



# Understanding the True Costs of Your Technology Management Options

*A Guide to the Advantages and Disadvantages of  
the different Technology Management Strategies*



## Executive Summary

Choosing a technology management strategy can be a confusing process, but it does not have to be. With a little advice and guidance, it is easy to understand your technology management options.

Choosing the right technology management strategy can help your company grow and operate efficiently and effectively. Making the wrong choice can result in headaches, unnecessary expenses, and stunted long-term growth.

There are three main ways to handle technology management. One strategy is to rely on an in-house IT team. Another option is to not have an IT department. Companies that choose this route typically turn to outside experts in times of crisis and leave the day-to-day IT work to tech-savvy employees. These staff members must do their regular work as well as manage the company's technology infrastructure. The third approach is to work with managed service providers (MSPs). Depending on the clients' needs, MSPs can manage some or all aspects of their clients' IT infrastructures.

This guide will examine these three main approaches to IT management and compare the costs of each option. It will answer the following questions:

- What are the costs associated with employing a team of full-time, in-house IT experts?
- How much does it typically cost to bring in an outside IT expert to fix a problem?
- How much do MSPs usually charge?

This guide is an introduction to the subject and does not provide a single answer to the question of which technology management strategy is best. There is no one-size-fits-all solution. Each case should be evaluated based on its own specific details. With this in mind, you should use this guide in conjunction with advice from experienced IT professionals who are familiar with your company's unique circumstances. Combining these two sources of information is the best way to find the right technology management strategy for your organization.



Your technology assets are no doubt crucial to your organization. How you manage those assets is just as crucial. It can mean the difference between a business that operates efficiently and effectively and a business that struggles to get by. However, choosing the right strategy to manage your IT assets can be confusing.

To understand your options, you need to know about the main technology management strategies and the costs of IT management. With this information, you can compare the costs associated with each strategy so that you pick the best one for your organization.

## Defining the Technology Management Strategies

There are three main strategies that you can follow to manage your IT assets: in-house, break-fix, and managed services. Here are the differences between them:

### In-House Strategy

With the in-house approach, a company hires one or more IT professionals as employees to manage its IT assets. These IT staff members are responsible for providing ongoing IT support and maintenance.

The IT staff members often work full-time for the company. They typically work on the company's premises, but sometimes they work from remote locations. They represent an ongoing labor cost for the company.

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### Break-Fix Strategy

Companies using the break-fix strategy rely on tech-savvy employees to handle day-to-day IT work and bring in IT experts whenever something major breaks. After the IT experts fix the problem, they leave. This work is usually done as part of a short-term contract, although some companies have long-term break-fix agreements with outside IT experts.

There is no ongoing IT support or maintenance by IT professionals when companies use the break-fix approach. However, it reduces labor costs since there are no in-house IT professionals.

### Managed Services Strategy

With the managed services strategy, a company outsources some or all of its IT work to a managed service provider (MSP). For example, an MSP might take care of all repairs, upgrades, and maintenance tasks. It might also handle the company's cybersecurity applications. They can also help identify cloud service options that can help your business be more efficient and productive.

MSPs provide their clients with service level agreements (SLAs). An SLA spells out the amount of work an MSP is expected to provide. An SLA also includes the details about any penalties that the MSP would suffer if it were to fail to provide the agreed-upon services.



There is ongoing IT support and maintenance with the managed services approach. The labor cost remains the same throughout the length of the SLA.

## Defining the Costs of Technology Management

To accurately compare the costs associated with the three technology management strategies, you need to make sure you include all relevant costs. The costs fall into three main categories: labor costs, infrastructure costs, and the costs resulting from downtime and poor performance. Here are the types of expenses included in each category:

The costs of technology management fall into three main categories: labor costs, infrastructure costs, and costs resulting from downtime and poor performance.

### Labor Costs

Labor is the most costly element of a technology management solution. Labor costs include wages, bonuses, benefits, and other direct costs associated with employing staff members or contractors. They also include indirect costs, such as recruiting, hiring, and training expenses.

### Infrastructure Costs

IT infrastructure costs include the money spent on hardware components (e.g., computers, monitors) and software components (e.g., operating systems, cybersecurity applications). It also includes the costs of any services used to operate or manage an IT environment, such as cloud services. For example, if you are using a public cloud such as Microsoft Office 365, you need to include the cost of its subscription in your infrastructure costs.

Although not a large expense, the cost of the tools used to install and maintain the IT infrastructure fall under this category. Multimeters and network cable testers are examples of these tools. This expense is incurred only with the in-house strategy. In the break-fix and managed services approaches, the outside IT experts provide their own tools.

### Costs from Downtime and Poor Performance

At first glance, downtime and poor performance costs might appear less important than labor or infrastructure costs. However, you must consider downtime and performance issues when comparing IT management options. According to a 2014 study, nearly 80 percent of surveyed small-to-mid-sized businesses said that downtime costs them at least \$20,000 per hour. Over 20 percent of respondents said that it costs them at least \$100,000 per hour.<sup>1</sup> In light of these costs, avoiding downtime should be at the top of every company's IT priorities list.

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<sup>1</sup> IDC study [“Complexity and Data Growth Driving Small and Medium Environments Toward A New Generation of Data Protection”](#) (sponsored by Acronis)



# Comparing the Costs of Technology Management Strategies

Comparing the costs associated with the three technology management strategies can help you determine which one is best for your organization. This might seem like a complicated task, but it is made easier by the fact that the infrastructure costs remain largely the same, regardless of the technology management approach. This is because a company typically has the same IT infrastructure in all three cases.

In the following discussion about the costs associated with the technology management strategies, the infrastructure costs are assumed to be largely the same across all three strategies. For this reason, they are not included in the discussion. That way, you can focus on the costs that will change depending on the technology management strategy you use.

## Costs of the In-House Strategy

Running an in-house IT department may seem simple. Immediately, though, companies are faced with the dilemma of how many IT experts to hire. While a very small business may be able to get away with hiring just one employee for IT management, the vast majority of companies should have at least two people in the IT department: a manager and a technician. With only one employee working on IT issues, a company risks becoming overwhelmed by problems that need immediate solutions. Additionally, the two-person (minimum) team provides companies with a backup option if one IT staff member takes time off or quits suddenly.

### Labor Costs

The in-house strategy has predictable labor costs. Employing an IT manager costs \$93,750 a year on average. This figure includes a base salary of as well as benefits and bonuses. Employing a general IT technician costs \$62,500 a year on average, accounting for bonuses, benefits,. Thus, hiring an IT manager and IT technician will cost about \$155,000 annually for their base salaries, benefits, and bonuses:

Employing a small IT department consisting of just two employees will cost an average of \$156,250 annually.

IT manager	\$93,750
IT technician	<u>\$62,500</u>
	<b>\$156,250</b>

It should be noted that salaries are higher for more seasoned IT professionals and are dependent on your geographic location.



Recruitment, training, and workplace integration also cost significant amount of money. According to some estimates, the total cost of hiring a new employee can range from 150 percent to 300 percent of the base salary of the employee.<sup>2</sup> Assuming a hiring cost rate of 150 percent, the additional one-time hiring cost for the IT manager and IT technician would be \$187,500:

IT manager's base salary	\$75,000
IT technician's base salary	<u>\$50,000</u>
	\$125,000 × 150% = <b>\$187,500</b>

The one-time cost associated with hiring the two in-house IT staff members means there will be an additional \$187,500 subtracted from the bottom line.

Another expense is continued education and training to keep abreast of developments in the always-changing IT industry. The in-house IT staff members will need to continue their education by attending conferences, seminars, and training programs. Combined, these programs can cost thousands of dollars each year.

### Costs from Downtime and Poor Performance

Companies with small IT departments rarely have the resources needed to pay for employees to work over weekends, at nights, or on holidays. This makes these companies vulnerable to cybersecurity threats and system failures that occur during non-business hours. These issues could result in downtime, which can cost companies thousands of dollars.

Small IT departments can also sometimes lack expertise in certain niche areas. In contrast, a larger IT team can include technicians with a broader range of experiences and specializations.

## Costs of the Break-Fix Strategy

The main advantage of the break-fix strategy is that companies only pay for labor when IT work is actively being done. Since this work is done only on request, this cost can be more finely controlled. While mission-critical concerns must still be addressed, the break-fix approach gives small businesses the flexibility to add or remove other IT costs as needed.

### Labor Costs

The break-fix strategy has an hourly labor cost that is higher than the hourly labor cost in the in-house approach. This is due to the fact that outside IT experts typically charge more than an in-house employee's hourly rate.

Outside IT experts need to charge more for several reasons. They have business-related expenses to cover, such as office space, transportation, computer equipment, business taxes, and business insurance premiums. Since they do not get benefits from an employer, they also have personal

<sup>2</sup> Investopedia's ["The Cost of Hiring a New Employee"](#)



expenses to cover, such as healthcare insurance premiums, life insurance premiums, and retirement contributions. Plus, outside IT experts who provide services to companies using the break-fix approach do not typically bill clients eight hours each day. Most jobs take only two to four hours on average, not including travel time. Booking more than one client in a day can lead to unhappy clients because they might be left waiting in their time of need. So, most outside IT experts' rates account for the fact that only about 60 percent of their time is billable. This is referred to as the utilization rate.

The hourly rate of an outside IT expert is typically four times that of the hourly rate of a comparable in-house IT staff member.

Given all these factors, the hourly rate of an outside IT expert is typically four times that of the hourly rate of a comparable in-house staff member. So, if you need an outside expert who has the skill level of a general IT technician to fix a basic problem, you can expect to pay around \$100 an hour:

$$\begin{aligned} \$50,000 \text{ base salary} / 2,080 \text{ payroll hours} &= \$24 \text{ an hour} \\ \$24 \times 4 &= \mathbf{\$96 \text{ an hour}} \end{aligned}$$

If you need an outside IT expert who has the skill level of an IT manager to fix a major problem, you can expect to pay around \$135 an hour:

$$\begin{aligned} \$75,000 \text{ base salary} / 2,080 \text{ payroll hours} &= \$36 \text{ an hour} \\ \$36 \times 4 &= \mathbf{\$144 \text{ an hour}} \end{aligned}$$

Due to these higher rates, companies using the break-fix approach sometimes use tech-savvy employees to perform day-to-day IT work and troubleshoot minor IT issues. These employees must do their regular jobs in addition to the IT work. However, the dual responsibilities can damage their productivity and put a serious strain on them as they try to juggle both jobs at once.

Additionally, the break-fix strategy has much more variability in terms of budgeting. An outside IT expert's services might be needed multiple times one month but not at all the next month. This unpredictability makes budgeting more of a challenge.

### **Costs from Downtime and Poor Performance**

Companies following the break-fix approach generally do not have plans in place for monitoring or regular maintenance. As a result, they are not able to quickly correct their computer systems when they start to perform poorly. This also means that the company would be less likely to discover cybersecurity threats or other problems.

These companies also generally do not have plans in place for regularly updating their computer systems with the latest patches. These updates are vital for cybersecurity. Outdated computer systems are much more vulnerable to hackers. These vulnerabilities would likely remain unnoticed until the company is actually attacked. By then, however, it would be too late to fix the problem.



This attack could result in the substantial loss of money and/or data. It could also cause significant damage to the company's reputation. This could lead to lost business opportunities.

Besides the lack of monitoring and regular maintenance, the company would not be able to address downtime issues as quickly as possible. To solve an IT problem, the company would have to bring in an outside IT expert. This person would likely be less familiar with the company's systems than an in-house IT staff member would be. This lack of familiarity and need to travel to the company's location can significantly lengthen the time between discovering a problem and resolving it. Even one additional minute of downtime can lead to large financial losses.

## Costs of the Managed Services Strategy

Like the in-house approach, the managed services strategy has predictable labor costs. This predictability can simplify the budgeting process. The managed services strategy also offers access to a large pool of IT professionals, who have their own strengths. A quality MSP will solve its clients' problems by leveraging team members with the specific expertise needed for the task.

### Labor Costs

Pricing for managed services can vary. Some companies use monthly contracts with flat fees, while others charge by the workstation, server, or user. Additionally, many of them have bundles or tiers in which they offer specific service packages. For example, a basic package might include desktop and server support, while a more comprehensive package might include support for mobile devices as well.

The majority of MSPs offering contracts charge from \$1,000 to \$5,000 per month.

In a 2014 survey of 700 MSPs, the majority (65 percent) of MSPs offering contracts charged from \$1,000 to \$5,000 per month. The survey also revealed MSPs' standard hourly rates. While MSPs usually do not charge by the hour, they often provide standard rates when requested by potential clients. The survey showed that MSPs generally charge a lower hourly rate than outside IT experts who provide services to companies using the break-fix approach. The MSPs' average hourly rates were:

Level 1 IT technician/engineer	\$95
Level 2 IT technician/engineer	\$110
Level 3 IT technician/engineer	\$130

One reason why the MSPs' rates are lower is because they have a much higher utilization rate. MSPs typically have several IT professionals on staff. They perform their support and maintenance services according to a set schedule. Plus, a lot of the support and maintenance work is done remotely, eliminating travel time. As a result, MSP team members can work three hours in the morning for one client and four hours in the afternoon for another client, for example. If a client has an emergency, the MSP can have a team member who is currently available troubleshoot the problem.



## Costs from Downtime and Poor Performance

Many MSPs use monitoring software to watch over their clients' IT infrastructures around the clock. This lets them address issues before they develop into full-blown problems. MSPs will also keep their clients' IT infrastructures up-to-date. This combination of monitoring and regular updates keeps their clients' systems performing at optimal levels and provides a higher level of security.

A combination of regular software updates, around-the-clock monitoring, and rapid response capabilities can cut downtime and keep the system performing at its best.

Moreover, companies using the managed services strategy will not suffer from a shortage of manpower. Thanks to an MSP's pool of IT professionals, companies can solve problems that are discovered outside of regular business hours. While most MSPs offer options for emergency help, not all of them provide around-the-clock monitoring services. That being said, 24/7 coverage is an available option and is negotiable based on your needs. MSPs will describe the level of service that they will provide in their SLAs. They will also explain how they operate outside of regular business hours and detail how they plan to respond to emergencies.

Active monitoring, regular updates, and around-the-clock availability can significantly minimize the risk of downtime. This, in turn, can help companies reduce the likelihood that they will lose thousands of dollars due to unplanned maintenance or a security breach.

## Which Strategy Is Best?

Which technology management strategy is best? There is no one-size-fits-all solution. The technology management strategy that is best for you depends on your situation.

The in-house strategy makes sense for companies with specialized equipment or a computer system that requires constant attention. However, its high labor costs make it the wrong option for many small-to-mid-sized businesses.

The break-fix approach is too costly from a downtime perspective for most companies, regardless of their size. The relatively high risk of downtime increases the likelihood of significant losses.

The managed services strategy offers a balance between labor costs and downtime costs. MSPs offer monitoring, cloud services and rapid response capabilities, so companies can always stay one step ahead of a problem. MSPs' reliability is guaranteed in their SLAs, so companies can have confidence in the safety of their computer systems. Additionally, MSPs offer a range of packages. This range lets companies find options that match their budgets. It also offers them the flexibility to alter their approaches as their situations change.



## Get the Right Advice

As experts in the IT industry, we can determine the state of your current IT setup and assess the needs that you will have in both the short term and long term. From there, we can suggest a cost-effective solution that keeps your IT infrastructure safe and lets your company operate on full capacity. Contact us at [www.microage.ca](http://www.microage.ca) to learn more about the ways in which we can help your company.



# Quick Reference

For your benefit, we've included a chart that compares the three main IT management strategies in

	In-House	Break-Fix	Managed Services
Labor and Hiring Costs	<p>≈\$187,500 one-time cost to hire a two-person team</p> <p>≈\$156,500 annually to employ a two-person team</p>	<p>≈\$96 per hour for an outside IT expert with general IT experience (fix basic IT problems)</p> <p>≈\$144 per hour for an outside IT expert with extensive knowledge and experience (fix major IT problems)</p>	≈\$1,000 to 5,000 per month
Cost of Continuing Education	Thousands of dollars annually	Included	Included
Budgeting	Predictable	Unpredictable	Predictable
Monitoring	<p>Included during business hours</p> <p>All other times, the situation varies</p>	None	Company chooses level of coverage based on their needs including the availability of 24/7 coverage should it be required.
Regular Maintenance	Included	None	Included
Upgrading	Included	None	Included
Response Time/Availability	<p>Immediate during business hours</p> <p>Delayed response all other times</p>	<p>Never immediate</p> <p>Response time depends on the situation</p>	Company chooses level of availability based on their needs and may include 24/7 availability if they require this.

