

# Overview of Closed Loop Lifecycle Planning

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## INTRODUCTION

As mentioned in the preceding chapter, closed loop lifecycle planning represents the overall bill of material that defines what IT needs to fund to support the client environment.

*Total cost of ownership* (TCO) represents the results of inputting information into a toolset that compares input to the industry averages and averages of other similar businesses. The result is a measurement output that suggests areas of improvement. The analogy that can be used is that, as a measurement strategy, TCO can identify where to go “fishing” for savings; lifecycle identifies how to “catch” the fish.

At the time of Y2K, networking and other IT policies were not as mature as they are today. The regulatory environment and management toolsets then were not as advanced either. As a result, unsecured end users could add, change, and otherwise impact what might have been intended to be a locked-down (secured) environment. For the best example of this, compare the number of application titles in an enterprise back then with the number of applications in use today in the enterprise. Whereas much of that growth has been organic (required by the business), much more of it has likely resulted from end users exercising the flexibility of the access environment.

In the late 1990s, lifecycle was mentioned in most manufacturer and service provider portfolios. However, no consistent industry definition addressed the full range of IT and business requirements to provide businesses a “playbook” from a practitioner’s perspective.

The methodology presented in this book is proven. Closed loop lifecycle planning has been embraced by many businesses as a building block of the overall lifecycle-management plan itself, as evidenced by more than 200 white papers (and counting) and its implementation in more than 500 unique businesses (and counting).

The table of contents (and hence the chapters, or structure) of this book presents a menu of closed loop lifecycle planning elements. These lifecycle elements interrelate and operate within all enterprises, regardless of size. The lifecycle elements include the following:

- Acquisition of hardware
- Acquisition of software
- Staging and integration
- Interoperability and prototyping
- Installation
- Moves, adds, and changes (MACs)
- Warranty and maintenance
- Asset management
- Help desk
- Networking
- Project management
- Technology refresh
- Disposition
- Management tools
- Total cost of ownership
- Service delivery strategies

Closed loop lifecycle planning includes user segmentation, cost of change, and appropriate incumbent behavior. This book addresses each of these topics. User segmentation and the cost of change are distinct disciplines. Properly implemented, these elements will ensure end users get what they need and do not act independently.

## WHAT IS AN ACCESS DEVICE?

Closed loop lifecycle planning is based on the access computing model: how end users obtain data and information from a corporate repository. The bill of material described previously identifies the elements required to support an access device used to obtain such information.

Just a few short years ago, the definition of *access device* would have been quite straightforward: a desktop or a laptop computer. However, the technology workers now use to perform their jobs has changed dramatically. These changes have not been driven solely by business requirements, which traditionally drive behavior; they have also been driven by the consumer market and the rapid adoption of various new technologies.

**NOTE:** The Bonus Section of this book, “User Segmentation: A Complement to Closed Loop Lifecycle Planning” (located online), covers the overall role of technology in lifecycle management.

The important point here is that end users access information to perform their jobs in a number of extraordinarily variable ways. To manage lifecycle today means a focus on the following devices, just to name a few:

- Desktops
- Laptops
- Tablet PCs
- Handheld devices
- Smart phones
- Home devices
- Printers
- Thin clients

Access device diversity creates both actual and potential complexity. For end users, the diversity could mean more flexibility. The balance between device diversity, control, and flexibility will challenge most businesses. Do businesses strive for more control or more flexibility? A plan that allows end users flexibility while meeting company security and other controls (such as data backup and protection) is optimal, but always a challenge to define.

Today, when personal privacy issues, intellectual property protection, and regulations hold businesses and individuals more accountable for managing corporate information, device diversity could add more complexity, cost, and risk, making

the decision process more difficult than anticipated. And as part the overall context (and complexity), most businesses are trying to constrain or reduce their IT expenditures.

One metric often used to indicate how well a business manages lifecycle is the ratio of PCs to end users. Obviously, the goal is to get to as close to a 1:1 ratio as possible. However, the real metric today should be the ratio of access devices to employees. This subtle difference recognizes the fundamental change in the client lifecycle management discipline and the fundamental change in discussing end-user access within a business.

Lifecycle costs and risk associated with a diverse portfolio of access devices drive changes in IT. Today, many businesses do not include the full range of access devices in a single portfolio. As a result, costs, risk, and resources are commingled with other expenditures and are difficult to isolate.

New technology may also alter the traditional separation of IT and network infrastructures. The demand for mobile access, for instance, is resulting in hybrid technologies that combine both IT and networking disciplines. For example, is a remote handheld device that has access to email a device that IT should manage or is it a device that the networking team should manage?

**NOTE:** Security is the number one priority in the twenty-first century. Even the smallest security leak can prove devastating. A security breach is now potentially a new form of global terrorism.

The organizational roles and responsibilities could begin to become blurred as mobility becomes standard within businesses.

## PCS ARE NOT A COMMODITY!

One cogent business position holds that access devices in a business enterprise are not commodities. Others believe that the pricing of the device itself makes it a commodity, and to some degree that is correct. The big picture suggests however, that a PC is not a commodity.

You might be asking, if PCs are *not* a commodity, why is there so much governance regarding how a device is configured and deployed? And, if PCs *are* a commodity, why is there so much concern about their support costs? Another question is this: Why is there such concern about cleansing the information on the device before disposing of it.

The answer is simple: After a standard PC has been customized in any way, it loses all the characteristics of a commodity. That customization can even include the placement of the device within a business infrastructure.

The definition of *commodity* is often confused with *consumable*. This confusion inhibited lifecycle practices with regard to access devices for a long time. The idea that access devices are commodities suggests that you can take one device and, without change (or very minor changes), transfer the device just by changing where you the plug it in. In a business, however, users (and their access devices) have a profile, an image, retained data, and personalization that must be considered. Transitions are complex. Therefore, PCs (and other access devices) should not be considered merely commodities. Many businesses have yet to accept this fact, and therefore access device governance is perhaps less than it would otherwise be.

## PRICE DOES NOT EQUAL COST

One principle of lifecycle management holds that price does not equal cost. Typically, PC manufacturers and access device manufacturers price their products within a narrow bandwidth of other manufacturers' prices. However, the manner in which the devices are acquired, deployed, managed, retired, and so on (all factors of actual cost) may be unique to the *class* of device.

## IF A LIFECYCLE-MANAGEMENT CHANGE CANNOT BE QUANTIFIED, IT WON'T HAPPEN

Lifecycle management in an organization requires that any proposed change to an existing stable current-state environment must be quantified; this quantification is necessary to get senior management to buy in to the change and support it in practice. Further, the quantification must be expressed in terms that reflect true dollar impact (that is, the balance sheet and income statement impact).

Many businesses sincerely believe in productivity gains, downtime measurement, reduced risks, and the benefits of end-user satisfaction. However, in actuality many businesses consider these types of impact "soft" costs. Soft costs cannot be directly related to the IT budget and financial statements and so are often overlooked. As a result, most business justifications that are based heavily on "soft" costs are not embraced as quickly as those that are based on a firm dollar relationship to the budgeting process.

Even in this area, perspectives are changing. It is now understood that productivity, downtime, risk, and other costs traditionally considered “soft” can be quantified, tracked, and measured. Due diligence is required to make a business case, but that is generally understood. Administrative regulations, laws, and corporate governance have all elevated the role that these “soft” costs play in justification of a business case.

Senior management generally tends to discount business cases in which “soft” costs are the predominant driver. If the “soft” costs are explained in terms of cost reduction and cost avoidance, however, this complementary positioning adds considerably to the business case. After all, cost reduction and cost avoidance still represent the cornerstone of most business cases for change.

In closed loop lifecycle planning, the focus is on “hard” cost impact: cost reduction and cost avoidance. Cost reduction shows up on both the balance sheet and income statement. Cost reduction impacts both the capital and expense categories of the IT budget. Cost avoidance focuses on those costs and expenses that might continue or might increase if change is not embraced. Cost avoidance is the category in which many of the entrance and exit costs show up.

It should be clearly understood that cost avoidance is not a “soft” cost; instead, it is similar to a cost reduction. Cost avoidance represents the financial impact and service level impact of not making certain lifecycle decisions (in other words, retaining the status quo).

One example of cost avoidance is a business decision not to acquire a management tool for imaging, but to continue the manual process of loading an image. If the requirements or volume increases, the alternative is generally to increase staffing. The increased staffing becomes a cost-avoidance categorization.

In a general context, many lifecycle elements can be addressed by “throwing more resources” at a problem area. The increased resources represent real costs and should be identified as a conscious decision not to avoid costs, but to increase the expense to address a certain issue.

Together, cost reduction and cost avoidance underlie the business case for lifecycle management. After these elements have been quantified, management must validate the reasonableness of the numbers so that the plan can be put into place to address and effect change.

Only after cost-reduction and cost-avoidance quantification has occurred does the impact of service levels and “soft” costs become fully relevant. In many cases, a higher service level can be achieved for less cost. In other cases, the service level

may be modified to reflect the end-user requirements (as in the case of user segmentation).

Note, however, “soft” costs are playing a bigger role in the overall justification of more and more business cases. Businesses are learning that the “soft” costs can be more than merely subjective. This understanding reflects as much of a cultural shift as a business shift.

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## IS LIFECYCLE MANAGEMENT A “BEST PRACTICE”?

*Best practices* are generally defined as the processes followed to optimize service levels while minimizing risks and costs. Although few would disagree with this definition, there is often an assumption that “one size fits all” as relates to best practices in general.

Experience has taught, however, that a logical threshold determines whether a business can fully adopt best practices. Most important perhaps is whether a best practice can scale according to the complexity, size, and scope of a business. Most companies, for example, need different service levels for different types of users, and IT must be able to meet this requirement.

One way to put best practices into perspective is via an employee count or a count of the end-user population. Based on my experience, the following scaling perspective will help you understand best practices.

### **Number of Employees or End Users with Access Devices**

Fewer than 5,000

5,000 to 10,000

10,000 to 20,000

More than 20,000

If viewed in this context, lifecycle management can be more easily adapted to the unique requirements of businesses based on the criteria of scope, size, and complexity. The fewer the number of employees or end users, the more likely that the processes will be manual and that lifecycle management will have more of a high “touch” perspective. Affordability, as it relates to investing in lifecycle management, will factor highly in the “fewer than 5,000” category. Although automation, TCO, lifecycle management, and risk are important issues to these businesses, cash flow just might not suffice to address these issues at a high level yet. And so, these businesses put off addressing these issues until profitability and investment priorities are compatible.

Management tools and predefined processes for this size of business are being scaled to make things more affordable for these companies. The market has recognized their growth potential, and so this segment will clearly get favorable attention. Even as of this writing, investment dollars are focused on scaling solutions for those businesses in the “fewer than 5,000” employees or end users category. After all, the risks and liabilities are as important (some might say more important) to this business category as to any other.

In the “5,000 to 10,000” category, the perspective of lifecycle management is that the scaling is such that manual intervention and resources required suggest a higher level of best practices. This implies more tools and more well-defined strategies going forward. Businesses in this category often believe that they are on the cusp of requiring more sophistication as it relates to best practices. Although not scaled to be fully manual, and perhaps not sized to have a large, robust IT department, many of the processes and resources are stretched. The “5,000 to 10,000” category tends to be more resource intense and expense constrained.

The “10,000 to 20,000” category is a clear area where best practices can be scaled and are more easily defined. The governance is extraordinarily relevant, and the expectations are clearly higher. Accountability is necessarily high in this category because the scope of what needs to be managed becomes much more complex, simply because of the number of end users impacted. In this category, it is not unusual to find that businesses are growing organically or through acquisition. In this scenario, lifecycle management becomes a critical discipline that can impact how competitive the new organization can be in the market. Information is a key and critical asset. IT plays even a more pivotal role in the new enterprise.

When a company has more than 20,000 employees or end users, lifecycle management really becomes non-negotiable. Without doubt, to comply with regulations and governance, these businesses must fully embrace best practices relevant to the size and scale required.

The overall message in this section is not that best practices are inflexible or inadaptable; it is that best practices must be viewed in context. Scaling and scoping are key factors to consider. The fundamental work to be performed does not necessarily change, but how that work is accomplished will certainly vary. Lifecycle management, therefore, is a custom solution.

Lifecycle management itself is a best practice!

## WHY DOES IT OFTEN TAKE A COMPELLING EVENT TO INITIATE LIFECYCLE MANAGEMENT?

According to closed loop lifecycle planning, a *compelling event* is an occurrence that triggers a review and potential change in access devices and support strategies. Such events are common and occur frequently. Another helpful term to understand is *business as usual*, which describes the stable state of a business.

In the client computing environment, having or anticipating an event can be enough to trigger an evaluation of lifecycle management. The events and scenarios listed here are types of business-as-usual activities that might trigger a lifecycle review. Each of these topics is covered in detail in various sections of this book. A compelling event might be any of the following, among others:

- Technology refreshes
- Software compliance audits
- Cost-reduction initiatives
- Acquisitions/divestitures
- New management
- Related industry developments
- New technologies
- New facilities
- Regulatory/legal requirements
- Risk-reduction initiatives
- Policy or governance
- Personal privacy protection
- Intellectual property protection

Any of these compelling events by themselves could be the catalyst for lifecycle management to be explored in earnest. In each of these compelling events, lifecycle as a solution becomes the lynchpin of the approaches to secure benefits (whether it is to reduce costs, avoid costs, mitigate risks, or improve service levels).

One common element in all of these compelling events is that they suggest change.

In today's business-as-usual environment, most of these compelling events are considered the norm, not an exception. This change in the definition of a compelling event could be one reason why lifecycle management has remained constant and periodically seems to elicit renewed vigor with regard to the discipline.

## “IT TAKES A CHANGE AGENT”

To implement lifecycle management, someone must act as a “change agent.” The change agent will be, simply put, a very unpopular person for a period of time; after all, change to many implies that something is “wrong.” The dynamics of change and the cost of change are discussed more fully later in this book. The reason to raise this point here is that in all organizations, there needs to be a focal point to establish and effectuate the vision.

Don’t confuse the role of the change agent with that of a program or project manager. The roles differ significantly, and to a large degree are unrelated. The change agent addresses the organizational, emotional, political, and cross-business issues relating to lifecycle management. The project or program manager provides very specific deliverables in terms of process and procedures relating to work actually performed. Depending on the size and structure of a company, someone on the staff can be given direct responsibility to implement the vision; this person is the change agent.

Lifecycle management will always require support at the executive level. Without this commitment, only portions of lifecycle management may be delivered. For many companies, a partial approach might seem adequate, and so not all businesses will fully embrace integrated lifecycle management. However, partial implementation ensures suboptimization. And although the business case for lifecycle management might have been effectively created and accepted, the cost of entry (in both political and economic capital) might entice some businesses to attempt a partial implementation.

One role of the change agent is to determine what the vision (solution) is at the governance and policy levels. The next step is to determine how this vision can be executed within the organization. Without executive sponsorship and a champion, however, no vision can be effectively implemented (or behaviors changed). One would logically look to the chief information officer (CIO) and chief technology officer (CTO) as key sponsors for change within the enterprise. The CIO, chief organizational officer (COO), chief financial officer (CFO), or CTO generally champions change within an organization. Any or all of these executives can be considered senior management change agents.

The staff person driving the change must be empowered by the executives and have their full support. If not, the changes are difficult (if not impossible) to implement. Experience has suggested that change agents have a high turnover rate due to the significant pressures; frustration and “burnout” are symptoms commonly expressed.

A change agent is a highly sought and a highly valuable resource. The role is so critical that it does relate to how competitive a business can be in its industry.

## PILOT AND PROOF OF CONCEPT

The terms *pilot* and *proof of concept* are often used interchangeably in the industry. For lifecycle management, these terms have specific meaning and are not the same. It is important to understand the differences between the two terms as another foundation for lifecycle management.

A pilot is the testing to determine whether a technology works. Product specifications are provided, speeds are defined, networking connectivity is defined, and so on. Pilots are a technical evaluation process and are generally performed in a lab environment. The persons performing the evaluation are the engineers and architects. The objective is to ascertain whether the specifications provided perform correctly and the functionality is as presented. Piloting is a critical task within lifecycle management and is covered in more depth later in this book.

*Proof of concept*, on the other hand, is a business proposition. A proof of concept takes the approved technology (validated technically in the pilot phase) and rolls out the technology along with the support processes in a scaled production environment.

Lifecycle management should be viewed in a proof-of-concept perspective. Many businesses consider the proof-of-concept phase the initial phase of the overall deployment of lifecycle management practices. The thinking is that if the proof of concept is executed as expected, the policy, process, and procedures can be adopted.

The distinction between pilots and proofs of concept is critical. Lifecycle management is not a pass/fail proposition. Many of the business support decisions regarding the proof of concept should be made in this phase.

In summary, a pilot and a proof of concept are two different things, each with its own unique criteria: one technical and one business. These two lifecycle elements should not be confused.

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## CONTINUOUS PROCESS IMPROVEMENT

Lifecycle management is not a one-time-only event or activity. Dynamics are constantly changing (a great driver, in general, for our economy). The billions of research and development dollars spent on innovation and new technologies and

tools is a cornerstone of lifecycle management. Those businesses that take advantage of technology innovation differentiate themselves from others and thus accrue a competitive advantage.

End users expect a continuous process-improvement plan to be in place. Many times, end users are unaware of the plan, and this can lead to concern. For example, suppose an end user has an older PC and does not know when the device will be replaced. At some point, the end user might call the manager, the help desk, or some other support resource. If the end user knows about and understands the continuous process-improvement plan, however, that inquiry might not occur. (And, don't underestimate the emotional impact on the end user of not knowing what is going on.)

A key element of any plan in lifecycle management, including the continuous process-improvement plan, is communication. If the plan itself is not broadly known, the value of the plan is lessened.

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## THE IMPACT OF THE CONSUMER MARKET

In the past, as client technology was developing, there were "casual" users. These individuals avoided technology unless absolutely necessary. The skill set and training was at a very basic level because technology was something to be avoided, if at all possible. The consumer market has changed this dynamic. In contrast to the past, innovation in the consumer market is driving enterprise changes.

Today it is virtually impossible to think of any industry that is not impacted by client technologies and the innovation that sector has initiated. Simply put, today you cannot buy any goods or services that are not directly related to client technologies. The consumer market impacts everything from how you bank (ATM), to how you buy groceries (electronic scanners), to how you listen to music (MP3), to how you rent cars (automated checkouts), and even to the basics of how we communicate day to day (cell phones/smart phones).

At the crux of the technology is a simple proposition: how you access information or content that you want. This is the similar proposition in businesses: how to access relevant information.

As a result of these market dynamics, the consumer market has resulted in an overall rising of awareness of client technologies and a fuller understanding of how devices can work. Therefore, the "casual" user no longer exists; after all, having a PC at home is the norm in many households.

The demise of the casual user has an important impact on IT and lifecycle management. Recognizing this shift in competency is key to lifecycle management going forward. Many IT departments remain skeptical that end users can “handle” PCs. But, this skepticism is misplaced. Many of the end users might have home systems set up that are more complex those they work with at the office. With regard to PCs, therefore, much of the mystique surrounding IT (and its access devices) has diminished. In some cases, a lack of trust develops between IT support and end users. When this occurs, a “Stealth IT” organization might perform lifecycle management work informally.

Another fundamental shift is occurring as a result of the consumer experience: Employees expect the business experience to be at least as robust as they have at home (or experience in their day-to-day activities). This translates into expectations regarding service levels, the types of access devices available, and how support can be delivered. One of the many metrics IT uses is end-user satisfaction. If a business is several generations behind in how its employees can access information compared to the consumer experience, it is not unreasonable to assume that end-user satisfaction may decline considerably.

Although financial, operational, and logical differences between the consumer experience and the business experience will always exist, the gap between the two is narrowing considerably.

Access devices are viewed by employees as productivity tools. Productivity is often considered a “soft” cost, not directly traceable to the financial statements. However, just as other benefits, technology may be considered part of the investment a business makes in its employees.

It is now time to bring in the topic of lifecycle management specifically. Access devices are not considered an entitlement. However, whatever the access devices are, it is expected that the lifecycle-management solution behind them is more than adequate to ensure their effective use.

Self-service support has been available for several applications for many years, but the adoption rate is low. It is anticipated that because of the consumer experience, self-service adoption will increase as end users become more comfortable with that service-delivery alternative. Again, the mystique will be gone. After all, these are the same end users who know how to download music from the Internet to their MP3 player; they can likely change a password.

Remember this old adage: A rising tide raises all ships. This is the impact that the consumer experience is having on lifecycle management.

## WHAT ABOUT THOSE REGULATIONS?

It seems as though not a day goes by without the media reporting on issues of identity theft, personal privacy, intellectual property, and other technology- and lifecycle-related topics. How data and information is used and how secure it is remain critical issues.

The objective of regulations, governance, and laws is to protect the confidentiality and secure the correct focus.

IT has a daunting challenge. The myriad access devices and the number of ways that information can be inappropriately obtained from these devices is obviously a concern to everyone. In fact, IT might not even have control over access devices that come into an organization. Disposal of the various devices is also a recognized challenge.

All the regulations, governance, and laws have one principle in common: They hold businesses (and in some cases, individuals) accountable for the information and its access.

Regulations, laws, and governance are perhaps the easiest and most compelling rationale to adopt lifecycle management. A strong lifecycle management practice is the best way to protect the information. Those businesses that have not embraced lifecycle management are at a considerable disadvantage.

We all conduct business with many companies that handle and use personal information. We expect that this information will be appropriately used and secured. In many cases, the law requires it. As consumers, we fully expect businesses to have a lifecycle management program that ensures that their access devices (and more specifically, the information they could contain or have access to) will be handled in a manner that poses the least risk. This is yet another reason that lifecycle management is no longer optional.

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## MAKING LIFECYCLE MANAGEMENT DECISIONS CONSCIOUSLY

A recurring theme in lifecycle management is that decisions are made both consciously and unconsciously. Because of the proliferation of access devices, many businesses defer decisions and provide a de facto “best effort” service level for certain devices. In other words, the business decides not to make a decision. Best effort service level, experience suggests, almost always leads to dissatisfied end users; regardless of the service level provided, it is often considered too little and too late.

*Decisions need to be made consciously!* De facto standards, support, service levels, and expectations become established when end users are left to assume that what they are leveraging is correct. In lifecycle management, benign neglect is a concern.

IT may or may not be able to approve or reject end users or organizations; however, tacit agreement in today's highly regulated environment is simply not a good idea. Many businesses today, for example, provide "best effort" support for certain categories of handheld devices. The initial conclusion, therefore, is that the handheld devices are an acceptable company standard, and that IT is prepared to support these devices.

In lifecycle management, the implications from decisions that are made are often as important as the initial decisions themselves. In the example just cited, at what point does the best effort apply if the overall population of devices becomes significant and IT simply cannot deliver an acceptable service level? At that point, a predicament arises; after all, IT cannot go back and suggest that the devices were inappropriate in the first place.

Businesses defer lifecycle decisions for a variety of reasons, but all of the dynamics discussed in this chapter clearly suggest that decisions should be made consciously, because the information and data to be accessed is still the same.

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## SUMMARY

Now that the basics have been introduced, the journey begins. It is important to remember that all of the lifecycle elements presented in this book are interrelated.

Remember, it is not the initial questions that are necessarily important; we must consider the full implications of those decisions and their impact on other lifecycle elements, too. Like any journey, this trip might seem long and arduous. It is. The problems that lifecycle management addresses are not simple. You won't find a "one size fits all" solution. Every business will have its own complexities and culture. However, some commonality will exist, and so the ability to create the vision for your business will be greatly facilitated.

So let's begin.