the accuracy of cost allocations, and consider using commercial packages that are flexible and have some of the capabilities mentioned above to increase the decision-support capabilities of your system.

NOTES

1. The associations include the Association of Chartered Certified Accountants;

the American Institute of Certified Public Accountants; the Chartered Institute of Management Accountants, Certified Management Accountants-Canada; the Consortium of Advanced Management, International; the Financial Executives International, the Institute of Management Accountants, and Oracle Corporation.

2. Source: University of Cambridge, Institute for Manufacturing. The BRAG research team does not address the usefulness of any specific computer-based tool but instead investigates how cost and profit measurement systems support financial, operational, and strategic decision making.
3. For many of the questions in the survey, we used a seven-point decision scale. For the remainder of this article, whenever the answer "agreed" is indicated, we have combined both the "strongly agreed" and "agreed" answers. We have not included the answers "somewhat agreed" or "neither agreed nor disagreed" in the results for "agreed."

Toby Hatch is a senior strategist for enterprise performance management with Oracle Corporation and is involved with research, writing, and speaking about enterprise performance management topics. Previously, she was involved with supporting and implementing business scorecards and activity-based management solutions in companies around the world. **William Stratton**, PhD, CMA, is a professor of accounting at the Udvar-Hazy School of Business, Dixie State College of Utah. Stratton has numerous publications in accounting and international business journals and is coauthor of a leading textbook on management accounting. **Raef A. Lawson**, PhD, CFA, CMA, CPA, is the vice president of research and professor-in-residence for the Institute of Management Accountants. He has written extensively in the areas of Chinese cost management practices, performance scorecards, activity-based costing, and cost and performance management. **Denis Desroches** is a Principal for the Enterprise Planning field with Oracle Corporation. Since 1993, Mr. Desroches has supported organizations with the selection, implementation, and knowledge acquisition of scorecard, performance management, and activity-based management solutions.