6 Activity-Based Costing in Your Organization
In previous chapters, we have examined various cases where activity-based costing (ABC) was applied to different areas in managing overhead costs. Now, it is time to bring everything together to take on your own journey. The reason why we use the term “journey” is that activity-based costing is neither a one-time application nor a final destination. Rather than a destination, it is a vehicle for getting you up the ramp to the highway of process improvement and accurate cost allocation with refined profit information.

Your project or organization may have endless issues that are different from the cases we have covered in this book. Consequently, you cannot achieve success simply by copying the procedures described in this book. One essential piece of wisdom in relation to applying ABC to any organization is “there is no cookbook.” Although there is no bible or perfect cookbook, learning common mistakes and recognizing potential challenges you may face in the journey will help you to overcome obstacles and challenges in implementing ABC in your organization or project.

This chapter will provide guidance and implementation tips for your ABC journey, set out as follows:

- The benefits of implementing ABC
- Implementation roadmap for ABC
  - Advice on major processes
  - Gate checklist
- Common mistakes in implementation

6.1 The benefits of the ABC journey

There are benefits to be obtained not only from the data analysis aspect of ABC but also from the process of implementation itself. Some general benefits of implementing ABC are:

Making people across departments cost-conscious and accountable for their processes

In general, cost accounting activities such as tracking the costs of cost objects are a segregated process, usually carried out by the accounting department. Activity-based costing (ABC), on the other hand, takes the efforts of employees across departments. The process of cost tracking or data collection requiring collective efforts involves people across departmental boundaries. In addition, each employee is aware of the cost impact of each
activity he or she performs. In this regard, the process of ABC development itself makes employees who participate in the process cost-conscious and accountable for their jobs.

**Transparency of cost allocation**
ABC uses a cost driver to allocate activity costs to cost objects. A cost driver is a factor that has a cause-and-effect relationship between costs and a non-financial factor. As opposed to volume-based allocation, ABC allocates activity costs to cost objects using a cost driver, thereby making the relationship between activity costs and cost objects clear and transparent. In this regard, the process of cost tracking and allocation can be said to be transparent.

**Flexible costing system**
Unlike the traditional costing system, the ABC system is flexible in that it may have multiple cost objects depending on the objectives of the system. You can develop various cost–benefit analyses or profitability analyses by using cost information on various cost objects.

You can use data or results from ABC as information for strategic decision-making or strategic planning. Most benefits of the ABC system as a tool for a strategic decision-making are based on the fact that ABC gives more accurate cost information on various cost objects. The following sections list examples of some of the benefits where ABC is used as a tool for strategic decision-making or planning.

**Bidding with reliable cost data**
With the availability of accurate information on home office overhead costs and project overhead costs, you can make your bidding numbers more competitive. In most cases, construction companies have used historical information or the predetermined percentage of direct costs based on aggregate and unreliable overhead cost information.

For example, most construction companies use the same overhead cost ratio (i.e., overhead costs/total direct costs) regardless of the type of the project they are bidding on. However, construction companies using the ABC system are likely to have more accurate overhead cost data especially with regard to different project types, such as new building construction projects vs. renovation construction projects. Accurate overhead cost information keeps construction companies more competitive in the competitive construction market.
Evaluation of subcontractors

One of benefits of a project-based ABC system is that ABC data allows you to evaluate subcontractors based on how much of your (i.e., the general contractor’s) resources are consumed by each subcontractor. This claim assumes that subcontractors consuming more of a general contractor’s overhead resources show better performances than do subcontractors consuming less.

With cost information on work divisions or specialty contractors (project-based ABC), you can develop a subcontractor evaluation system. If you have accumulated cost data over time, you can use that information in selecting a subcontractor for a new project. For this purpose, this book introduces a new MBR index (management burden ratio). A general contractor can develop MBR for each subcontractor, which can then be used to evaluate their performance.

Note that MBR is only one of the available metrics for measuring the performance of subcontractors. There are many other important factors a general contractor can use to evaluate its subcontractors’ performance. Examples include:

- On-time delivery rate (if a subcontractor supplies materials to sites)
- Percent plan completion (PPC)²
- Cost performance (final costs/contracted amount).³

Marketing strategy

These days, negotiated contracts have become popular in private markets as opposed to low-bid procurement systems where bids with the lowest price are awarded. Negotiated contracts usually require general contractors to build and nurture relationships with potential customers. As a result, general contractors’ marketing costs have increased. Since general contractors want to reduce marketing costs or make marketing efforts productive, they may want to focus on profitable market sectors (or project types) and customers. If you are a general

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¹ Refer to Chapter 3.4 and Equation 3.3

\[
\text{MBR} = \frac{\text{Project Overhead Costs Allocated to a Subcontractor}}{\text{Total Subcontracted Amount with a Subcontractor}}
\]

² PPC = the number of assignments completed on the day stated/total number of assignments made for the week (Ballard, 2000; Ballard, 1994).

³ Cost performance of each subcontractor = (contracted amount + change order amount)/contracted amount.
contractor, how can you identify profitable market sectors and customers without accurate profit data?

ABC can help you with this type of strategic decision. If you apply ABC to your home office, you will have the types of projects and customers as your cost objects. You will also have cost information and profitability analysis data on the projects and customers. You can focus your marketing efforts on the most profitable types of projects and customers.

ABC data can also be used at an operational level. You may use cost driver information in process reengineering. The following are examples of benefits where ABC is used as a process improvement tool at operational level.

**Identifying major activities**

Each department needs to identify major processes if it is committed to developing an ABC system. In the process of identifying activities, team members come to better understand activities throughout their departments, e.g., what other team members do, what information other activities require, how information on other activities is processed. In many cases, employees do not understand the nature of the jobs that others do. Note that many processes are interdependent, and understanding what others do is critical in improving processes in a department. To facilitate process improvement and organizational learning, each member of the department should understand what others do.

In this regard, the process of identifying activities\(^4\) requires each member to understand the nature of other employees’ activities. I would recommend that the definition of each activity in the activity list be addressed to foster and promote organizational learning and process improvement.

**Identifying the critical activities that need to be improved**

The cost driver rates, or the unit rate of activity costs, can be used as a measure of process efficiency or productivity. When the rates are compared to the cost driver information for other projects or organizations, you may find activities that need to be improved.

**Setting up a cost target for major processes**

I observed that some organizations use the cost driver information as a reference to set up their cost target for process improvement.

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\(^4\) Refer to Chapter 2.4 for more information on identifying activities.
One of the construction companies that I consulted with in the past had departmental meetings on a regular basis in which team members discussed how they could improve efficiency or productivity on major processes. In those meetings, they used to set a cost target for critical processes, for example, 5% below the current cost driver rate.

### 6.2 Implementation roadmap for ABC

ABC is a journey, not a destination. ABC itself does not improve processes nor reduce overhead costs. Implementing ABC paves the way for process improvement and refined cost information. At this point, the book presents two implementation roadmaps. The first, more abstract, is a concept-level roadmap for an organization striving to make ABC a sustainable method with the aim of making the organization better and more competitive. The second is a more detailed implementation roadmap for planning and executing a demonstration project or a focused ABC application, one of the milestones along the on-ramp to the ABC highway.

#### 6.2.1 Concept-level roadmap

In the first journey, you should limit the scope of the ABC system based on your urgent needs, i.e., a focused application. This focused application can be a demonstration project, the results of which may prompt you either to expand the ABC application or not to proceed further with it. In each application, an organization should go through three stages: a planning stage, an execution stage, and an internalizing stage. Although case studies in the previous chapters focus on planning and executing the ABC system, you should not neglect or ignore the stage of internalization. You need to stabilize the ABC system to prevent your organization from slipping back into the traditional costing method. Each stage will be addressed in a detailed implementation roadmap.

Once you have success with a focused application, you can extend ABC to other parts of the organization (expanded stage). For example, you can expand the ABC system to managing project overhead costs in heavy civil projects if your demonstration project was focused on managing project overhead costs in...
building projects. You may want to expand ABC to managing your fabrication shop if your demonstration project was focused on managing general overhead costs in your home office. As you see in the examples, you may implement multiple applications step by step in this phase.

Finally, you can replace your accounting system with ABC in managing overhead costs. Not every organization using the ABC system replaces its accounting system with an ABC system. Many organizations keep the ABC system as a complementary costing method for managerial and strategic purposes. Figure 6.1 shows a concept-level roadmap for the ABC journey.

### 6.2.2 Implementation roadmap for a focused application

In this book, we concentrate on focused applications. In the focused ABC application, an implementation roadmap is developed. The implementation roadmap consists of three phases (a planning stage, an execution stage, and an internalization stage) and two gates (Gate 1 and Gate 2) as shown in Figure 6.2.
6.2.3  Phase 1. Planning stage: preparing for your ABC journey

The planning stage is the first stage in developing the ABC system. This stage helps you and your organization prepare for implementing an ABC system. The planning stage is the challenging phase, but it is easy to neglect its importance because the impact of the performance at this stage is not instantly apparent. The impact of performance at the planning stage will not be revealed until the execution stage. Please be aware that the more effort you put into this planning stage, the more time you will save in the execution and internalization stages. The planning stage involves several tasks which include the following:

- Define goals
- Build up commitment from top management
- Form a task force
- Develop a team charter in which clearly defined objectives and scope are addressed
- Educate people in preparation for ABC system development.

6.2.3.1  Prepare a clear answer to the question “Why am I planning to implement ABC?”

Before you start, you need to understand why you want to implement activity-based costing in your organization. I do not believe that you want to implement ABC simply because competitors are
using it or because ABC is a popular costing method in other industries. You may have problems to solve, and you hope that ABC can help you solve them. What are those problems? Are you confident that ABC can solve the problems you have identified? If necessary, you can bring management consultants in to discuss the issues and possible outcomes.

Some of the problems or issues that ABC can help to solve or improve are:

Cost distortion, which can be an issue if the overhead costs of your organization (your home office, a project, or a manufacturing shop) are allocated to multiple cost objects;

Identification of critical activities prior to process improvement activities. You need to be aware of the costs of each activity in order to improve your processes.

In previous chapters we discussed several case studies, each of which had specific objectives for the ABC system:

- ABC in the construction project
  1) To monitor where and why project overhead costs are spent
  2) To evaluate the performance of subcontractors.
- ABC in the home office
  1) To estimate accurate profit for each project and each market sector
  2) To identify major processes in each department.
- ABC in the rebar fabrication shop
  1) To investigate whether the traditional volume-based allocation system distorts costs and profitability analysis
  2) To determine which projects are profitable
  3) To adjust the contract price between the rebar shop and each project so as to make the project cost transferred accurate.

Depending on the objectives or goals, you will have a clear idea of the scope of the system. For example, it is not a good idea to implement ABC company-wide from the beginning. In many cases, applying ABC to one or two specific department(s) is enough to achieve your goals.

### 6.2.3.2 Educate your people

If it is your first time implementing ABC, you may need external help. In many cases, an external consultant is brought in to lead the implementation. However, I have also observed that the skills and
knowledge needed to implement ABC are not always transferred to the recipient organization. As a result, implementing ABC can be a one-time event, which may provide some improvement.

If you want to make ABC a sustainable process for improving your organization, I would advise the use of a sensei instead of a management consultant to lead the ABC task force. How is a sensei different from a management consultant? The word “sensei” is used in Japan to refer to a teacher who has mastered the subject (Liker, 2003). You need a person who can not only lead or facilitate the implementation of ABC but who can also teach the skills and knowledge to transplant ABC into the organization. You can ask a management consultant to serve as sensei before starting the process. Eventually you need to build up ABC champions in your organization who can lead and coach other people.

Leveraging champions helps convince other members of your organization to participate in ABC development and support the task force. It is my observation that people tend to resist a new management movement such as ABC when an external specialist leads it, as opposed to an internal staff member.

### 6.2.3.3 Form a task force and develop a team charter

You need to develop a task force to lead the implementation. The team must include members across departmental boundaries. Developing an ABC system requires a team to understand the internal processes of each department; the team must also be able to obtain resource consumption information. With team members from across departments, such information is easily accessible. It is recommended to have a team leader or external facilitator who can coordinate or lead the implementation. In many cases, a consultant or sensei takes the role of facilitator in a task force.

Once you have a task force in place, the team needs to develop a team charter (Figure 6.3), for several reasons. First, the team charter is a game plan in which the objectives (what) and methods (how) are described. Second, the process of developing the team charter helps improve the collaborative spirit required for the process of ABC development.

The team charter needs to be developed by collaborative efforts. It also needs to be agreed and approved by every team member. The charter without consensus may create confusion
and cacophony that inhibit the team from moving forward. Although variations are allowed, a typical ABC team charter includes the following elements:

**Objectives**: In many cases, top management has specific goals in mind before forming a team. Although the objectives of the system are set by top management, the team members need to interpret them and re-create objectives that are achievable with the available resources (manpower, budget, and time). I have observed that the objectives set by a top manager were so varied and general that they could not be achieved with a single implementation of ABC.

**Scope**: Once the objectives are agreed, the team needs to define the scope of the system, depending on the objectives. It is important to avoid making the system too ambiguous or wide-open. The scope of the system should be limited so as to achieve results relevant to the objectives.

First, the team may choose which departments are to participate in developing the system. They must consider whether applying ABC to the entire organization is necessary to achieve the objectives.

Second, the team also needs to determine the types of costs to be included. The case studies in previous chapters included only human resources in their overhead costs, and excluded facility and utility costs. Depending on the needs and objectives, facility and utility costs can be included as required.

**Gate 1**
Gate 1 is the first gate in ABC system development and follows the planning stage. A checklist can be used for self-assessment. A checklist is a valuable tool to reduce the potential of overlooking an issue (or issues) at the planning stage. A checklist also serves as a reminder to the task force members of the required actions in the planning stage. Passing through Gate 1 allows the team into the execution stage. The checklist for Gate 1 consists of four areas, each of which has a set of information that should be checked off before moving to the next stage.

- Commitment from top management
- Task team formation
- Team charter
- Preparing the organization.

The complete checklist for Gate 1 is to be found in Figure 6.4.
6.2.4  Phase 2. Execution stage: developing your ABC system

The execution stage involves implementing plans (e.g., data collection plan) created during the planning stage. The execution stage is typically the longest phase of the ABC development process. It is the stage within which the deliverables are presented to the users of the system. While plans are executed, a series of management
Commitment from Top Management

1. Did top management declare their commitment to the ABC system?

2. Are your employees aware of the commitment to the ABC system from top management?

Task Team Formation

1. Did you make a task force that included an external facilitator and members from departments?

2. Did your task force have authority to access activity data or to collect activity data?

Team Charter

1. Did your task force develop specific objectives for the ABC system?

2. Did your task force define the specific scope of the ABC system?

3. Did your task force determine the level of activity detail?

4. Did your task force determine the method of estimating the costs of activities?

5. Did you develop a team charter and have it endorsed by each member and a senior-level manager in charge?

Getting your Organization Prepared

1. Did you provide training such as a workshop on ABC?

2. Are your employees aware of the objectives of the ABC system?

3. Are your employees aware of the procedures for data collection?

Figure 6.4 A checklist for Gate 1.

Processes should be undertaken to encourage employees to participate in data collection and to support ABC development. Leadership and commitment from top management are needed to successfully implement plans in this stage. Without leadership and commitment from top management, employees tend to be reluctant to participate in ABC development processes.
In the execution stage, the task force needs to carry out various tasks, including the following:

- Define cost objects
- Develop a list of activities
- Develop a list of cost drivers
- Allocate resource costs to activities
- Calculate the unit rates of activities
- Calculate the costs of cost objects.

**6.2.4.1 Reduce the number of types of cost objects**

You need to define appropriate cost objects, the costs of which should provide relevant information for achieving the objectives of your ABC system. I would recommend not defining more cost objects than needed. Remember that each cost object needs a cost driver and you need to keep track of the volume of each driver on a regular basis. In the case studies discussed in previous chapters, the specific objectives of each ABC system were the following:

- **ABC in the construction project**
  Management areas (cost management, quality management, time management, etc.)
  Buildings (building #1, building #2, etc.)
  Work divisions (earthwork, structure, finishes, cladding, mechanical, electrical, etc.)

- **ABC in the home office**
  Projects (project #1, project #2, etc.)
  Market sectors (commercial, tenant improvement, heavy civil, etc.)
  Customers (customer #1, customer #2, etc.)

- **ABC in the rebar fabrication shop**
  Projects (project #1, project #2, etc.)

The task force may simulate the cost analysis with pseudo cost data prior to collecting cost information on activities. The simulation will show how each data type can be used in the analysis; the team will be able to determine if such cost objects are needed. If this is your first time implementing ABC, do not define complex cost objects. Begin with a simple structure of cost objects.
6.2.4.2 Develop a hierarchical activity list

Care should be taken to use an appropriate level of detail when the team defines activities. The process of identifying activities is similar to the process of developing a work breakdown structure (WBS) (Project Management Institute, 2013; Fleming and Koppleman, 1994). As in a WBS, the activities in the ABC system need to be arranged in a hierarchy and constructed to allow for logical groupings. As discussed in Chapter 2, there are three levels of activities.

- **Daily task level** is appropriate for process reengineering. However, the ABC system can be complex if you use activities at the daily task level. Bear in mind that each activity has its cost driver. Avoid using activities at the daily task level in the ABC system because you have to update too many cost drivers on a regular basis.

- **Activity level** is appropriate for an ABC system. You should make sure that you can manage to update the costs of activities.

- **Functional level** is appropriate for use as an activity center. Usually each department or functional unit corresponds with each activity center.

I would highly recommend the separate development of an activity list and activity dictionary, so that the process of developing the costs of activities becomes efficient. You can begin to develop activity lists at the functional level. In many cases, it is straightforward to list out the activity centers first because they correspond to departments. You can then develop the list of activities for each function. When you need to improve processes for a specific activity, you can develop a list of processes associated with it. As mentioned in Chapter 4.4, you are strongly recommended to use an activity code to effectively manage activities. The first two letters to the left can be used if one function has more than one activity center. In the case of a project-based ABC system, these first two letters representing a function are seldom used. On the other hand, you might have these first two letters representing a function when you develop a home office ABC system because of its organizational complexity.

Once you have the list of activities, you need to develop an activity dictionary (Figure 6.6). In addition to a description of each activity, the activity dictionary needs to include the type of resources required
to perform it. The resource information is needed when you develop a survey to estimate the costs of activities. The progression of the list of activities and activity dictionary development is as follows:

Figures 6.5 and 6.6 show samples of the list of activities and activity dictionary for your reference.

<table>
<thead>
<tr>
<th>Activity center ID</th>
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**Figure 6.5 Template activity list.**
<table>
<thead>
<tr>
<th>Activity ID</th>
<th>Activity</th>
<th>Definition</th>
<th>Resources</th>
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**Figure 6.6** Template activity dictionary.

**Goal:**
Define comprehensive list of activities on each activity center

**Goal:**
Describe each activity
Identify required resources on each activity
6.2.4.3 Develop a list of cost drivers meeting three criteria

After activities are identified, you need to develop a cost driver on each activity. As shown in earlier chapters, you can define a list of cost drivers after activity costs are calculated. It is acceptable to switch the sequence as long as cost drivers are defined before activity costs are assigned to cost objects.

The reason why you are recommended to define a cost driver on each activity is that the collective efforts of the task force members are required. As discussed, you need to select an appropriate cost driver on each activity from the three types of cost drivers using the following procedures:

1) The team needs to select one of the three types of cost drivers (i.e., transactional, duration, and budget) based on the attributes of each activity.

2) Once the type of cost driver is determined, a few candidate cost drivers can be developed for use as cost driver for each activity.

3) Then, the team can use the three criteria previously discussed to determine the cost driver:
   - Does it have a cause–effect relationship with a cost object?
   - Can we measure the volume of cost driver in an objective way?
   - Can we measure the volume of the cost driver in an economically feasible way?

Sometimes the team may have a hard time choosing the right cost driver from two candidates. Suppose that one gives more accurate costs while the other is simpler. One piece of practical advice from my experience as a consultant is that simplicity is paramount. This advice particularly applies if you are a first time user. Remember that you need to keep track of the volume of each cost driver; measuring it is not a one-time event.

6.2.4.4 Determine resource costs to activities

If you are a first-time implementer, I would advise you to use a time–effort % method where a percentage of each person's time is allocated to each activity. Prior to carrying out a survey to obtain this data, there are two requirements: (1) obtaining the unit costs of resources and (2) educating people participating the survey.
6.2.4.4.1 Obtaining the unit costs of resources

Most resources in an ABC system are human resources, so you need to obtain salary or hourly wage information on each human resource from the accounting department. The wage information usually includes burdens (taxes). When wage information outside organizational boundaries is needed, it must be obtained from a task force member. In this regard, obtaining commitment from all participating units is critical.

6.2.4.4.2 Educating people participating in the survey

Because people often fear job-monitoring systems, they may be uncomfortable accounting for the time spent on the different activities they perform. As a result, people put more time towards activities that look valuable and less time towards activities that look less valuable.

It is important to reassure your employees that the new system is a way to calculate the costs of each cost object not to measure the performance of each employee. For that reason, it is advisable that you hold a workshop where the purpose and major procedures of the ABC project are addressed. Alternatively, you can use an online workshop to save resources. Such educational sessions need to take place before data collection begins.

When the two prerequisites are met, you are ready to survey for time–effort % data. Each employee in the departments to be surveyed is required to allocate the average percentage of his or her time spent on each activity (Figure 6.7).

The cost of each activity can be easily calculated using the following formula, once the time–effort % form has been filled out:

\[
\text{Cost of Activity } i = \sum_{j=1}^{N} (\text{Time}\%_j \times \text{Salary or Resource Cost})
\]

6.2.4.5 Calculate the unit cost of activity (activity costs per cost driver)

Since the system allocates activity costs to different cost objects using a cost driver, you need to calculate the unit cost of each activity using the following simple formula:

unit cost of an activity = activity cost/total volume of cost driver
Activity Based Costing for Construction Companies

When calculating the volume of cost drivers, you need to have different strategies depending on the type of cost driver.

*Budget cost driver:* You may need to obtain budget-related information including

- Material budget
- Labor budget
- Total budget

Figure 6.7  Time–effort % survey form.

<table>
<thead>
<tr>
<th>Wage</th>
<th>Act #1</th>
<th>Act #2</th>
<th>Act #3</th>
<th>…..</th>
<th>Total percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resc #1</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>100%</td>
</tr>
<tr>
<td>Resc #2</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>100%</td>
</tr>
<tr>
<td>Resc #3</td>
<td>%</td>
<td>%</td>
<td>%</td>
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<td>100%</td>
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<tr>
<td>Resc #4</td>
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<td>Resc #5</td>
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<td>Resc #6</td>
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<td>Resc #7</td>
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<td>%</td>
<td>100%</td>
</tr>
</tbody>
</table>

... % % % % 100%
• Revenue
• Spending on material.

*Duration cost driver:* For duration drivers, you need to measure the duration of an activity. The simple way to measure the length of the activity is to ask the person who performs the activity. It is important to use an average duration because duration can fluctuate over time.

*Transactional cost driver:* This is the most common type of cost driver. However, it can be cumbersome to track the volume of this type of driver. But, never fear, most transactional cost drivers can be tracked through official documentation. For example, the number of inspections can be tracked using inspection documents such as inspection reports. It is important to measure the volume of cost drivers by taking the average of at least three-months’ data.

Once you obtain the volume of each cost driver, you can calculate the unit cost of each activity, the activity cost per cost driver, using the following equation:

\[ UR_i = \frac{C_k}{Q_i} \]

Where, 
- \( k = \) Cost object number
- \( i = \) Activity number
- \( C = \) Cost
- \( UR_i = \) Unit rate of activity \( i \)
- \( Q_i = \) Quantity (volume) of cost driver for activity \( i \)

**Gate 2**
Gate 2 is the second gate in ABC system development and follows the execution stage. As for Gate 1, a checklist is provided for self-assessment. Passing through Gate 2 allows the team to proceed to the internalization stage. A checklist for Gate 2 consists of two areas, each of which has a set of information that should be checked off before moving to the internalization stage.

• Developing a list of activities
• Developing a list of cost drivers and costs of activities.

The complete checklist for Gate 2 is to be found in Figure 6.8.
6.2.5 Phase 3. Internalization stage: final tune-up

The internalization stage is the final stage of ABC development. This stage involves fine-tuning the ABC system by testing the prototype system and developing a system manual that helps the organization to update and maintain the system.

6.2.5.1 Test-run the system

Having obtained the unit cost of each activity (i.e., costs per cost driver), you need to test-run the prototype system before executing it routinely. The total volume of cost drivers can be divided into cost objects. Suppose that a “change order review” activity has a cost driver of “the number of change orders” and the total volume of the cost driver is 20 (i.e., the number of change orders issued for the last three months). You should investigate how...
many change orders each cost object has consumed over the last three months and ensure that the total number of change orders is still 20. By doing so, you can reduce additional efforts in tracking the volume of the change order.

You need to assign the activity costs to cost objects based on the volume of cost drivers consumed by each cost object. In the process of assigning costs to cost objects, you need to make sure the prototype system meets the following condition:

\[
\sum \text{Resource Cost} = \sum \text{Activity Cost} = \sum \text{Cost of Cost Object}
\]

Once you are sure that these three terms produce identical results, you need to produce a variety of cost reports such as activity cost reports. The purpose is to establish whether the results generated by the prototype system can achieve the objectives set by the task force (i.e., the objectives set out in the team charter).

The primary objective of the test-run is to identify errors or areas for improvement and to refine the prototype system. At the end of the test-run, areas for improvement should be listed if any of the following conditions occur:

a) When there is any objective of the system unfulfilled by the analysis of the results of the test-run;
b) When it was difficult to track the volume of any cost driver;
c) When any transactional cost driver showed significant fluctuation over time.

In the first case, the cost objects must be redefined or new cost objects added, so that you have the information necessary to achieve the system objectives. The worst case scenario is to adjust the system objectives. In the second case, you need to consider an alternative cost driver that allows you to manage the tracking of the volume of the cost driver. In the last case, you need to consider changing to either a duration cost driver or a budget cost driver.

### 6.2.5.2 Develop a system manual

When you refine the prototype system based on the finds of the test-run, you should develop a system user manual. A system user manual is a written guide in hardcopy (paper report) or
electronic document format that provides instructions on how to use the ABC system. Some firms also develop educational material in web-video or other mobile format so that they can minimize time spent on class-type instruction.

Developing a system manual is a critical process because the ABC system requires regular updates. The system manual is expected to include the following components:

1) **Scope and Objectives**
2) **Activity List**
   You need to include the activity hierarchy and the definition of each activity.
3) **Resource List**
   The manual needs to clearly show what specific resources are consumed by each activity.
4) **Allocation Procedure**
   You need to delineate how the volume of cost drivers is tracked and how activity costs are allocated to cost objects.
5) **Types of Reports**
   The system manual should indicate what types of ABC cost reports need to be generated.
6) **Update Instruction on Activity Costs**
   The activity costs in the prototype may change over time. Therefore, you need to address the frequency of updating activity costs and the method for updating them. The frequency of updating activity costs may differ depending on the attributes of activities.
7) **Update Instruction on the Unit Cost of Cost Drivers**
   When the activity costs change as a result of updates, the unit cost of cost drivers should change accordingly.

### 6.3 Common mistakes in the journey

#### 6.3.1 Beginning your ABC journey without strong commitment from top management

Commitment to the ABC system is most effective when it comes directly from the top of an organization. I have observed that commitment from top management is one of the most important success factors during ABC system development. Commitment from top management makes employees and
members of organizations aware of the sense of urgency and ensures that tasks associated with the ABC system are put on their priority lists. Otherwise, the tasks associated with an ABC system can be seen as burdensome.

Commitment from top management is needed even after the ABC system is developed. Without deep commitment with consistent leadership, organizations tend to slip back into traditional cost management once operating the system gets tough, perhaps in relation to the need to update the volume of cost drivers on a regular basis. This is in line with Kotter’s experience (Kotter, 1995; Kotter and Cohen, 2002) that 50% of new operational management approaches failed at this step.

6.3.2 Beginning your journey with poorly defined objectives and scope

The more time and effort is put into defining the objectives and scope of the system, the more time will be saved in its execution, including time required for data collection and analysis. If you jump into developing the ABC system, perhaps defining activities without properly defining objectives and scope, it will not be surprising if you are forced to redefine activities or if you get results that are not relevant to your goals.

6.3.3 Developing a task force that does not have the necessary authority

The first time I was asked to consult on ABC implementation for a contractor, the task force was made up of new or inexperienced employees from several departments because most departments did not take the ABC initiative seriously. Instead, they thought that it was a kind of business campaign on which they were required to spend their time and resources.

I liked working with them, but there were two major problems in implementing ABC. First, the team had difficulty developing activities, since they were not fully aware of the processes of the department in which they worked. Second, the team also had difficulty in collecting activity data such as duration or cost driver volumes, since they had limited access to such data.
6.3.4 Developing more cost objects than needed

The team may attempt to have as many cost objects as possible. However, you should keep in mind that every additional cost object needs additional efforts to keep track of its cost driver. You can avoid such a mistake by having a clear set of objectives prior to developing a team charter.

Tip!

When you form a new task force leading ABC implementation, make sure that each team member is experienced and is aware of the major processes within their departments. In addition, you need to give authority to a task force so that they have easy access to various data.

6.3.5 Making activities ambiguous

When you develop activities, there should be consensus on the definition of each activity. Sometimes, the activity seems too obvious to the team members to discuss its definition and scope. However, the definition or scope of an activity can change as time passes. Two years after the system is developed, for example, people may have difficulty calculating activity costs because of poorly defined activities.

Tip!

You need to develop a clearly defined list of activities. When you develop a list of activities, you need to use a hierarchy to differentiate activities from functions or detailed processes.
6.3.6  *The effect of distorted time–effort % assigned to activities*

Some people tend to allocate a higher percentage of their time towards activities that seem more valuable. That is because they may construe the survey as intended to evaluate performance. When people distort their time–effort % data, you may have distorted ABC results. The time–effort % survey is so important and crucial in developing the ABC system because responses to the survey lead to establishing the costs of activities.

**Tip!**

You need to educate people before you begin collecting data and before carrying out the time–effort % survey. A two- or three-hour workshop led by an external consultant or sensei is advisable. You may use online tools such as YouTube or PowerPoint for those who do not have time to attend such workshops.

6.3.7  *Choosing cost drivers that are hard to measure*

When you choose a cost driver, you need to consider not only the cause-and-effect relationship but also its tractability. Suppose that you have a cost driver that has a positive correlation with the cost of an activity. The cost driver is not appropriate, however, if you have difficulty tracking the volume. In a case where you need to select a cost driver from two factors, I would advise you to select the one whose volume is easy to trace.

**Tip!**

If you establish a particular cost driver, remember that you have to continue to track the volume of a cost driver on a regular basis. After completing a test-run, it is better to change the cost driver to a more manageable one if you find that updating the volume of the cost driver is overly cumbersome.
References


