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IT Capability Practices in Kenya

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Abstract: *IT Capability refers to an organization's ability to identify technology that meets business needs, to deploy IT to improve business process in a cost-effective manner, and to provide long-term maintenance and support for IT-based systems. It is the abilities to leverage different IT resource for intangible benefits.*

Keywords: *Corporate Strategy, Business Strategy, IT Strategy, Enterprise Architecture, IT Capability, Digital Transformation, IT Organization.*

I. Introduction

Information Technology (IT) Capability is an organization's ability, by virtue of its IT assets and know-how, to create business value (CioIndex, 2019). This capability can be, and is usually, attributed to the IT function within an organization. More appropriately it should be attributed to the organization because no function within an organization is an island. Each function gains from the other and in turn enriches them. This value "bleed" from one function to another cannot be quantified in a meaningful way, however, it exists. It can be positive or negative. When the organization plays as a team i.e. the functions collaborate, positive value passes between functions. In this case, the organization's capability is greater than the sum of its parts. The functions are better off together. Conversely, when the organization does not play as a team i.e. is dysfunctional, then the value bleed is negative. In this case, the organization's capability is less than the sum of its parts. It follows then that the functions are better off not being with each other! The net of this phenomenon is that no function within an organization would create the same value within another organization. For example, if an IT organization is moved from one company to another, it will deliver but never the same value as it was creating in the original company. This is true of any team. A player is successful or more successful on one team versus the other (CioIndex, 2019).

II. Problem Statement

Despite devoting enormous resources and energy trying to align their company's IT investments with their most important business needs and improving IT's effectiveness, fewer than one in five organizations felt their efforts were succeeding (Bain & Company, 2019a). The General business problem is that managers lack strategies to deliver on the promise of IT capability. The specific business problem is that managers in Kenya companies lack the strategies to develop and implement mature IT capability.

III. Literature Review

IT Strategy

Technology is an integral and potentially differentiating component of the business that both influences and is guided by corporate strategy. At least, that's how it should work. IT managers must work with business leaders to understand the strategic goals and then determine which technological capabilities, systems and support they need to achieve them. IT strategy enables managers to:

- Reach new and game-changing levels of performance by modernizing their IT capabilities, including their systems architecture, operating model and cost structure, so the company is ready to pursue its digital future.
- Improve the value that IT brings to the business, by identifying the resources and capabilities needed to generate lasting results. Focus the investments on what matters most, ensure the right people and processes are in place, reduce complexity, and be confident that the large-scale projects will meet or exceed expectations (Bain & Company, 2019c).

IV. Components of IT Capability

IT Capability is comprised of four subcomponents or elements. IT's overall capability is not the sum total but the synthesis of capabilities of its underlying elements

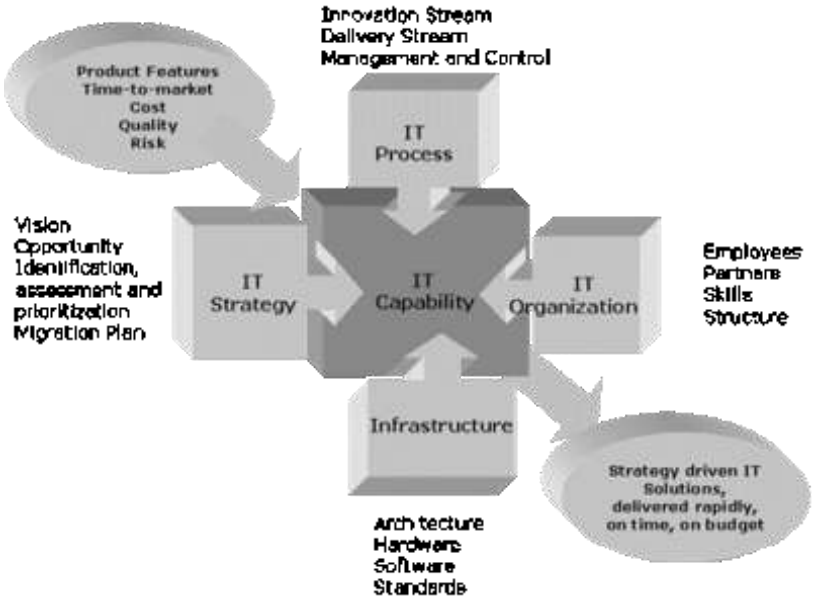

Figure 1. Source: (IGI Global, 2019).

IT Capability comprises of the following components:

- IT Strategy
- IT Processes and Metrics
- IT Organization
  - Skills
  - Structure
  - Knowledge/ "know-how"
- Assets/Infrastructure
  - Hardware
  - Software
  - Applications
  - Network
  - Database
  - Tools

An organization creates value by utilizing a unique combination and configuration of these components

V. Mapping IT Capabilities to Business Capabilities

From a strategy perspective, the business capability analysis is based on current definition of functions instead of an organization structure, as organizational structure is quite dynamic and frequent changes, which may create a chaotic process model, use the value chain or the supply/demand governance model to map the business capability.

- A pragmatic approach is to look at this from a 'value streams' perspective:
  - 1) Identify major business value streams (end-to-end processes that deliver customer value).
  - 2). Map information technology related services that support these or are missing (untapped capability).
  - 3). Estimate the 'capability leverage', preferably in dollars, provided, or potentially so, by of each of these IT services to each value stream (greater agility etc).
  - 4). Estimate the business capability (preferably normalized to dollars) represented by each value stream

- Map IT capabilities to either:
    - 1) What the business does - Capabilities or
    - 2) How the business does it - Processes\Functions
    - 3) Processes are best if you are working at a tactical level
    - 4) Capabilities are best for strategic work

Either will help identify business - IT alignment issues

- One Page IT Capability Mapping: It is quite interesting if everything can be put in one page. It depends on the nature of the enterprise (diversified), size, and the age of the enterprise as well. So single page would include fundamental to any business enterprise are the questions of 'what do we do', and 'how do we do it':
    - 1) Vision
    - 2) Requirements to deliver
    - 3) IT capability
    - 4) The resources, metrics, application, and information associated with capabilities are the aggregation of all the resources, metrics, etc. belonging to the business processes that 'work for' the capabilities.

The approach could be to draw an enterprise value chain and expose all the business capabilities beneath those functions and highlight the activities & identify the overlaps and gaps; then, take to next level (with lots of details) in multiple pages. For all the capabilities, then calculate cost in three categories like strategic, operational and governance. For all the foundational capabilities like HR, finance and others, then draw that at the bottom of the sheet across the whole enterprise value chain (Future of CIO, 2019).

VI. Defining Required IT Capabilities

Every organization's needs are different: Some need IT to focus on delivering the latest and greatest applications, while others need IT to create a robust infrastructure. Let's accept one fact: IT is a service provider and the firm and its employees are its customers. IT must enable the business and ensure that its customers are satisfied with the basic services (for example, keeping servers and email up and running, providing help-desk support) and that all IT operations are efficient and cost-effective. Creating a strategic IT vision requires determining the IT organization's various customer segments and their business needs. Generally, customers need a set of capabilities across a range of functions. Typically, these capabilities fall into three main areas. Each of these areas must be optimized by the IT organization:

- IT operational excellence. Critical capabilities that allow IT assets to be managed to take information systems to higher levels of effectiveness and cost efficiency. The objective is to create low-cost, flexible support for the enterprise.
- Business enablement and process improvement. The ability to transform or improve core business processes within the organization. The goal of core-value and IT-enabling processes is to take value chains and business operations to world-class levels. The measure of success is not cost reduction, but improvements to key business processes.
- IT innovation. Solutions developed with the business to help achieve breakthrough innovation to improve competitiveness. Initiatives move beyond improving processes to helping create competitive strategies and transforming market dynamics, repositioning a company against its competitors or allowing it to enter markets where it did not previously compete.

IT capabilities can be illustrated in a capability catalog, which is used to establish a common language and framework on services to be consumed and delivered to the business (see figure 2). Additionally, the capability catalog can be used as a basis to define which capabilities are core and which are non-core (A.T. Kearney, 2019).

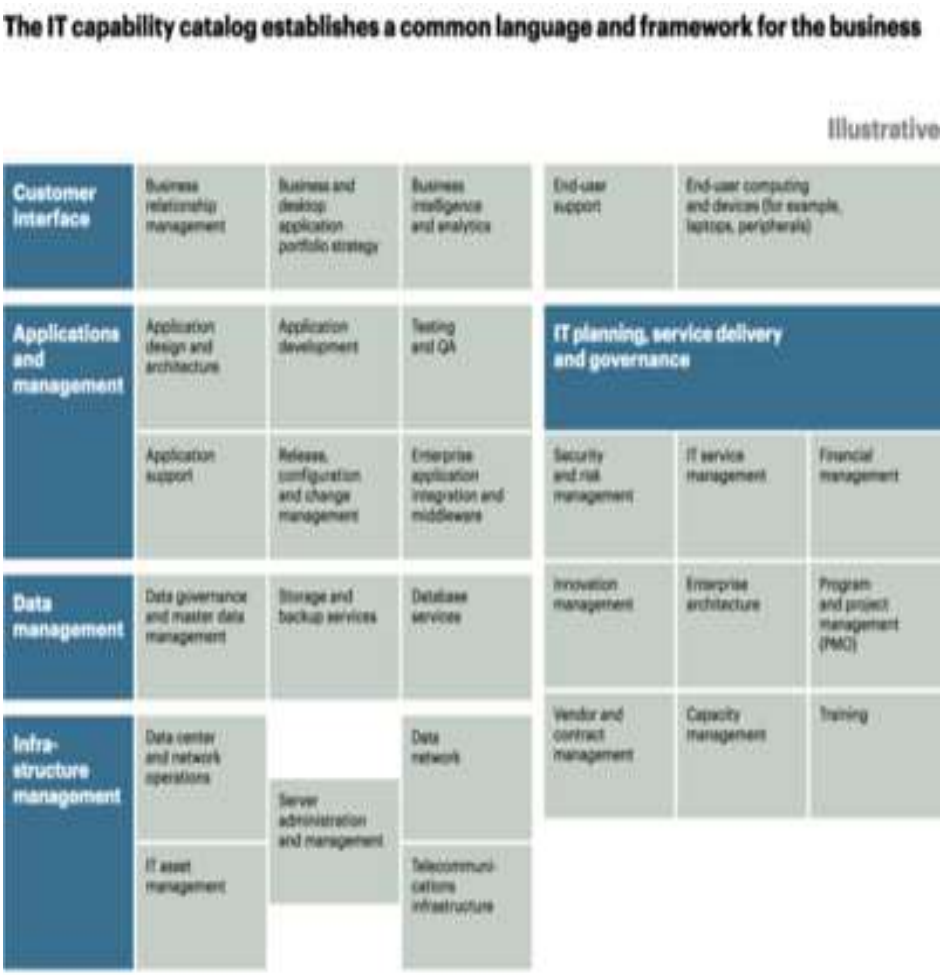

Figure 2. Source: A.T. Kearney. (2019).

Core capabilities are those for which in-house expertise must be developed, because they are often critical to the business and for gaining competitive advantage. Examples include business relationship management and IT strategy and innovation. Non-core capabilities are less crucial to be executed by in-house staff and are often outsourced to IT services providers. Potential examples often include end-user support, application development and infrastructure management.

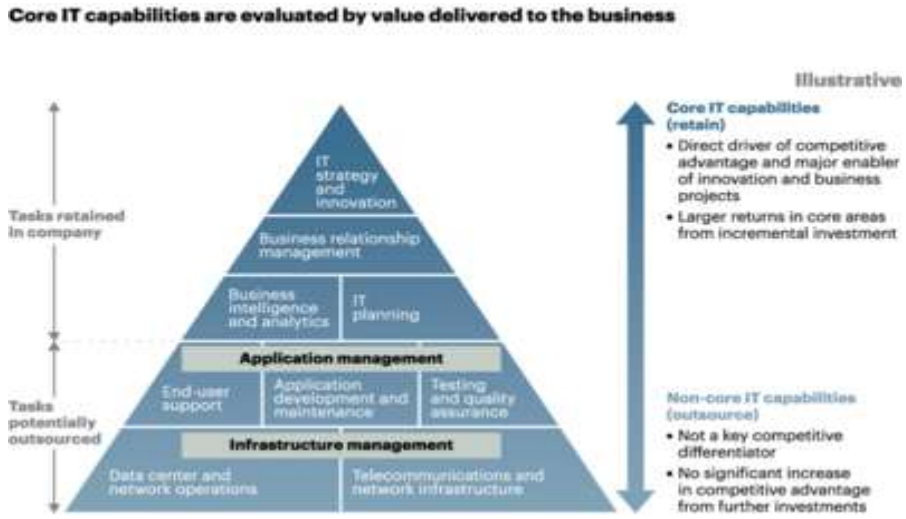

Figure 3. Source: A.T. Kearney. (2019).

VII. Potential Landscape of IT Capabilities

Below is a diagrammatic illustration of a normative, high-level IT Capability Model. One can debate the specific labels for each of these capabilities, but essentially, any enterprise that depends upon Information Technology to any degree needs each of these IT Capabilities (The Merlyn Group, 2019).

Figure 4. Source: The Merlyn Group. (2019).

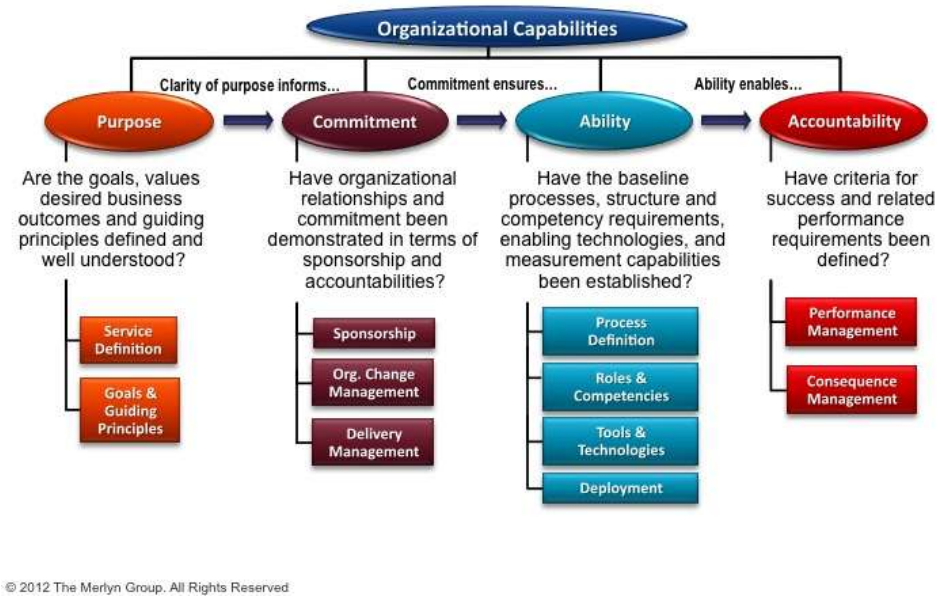

Figure 5. Source: The Merlyn Group. (2019).

VIII. Capabilities-Centered IT Strategy

In order to unleash an organization's full potential, IT needs to be anchored to clearly defined business capabilities. Information technology organizations and the business units they are meant to support do not occupy parallel universes, but most business leaders can be forgiven for thinking they might. Bain & Company found that despite devoting enormous resources and energy trying to align their company's IT investments with their most important business needs and improving IT's effectiveness, fewer than one in five felt their efforts were succeeding (Bain & Company, 2019a).

The consequences of misalignment are severe, showing up in four major lost opportunities:

- Money squandered on the wrong IT investments;
- Delays encountered in bringing new products and initiatives to market;
- Opportunities missed to create loyal customers because of suboptimal service;
- Improvements deferred because IT lacks the fully engaged support of the business which, in turn, fails to achieve its most critical objectives.

Bain & Company (2019) developed and tested a five-step process for unlocking IT's full potential to deliver business value:

- 1. Define business imperatives and capabilities. Business imperatives are the organization's most urgent priorities flowing from the corporate vision and strategy. Alignment begins by defining these critical battlegrounds and identifying the key capabilities the business units need to master in order to support them. Executives need to weigh the strategic relevance of each capability based on the number of business imperatives it supports and group them into priority clusters. A clear business imperative might be to establish a customer-centric culture that allows the real-time ability to make special offers and set prices based on key customer relationships, and to adapt products accordingly. In a bank setting, for example, the business capability required is for all branch staff to have, or be able to quickly retrieve, timely and simple-to-understand online insights into their customers. Translated into an IT-enabled business capability, some of the features needed in this platform would include instantaneous responsiveness to deliver a full customer profile to a sales representative's desktop. From this, a sales rep would instantly know what other products the customer has purchased, past issues or complaints, and prompts related to complementary offerings. In other words, the business capability is a complete profile linked to the ability to design and price custom products based on such important customer factors as segmentation, subgroups or change-of-life points. Such a frontline service point of view would empower a bank branch manager, financial adviser or credit-card company call-center representative to provide a better customer experience.
- 2. Identify IT capabilities that support business capabilities and plug gaps. Here, line executives and IT managers together determine the IT design required to satisfy the business capabilities. Their collaboration will likely reveal that the choices they make may not accommodate all business imperatives, requiring that they rank order them. To do this, managers need to assess the strategic relevance of the various IT capabilities, map them to the business capabilities they support and then group them into priority clusters. In the process, they will identify gaps between current IT capabilities and the target state, and they will need to determine which IT capabilities can be shared across different lines of business. To return to the financial services company example, IT needs to build a flexible customer-information platform based on a common customer database that enables the bank's financial advisers, call-center reps and credit product marketers to quickly offer the right products and service levels to each customer. The process of developing that platform may expose potential capability gaps, such as in a lack of data in the forms the business unit will require or insufficient IT skills to support data analytics. These will need to be addressed.
- 3. Design the operations and technology architecture. Rather than develop IT features in an ad hoc manner as requirements emerge, managers need to establish capabilities-based IT principles. These will guide and govern IT architecture, its evolving design, and the way features are built and operated. From a firm-wide perspective, companies must develop recommendations for a target-state technology solution that encompasses each IT capability. Here, the selection of systems architecture becomes critical to ensure flexibility and meet evolving business needs. As part of creating durable, multi-user capabilities, IT managers must carefully design specs for the final application, determine how the data are going to be manipulated and decide what overarching infrastructure will accommodate it. For example, in most organizations, master customer data are scattered over diverse applications and databases. To support the financial institution's business requirements-and to simplify the environment for the sales force-various customer systems will need to be integrated into one universal content-

management system. In this way, branch and contact centers will be able to access a real-time, 360-degree customer view from one readily accessible place. This not only pushes data to customer-facing employees when they need it, it facilitates customer-focused service, segment-specific marketing and sales analytics. On a daily basis, for example, such a platform could push customer feedback gathered from surveys directly to a call-center representative to follow up and resolve problems. When aggregated by the IT customer-interface system to reflect the experiences of the hundreds of customers who required call-center service, the feedback can be used by supervisors and managers for front-line training or to elevate issues that may need higher-level attention. Finally, the platform would also enable market analysts to sort the feedback by customer segment in order to identify opportunities to improve service delivery to high-value targets or spot opportunities to cross-sell other products.

- 4. Develop the IT strategy roadmap. Aligning IT with business objectives requires not only a capabilities-based goal, but a roadmap to get there. To create one, managers must work together to identify key IT investment needs that will close the alignment gaps, and then bundle them into IT investment themes. Following an acquisition, for example, a top priority will be to improve IT connectivity and efficiency across the merged companies. Thus, integrating the two organizations' systems ties into the business imperative to get a more granular view of all customers and how they rate the services they receive. Meanwhile, organizational capabilities needing an immediate upgrade might be to consolidate finance, data warehouse and human resources functions. Most leading firms sequence their IT investments. They develop a three- or five-year transformation roadmap for IT initiatives based on their strategic relevance, urgency and ease of completion. They also build an investment plan based on the estimated cost to accomplish these IT initiatives and the return that investment is expected to yield.
- 5. Reallocate IT spending as business priorities evolve. Periodically, companies need to reassess whether their technology investments remain aligned to business priorities by applying a business lens to IT costs. Sometimes it is necessary to refocus the project portfolio on the most critical capabilities, reallocate IT budgets accordingly and capture the savings. Frequent assessment of all projects against the IT strategy can identify significant amounts of unaligned IT costs early on that can be reallocated to new business priorities. For instance, IT capabilities may need to be revised as business needs change, creating opportunities to serve new customer segments. Other capabilities might begin to rise in priority, as well, such as the need to accommodate high-volume customer surveys, develop a capacity to mine verbatim feedback, and begin channeling the feedback to front-line employees.

IX. Benefits of Capabilities-Driven IT

PWC researchers found out that many high-tech firms and startups in financial services and other industries are taking a different approach, not just decentralizing but integrating technology capabilities directly into the business, with a capabilities-driven IT model. In this model, blended, collocated teams contain all the business, operational, and technology skills needed to deliver a specific capability. These teams can deliver fast, flexible solutions, because IT development is no longer in the back office, but directly linked to the business's needs, while IT governance and infrastructure services remain centralized to maintain benefits of scale (PWC, 2019).

With capabilities-driven IT, large financial institutions can begin to operate with the agility of fintech startups, since technology is no longer a bottleneck but instead a fully integrated part of the business. Here are some of the benefits this approach will bring:

- Business needs met quickly and effectively. Since pods own both the technology and the talent needed to deliver each capability, and even non-technology specialists participate in IT development, collaboration is continuous. There is no more bureaucracy related to approvals or fights over priorities. Each capability pod decides how best to utilize its own resources to meet the business unit's needs.
- More customer-centric products delivered faster. Because technology developers in the pods work closely with client-facing segments, they have greater insight into client feedback and can incorporate those insights into the development process. They can set and change priorities to meet evolving client expectations, develop products that are more tailored to customer needs, and get these products to market faster (and, if preferred, incrementally).
- Better-engaged IT employees. The reduction in intermediate steps between IT and business units does not just improve efficiency. It also makes employees more effective. Few things discourage technology personnel more than excessive bureaucracy. With less time spent on back-and-forths between different divisions, software developers can spend more time developing.

- More efficient capital allocation. No longer do business and IT make plans in isolation. Instead, capability pods define their own technology needs, allowing management to better align investments to meet business objectives. Instead of monolithic technology investment processes, management allocates discretionary funds to capability pods in line with their needs and ability to generate incremental value.
- Better use of outsourcing and automation. Since the pods are no longer required to use the company's centralized IT services, they can take advantage of software and infrastructure from external providers, and their combined business, operational, and technology skills enable them to assess with a business lens the trade-offs between third-party software's functionality and costs. That assessment is often challenging in current models, where IT is separate from the business.

X. IT Capability and Digital Transformation

Nearly every company is involved in some form of digital transformation, but few see the pay off. The answer is surprisingly few. Bain & Company (2019) found that that only 8% of global companies have been able to achieve their targeted business outcomes from their investments in digital technology. Said another way, more than 90% of companies are still struggling to deliver on the promise of a technology-enabled business model.

What secret formula do the 8% deploy? Unsurprisingly, there are no shortcuts or silver bullet. But successful transformations do share some common themes.

One of the most important is understanding that this is really a business transformation, supported by investments in new technology; not new technology in search of opportunities. Many executives pay lip service to this idea, but in practice, they delegate too much responsibility to the tech team, hoping the business can watch from the sidelines. At the 8%, executive teams understand that the core of a digital transformation is a business transformation, changing the way of engaging customers across channels, simplifying business processes, and redesigning products or services. Rather than asking which technologies they should add to become more digital, the 8% ask how they can improve the business and how technology can enable that change.

A good example comes from a global insurer, which went through a technology transformation earlier this decade. One of the first decisions that senior executives made was to standardize products and services. They realized that customization does not necessarily deliver differentiation, though it almost always increases costs. By standardizing business and product design in up to 80% of their workflows, they were able to develop new capabilities and deliver faster than competitors. A technology function working on its own would not have been able to drive this standardization because it involved business process and product redesign.

Our work with companies undergoing technology transformations reveals several myths that are widely believed among executives—and that, unless dispelled, can hinder success.

- **Myth 1: You can spend your way to leadership**. The research shows that leaders—the 8%—don't spend much more on technology than others do. In some cases, they actually spend a lot less. But they do spend differently. Leaders invest more to develop new products and services, and less on keeping legacy systems running (see Figure 1). They also find ways to self-fund some of their transformation expenses by eliminating lower-value business projects and selectively deploying new technologies to reduce operating expenses. They are transparent about costs, optimize sourcing, manage demand closely, and simplify systems and processes where possible. Over the course of a major digital transformation, a US retailer cut technology spending by 40% and was able to deliver four times more productivity by building up its internal talent pool, adopting Agile and DevOps methodologies, spending less on external vendors, and redesigning the architecture of its applications and infrastructure.
- **Myth 2: Setting up Agile teams will be enough to deliver high-quality solutions quickly.** Modern IT depends on Agile, but Agile alone is not enough. Companies need to synchronize their progress on Agile with their efforts to modernize architecture and develop new talent (see Figure 2). No company is a leader in one without addressing all three. Digital natives like Amazon and Netflix, as well as companies like Target and Capital One, recognized this truth early and designed their transformations accordingly.
- **Myth 3: Investing in data analytics or customer engagement will be enough.** Focusing on only one aspect of digitalization—for example, improving customer experience or building better analytics capabilities—won't deliver a successful transformation. Leaders modernize their foundational infrastructure, remove legacy bottlenecks and address core technology issues such as integration and developing a service-oriented architecture. Executives at Lyft realized this as they were moving to adapt a monolithic core system that was limiting their ability to scale. Over about two years, Lyft redesigned its architecture into a series of micro services that increased speed—a significant investment, but one that the

company thought necessary to achieve its strategic goals. Other companies such as Target and Capital One have also invested in architecture modernization, as did Amazon in the early 2000s, when it modularized its monolithic technology stack to lay the foundation for the explosive business growth it foresaw.

- **Myth 4: To succeed, you need to do everything at once.** Doing everything at once increases the risk of failure. Winners prioritize initiatives and carefully design transformation plans that produce a cadence of improvement. They don't try to become best in class everywhere, only where it matters most to their business. A European bank that had wrestled with an ambitious transformation of its core banking system wasn't seeing the progress it wanted. By pausing to re-orchestrate the migration plans, the bank was able to focus on delivering progress in the areas that mattered most. A redefined business transformation plan that mapped out staged progress has allowed the bank to meet its strategic goals.

Of course, merely countering these myths will not necessarily move a company into the 8%, the elite cadre of companies that are seeing real value from their investments in digital technology. But clearly grasping what is necessary—and acknowledging that change is difficult—may be the first steps in a renewed approach to a successful transformation (Bain and Company, 2019b)

XI. Practices in Kenya

Madison Group

Madison Group has invested in IT capability including the IT organization, Skills, Structures and Knowledge. The IT organization structure is based in the COBIT process best practice of Plan, Build, Run and Monitor. The IT staff hold skills and certifications namely, ITIL, COBIT, ISO 27001, ISO 22301, CISA, CISM, CISSP, CRISC, CGEIT, PMP, CCNA, Agile and others.

The organization has deployed disruptive technologies including Microsoft Office 365 collaboration tools on the cloud. Mobility platforms and applications for better customer experiences. Qlik sense analytics and visualization. SAP R3 enterprise resource planning system (ERP), core insurance and investments management systems. Madison deployed converged and hyper converged infrastructure to host the applications at the data and disaster recovery centers.

Madison shall keep training the IT staff in emerging technologies mainly in Social, Mobility, Analytics, Cloud, Cybersecurity, Artificial Intelligence (Robotics Process Automation and Machine Learning), and projects management.

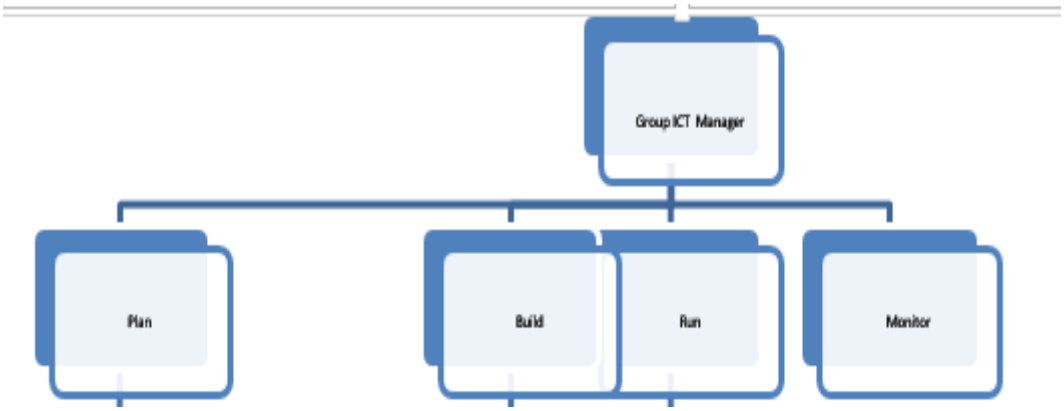

Figure 6. Source: Madison Group (2019). Madison Group IT Organization structure

XII. Eldama Technologies

Eldama Technologies is a cloud- based service provider, focusing on building long term partnerships with businesses ranging from small SME's, through to corporates and up to some of Kenya's largest enterprises. Eldama is Kenya's first tier 1 Microsoft cloud solutions provider, specializing in office 365 and associated services (gold Partner). Eldama offers a full suite of managed IT/cloud services and solutions which allow for intelligence, collaboration and transformation. Eldama provides several solutions such as security, telephony, network infrastructure, as well as a server and storage solutions. Eldama has over 100 years IT experience within the business and is based in Kenya but with customers in east and west Africa.

Eldama provides their clients with solutions that help to build their businesses and that means being innovative about what solutions can help them to become better and more efficient. They add value to the clients other than selling them devices. This sets them apart from the competition (Eldama, 2019).

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