Challenges with Local Government IT Implementation for Public Administration

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Challenges with Local Government IT Implementation for Public Administration

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Abstract

The difficulties impacting the development and implementation of information technology are discussed in this study. The difficulties raised are addressed in the context of IT implementation procedures, particularly with regard to the issue of administrators from the local government sector's demands and attitudes. This essay offers two main findings. The first is that the ultimate success of IT deployment depends on strategic planning. Second, it is demonstrated that executives' IT competence levels have contributed to the efficiency of the process for developing and deploying IT.

Keywords: *Digital Transformation, Government Authonomy, Indonesia, New Public Services*

Introduction

The way we conduct business at the most fundamental levels is changing due to the rapidly growing technologies that are transforming public administration. The use of information as a resource, factor of production, and commodity, as well as the acceleration of our economic growth through technological innovation and scientific discovery, are some of the themes that have sparked this change (Zhang et al. 2019). The free exchange of ideas and knowledge has become more and more important to our economic and technical advancement as the digital era advances (Yang et al. 2020). As a result, it is critical that we have quick access to accurate information. Our country's ability to survive in the digital era depends largely on technological advancement and access to scientific and technical knowledge (Annosi et al. 2019).

The information age is well underway from an organizational perspective, and both public and commercial organizations are utilizing a wider range of information technologies (ITs) on a daily basis. In reality, a public organization can no longer function effectively without making considerable use of ITs. Since their introduction, information technologies have been hailed as the panacea for a number of organizational ailments (Østergaard et al. 2021). In many situations, they are seen as a way to boost productivity through the wonders of automation, which may be

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used to combat bad performance. What is all too frequently overlooked or lost in the conversation is that, while ITs can offer a number of benefits and solutions, they also bring with them unique issues and difficulties that are unique to the organizational environment.

IT deployment and use afterward include a series of connected processes. Failure throughout any phase of implementation has been shown to raise inefficiency, ineffectiveness, and encourage a variety of extra uncertainties. ITs cannot miraculously cure the wide range of organizational and management diseases that afflict us, nor can they resolve the numerous terrible challenges (whether organizational or otherwise) that public managers face. We can only gain from more efficient operations and problem-solving techniques through rigorous design, planning, procurement, and deployment of ITs (Tan, Aviso, dan Ng 2019).

Even while many people mistakenly believe that ITs are a panacea, they are undoubtedly a benefit and, when used correctly, may offer a variety of beneficial and efficient solutions. Numerous significant and linked aspects play a role in how well ITs are implemented in every firm. Important initiatives have been initiated during the past ten years in an effort to better understand the issues surrounding information technology, their applications, and their effects on public sector organizations (Dong et al. 2021), (Tiep et al. 2021) [6, 26]. Sadly, not much of this study directly discusses the method of IT deployment in the context of local government. The early 1970s saw the start of several generic IT research projects that were solely focused on the public sector, but since then, such studies have advanced slowly, with significant advancements occurring only sporadically (Brown dan Brudney 1998; Motlhasedi 2022; Pittaway dan Montazemi 2020).

Local governments have a special place in the system among other governmental bodies. The local level of governance is where the average American has their most regular personal encounters. In a number of district-provided services, public goods, cities, townships, school districts, public safety agencies, and utility commissions, localities are represented. Each locality has a financial connection with its residents, requiring taxes to help create the local atmosphere. Local governments have a big influence on the overall governance structure and the standard of living in America due to their close proximity to people and the variety of services they offer.

Despite having a clear influence on society, local government IT challenges have not received enough attention in public administration studies. In actuality, using IT in the public sector is a very steep slope, especially at the local government level. Local governments are drowned in quickly advancing technology, just like every other institution. However, administrators and staff in local government generally lack the same training and depth of IT knowledge as those in the private sector or state and federal public entities [40]. Additionally, local governments frequently do not have the funding for the education and development required to cope with both present and emerging technology [16, 39, 42].

Pressure on local governments to adopt a larger range of information technology to improve their operations has grown over the past ten years from the general public, the press, and other

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groups. The sometimes false belief that they will offer more effective and efficient ways of operating comes along with this push. Unfortunately, many of these communities are powerless to proactively respond to the rapid technological change and evolution occurring all around them. The public sector experiences what may be referred to as IT lag time. Some of the worries about this latency are detailed in the studies done by Kraemer, Danziger, and King in the late 1970s and early 1980s [10, 19, 23]. According to their research, local governments generally faced a ten-year lag between the introduction of new IT and its adoption and routineization across a sizable number of municipalities. Even then, it seemed that only the most progressive municipal governments—generally the biggest and wealthiest—regularly embraced IT within a ten-year period. Smaller towns often require longer—between fifteen and more years.

Local governments struggling with IT are making quicker headway with their IT purchases and installations because of recent improvements in accessibility, usability, and cost. Unfortunately, even a 2- to 3-year delay is an eternity in terms of technology. Evidently, local government faces its fair share of IT implementation challenges. To believe that these issues are caused by just one or two variables, however, would be erroneous. When local governments try to use information technology, there actually seem to be a lot of problems involved.

Methods

The problems associated with IT installation are the focus of this study. The first query answered was what definitional regions may be utilized to classify issues answered was what definitional regions may be utilized to classify issues. Five distinct issue areas were chosen after a thorough assessment of the literature: leadership, organizational environment, management process, personnel, and technological systems [13]. 78 executives from the federal, state, and municipal governments participated in in-depth interviews through Virginia Tech's Center for Public Administration and Policy. Interviewees were asked to explain challenges that they believed had an influence on the planning, acquisition, and deployment of IT in their businesses as part of the study. A thorough content analysis of the replies produced 22 distinct concerns. The right issue categories were then assigned to those problems.

The scope of this research and its approach to the IT implementation process are shown in Figure 1. Leadership issues are those that include the involvement, dedication, and direction of the organization's senior executive, such as administrative support and interdepartmental collaboration. This topic area is based on the idea that senior management must be involved in the development and deployment of IT because organizational transformation happens from the executive level down [11, 34, 41]. Similar to this, issues characterized in the management process area are those that are specifically related to administrators and their function in organizational functional operations, such as in budgeting, personnel management, and general management: essentially, any issues that call for the administration of specific attention or directives [18, 21, 25].

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Figure 1. IT development and deployment process

The problems referred to as organizational environment are more complex and address elements like organizational culture, change, and behavior that are less obvious and harder to describe. In essence, these are problems that have an impact on or may be influenced by environmental variables, both internal and external [27, 46].

The majority of technical system issues relate to how information technologies impact organizations and individuals in general [10, 27]. These worries range from various IT life cycles to interoperability issues to difficulties with hardware and software. A few examples of the components that surround each person in the company and are referred to as "personality concerns" include individual knowledge levels, staffing levels, and resistance to change. These issues are significantly influenced by human situations around relationships, emotions, and perceptions. Table 1 lists the challenges along with where they fall within the designated categories.

A poll asking respondents to score (on a Likert scale) how difficult each issue was in connection to each of the three stages in the IT deployment process: planning, procurement, and implementation, was built using the categories and issues identified in the first section of the study. From "not at all bothersome" to "highly problematic, the scale went [3].

138 local government officials from the state of Virginia made up the study's sample. These administrators were asked to respond to a survey that was created to assist them in assessing each step of the implementation process as a separate endeavor in light of its underlying challenges in order to more accurately determine the unique effects of each on the process. A one-tailed t-test (difference of proportions test) was used to analyze the importance of those concerns classified as either not troublesome or extremely problematic, with a significance level of.05.

Table 1. Issue breakdown

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Issue Type	IT Planning	IT Procurement	IT Implementation
Leadership Issues			
	Interdepartmental Coordination		*Interdepartmental Coordinati*
	Individual Support	**Individual Support**	**Individual Support**
	Organizational Support	**Organizational Support**	**Organizational Support**
	Timeframes and Scheduling		*Timeframes ana Scheduling*
Management Process Issues			
	Lack of a Strategic/Formal plan	**Lack of a Strategic/Formal plan**	**Lack of a Strategic/Formal plan**
	Fiscal/Budgeting Issues	**Fiscal/Budgeting Issues**	**Fiscal/Budgeting Issues**
	<Lack of a Planning Model>		
	Organizational Directives	**Organizational Directives**	**Organizational Directives**
	Written Procedures/Guidelines	*Written Procedures/Guidelines*	
Organizational Environment Issues			
	Organizational Culture	**Organizational Culture**	**Organizational Culture**
	Politics, Internal/External	**Politics, Internal/External**	**Politics, Internal/External**
	Rapidly Changing Technology		*Rapidly Changing Technolog*
	<Contracts>		
			<External Consultants>
Technical Systems Issues			
	Existing Systems		*Existing Systems*
	Standardization Issues		*Standardization Issues*
			<Compatibility Issues>

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Personnel Issues	*Organizational IT Expertise*	*Organizational IT Expertise*
	Individual IT Expertise	*Individual IT Expertise*
	Internal Leadership	*Internal Leadership*
	Personnel Issues	*Personnel Issues*
		<Adequate Staffing>
		<Resistance to Change>
		<Training>
Key:	**Dynamic Issues**	*Potential Dinamic* <Spesific>

Whatever the organization's long-term objectives, strategic or structured planning is a crucial exercise. Better management of change, a clearer picture of potential consequences, more effective strategies for current and future operations, clear and concise priorities for the expenditure of scarce resources, and an overall improvement in organization performance are all advantages of this type of planning [4, 16]. Strategic planning ultimately offers a framework for comprehending and tackling complex problems in a specific organizational setting.

Four separate IT planning challenges emerged as being significant: Rapidly evolving technology, individual IT expertise, a lack of a formal or strategic plan, and financial or budgeting difficulties. Table 2 gives an overview of the concerns analyzed in relation to IT planning. The problems that were determined to be extremely severe for more than 50% of the target group are underlined.

The continually evolving nature of technology is a major factor in strategic planning for IT. In this survey, 69% of the participants rated this situation as extremely problematic. Technology is by its very nature a dynamic field. New innovations are continually replacing or improving earlier ones. Information technologies were created with the sole purpose of enhancing our ability to communicate and perform. Technology advances quickly and is driven by change and development.

There is a very small window of opportunity for the novel and unusual. In another sense, information technology is self-sustaining, creating ongoing demands for new tools, programs, and systems. Fundamental developments normally take place in this field every 18 to 24 months [6]. Therefore, the nature of technology has important implications for long-term strategic planning.

Table 2. Problematic Issues for IT Planning

Issues	**Not Problematic**	**Somewhat Problematic**	**Highly Problematic**

Interdepartmental Coordination	17%	36%	47%
Individual Support	33%	**52%**	16%
Organizational Support	29%	47%	24%
Timeframes and Scheduling	21%	40%	40%
Lack of a Strategic/Formal Plan	29%	17%	**53%**
Fiscal/Budgeting Issues	14%	33%	**53%**
Lack of a Planning Model	33%	19%	48%
Organizational Directives	36%	41%	22%
Written Procedures/Guidelines	21%	45%	34%
Organizational Culture	29%	**52%**	19%
Politics, Internal/External	33%	33%	34%
Rapidly Changing Technology	70%	24%	**69%**
Contracts	**60%**	31%	9%
Existing Systems	26%	47%	28%
Standardization Issues	19%	47%	34%
Organizational IT Expertise	17%	**50%**	33%
Individual IT Expertise	14%	31%	**55%**
Internal Leadership	29%	48%	22%
Personnel Issues	24%	**55%**	21%

Individual IT skills came in second place in terms of IT planning, with 55% of responses. Because it affects IT workers as well as managers and end users, this problem is especially crucial. Individual competence levels vary greatly among firms. The effects of this issue are misleading since it's frequently assumed that it just involves managers' and users' needs for training on new IT systems and their applications. The opposite is true [21, 34]. When making plans for IT, it's crucial to take into account everyone in the organization's degrees of skill and the demands that should be met depending on those levels. The challenges that occur depending on the knowledge levels of the people involved in the process itself have a secondary influence on planning. In other words, if you have a limited grasp of ITs, it will be exceedingly challenging to prepare for them successfully.

The absence of an information technology strategic plan was among the major concerns that were obviously important to this specific field. 53% of those surveyed thought this situation was extremely severe. The organized nature of the strategy seems to be the key. While 34% of respondents to the poll did have some type of IT strategy, just 25% of those used a formal or strategic plan, according to the survey's findings. Lack of a strategy or the use of a completely

informal plan gives an organization little to no precise instructions for the purchase or use of information technology. Given the nature of IT and the issues that users and managers encounter because of them, it makes sense that a lack of a strategy would only make the situation worse [34].

From a number of perspectives, fiscal and budgeting concerns are particularly challenging for the planning process. First off, information technology costs come in many different forms. Their initial purchase might turn out to be highly expensive, sometimes beyond the means of smaller governments. This calls for purchases over time, which raises a number of compatibility, upgradeability, and standardization problems. Additionally, costs rise as a result of the complexity of IT and their steep learning curve. Training and upkeep are two important financial challenges in this regard [22].

The majority of the survey's difficulties were not viewed as being particularly troublesome for the IT implementation process's procurement stage, as can be seen in Table 3. Only one concern, the absence of a strategic strategy, was seen as extremely troublesome, and even then, only 40% of respondents agreed. Actually, none of the problems in this area satisfied the criteria when they were examined using the difference of proportions test. significant level of.05. In their investigation of the funding of computers in local governments, King and Kraemer [22] support the idea that procurement-related difficulties are not particularly significant.

Table 3. Problematic Issues for IT Procurement

Issue	Not Problematic	Somewhat Problematic	Highly Problematic
Individual Support	34%	45%	21%
Organizational Support	38%	43%	19%
Lack of a Strategic/Formal plan	36%	24%	**40%**
Fiscal/Budgeting Issues	28%	36%	36%
Organizational Directives	41%	40%	19%
Written Procedures/Guidelines	34%	36%	29%
Organizational Culture	33%	48%	19%
Politics, Internal/External	34%	45%	21%

In essence, all of the preceding stages of the process are used during the implementation step. Implementation is particularly challenging in this context and frequently laden with issues. Three of the challenges with the adoption of IT are shown in Table 4, and they proved to be quite difficult: Rapidly evolving technology, resistance to change, and training

All of the challenges in the implementation of IT are interconnected, and at this level, they seem to be mostly tied to personnel concerns. 72% of respondents cited training as a major obstacle

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to IT deployment. Compared to all other issues, this one received the most feedback. The fact that training must be a constant and continuing process to be effective is part of the issue [11, 21]. Additionally, it can be challenging to coordinate the training process since people inside the business frequently have varying degrees of knowledge [34]. Regardless of the size and breadth of the business, the actual training procedure is very complicated. IT training sometimes needs to be outsourced through external consultants or businesses that specialize in hardware and software training, especially for companies the size of a typical local government. This results in an increase in costs, issues with planning, and difficult scheduling and time management scenarios for management.

Table 4. Difficult Problems with IT Implementation

Issue	Not Problematic	Somewhat Problematic	Highly Problematic
Interdepartmental Coordination	17%	47%	36%
Individual Support	19%	**55%**	26%
Organizational Support	24%	47%	29%
Timeframes and Scheduling	22%	43%	34%
Lack of a Strategic/Formal plan	26%	40%	34%
Fiscal/Budgeting Issues	33%	43%	24%
Organizational Directives	38%	**50%**	12%
Organizational Culture	24%	**60%**	16%
Politics, Internal/External	38%	45%	17%
Rapidly Changing Technology	16%	31%	**53%**
External Consultants	47%	41%	12%
Existing Systems	24%	**50%**	26%
Standardization Issues	22%	45%	33%
Compatibility Issues	21%	43%	36%
Organizational IT Expertise	16%	45%	40%
Individual IT Expertise	12%	40%	48%
Internal Leadership	34%	38%	28%
Personnel Issues	31%	34%	34%
Adequate Staffing	24%	40%	36%
Resistance to Change	17%	29%	**53%**
Training	20%	26%	**72%**

Both the planning process and IT deployment are hampered by rapidly evolving technology. This topic was seen as extremely troublesome by 53% of the respondents. The key challenge in this step of the business is the inescapable delay between IT planning and execution. A typical

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strategic plan has a span of three to five years. In terms of technology, as was previously said, this is an eternity—new, significant advances in IT might happen within the space of 8–12 months. When the intended technologies are actually implemented within the firm, they could already be out of date. As a result, there are issues with not only the deployment of physical hardware and software but also with the human side of the process. This has a big effect on training, individual knowledge levels, and individual resistance levels. Additionally, because technology prices are subject to quick change, budget planning is a challenging task.

Any discussion of information technology is troublesome when it comes to the question of resistance to change. In this survey, 53% of the participants said it was a very difficult obstacle for IT deployment. Information technologies frequently represent wholly new—and in some cases, global—changes for the organization and its members, which is one of the main issues in this sector.

Any discussion of information technology is troublesome when it comes to the question of resistance to change. In this survey, 53% of the participants said it was a very difficult obstacle for IT deployment. Due to the fact that information technologies can represent something wholly new—and in some cases global—humans often develop a certain amount of comfort with their skills and job procedures. Most individuals see new technology as intimidating, with steep learning curves and potential job losses. This attitude generates tremendous resistance to change and infuses dread into the implementation process. Simple changes like a computer update might trigger a lot of resistance from cynical customers.

Using the research's findings as a basis, figure 2 depicts the IT implementation process, its main difficulties, and the process's anticipated outcomes.

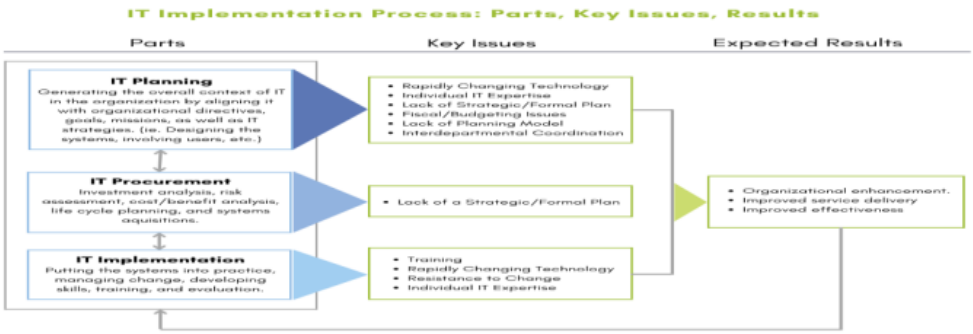

Figure 2. IT implementation process

The main factor determining the efficiency of the entire implementation process is IT strategic planning. Without a strategic plan for IT, local governments face the risk of spending money on things that may not work out in the long run. Lack of a strategy might also lead to additional

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troublesome problems. Interdepartmental coordination, which is usually neglected and results in various standards, inadequate system integration, duplication of effort and resources, as well as a failure to satisfy individual and organizational requirements [27], is one of the potential consequences, according to Kraemer. When using strategic planning, system purchases may be planned out across time, and cost planning in advance can permit expenditures that meet the municipality's long-term objectives. Planning may also improve technical infrastructure by determining needs and promoting IT objectives across the whole firm. The efficient design and application of information technology inside an organization depend on strategic planning [29].

Though it might seem like a straightforward concept, "the potential for miss-assignment of tasks between people and ITs in poorly designed systems may be at the bottom of much of the dissatisfaction with IT when viewed from most perspectives within an organization [6]." A significant section of the market uses extremely basic language to explain technology, which contributes to the challenges of IT deployment. Therefore, the need for careful IT analysis and planning cannot be overstated. Most people who lack a high level of knowledge in this area think that efficiently utilizing IT is as simple as turning on a light.

The firm and its managers must consider strategic planning for IT deployment as a need, not a choice. It may be necessary to implement considerable changes in the organizational environment, including its leadership and management procedures, in order to reach this degree of commitment. This idea of the significance of IT planning is actually a top-down analysis of company objectives. One element unites all highly effective local government IT implementations: they have had the commitment and backing of the highest levels of administration, including the chief executive and all significant department heads [29].

Any IT deployment is a significant organizational task that calls for a considerable outlay of resources at all levels, including time, money, and effort. Not just in the beginning but also in the early planning phases and up to execution. In addition to actively participating in the creation and execution of the systems, organizational leaders must be dedicated to securing the required funds. Chief executive participation, which permits departmental barriers to be crossed, is one of the crucial elements. The significance of engagement by all people and groups who will be impacted by the adoption of IT in the company must be emphasized through executive-level involvement. To ensure higher ease of implementation and service to the demands of the end users, it is essential that all relevant parties engage in the creation, planning, implementation, and operation of IT. These people might be management, users, citizens, IT staff, and, in certain circumstances, elected politicians.

The responsibility for establishing the organization's missions must be one of the key focuses of leadership in order to simplify IT planning and improve interdepartmental collaboration. The incorporation of IT policies into the organizational social structure should be part of the purpose's embodiment in the form of IT planning and coordination. "Shaping the character of

the organization, sensitizing it to ways of thinking and responding, to achieve increased reliability in the execution and elaboration of policy in accordance with its spirit as well as its letter [40]" This level of leadership also has to deal with how internal disagreements are handled. To finally make the greatest use of the organization's limited resources, administrators must be devoted to managing the conflict between the conflicting IT demands and interests of various departments and facilitating coordination of these.

Implementing IT has consistently run into issues with interdepartmental collaboration [21]. The organization's borders frequently obstruct the creation and application of integrated systems. Instead of supporting several redundant, smaller, or solitary systems that are department- or task-specific, it is sometimes beneficial to design one system that can accommodate a variety of purposes and requirements. In certain cases, this can require a modification or adjustment in the corporate culture. The "data ego" dilemma, as described by Kerr, serves as an illustration of how serious this issue is [21]. Users frequently believe they are the owners of the data, specific IT, or the whole system. By "owning" it, the user no longer feels the need to share it; this mentality encourages the growth of duplicate, "stand-alone" systems, which are frequently challenging to manage and integrate. An organization's culture must support the notion that IT is a valuable resource for the entire business and that integration and coordination will benefit everyone.

Developing an organizational culture where IT is viewed as an essential and crucial component of the operations and success of the company must be the primary goal for administrators in local government. In other words, through building an organizational culture that effectively handles IT, local governments must foster an atmosphere conducive to IT success. A strategy for creating this type of culture calls for managerial support, success measurement and reporting, satisfaction with the system and services, training, and participation from every employee throughout the entire process [6]. It is impossible to downplay the value of such a culture. Selznick first made the case in 1957 that an emotional connection to the organization might provide a "resource of energy" that would help people work harder and offer assistance in times of need [41]. He continues by pointing out that there may be a drawback to these types of emotional connections. At the very least, there is a cautionary effect to be aware of: the organization may become ensnared in certain processes that restrict how managers may distribute limited resources. An organization would find it extremely challenging to adjust to changing circumstances as a result. People may be less open to change once principles have been ingrained into an organization because they feel a personal connection to the "identity" of the group and how it operates. This "infusion of value" clashes with the need for self-maintenance. Leadership is essential for generating enthusiasm for IT implementation while avoiding becoming methodical. A company needs to evolve with the times and new technology in order to thrive. This, in Selznick's words, is "a struggle to preserve the uniqueness of the group in the face of new problems and altered circumstances [41]."

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When a culture of information technology value and change acceptance has been established, real organizational changes that support this culture may then be implemented. In essence, this change-adaptation process relates to organizations, but it also applies to the people and groups that make up such organizations. People get acclimated to a certain workflow or method of operation. They receive training to function within certain constraints and gain confidence in their skills. It is crucial to first set them up for acceptance of a suggested change in order to implement a new way of carrying out their job successfully. Forced change implementation without adequate planning almost always ends in disaster. Change may be implemented with less disruption and opposition once people are ready for it. This approach to information technology calls for a significant level of commitment from senior management, a sophisticated training program, and intensive cross-departmental cooperation.

Resistance will always be there, regardless of how carefully IT changes are implemented inside a company, as change of any sort is problematic—not just for people and organizations but also for those who suggest implementing it. It is important to get past as much change resistance as you can during any IT deployment process. To do this, it is necessary to have knowledge of the causes of change. There are four specific causes of change brought about by IT that Keen identifies: resistance to IT specialists; negative attitudes toward the project as a whole; assumptions that the results of the cost-benefit analysis will be poor; beliefs that there is no particular need for new ITs; and finally, fear of social uncertainty (which Keen contends is frequently mistaken for fear of technology) [20]. Role ambiguity might be a symptom of these kinds of anxieties. A change is more likely to be rejected if a person is unaware of how it will affect him or her. The only way to successfully deal with resistance to change is to identify its causes and comprehend its nature. Resistance to change is an issue that will inevitably arise during the planning and execution of IT projects.

An effective response to the introduction of IT is resistance to change. The way individuals respond to technological change and adjust to it greatly depends on their background, level of education, and general IT experience. People sometimes feel frustrated and confused about their duties and occupations, as is frequently the case when IT is introduced, resulting in changes to processes, habits, and communications with the business. They could experience a lack of power in their relationships with others as well as a change in their place of employment.

Continuous, needs-based training initiatives are one of the finest strategies to overcome resistance to change with regard to the adoption of IT. Whisler examined training in the 1970s as a tool for helping organizations adjust to technological change [45]. He discovered many traits pertaining to this region. In one way, he discovered that the character of the training changed depending on where in the company it took place. He also discovered that the quantity of IT application training rose at the lower levels.

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The top management was the subject of a second observation about how they were informed of IT advancements. Whisler discovered that these managers were often updated on current IT and impending trends by internal sources (i.e., MIS staff). Giving managers access to outside educational seminars is a relatively recent development. Whisler deduced from his observations that people in intermediate management roles received IT-specific training more frequently than those at the highest levels. Compared to the more broad information CEOs received, the nature of this training seemed to be much more technical. Few businesses at the time of Whisler's study were offering workers training that presented a comprehensive perspective of IT throughout the company.

The type of specialized knowledge that training may assist in fostering is crucial for the success of IT deployment. However, it would be incorrect to believe that focusing on managers and end users is the only way to address the concerns of individual competence and training. It is crucial that the so-called "technology experts" receive certain types of training in the current context, especially in municipal governments. IT personnel today need to have a deeper awareness of their organization's demands and entire operations. Being "computer wizards" is no longer adequate. These "experts" should at the very least be familiar with how the public sector works. In an ideal world, they would have received training in local government operations and providing public services. They ought to be involved at every level of the IT deployment process, from planning through assessment and beyond. IT specialists are in a unique position to demonstrate to managers and users how to use IT to eventually increase the effectiveness of the firm. IT specialists need to be ready to take on a variety of significant tasks inside the company. They must be politicians as well as activists, futurists, strategists, change agents, integrators, and staff specialists [21].

The management of change, especially change linked to IT, is the last crucial element in resolving the critical aspects of the IT implementation process. A crucial organizational choice that should not be taken lightly is the adoption of new IT systems or any significant alterations to current systems. The manner in which the modifications were put into effect ultimately had a significant impact on the outcomes. The best-case scenario is that these changes are implemented based on a (formal or informal) strategy that serves to pilot the change from the planning stage through its execution with the least amount of difficulty and interruption. Predicting the most likely results that the change will bring about and creating a plan to deal with them are two of the most crucial elements of a successful strategy for dealing with this kind of change. "The most successful manager is one who very early perceives—and perceives correctly—trends just beginning to develop that might affect the organization, then devises and implements an effective adaptation for the organization [45, 46]." The manager in the information age must comprehend the direction of technology and develop practical plans for transforming the business.

Conclusion

There was once a widespread belief that information technology and those who supported it were wrapped in a cloud of uncertainty and dread. a method where: IT operations and processes were a backroom function; IT staff were techno-geeks with limited familiarity with public administration operations; each department held its own data the exclusion of others; and users were largely trained for new, particular apps. To allow managers and organizations to address the diverse and quickly changing requirements of the future, a shift in this approach is now required. When (1) IT is a seamless component of company strategy and operations; (2) IT staff members are technically skilled and have a working knowledge of how local government functions; (3) Data is a resource that the entire business may use, and ITs are created with this in mind; (4) Users receive training on how to use IT to its full potential, a method for implementing IT is required.

References

Annosi, Maria Carmela, Federica Brunetta, Alberto Monti, dan Francesco Nat. 2019. "Is the trend your friend? An analysis of technology 4.0 investment decisions in agricultural SMEs." *Computers in Industry* 109:59–71. doi: 10.1016/j.compind.2019.04.003.

Brown, Mary Maureen, dan Jeffrey L. Brudney. 1998. "Public sector information technology initiatives: Implications for programs of public administration." *Administration and Society* 30(4):421–42.

Dong, John Qi, Prasanna P. Karhade, Arun Rai, dan Sean Xin Xu. 2021. "How Firms Make Information Technology Investment Decisions: Toward a Behavioral Agency Theory." *Journal of Management Information Systems* 38(1):29–58. doi: 10.1080/07421222.2021.1870382.

Motlhasedi, Nna. 2022. "Records management for open government at Ministry of Local Government and Rural Development Botswana Nna." *SASA Journal* 55(1):1–13.

Østergaard, Poul Alberg, Neven Duic, Younes Noorollahi, dan Soteris A. Kalogirou. 2021. "Recent advances in renewable energy technology for the energy transition." *Renewable Energy* 179:877–84. doi: 10.1016/j.renene.2021.07.111.

Pittaway, Jeffrey J., dan Ali Reza Montazemi. 2020. "Know-how to lead digital transformation: The case of local governments." *Government Information Quarterly* 37(4). doi: 10.1016/j.giq.2020.101474.

Tan, R. R., K. B. Aviso, dan D. K. S. Ng. 2019. "Optimization models for financing innovations in green energy technologies." *Renewable and Sustainable Energy Reviews* 113. doi: 10.1016/j.rser.2019.109258.

Tiep, Nguyen Cong, Mengqi Wang, Muhammad Mohsin, Hafiz Waqas Kamran, dan Farzaneh Ahmadian Yazdi. 2021. "An assessment of power sector reforms and utility performance to strengthen consumer self-confidence towards private investment." *Economic Analysis and Policy* 69:676–89. doi: 10.1016/j.eap.2021.01.005.

Yang, Wen, Yanchun Pan, Jianhua Ma, Tianyue Yang, dan Xiao Ke. 2020. "Effects of allowance allocation rules on green technology investment and product pricing under the cap-and-trade mechanism." *Energy Policy* 139(January):111333. doi: 10.1016/j.enpol.2020.111333.

Zhang, Yiwei, Sanhong Deng, Yue Zhang, dan Jia Kong. 2019. "Research on government information sharing model using blockchain technology." Hal. 726–29 in *Proceedings - 10th International Conference on Information Technology in Medicine and Education, ITME 2019*.

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