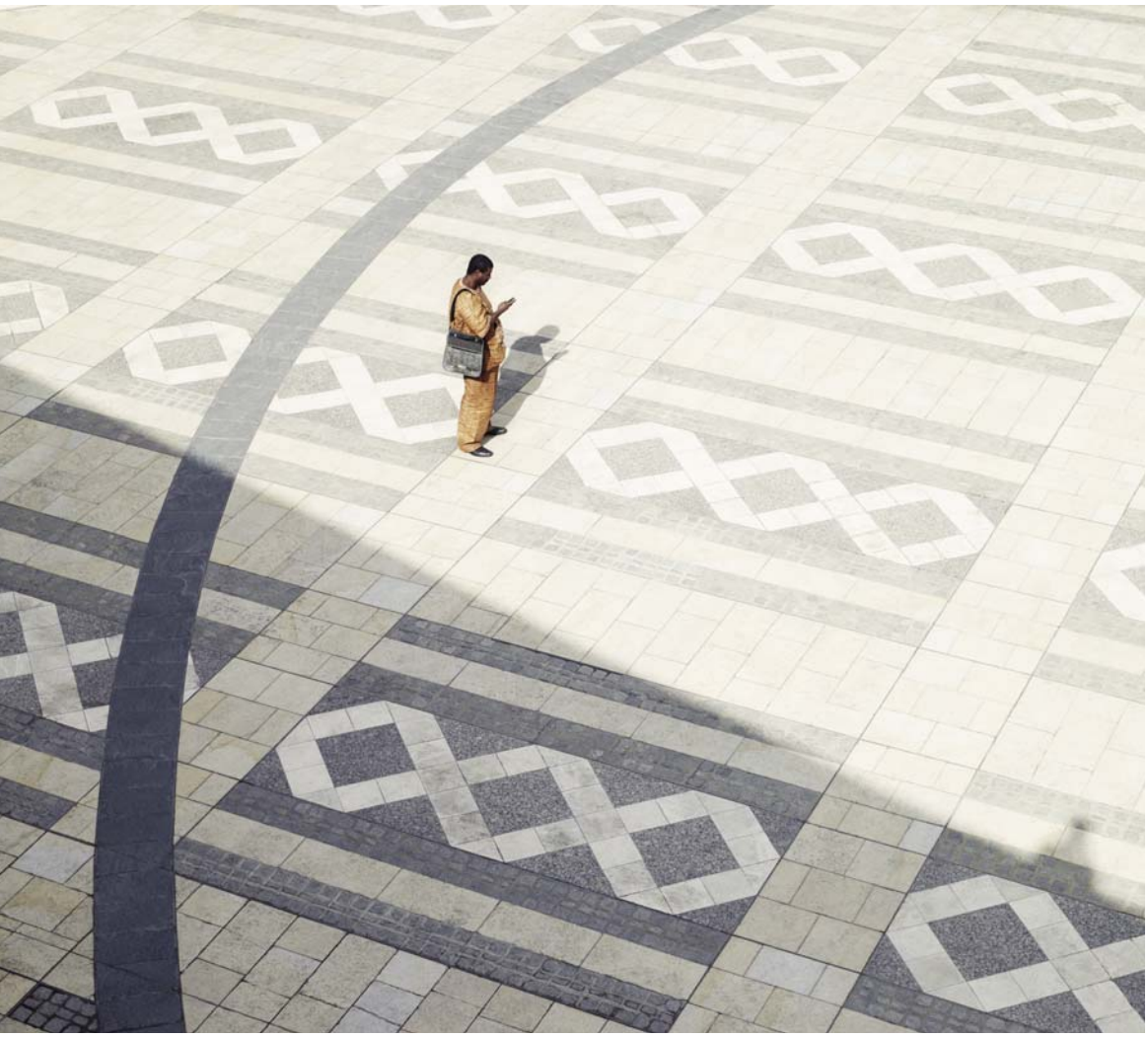
CIO
EAST AFRICA

4th Annual PwC/CIO - CIO100 Survey:
Measuring Enterprise Innovation

CIO100 East Africa Mega Trends Report



In the past business changes drove innovation and technology. This is supported by the trend of the CIO100 East Africa Survey 2014 in which most of the respondents reported that they implemented mobile and wireless technologies to increase customer and citizen experience.

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The heart of the matter

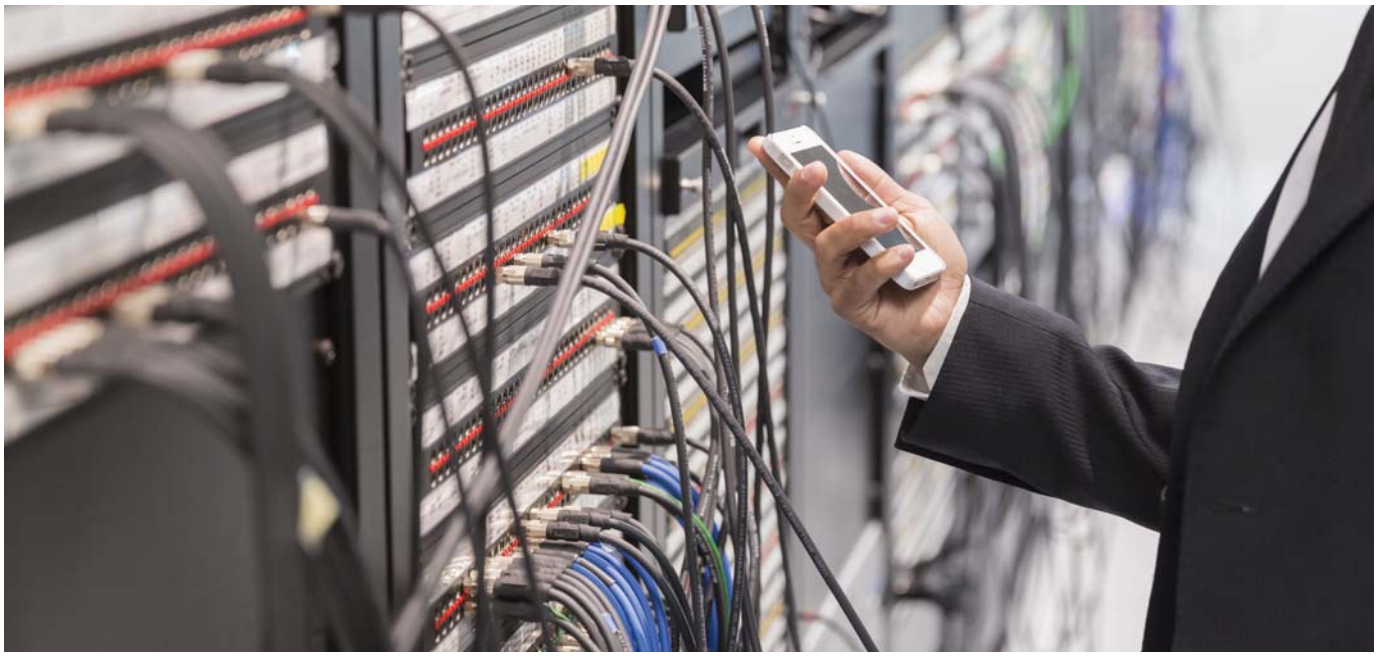
For many businesses and institutions, technology has evolved from being a support function to more recently, a strategic enabler. The rules have changed, and CIOs —old and new—are having greater passion to innovate than ever

In East Africa economies are expected to grow at about 6% on the average. According to the African Development Report 2013 the dynamics of the East African region are rapidly changing with new oil and gas discoveries in the region, which are expected to attract foreign direct investment in prospecting and construction of infrastructure.

This has been echoed in The PwC/CIO - CIO100 East Africa® Survey 2014. A major observation among 560 executives and senior managers across 7 countries and virtually every industry, confidence in their organizations' Information Technology management practices continues to grow.

Indeed, many believe they are winning. Strategies are deemed to be sound. The CIO role has had great adoption especially within the Public Sector, Financial Services and Telecommunications. At last the CIO's journey is on the right track by having significant input into the strategic direction of the enterprises and organisations.

More than two thirds (68%) of respondents have used new technology for the first time and see their organization as a "front-runner" in terms of Information and Communication Technology (ICT) innovation by either developing new ICT or adopting technology that drives the organisation's success and sustainability.



An in-depth discussion

Today, the CIO is increasingly being thought of as a chief innovator, chief strategist, chief process officer, or all three

Adopted from The next-generation CIO extract report by PwC's Center for Technology and Innovation

The best CIOs are beginning to act as chief innovation and process officers. This is because they're the only C-suite executives who have to know how the business actually works from one end to the other. This advantage gives them insight and leverage into making the business run better. Digital company 2013, the 2008 Economist Intelligence Unit's (EIU) study of 667 senior executives (which PricewaterhouseCoopers participated in) clearly shows CIOs' and executive management's desire for CIOs to take on greater strategic roles in areas such as customer-facing business initiatives—projects that CIOs aren't always accustomed to being part of.

Long live the CIO!

About the survey

During the months of August to October 2014 the 4th annual CIO-PwC CIO100 survey themed 'Measuring Enterprise Innovation', was conducted. This was a joint effort by PwC and CIO East Africa with various intriguing respondents' responses revealing some interesting insights. In total, over 560 submissions were received within the East African region. This year's submissions came in from Burundi, Rwanda, Tanzania, Uganda, Kenya and Congo.

Out of the 560 applications the top 100 were interviewed through follow up email and telephone questions to clarify reasons for various responses.

The criteria for selecting the top 100 was through judging conducted by select CIOs within the industry as well as PwC technology experts. This was done through a point system where applications were scored based on the ability to demonstrate excellence in:

- Technology Innovation: The extent to which the organisation used IT in a new way or enabled new ways of doing business, whether internally or externally.
- Business Value Delivery: The measurable impact backed up by supporting data, that the project or initiative has had on the organisation's business results.

Overview of respondents

The participants included various organizations within East Africa with Kenya leading with 82%, followed by Uganda 10%, Tanzania with 5%, finally Burundi, Rwanda and Congo with 1% each.

Please note that not all answers add up to 100%, because of rounding or because respondents were able to provide multiple answers to some questions.

The chart below indicates the respondents mix by sector,

Figure 1

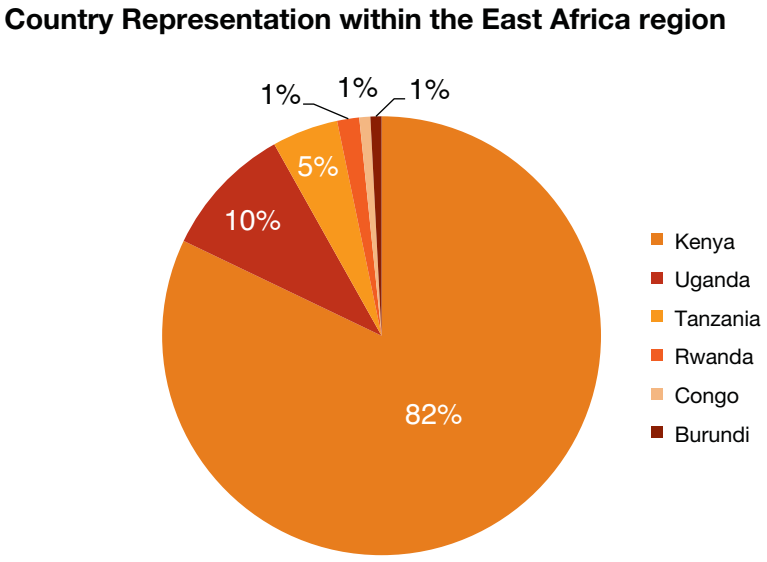
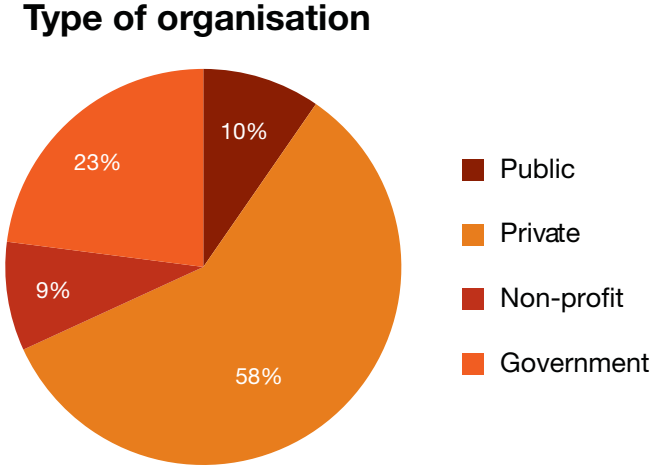


Figure 2

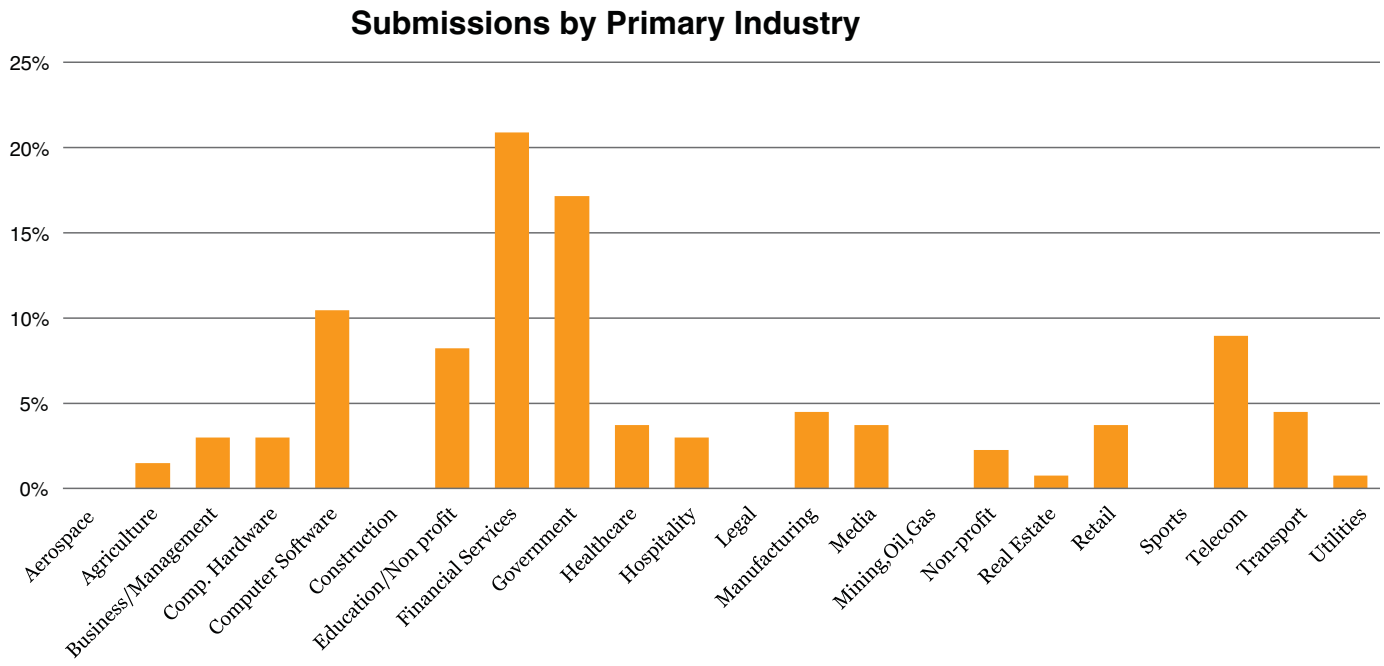


An organisation cannot manufacture, process transactions, or run marketing campaigns without IT. Strong relationships among senior executives are essential for the success of digital strategies

Participants of the survey were from various industries although it is important to highlight that there were no respondents from the following industries:

- Aerospace or Defense Contractor
- Construction
- Legal
- Mining, Oil or Gas
- Sports & Entertainment

Figure 3



It is evident that most respondents were from the Financial Services Sector which included Banking, Brokers and Dealers, Exchanges and Insurance Companies. Surprisingly, Government came in at a strong second and third was the Computer Software Industtry.

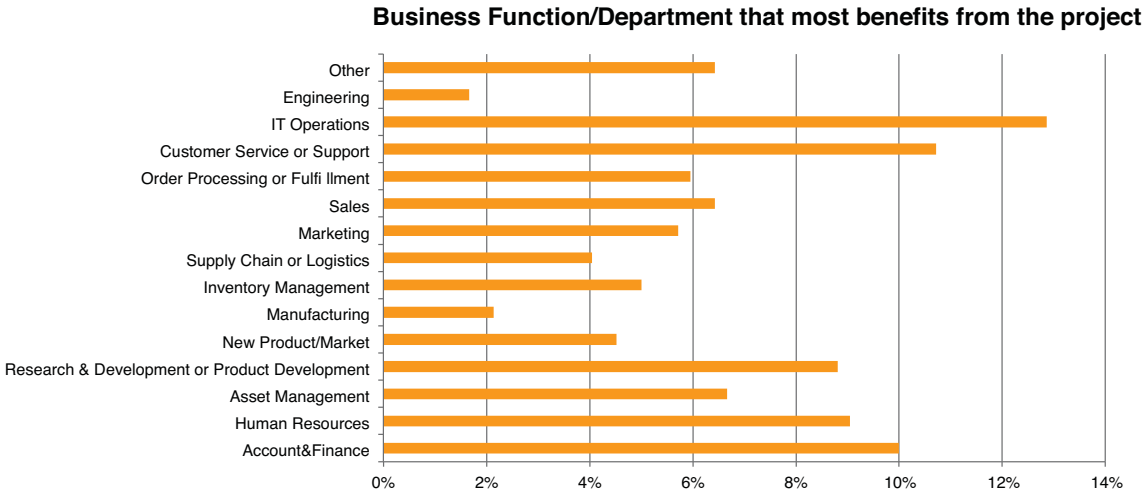
Respondents whose top overall business goal of the submitted projects was Operational Impact

28%

Finding #1

Overall the top five departments or functions that have benefited most from ICT projects were IT operations, Customer Service, Finance, Human Resources and Sales. After a further probe respondents main reason for this alignment being skewed toward IT was due to the capacity that needed to be first built in form of enterprise platforms to enable businesses adopt ICT.

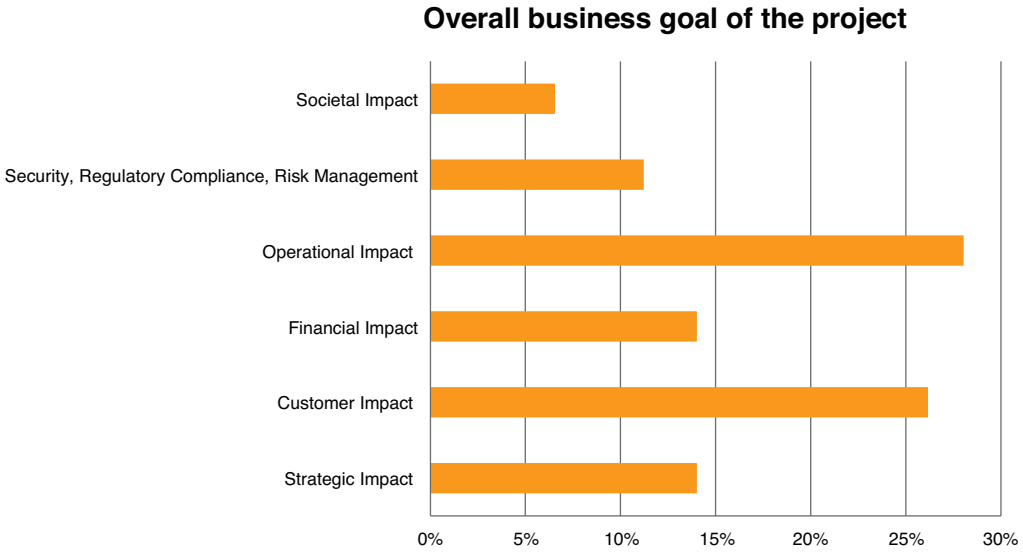
Figure 4



Finding #2

Across the East Africa operation effectiveness is the primary impact of IT projects closely followed by customer impact.

Figure 5



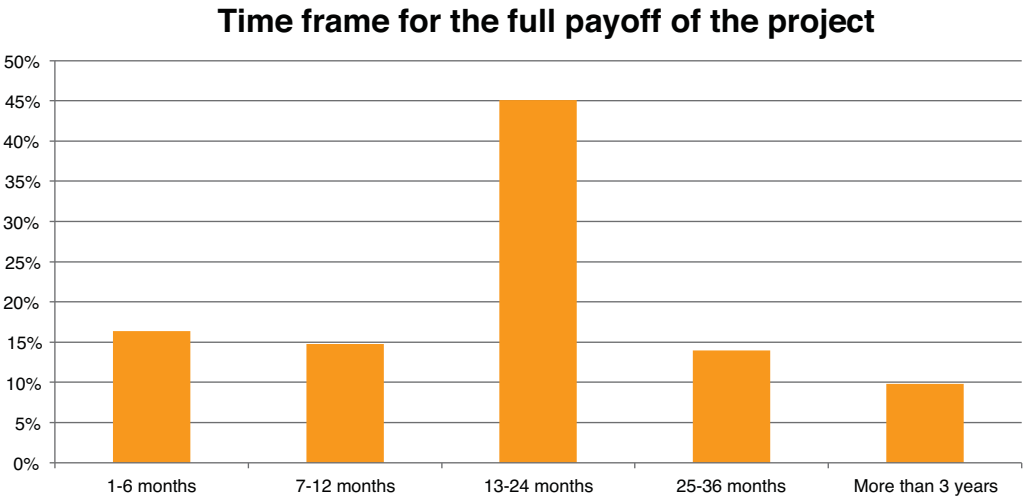
Respondents whose payback period for submitted projects was 13-24 months

45%

Finding #3

Good investments lead to good returns, so it's not surprising that only about 37% of most respondents say their payback period for ICT projects is 12months or less—although they may not realize that with recent technology trends most IT infrastructure and applications will need upgrades every 2 years.

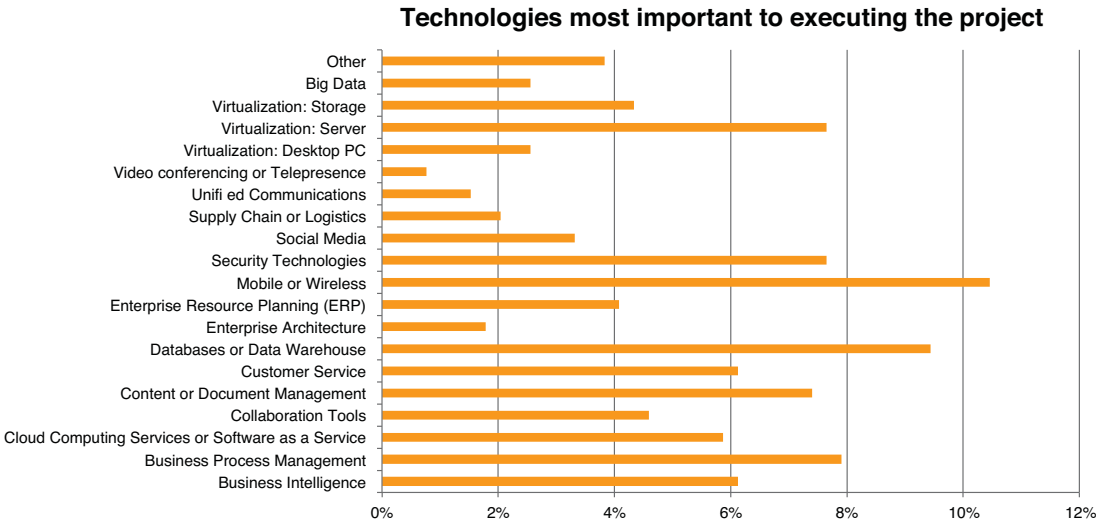
Figure 6



Finding #4

According to an article by the Daily Nation, about three quarters of Kenyans own a mobile phone. It is not a wonder then that Mobile and Wireless Technologies were listed as the technologies most important in driving the projects that were submitted. Following closely were Databases and Data warehouses, Business Process Management and the virtualization of servers.

Figure 7



Respondents from Public Sector companies rated Sales and Marketing departments as the largest beneficiary of technology projects

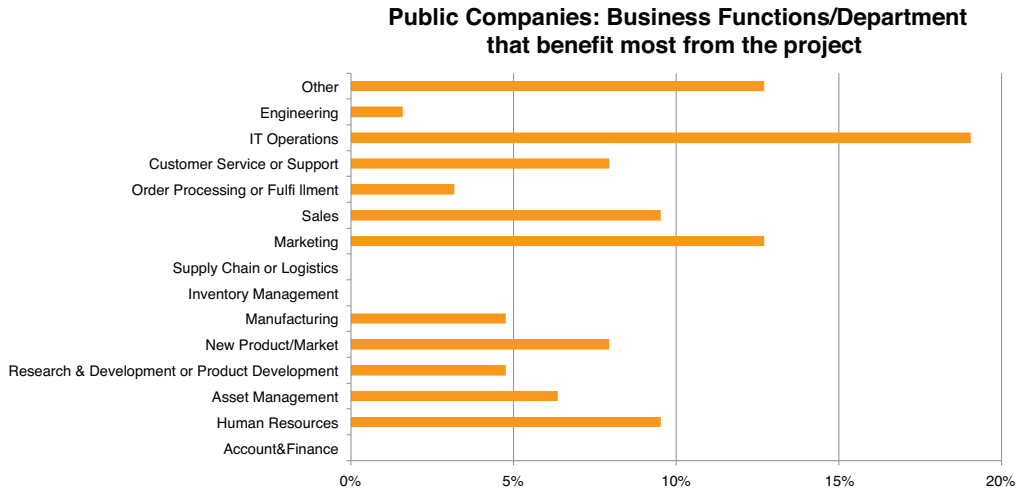
23%

A game of innovation: The rise of Public Companies

Finding #5

IT Operations emerged top department benefitting from the projects submitted. Other specific departments listed as key beneficiaries from submitted projects are Marketing, Sales and the Human Resources function.

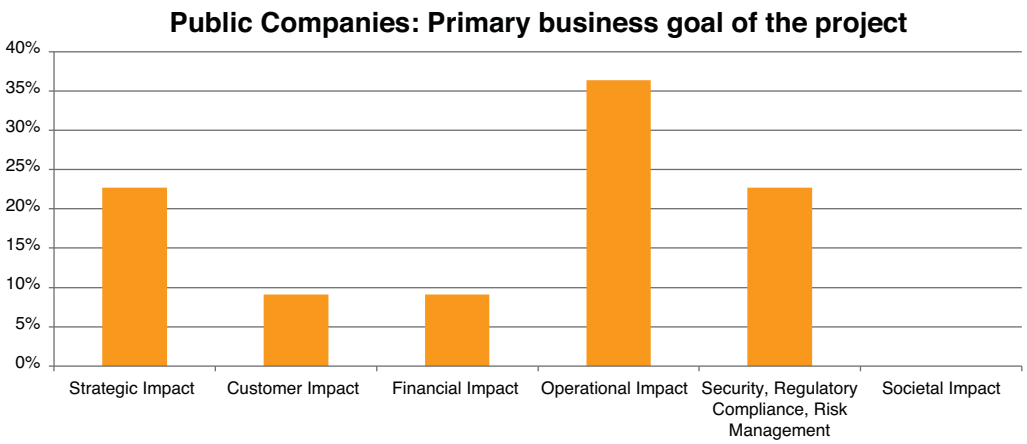
Figure 8



Finding #6

Further validating the finding above, Public companies main business goal emerged as Operational Impact followed closely by Strategic Impact and Security, Regulatory Compliance and Risk Management which tied.

Figure 9

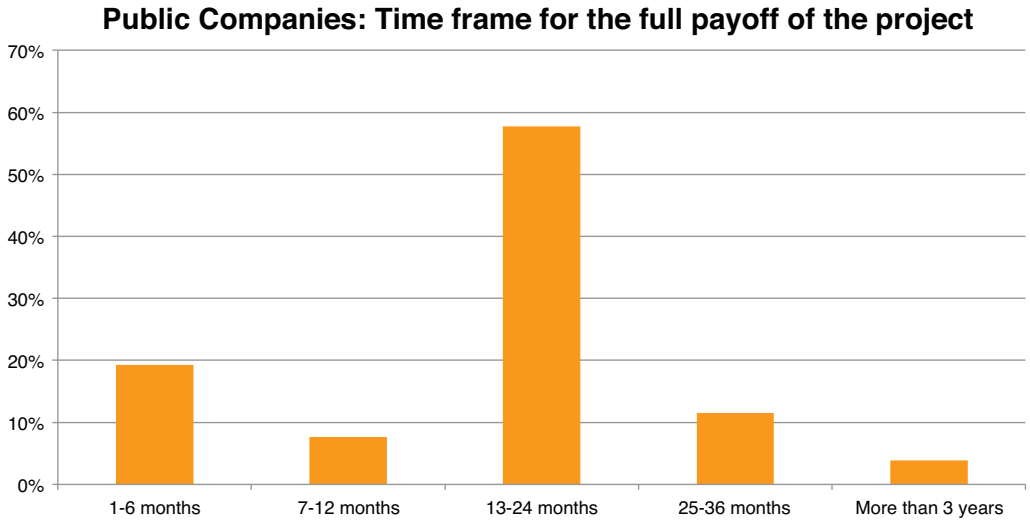


The power of "e" and "m" commerce? Most of the respondent organisations strongly agree that the projects with highest payback are those that are implemented to serve the customer and citizen

Finding #7

58% of the projects had a payback period of 13-24 months, indicating the need to see actual returns on investment within the shortest time possible.

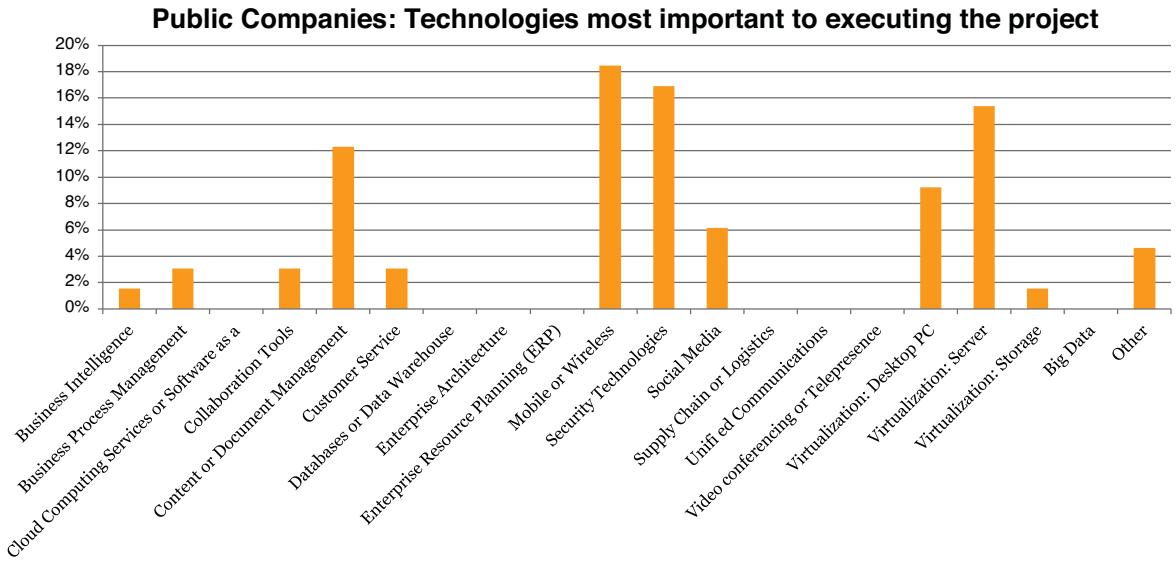
Figure 10



Finding #8

Mobile and wireless technologies have truly changed the region's technology landscape as they emerged as the technologies most important to executing projects within the public companiess. Trailing in at a close second and third were Security technologies and virtualisation of servers.

Figure 11



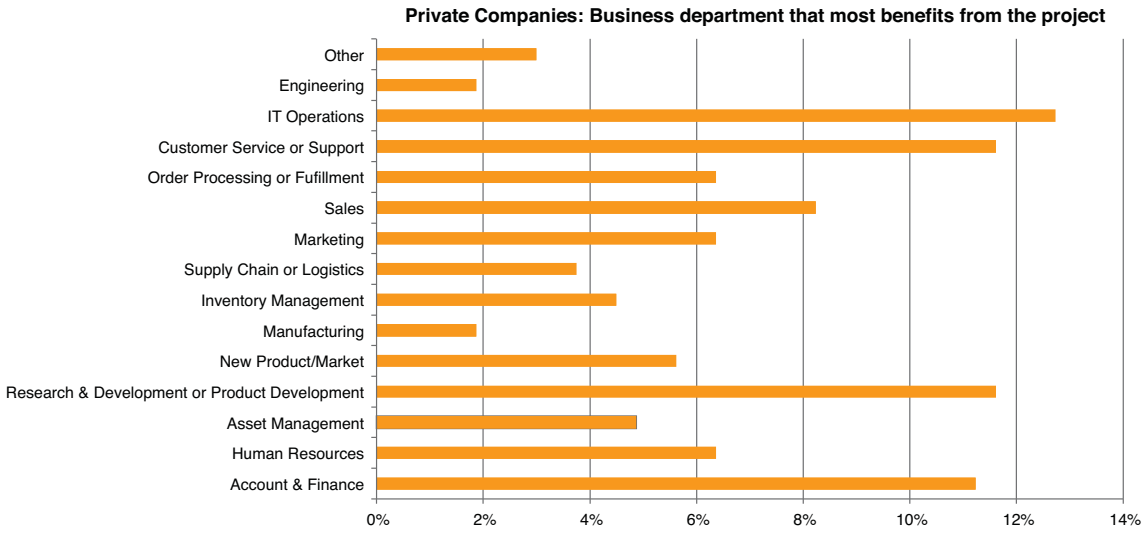
Private Companies championed a shift from the traditional roles of IT in the organisation by applying technology in enhancing Customer experience with 30% of respondents from the Private Companies indicating Customer Impact as the primary business goal of submitted projects

Private Companies: Satisfying the Customer

Finding #9

For this sector, in as much as IT Operations, on average, was the department that benefitted the most from the submitted project not so far behind was the Customer Service department, championing for the clients and third was the Accounting and Finance function.

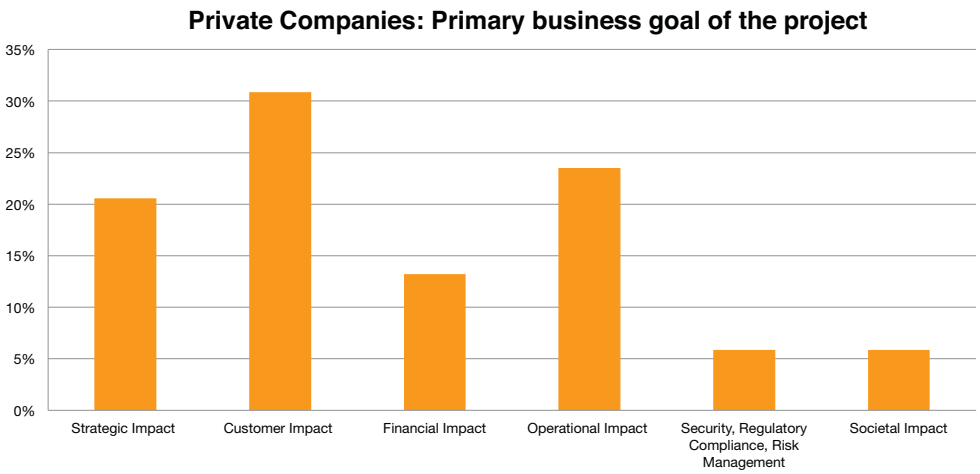
Figure 12



Finding #10

It is not surprising therefore that the primary business goal for most private companiess is Customer Impact, then followed up by Operational Impact.

Figure 13



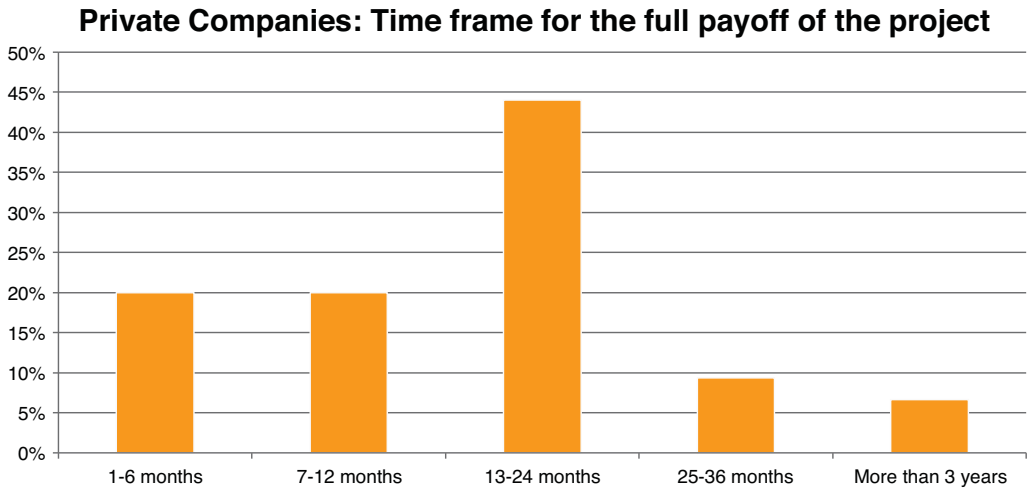
Among technologies used to reach the customers, respondents rated mobile or wireless technologies and social media as most important

16%

Finding #11

Keeping up with the Public Companiess and the overall trend, Private Companiess also invested in projects whose payback period ranged an average of 13 to 24 months.

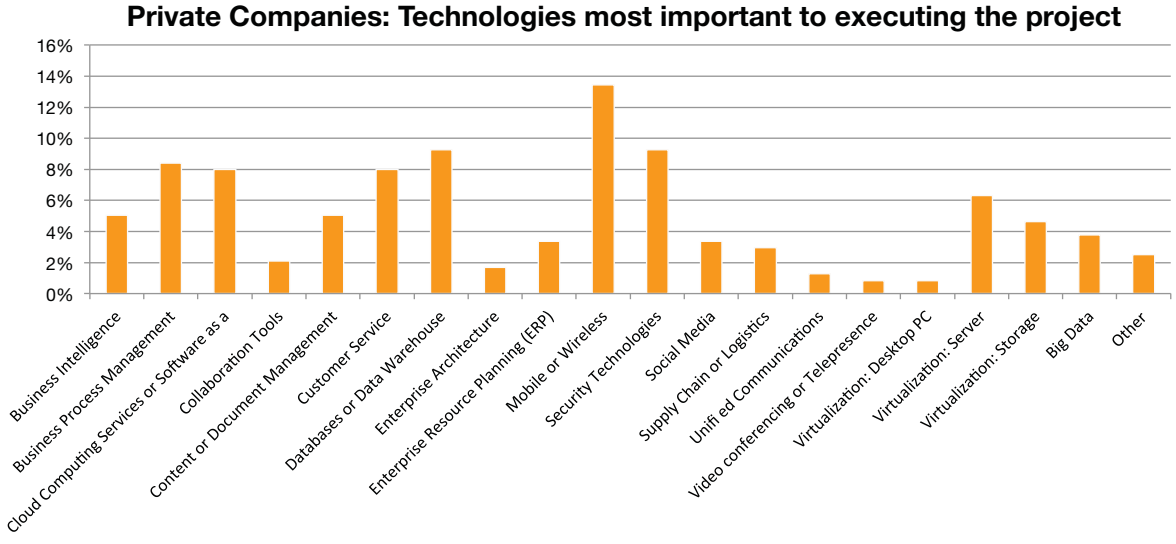
Figure 14



Finding #12

To execute their projects which are aimed at creating Customer Impact, it is no wonder that Mobile and Wireless Technologies were the most important technologies. Security technologies and Databases/ Data Warehouses came in second with Business Process Management coming in third.

Figure 15

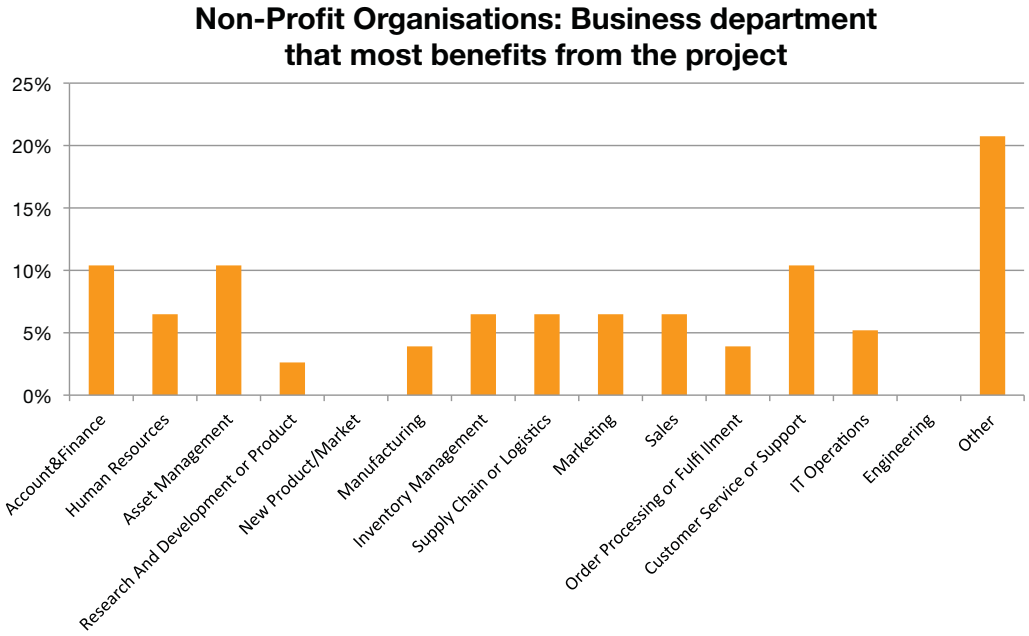


Non-Profit Organisations: Daring to be different

Finding #13

When it came to the business department that benefited the most from the projects, the conventional departments were not a sufficient description and thus 'other' departments took the lead. These include education improvement and curriculum development, medical staff and patient care management. When it came to more conventional departments and functions, Account and Finance, Asset Management and Customer Service and Support took the day.

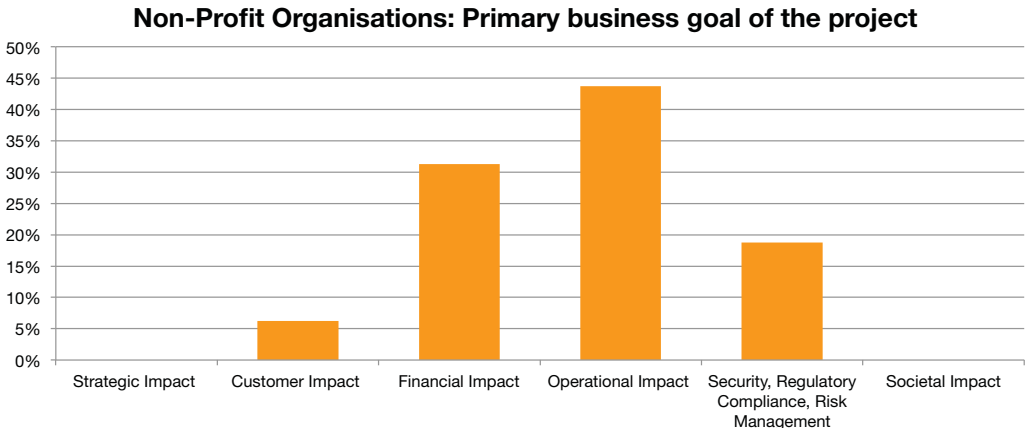
Figure 16



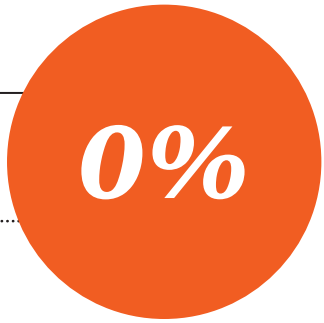
Finding #14

The overall primary business goal of these projects was found to be Operational Impact followed closely by Financial Impact, going to show that financial organisation within organisations of this kind is critical to their sustainability, effect and success.

Figure 17



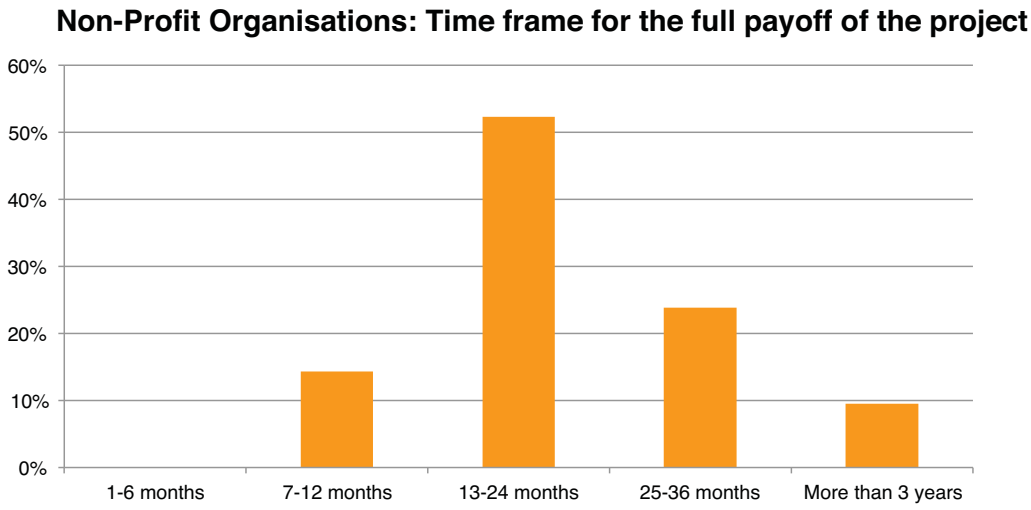
An observation from the survey indicated that non-profit organisations are least likely to invest in short term projects. This is due to the long-term nature of social based projects



Finding #15

Keeping up with the Public and Private Companies and the overall trend, Non-Profit organisations also invested in projects whose payback period ranged an average of 13 to 24 months with none having a short (1-6 months) payback period.

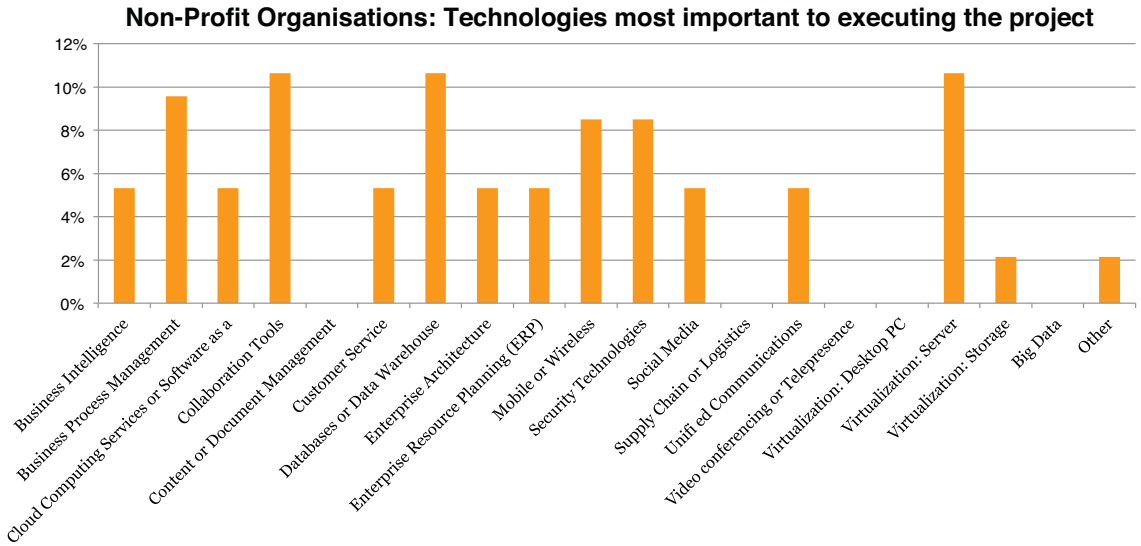
Figure 18



Finding #16

Further cementing their non-conformity, when it came to the selection of technologies that were most important to executing the project, three tied, Virtualisation of servers, Databases/ Data warehouses and collaboration tools, taking a step back from Mobile Technologies which were ranked third together with Security technologies after Business Process Management.

Figure 19

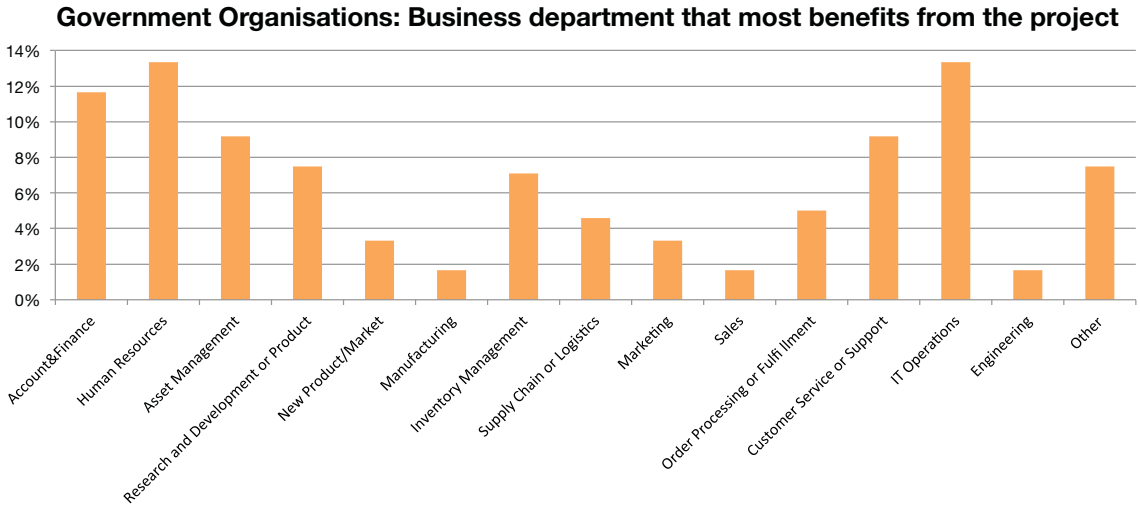


A New Era: The digitisation of Government Organisations

Finding #17

With the idea of changing the face of government, the business departments that are clearly going to show this are IT Operations and the Human Resource function which are the primary beneficiaries of these projects. Accounts and Finance came in second with Asset Management and Customer Service coming in third.

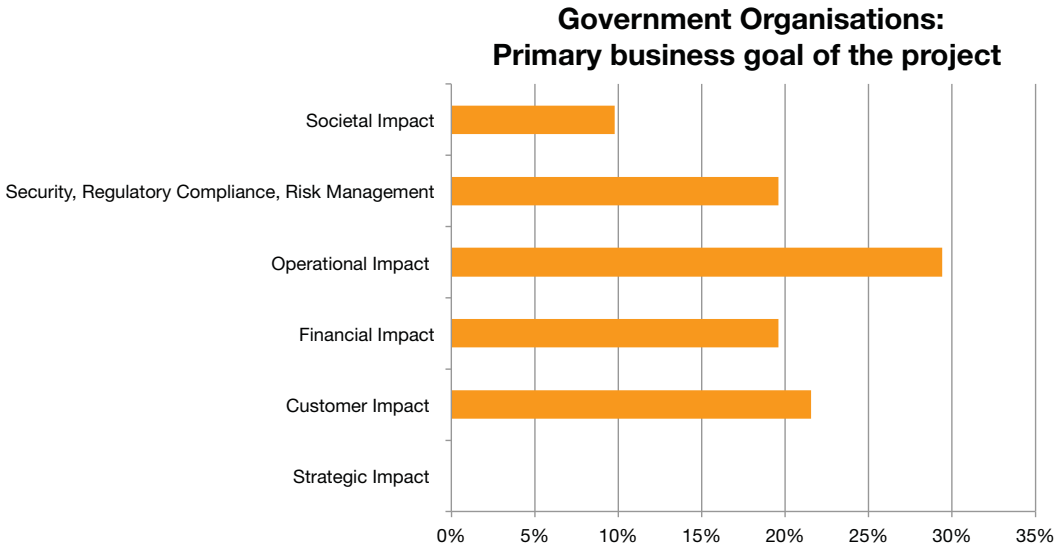
Figure 20



Finding #18

Operational Impact and Customer Impact ranked first and second respectively as the primary business goals of Government Institutions. Strategic Impact had no takers but hopefully it will be a goal in the near future.

Figure 21



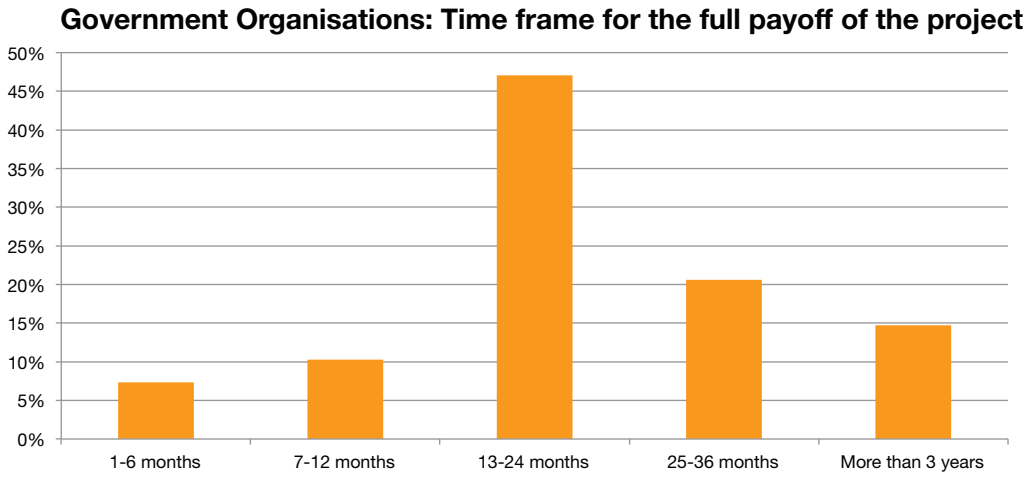
Document Management technologies assist Governments 'go digital'

12%

Finding #19

Keeping up with all other sectors Government organisations also invested in projects whose payback period ranged an average of 13 to 24 months.

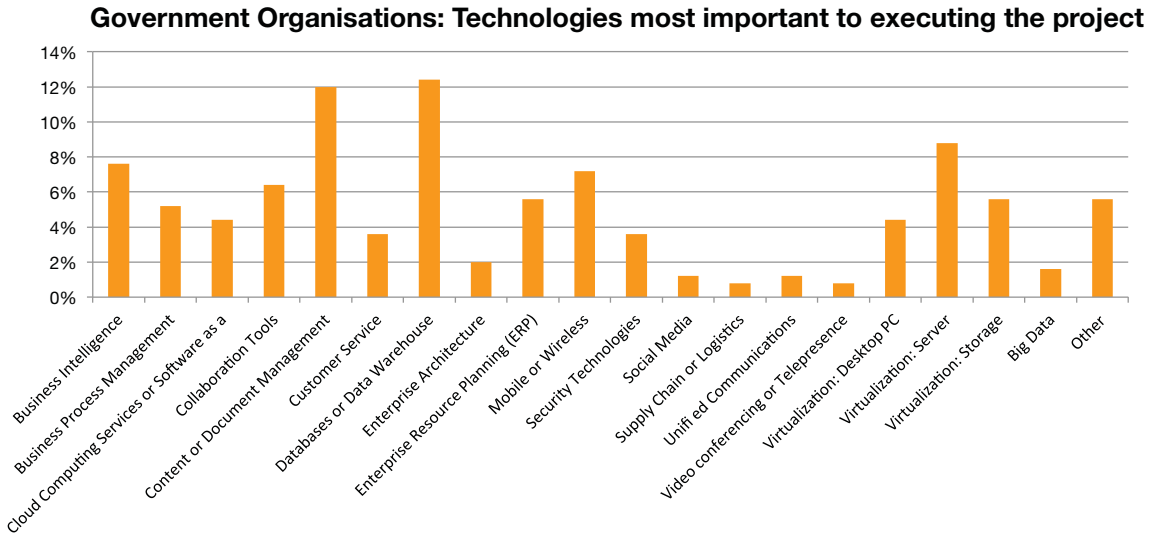
Figure 22



Finding #20

Also stepping away from the norm, Government Organisations identified Databases or Warehouses as the technology most important to executing the project. Content or Document Management came in a close second with virtualisation of servers coming in third.

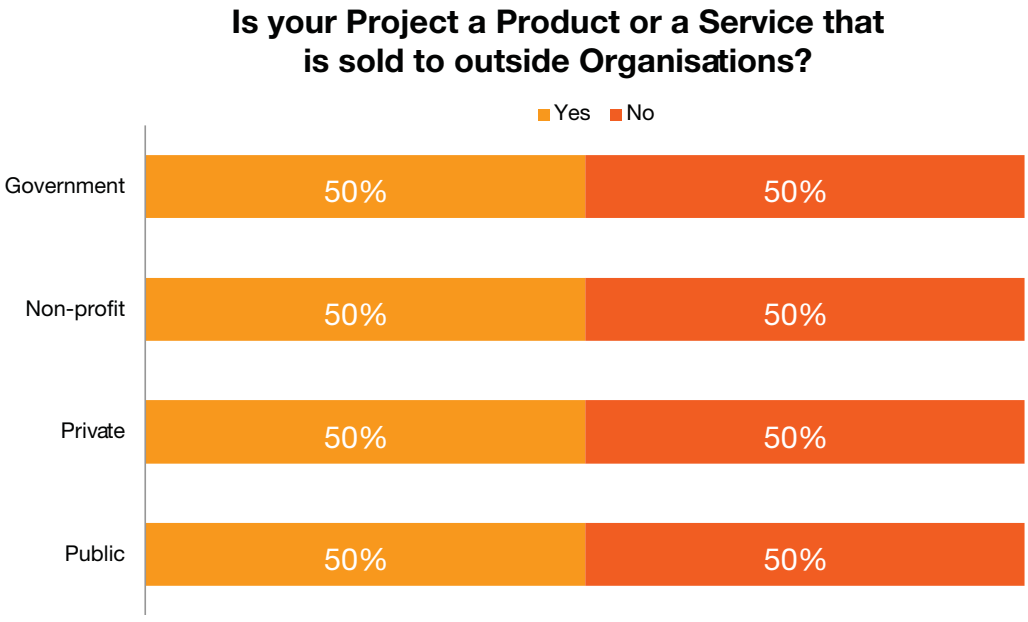
Figure 23



Charity Begins at home

A closer look at the statistics of the survey hinted at the use of innovation within organisations to better the organisations and also for sale at equal rates. This happened across the board. The question to be answered was simple," Is your project a product or a service that is sold to outside organizations?"

Here is how the replies came in:



Further, the survey results showed that organisations are now taking a step back from applying technology mainly for Research and Development and also Product Development and venturing into its applications in other fields.

CIO100 Innovative Behaviors

What is Innovative about your project?

Innovation is a top priority for many companies. Global CEOs ranked product and service innovation as their top strategy for growth, over increasing market share, entering new geographic markets, M&A, or joint ventures and strategic alliances (PwC, 17th Annual Global CEO Survey, 2014). Their top-three priorities in 2014 are to innovate products, technology and services (PwC, Breakthrough Innovation and Growth, 2013.)

Top performers in our survey were more likely to look to outside sources for project innovation and demonstrated the following behaviours

- Actively seeking feedback from customers with their satisfaction of products, services and internal processes.
- Targeting sustainability through similar stakeholder organisations to form Private Public Partnerships.
- Using external accreditation and certification bodies to measure level of innovation through scenario and gap analysis.
- Localisation of experiences gained or learnt abroad and sharing these with all relevant stakeholders before adoption.

How has the availability of smart technology impacted the project/ initiative?

Over the years the word "SMART" has had cross cutting meaning, such as smart cards, smart grid, smart phones, smart fridges and now smart watches.

Across board all projects were affected by smart devices and applications. The most innovative organisations used smart technology for the following reasons

- Engage better with smart phone users
- Save time and costs on monitoring IT infrastructure and telecommunication equipment
- Increase information sharing between software applications and effectively eliminate human intervention

What are the Macro / government factors affecting & determining project success?

This year the EAC budget speeches emphasised that leveraging ICT to achieve the various objectives of EAC harmonisation is the golden key. Equally in the respective budgets for Kenya, Rwanda, Uganda and Tanzania not only has expenditure in ICT sector stipulated but also mention impact of ICT across economic sectors such as healthcare, security, education and financial services.

Top innovators of the survey mentioned governments as a catalyst in the following ways

- Lower connectivity costs due to local Internet Exchange Points.
- Access to knowledge an sharing of peer experiences through low cost or free capacity building initiatives such as Government Skills for Africa program
- Streamlined ICT authorities and regulatory institutions
- Legislation measures such as the draft Cybercrime and Computer Related Crimes Bill 2014
- National fiber projects of the various East African countries

What is the risk exposure impacting project/ Initiative?

Teamwork and high collaboration are to achieve the changes expected from technology. Respondents mentioned the following top five risk exposures :-

- Resistance to change
- Budget overrun
- Insufficient project and change management skills
- Authenticity and security of data during migration
- Project sustainability after launch or go live, especially for pilot programs

How is total Customer/ Citizen service experience affected & what systems integration initiatives were considered?

Customer and citizen services and experiences have been greatly improved. There is more customer retention, more satisfaction and growth in market share as well. These factors are attributed by the effort within the organisations to utilise the CIO role with confidence. The survey reveals that CIOs had to collaborate mainly with their Sales & Marketing, Customer Service and Business Development counterparts to perform the following:

- Execute customer experience strategies
- Facilitate Business2Business and Businecs2Customer by ensuring various processes are streamlined as well as inter-functional and inter - organisational systems "talk to each other in the same language" – seamless integration.
- Use of audio and video media to support customers
- Use of collaborative tools such as SMS, email, website portals, chats to administer customer service and complaints at the sometime.

Closing Statement

Innovation and technology transfer. Access to energy and ICT is critical for Africa's economic and social transformation, as is basic infrastructure.

Africa must seize the technological and digital innovations in the areas of mobile technology, cloud computing, biotechnology, e-governance etc., to expand business opportunities. **AfDB Annual Report 2013.**

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