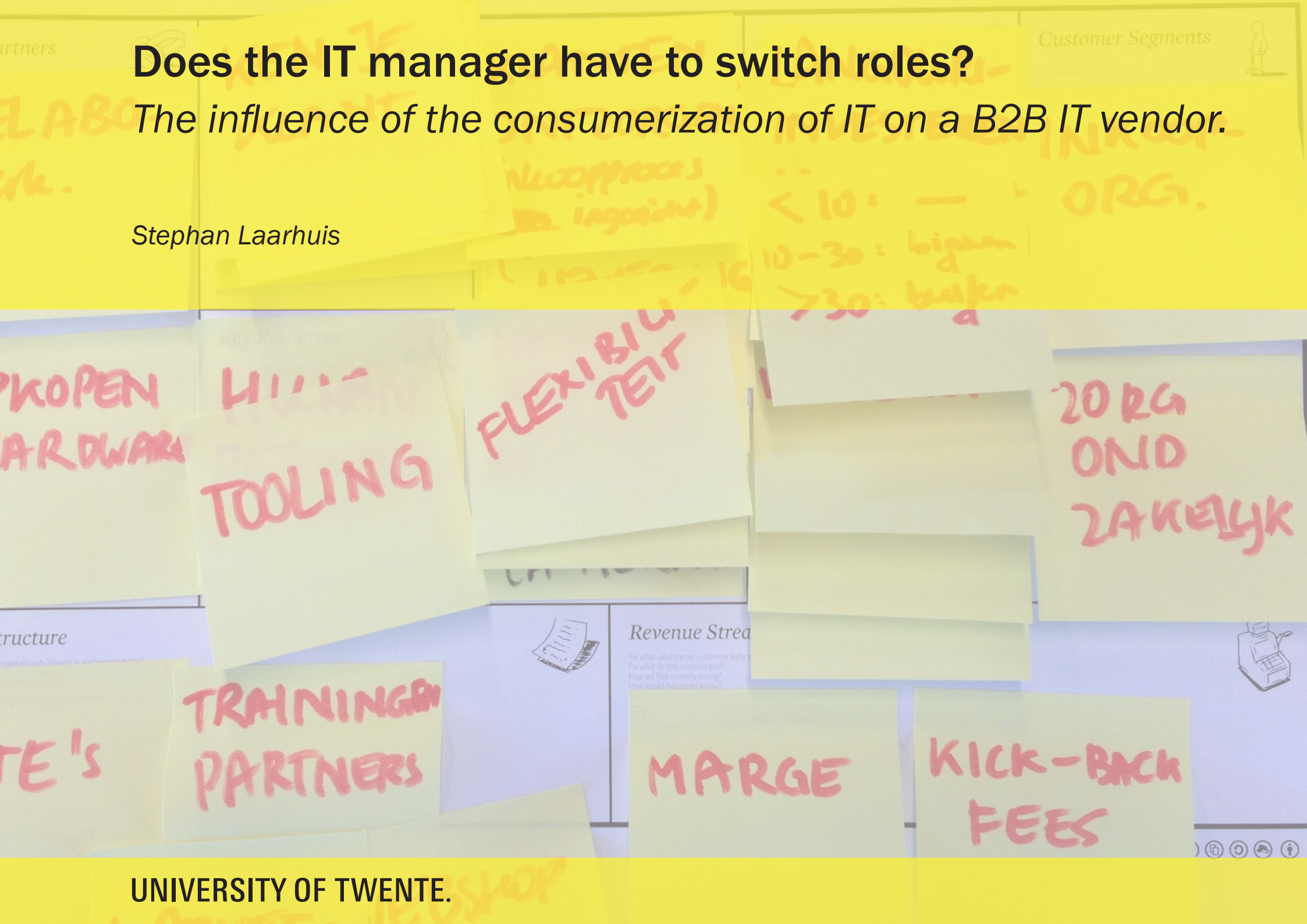# Does the IT manager have to switch roles?
The influence of the consumerization of IT on a B2B IT vendor.

Stephan Laarhuis

Colophon

Does the IT manager have to switch roles?
The influence of the consumerization of IT on a B2B IT vendor.

Summary

It is predicted that by 2012 90% of organizations will support corporate applications on personal devices. This change is partly driven by Generation Y entering the labour market. Together, these two happenings---the trend to BYOD and the impact of Generation Y within companies---inevitably influence the desired services of the IT department and its suppliers.

ChangeIT is on the eve of the launch of its new web shop. By means of this web shop ChangeIT sells hardware to new and recurring B2B customers. The environment of e-commerce is very dynamic. Therefore, it is important to know what customers want and what competitors do. ChangeIT does not have an accurate understanding of its business environment and this understanding should be improved.

The first goal of this research is the exploration of the concept 'consumerization of IT'. The second goal is to give an overview of the characteristics of Generation Y on the labour market. We want to know how these trends influence the services an IT vendor offers. Third is the external analysis. Finally, we want to answer the research question: How can a B2B IT vendor cope with the changing demands influenced by Generation Y and to what extent does the consumerization of IT play a role?

The theoretical framework will lead to hypotheses that we will compare to the actual situation at various companies by means of interviews. With the interview results we will carry out two types of analysis. The influence of the consumerization of IT and the Generation Y will be tested with an explanatory effects matrix. The external analysis will be completed using the Business Modelling Canvas.

Consumerization of IT and Generation Y
The consumerization of IT and Generation Y do influence the IT manager. We distinguished three types of IT managers: trend-setters, followers and executors. Trend-setters actively follow and implement new developments and try to continuously refine their own role. In three organizations this causes employees and IT to be able to think of new solutions together. In organizations where the IT manager can better be characterized as follower this happens less often: IT still prescribes the composition of the IT environment. Next to organizations with trend-setters and followers there are also organizations where the IT manager does not participate at a strategic level. This does not help the IT manager in changing his role. In these organizations, the management chooses the IT policy and the IT manager is the executor of this policy. In all cases this policy is better characterized as a following than as a trend-setting.

The transition of outsourcing the technical aspect of IT to the cloud will have the greatest influence on the tasks of the IT manager. This trend will inevitably influence the services portfolio of ChangeIT. A downside of the consumerization of IT is maintaining the security of data and the tension between what is safe and what is allowed. New advantages offered by the consumerization of IT include less pressure on the IT department, with employees being more careful with their hardware and more self-supporting. This leads to lower costs.

We expected Generation Y to be very influential in trying to change the way they and their colleagues work. Nine out of ten organizations state, however, that Generation Y does not ask for ways to work in another way. Nine out of ten interviewees don't see the characteristics of Generation Y in practice as described in literature. Half of the interviewees even disagree with these characteristics and state that Generation Y does not attract attention at all. This can have two reasons, both possibly leading to problems:

• Generation Y in practice conforms to the culture of the company and therefore does not attract attention.
• IT managers do not see (or want to see) Generation Y as different.

External analysis
Customers are satisfied with the advice ChangeIT gives. However, all interviewees expect a quick and accurate delivery, an area where, from the perception of the customer, ChangeIT too often fails to meet expectations. Additionally, customers have a need for information during the ordering process. They want to know when the hardware is delivered, so schedules can be adapted to the forecast of ChangeIT. Unfortunately, the information ChangeIT provides is often incorrect or unavailable. These two points, indicated as very important in the BM workshop with the management of ChangeIT, should be improved.
The relationship between supplier and customer is very important: ChangeIT is seen as a partner, not as supplier.

The business modelling canvas together with the interviews gave us the possibility to discuss the views of the interviewees and of the stakeholders of ChangeIT in a quick and easy way, enabling everyone to understand the different views. The interviews contributed to business modelling generation and created subjects for discussion.

Preface

In February I started with my thesis research at ChangeIT. The beginning of the process was arduous; with my affinity for the practical side of the business processes, the theoretical start of the assignment took longer than I had hoped. After the first interview, however, I got up to speed and began enjoying myself more. The opportunity to observe and learn about real business situations contributed to my enjoyment and has been very enlightening.

The end of this phase of my studies has been pleasant, and I want to thank my colleagues at ChangeIT for their input and support. I also hope that the workshops that took place will lead to improvements that are satisfactory to everyone.

I would like to thank a few people in particular. Firstly, I'd like to thank my supervisor at ChangeIT for her coaching and for giving me the opportunity to carry out this project in my own way. Next, I want to thank Ton and Christiaan for the constructive conversations we have had, especially in the last few months. Your guidance has been very helpful and enjoyable. And, of course, I want to thank those people who helped to motivate me.

I wish you, reader, much pleasure reading my thesis. If any questions should arise, you can contact me by sending an e-mail to stephan@laarhuis.eu

Stephan Laarhuis
Oldenzaal, 10 October 2012

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1 Introduction and research methodology

1.1 Problem definition

Gartner (Plummer, 2010) predict that by 2014, 90% of organizations will support employees using corporate applications on personal devices. Gartner give several reasons for their statement: (1) there is a driving demand among consumers and business users for enhanced consumer smartphones, (2) IT organizations see a growing demand by employees and (3) 'bring your own device' programmes are growing in number. Gartner also predict that by 2013, 80% of businesses will allow and support a workforce using tablets. These changes are partly driven by a new generation entering the labour market (Bernnat, 2011): Generation Y, also called the Net Generation or the millennials. A remarkable difference in respect to other generations is their way of working, which leads to a change in their demands of information and communication technology. This change seems to go hand in hand with the consumerization of IT (Carter, Thatcher, Applefield, & Mcalpine, 2011). These two trends inevitably have their influence on the desired services of the IT department and its suppliers.

ChangeIT is on the eve of the launch of its new web shop. By means of this web shop, ChangeIT will continue to sell hardware to new and recurring customers. As the environment of e-commerce is very dynamic (Partanen & Möller, 2012, p. 482), it is highly important to know what customers want and what competitors are doing (Banahene, 2010). As ChangeIT does not have a comprehensive understanding of its environment, an external analysis was determined to be necessary to prepare for the new web shop.

1.2 About ChangeIT

For more than 25 years, ChangeIT has been an ICT partner for businesses and organizations in healthcare and education. Over 100 professionals optimize organizational processes by designing, implementing and managing ICT solutions. The vision of ChangeIT is to support an organization's core activities by taking care of the ICT. The company's service portfolio consists of (1) designing an appropriate ICT infrastructure, (2) the delivery of ICT products, (3) the implementation and (4) the continued maintenance and control of the ICT.
ChangeIT is a fictitious name for an existing ICT vendor.

1.3 Scope

ChangeIT offers services and sells hardware. This report is built around three building blocks: an external analysis, an explanation of the consumerization of IT and a description and discussion on the characteristics and significance of Generation Y. In the case of the external analysis, the scope has been narrowed to the sale of hardware because the external analysis is input for the roadmap of the web shop where hardware is sold. To reflect this narrowed scope, the term 'e-commerce' will be used as well. The other two building blocks, the consumerization of IT and the new generation, can be seen as broader topics with relevance to the entire services portfolio of ChangeIT.

1.4 Research goal

This research has several goals. The first goal is to give an overview of the characteristics of Generation Y and the effects on the (current) labour market. The second goal is the exploration of the concept of 'consumerization of IT'. We want to know how these trends influence the services an ICT vendor offers. The third goal is the external analysis.

1.5 Research questions

The problem statement and research goal lead to the following research question:

How can a B2B ICT vendor cope with the changing demands of the market influenced by Generation Y and to what extent does the consumerization of IT play a role?

To answer this question, the following sub-questions must be answered:

1. What is the consumerization of IT and how does this influence our way of working?
2. How are the different generations in today's society labelled and delineated and what are their characteristics?
3. How does the new generation and the consumerization of IT influence the demands on ChangeIT?
4. What is the view of IT managers on their changing environment, considering the consumerization of IT and the entrance of Generation Y into the labour market?
5. What is the competitive position of ChangeIT and what are the strengths and weaknesses of ChangeIT according to their customers?
6. What should ChangeIT change in their services portfolio to cope with the changing demands in the workplace influenced by Generation Y?

1.6 Research model and structure of this thesis

To answer some of the formulated sub-questions, a systematic review of the literature was conducted. This research will be presented in Chapter 2. As with any business, a comprehensive understanding of the relevant market was

deemed important, so interviews with CIOs or IT managers have been conducted in which the subjects' opinions about the consumerization of IT, Generation Y in a business environment and the competitive position of ChangeIT have been investigated. The results of this research will be presented in Chapter 3 and 4. Chapter 5 will provide a conclusion.
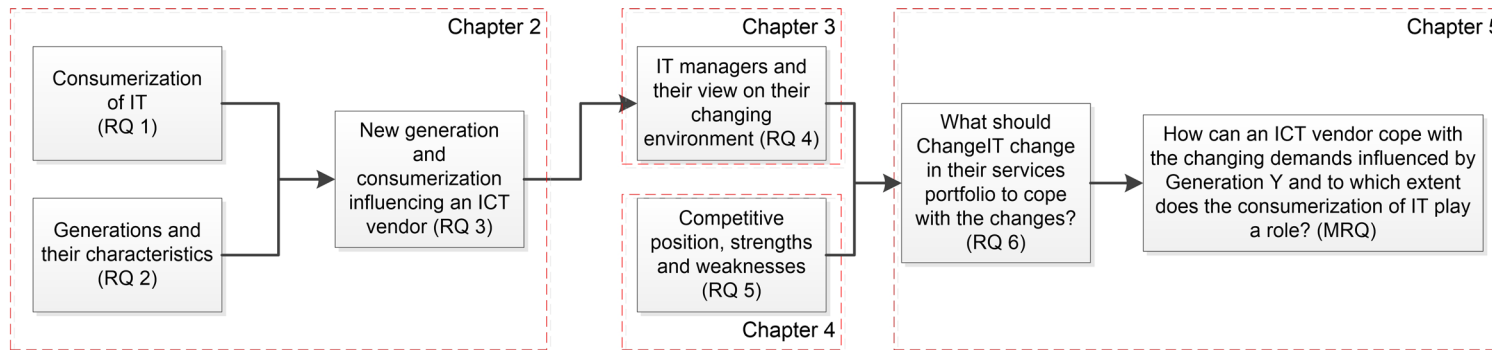
1.6.1 Interviews

To answer the research questions 4, 5 and 6, interviews have been conducted with IT managers (or employees with comparable functions) of customers of ChangeIT. The companies are situated in different provinces within the Netherlands: seven in Overijssel, one in Drenthe, one in Gelderland, one in Zuid-Holland. Organizations taking part in these interviews are in various sectors and are of various size:

- Accounting, 50 employees
- Building industry, 250 employees
- Consulting, 150 employees
- Education, 600 employees and 3000 students
- Event organization, 235 employees
- Financial services, 60 employees
- Health care, 450 employees
- Software development, 28 employees
- Trade (2), 100 and 75 employees

Goal

The goal of the interviews was to:

- Verify if the trends described in literature reflect the trends found in practice
- Determine the competitor position of ChangeIT
- Determine the vision and opinion of IT managers on the consumerization of IT and Generation Y

Methodology

The interviews were conducted between July 2nd 2012 and August 21st 2012. The interviewees were sent a short description of labour market trends, the goal of the research and the scope of the thesis. They were not required to prepare in advance. The duration of the interviews was approximately one hour. All interviews were held face to face, on site. All interviews were recorded and then summarized. These summaries have been approved by the interviewees.

Interview approach

The same approach was used for each interview. The interviews started with a short self-introduction by the interviewer and an introduction to the research. After that, the list of interview questions was used.

1.6.2 Trends in IT and the Explanatory Effects Matrix

An explanatory effects matrix helps clarify a domain in conceptual terms. It is therefore a useful first-cut exploration. The matrix enables a temporal understanding of concepts.

In advance of the interviews, we formulated the following hypotheses, which we have tested with every interviewee:

1. The consumerization of IT leads to a change of the role of an IT manager.
2. Generation Y demands different ways of working.
3. The entrance of Generation Y into the labour market leads to a change of the role of the IT manager.
4. Data security is increasingly a problem.

1.6.3 External analysis and business model generation

Usually a business model canvas is created with information from people within a given organization. In this case we combine information from representatives in customer organizations with information from employees of ChangeIT. We want to test if the data from the interviews is in accordance with the view of the management of ChangeIT. Therefore, we have plotted a business model canvas based on the interview data. In addition, a business model canvas has been plotted in a workshop together with the management of ChangeIT. The canvases will be compared and the possible gaps between the view of IT managers and the view of the management of ChangeIT will be highlighted. This has been designed to help to improve the quality of the services ChangeIT offers. The goal of these sessions will be to involve ChangeIT in the results of the interviews and to plan for future steps and improvements.

2 The entrance of Generation Y into the labour market and the consumerization of IT

In this chapter we will give an overview of the consumerization of IT and an overview of the delineation of and descriptions used to define and compare recent generations.

2.1 Consumerization of IT

This paragraph elaborates on the consumerization of IT by defining the concept, describing its impact, and noting the benefits and challenges of consumerization.

2.1.1 Cause of the consumerization of IT

In the past, technology found its way into organizations in a top-down fashion. Nowadays, employees want IT to work in the way they want it to. Now, IT innovation is driven by consumer markets, and has been steered by consumer markets since the emergence of microprocessor-based systems. This became more noticeable with the emergence of ever more powerful PCs, game machines, mobile phones and digital cameras (Moschella, Neal, Opperman, & Taylor, 2004).

At home, many employees have devices and services that are more capable than what they are provided at work. The combination of multi-purpose devices (i.e. smartphones), public networks (i.e. 3G) and related services is called 'consumerization'. In the future, more and more devices, networks and value-added services will be used and shared by both businesses and consumers (Moschella et al., 2004).

2.1.2 Definition of the consumerization of IT

Generational and cultural forces in the workplace challenge the traditional model of enterprise IT management. Previously, IT managers built their enterprise networks on systems of standardized component hardware and software. This led to control and cost savings (Hackenson, 2008). However, the way employees use personal technology in the workplace is rapidly shifting. Smartphones, tablets and laptops, as well as social networks and online services that employees use outside the workplace are more often used in business. This shift is forcing technology leaders to rethink the role and responsibility of IT within their companies. Progressive IT managers have already moved from serving as gatekeepers of consumer technology to enablers of these innovative devices, applications and services. Enterprises have an opportunity to transform the role of IT from reactive to the role of a strategic enabler, allowing employees to bring powerful consumer

technologies to drive business productivity (Avanade, 2012). PWC (2011) defined the consumerization of IT as 'the use of technologies that can easily be provisioned by non-technologists'.

2.1.3 What does the consumerization of IT cause?

Employees bring their own technologies into the workplace for several reasons. In November 2011, Avanade commissioned a survey of 605 C-level executives, business unit leaders and IT decision-makers in 17 countries to research trends surrounding the use of personal computing technologies in the enterprise. This study reports that 25% of the respondents said their company did not have the types of devices employees wanted. 25% indicated that their company's technologies did not have the capabilities employees wanted,

and 20% of all respondents reported that their company did not provide the brands employees wanted. However, companies support their employees' right to choose. Almost 40% of global respondents say they allowed employees to bring any smartphone they wanted into the workplace, and 30% said the same about tablets. More than one-third of the companies covered the entire cost of the smartphones and tablets their employees were bringing into the enterprise (Avanade, 2012).

2.1.4 What is the importance of the consumerization of IT?

At the end of the 20th century, IT managers hesitated to allow consumer technology because of differences in quality of hardware, services and support. These differences were cited as key reasons to own and control all aspects of enterprise technology. IT managers did not want to be responsible for providing help-desk and back-office support to users located off-site, and using systems and networks that support staff were not trained or authorized to service. However, a new wave of knowledge workers, mainly Generation Y, are accustomed to technology at work as well as at home. Globalization and the expectation of higher productivity have given rise to the mobile workforce and employees

who are expected to be on call around the clock. To help balance the scales, many enterprises have made significant changes to improve the quality of life of individual employees by supporting mobility and remote access. These organizations realize that giving people a voice in how they work provides a pay-off in terms of increased productivity and employee satisfaction (Hackenson, 2008). Increased productivity is, according to Samuels (2012), an important reason for IT managers to embrace consumer IT. Other significant factors include a desire for innovation, staff pressure and cost reduction. While browsing e-mail and social networking sites are still the primary uses for personal devices (85% and 46%), core mission-critical enterprise applications are now finding their way onto employee-owned devices (i.e. CRM, time and expense tracking applications, ERP) (Avanade, 2012).

2.1.5   Benefits of the consumerization of IT

Employee-owned equipment could actually reduce cost and keep the enterprise in tune with the latest capabilities offered by the marketplace. An employee-owned enterprise desktop/laptop strategy could offer the opportunity to shift help-desk device support activities to the manufacturers of the equipment, freeing corporate support staff to focus on ensuring that enterprise applications are delivering on key performance requirements (Hackenson, 2008; Moschella et al., 2004). The majority (58%) of executive respondents in the research conducted by Avanade (2012) said the greatest consequence was the fact that their employees were able to work from any location, while 42% reported that their employees were more willing to work after hours. The ability to work from any location was prioritized even higher (67%) by business unit leaders.

2.1.6   Challenges considering the consumerization of IT

Consumerization has challenges and risks as well. The consumerization of IT can be seen as a disruptive innovation, which could be difficult to manage. Companies must, in order to exploit consumerized technology, decide to support this transition (Moschella et al., 2004). Because consumers adopt more and more new technology and the offer by IT departments hardly changes, the gap between the two is increasing. This causes a growing disconnect between the technologies employees use for their private lives and those provided to them by their employers (Bless, 2010). According to Samuels (2012), the IT manager must take the consumerization of IT into account and must consider leadership, strategy and performance. In the case of leadership, key concepts are creativity, engagement, influence and the next generation.
Given the rapid expansion of the consumerization of IT, executives are still working

to put the right security policies, procedures, training and technology in place. Security measures have not kept pace with the trend of consumerization. 55% of the companies in the study conducted by Avanade (2012) said they have already experienced a security breach as a result of personal technologies flooding the enterprise. Across every industry, country and company size, security has been cited as the number-one risk related to the consumerization of IT (66%), followed distantly by unmanaged data (37%).

2.1.7   Working in the cloud and the security of data

According to Al-Aqrabi, Liu, Xu, Hill, Antonopoulos and Zhan (2012) the growing popularity of cloud computing leads to growing concerns about security and compliance. A survey shows that the IT managers listed (1) information security, (2) business continuity and (3) regulatory compliance as the top three concerns in moving their business workflows to the cloud. Cloud computing suffers from the following threats (Bisong & Rahman, 2011):

- unauthorised use of cloud computing components and resources
- threats and vulnerabilities in the APIs provided to the developers
- malicious insider trading
- all possible threats and vulnerabilities associated with shared IT systems and resources
- data manipulation, leakage and loss
- hijacking of accounts or user sessions
- other forms of unknown/emerging threats

Another threat to the security of data is the physical location of the data stored in the cloud. If data are located in another country, the laws of the host country apply to the data. That can be a risk if the host country does not have adequate laws to protect sensitive data, or if the host nation changes its policies (Smith, 2010).

Although not a security risk, the availability of a cloud service can be a threat as well if a company is very dependent on a cloud service (Bisong & Rahman, 2011).

2.1.8   Overview of the consumerization of IT

The consumerization of IT is driven by other trends. The image below depicts how some of these trends are interrelated with the consumerization of IT. This picture shows that Generation Y and Bring Your Own Device are related concepts. Social networks play a role as well.
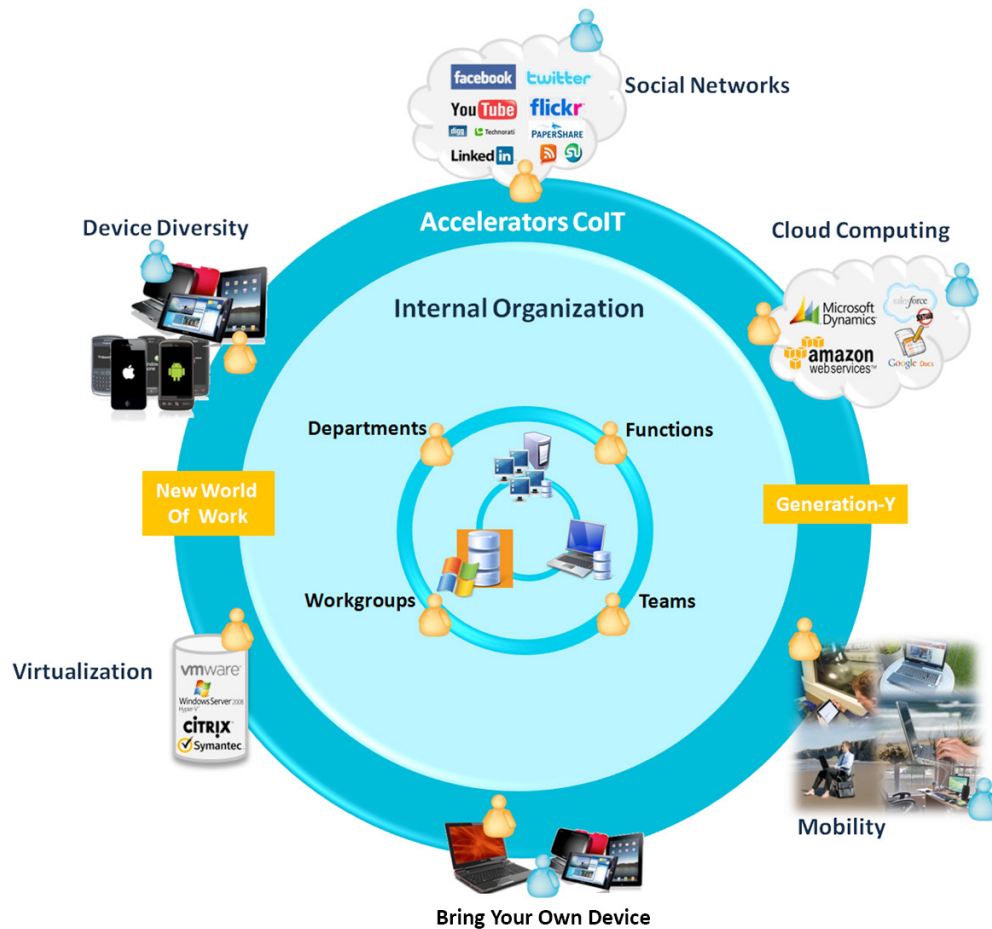
Figure 1: The consumerization of IT (http://www.scense.com/blog/?p=587)

This figure does not show which trend initiated the consumerization of IT, but it does show that technological inventions (virtualization, cloud computing, device diversity) and demands of employees (mobility, wish to bring own devices, Generation Y, collaboration and new world of work (in Dutch: 'het nieuwe werken')) together lead to and enable the consumerization of IT.

In this research we will mainly focus on BYOD, Generation Y and the new world of work because in our opinion the technological inventions are only enablers of new possibilities for how work and the workplace is organized. The specific angle of the research allows more focus to be given to the management perspective.

2.1.9   Meaning for this research

The consumerization of IT is definitely a hot topic among IT managers and CIOs. However, the term 'consumerization' is not always used. Topics like 'bring your own device' (BYOD) and 'Alternative Workplace Strategies' are closely related. These recent trends, combined with Generation Y entering the labour market (see Figure 1), make the investigation of the consumerization of IT a timely topic of study.

2.1.10   Conclusion

The consumerization of IT is a combination of various trends, which either influence our way of working or are caused by our way of working. This paragraph shows some challenges for IT managers: the consumerization of IT is difficult to manage, and an increasing gap is developing between the situation at home and in the office. The security of data is a challenge as well. We want to find out if the consumerization of IT is visible in practice and if this changes the role of an IT manager. But more importantly: we want to find out if there are chances for ChangeIT to expand its business due to this trend. This leads to the formulation of the following interview questions:

- What is your policy concerning the consumerization of IT and do you expect a change of this policy?
- Do you notice a change of your role due to the consumerization of IT?
- How do you cope with the security of data despite the consumerization of IT?
- What does the consumerization of IT mean for ChangeIT?

2.2   The delineation and characteristics of recent generations

'A generation is a human variety. Each generation represents a certain vital level, from which existence is felt in a certain way. If we consider the total evolution of people, each of its generations appears to us as a pulsation of its historical energy. And each pulsation has a particular and unique characteristic, as each note in the composition of a melody. Similarly we may imagine each generation as a species of biological missile hurled into space at a given instant, with a certain velocity and direction. The most important fact is, that generations are born one of another.'

Julian Marías - Generations, a historical method - 1970

Delineation of generations

In the literature there are various ways of dividing people of certain birth years into generation categories. The following overview shows some of the different ways to delineate generations:

Description	McCrindle	Beckendorff et al	Twenge et al	Washburn	Hewlett et al
Seniors	Before 1925			G.I. Generation: 1901 – 1925	
Builders	1926 – 1945			Silent generation: 1926 – 1945	
Boomers	1946 – 1964			Baby boomers: 1945 – 1964	1946 – 1964
Generation X	1965 – 1981			1965 – 1981	1965 – 1978
Generation Y	1982 – 2000	1977 – 1995	1982 – 1999	1982 – 2003	1979 – 1994
Generation Z	2001 and later				

Table 1: Spread of generations according to McCrindle (2002), Benckendorff, Moscardo and Murphy (2012), Twenge, Campbell, Hoffman and Lance (2010), Washburn (2000) and Hewlett, Sherbin and Sumberg (2009).

Donnison (2007) summarizes various articles. Some authors consider Generation Y, or the millennials, as beginning with individuals born in 1976. However, this overlaps with the range of Generation X, the preceding generation, in many other articles. Donnison concludes that the birth years of millennials at the beginning of the generation are between 1977 and 1983. 1994 is accepted by some authors as the final birth year of Generation Y, while others reviewed considered births in or even after 2007 as part of Generation Y.

2.2.1   Generations and their characteristics in the United States

Seniors (G.I. Generation)
"This cohort of Americans believes in civic virtue and upward mobility: the American Dream" Washburn (2000) states. "The generation that survived the Great Depression and fought World War II was indelibly marked by its heroic journey. (..) The G.I. generation lived for the camaraderie of group experience. (..) These folks can rightly state that they left the world a better place for their efforts."

Builders (Silent Generation)
Most members of this generation were too young to fight in World War II but, as stated by Washburn (2000), "they were greatly influenced by the surge of patriotism and self-sacrifice of that struggle. The Silent Generation admired the G.I. Generation and had no wish to differentiate themselves. (..) People born between 1926 and 1945 have lived in the better world left to them by the G.I. Generation, and they worked to extend that environment rather than change it."

(Baby) Boomers
"The term 'generation gap' was coined to describe the gulf between the Baby Boomers and the two generations that came before them. This difference in outlook was profound and on-going. (..) The big rift came from 1964 onward, starting with the Free Speech movement at Berkeley and moving onto the protests of the Vietnam War and the Woodstock mind-set. (..) At 76 million strong, the Boomers have always been demographically powerful, so they are used to being the most important generation due to sheer numbers."

Generation X

"This is the 'Baby Buster' generation, comprising about 41 million people – 25 million less than the Boomers. They are wedged between two much larger birth cohorts and thus feel demographically overlooked. Gen-Xers feel that they will get less in a material sense than the preceding generations got. This changes their approach to materialism itself. (..) For this generation, ambiguity is central to life itself, while reality and security are self-created."

Generation Y

Generation Y is also called Generation Me (GenMe), Millennials, nGen and iGen (Twenge et al., 2010). This generation is demographically not as big as the Baby Boomers (Washburn, 2000) but at 60 million they are big enough. Washburn states: "Gen-Y will have an enormous impact on business and infrastructure just as the Boomers did. Already they are changing the face of advertising and marketing. This is a generation to watch because they will be socially significant through sheer numbers alone. If you are a Boomer, get ready to be displaced as the centre of attention of business and marketing. Companies such as Levi Strauss and Nike are feeling the pinch already as their products are being ignored by Gen-Y in favour of new and trendier brands. Generation Y has grown up with computers, email, and instant communication in the same way that the Boomers grew up with the telephone and Gen-X grew up with television. They have no memory of a time when the technology did not exist."

Positive characteristics of Generation Y

Generation Y can be characterized as confident, self-assured, having high self-esteem and an optimistic outlook on life (Donnison, 2007; Habley, 1995; Levere, 1999; Taylor, 2003; Zemke, Raines, & Filipczak, 1999). Their confidence can be seen in their purchasing behaviour, it is evident that they are informed, knowledgeable, experienced and seasoned customers (Coeyman, 1998; Donnison, 2007; Goff, 1999; Gronbach, 2000; Keating, 2000a, 2000b; Krebsbach, 2001; Levere, 1999; Paul, 2001; Shepherdson, 2000; Stapinski, 1999).

It is commonly noted that the Millennials exhibit a collaborative team mentality and are strongly oriented towards their peers (Dembo & Gentile, 2000; Donnison, 2007; Gronbach, 2000; Raines, 2002; Weiss, 2003; Zemke, 2001).

Negative characteristics of Generation Y

Generation Y's "confidence and self-assurance often leads the generation to overestimate their employability, desirability, skills and abilities, and manifests as unrealistic expectations for their supervising managers, for employment, and for career advancement" (Chordas, 2001; Donnison, 2007; Durrett, 2004; Gaylor, 2002; Wolburg & Pokrywczynski, 2001; Zemke, 2001).

Commonalities between Baby Boomers and Generation Y

A study shows remarkable commonalities between Baby Boomers and Generation Y. To mention a few: both cohorts say it is important that their work involve "giving back", they say that work/life balance matters to them and overwhelming majorities of Gen Ys and Boomers say that having flexible work options is important. A possible cause for these commonalities: Gen Ys are usually the offspring of Boomers. "Boomers delight in taking Ys under their wing: 65% say that members of the younger cohort look to them for advice and guidance" (Hewlett et al., 2009).

2.2.2   Generations and their characteristics in the Netherlands

The description of generations in the USA deviates from the description of generations in the Netherlands. This paragraph shows the characteristics of generations in the Netherlands.
The Dutch generations have different names than the American generations. This table cross-references the Dutch and American generations:

Dutch generations	American generations
Protest generation (1940 – 1955)	Boomers (1946 – 1964)
Generation X (1955 – 1970)	Generation X (1965 – 1981)
Pragmatic generation (1970 – 1985)	
Screenagers (1985 – 2000)	Generation Y (1981 – 2000)

Dutch researchers show that the American generation X coincides with two separate groups in the Netherlands: generation X and the pragmatic generation.

The table on the next page shows the characteristics of Dutch generations.

	Protest generation (1940-1955)	Generation X (1955-1970)	Pragmatic generation (1970-1985)	Screenagers (1985-2000)
Attitude, state of mind	Ambitious, hedonistic, aware of social status.	Sober, conservative, check what works, post-materialistic, hedonistic, modest, interconnect as long as it suits them.	Realistic, critical, networkers, a bit easy-going, self-conscious, confident, individualistic and social, lives outside of work, willing to deal with what life brings.	Self-willed, authentic, working is nice pastime, learning, discovering, exploring, cooperation should lead to satisfaction, authority is relative.
Leading	Collect confidants around them, look for support, democratize, persuade, are reactive.	Connect, own direction, democracy as instrument, commercial.	Direct, short-term results, long-term vision, authority should be earned with knowledge and skills, entrepreneurial, pragmatic, don't do things which are (in their eyes) wrong.	Power is controllable, transparent, accept leaders who support authentic development, don't stick to 'old' borders.
Communication	Persuade, idealise, sometimes politically correct behaviour, in private sometimes other behaviour.	Realistic, practical, people know for themselves what is good, concrete.	Pragmatic, searching for knowledge, see mutual dependency in complex networks, no useless discussions, open, direct, honest.	In social networks, fast, useful contacts, critical in a constructive way, work goal-oriented and as long as necessary with pressure groups, don't waste energy, can do a lot at the same time.
Analysing	Quick, superficial.	Realistic, checking what works	See complexity.	Look for the truth, realistic both positive and negative.
Deciding	Majority, consensus.		Pragmatic, view on short-term results, honest, averse to old politics and authority, about here and now.	Fast, sometimes there is no right answer.
Changing	Idealize, solve problems, (re-)structure.	Checking what works, professionalize, working with performance systems, tailor-made.	Improvement according to traditional methods, knowledge systems, thorough, self-regulation within own catchment area.	Efficient, fast, sustainable, long-term policy, fast technological changes, no half-hearted measures.
Teaching, learning	Better educated than previous generations, self-development.	Better educated than previous generations.	Better educated than previous generations. Self-development, continuous learning.	Better and more internationally educated than previous generations, do what you're good at, it's about who you really are and what you can and can't do, knowledge is transient, develop authentically, self-development in interaction with others.
Handling of conflicts	Avoidance, look for the guilty party, resistance.	Look for balance	Balanced	Live and let live.

Table 2: Summary of generational characteristics in the Netherlands, based on literature review of Bontekoning (2007), based on research by Becker (1992); Diepstraten (1999); Koot & Sabalis (2000); Van Steensel (2000); Boin, Torre, Meulen, & Hart (2003); Jeekel (2005).

2.2.3   Differences between Generation Y in the USA and the Netherlands

The studies done in the Netherlands seem to show less extreme results than the studies in the USA. Where the USA studies indicate an enormous influence of Generation Y---with Generation Y responsible for changing the world we live in---this is less visible in the Dutch studies. However, the characteristics of Generation Y are mostly comparable with the corresponding Dutch generations. That means that a typical Generation Y person has the following characteristics:

Mind-set	Optimistic, confident, authentic
Position towards others	Likes to work together, strong collaborative team mentality, strongly oriented towards peers
Communication	With social networks, fast, informal
Working	Multitasking, flexible, power is controllable and authority is relative, (self-)development is important
Honesty	Transparency is important, has the ability to notice if he or she is deceived
Value	It's about who you really are and what you can and cannot do

2.2.4   Meaning for this research

This research points out that there are differences between people from different generations. In the literature and in management magazines the positive and negative characteristics of Generation Y are regularly a subject of discussion. This could indicate that the entrance of Generation Y could impact the labour market. In this research we want to find out what the impact of this change is on the way IT hardware can be sold online in the B2B sphere.

2.2.5   Conclusion

Generation Y seems to deviate significantly from preceding generations. Generation Y grew up with computers, email and instant communication. Characterized as confident and self-assured, they know what they want and this might have an influence on the way they work. Literature shows Generation Y exhibit a collaborative team mentality, so working together and (new ways of) communication could become more important. We want to find out if the demands of Generation Y that have been described in the literature are visible in practice as well. Furthermore, we want to know if the entrance of Generation Y into the labour market has changed of the role of the IT manager and what this means for ChangeIT. This leads to the formulation of the following interview questions:

• To which extent do employees of the organization demand new ways of working (from other locations, at different times) and is this demand caused by Generation Y?
• Have you noticed a change in your role due to Generation Y?
• What does the entrance of Generation Y mean for ChangeIT?

2.3   Consolidation

The consumerization of IT and the entrance of Generation Y into the labour market could be two independent trends with no apparent relation. However, how and if these two trends coincide is interesting to investigate. Figure 1 also implies that there is some relation between these two trends. Both seem to have influence on the way employees work and the way IT is used. It is even possible that Generation Y influences the consumerization of IT: because Generation Y grew up with computers and new ways of communicating, they might be inclined to have higher demands of what is provided by the employer.

In this chapter we looked at the theory of the consumerization of IT and Generation Y. In the next chapter we will look at the practice and the perception of IT managers. How do they deal with the consumerization of IT and the new generation?

3 IT managers and their view on the changing environment

The previous chapter described the consumerization of IT and Generation Y entering the labour market, both of which influence the way employees work and deal with IT. This chapter investigates if these trends play a role in practice.

3.1 Representation of findings

First we will show the results of the interviews concerning the consumerization of IT and Generation Y. The questions asked in the interviews are listed in Appendix 1. Appendix 2 provides a summary of every interview. Appendix 3 and 4 respectively give an overview of the answers to the questions about the consumerization of IT and Generation Y.

During the interview sessions it appeared that the questions asked did not sufficiently elicit IT managers' views for the future. We therefore decided to pose the following question as well: 'what is your future vision considering IT?'

3.1.1 Consumerization of IT

In three out of ten organizations the consumerization of IT is refused or no trend yet. It is refused because of a security policy or a company policy. In the other organizations, the consumerization of IT does play a role. Employees are allowed to bring their own smartphone and set up company email on that device. Some IT departments set this up for the employees. Employees do not yet ask to use their own computers at work. In some organizations a Choose Your Own Device programme has been implemented, in two variants:

- Employees are allowed to choose their own mobile phone. There is a personal budget, and there is a restriction concerning platforms: only Android and iOS are allowed.
- Employees are allowed to choose from three mobile phones, two laptops and a tablet. There is a personal budget.

BYOD and CYOD should lead to less tech support. At the IT department of one of the organizations with CYOD a major change has been noticed. There are fewer support requests within the organization, and damage to devices only occurs related to use and not intentionally in order to get a new or different device. However, at another organization BYOD didn't work as it did not lead to less tech support. Interviewees from companies that offer employees a choice do not need to provide more support in the purchase or maintenance of devices.

About half of the interviewees think their role is changing. Where an IT manager used to prescribe hardware, software and sometimes even procedures, nowadays the IT manager has the role of an internal consultant, taking inventory ofdemands, wishes and processes, and serving as the bridge between the internal organization and suppliers. Concepts like Software as a Service and the cloud contribute to and accelerate this change. One of the interviewees states the knowledge of users becomes more superficial. Users have more freedom; everything is possible within the boundaries of security. It is not about the management of the workplace anymore, but about offering a safe environment.

The security and accessibility of data on mobile devices is a problem for many organizations. They are all looking for ways to enable access to company data. Some of them allow the use of Dropbox for the time being. For employees, it's not always clear what the risks are of using Dropbox. In some organizations it's hard to create awareness of security of information risks. Employees are used to sharing information as they do at home. However, there are also organizations where creating awareness for potential security risks does not present a problem. Searching for a balance between what is safe and how much freedom should be given is an issue for the coming years. Many organizations use Citrix to give employees access to the company network. Citrix is device-independent and allows employees to access the company network from almost all devices they own.

According to the interviewees the consumerization of IT is a chance for ChangeIT. Interviewees expect ChangeIT to respond to the consumerization of IT in the following ways:

- Inform customers of ChangeIT about this trend.
- Initial configuration of devices and integration within the existing company network.
- On the side of control of mobile devices, by improving the maintenance and security of devices
- Support mobile devices.

- Help organizations implement the consumerization of IT and enable access to company data
- Securely connecting all services and offering a domain in the cloud
- Serving as a guide to IT managers who desire to go to the cloud, explain which steps should be taken, and execute part of (or all) steps.
- As the IT environment becomes more complex and diverse, ChangeIT should provide support.

3.1.2   New generation

At all of the organizations represented in the interviews, new ways of working were reported, although new ways of working are more present in some organizations than in others. Nine out of ten interviewees say the new ways of working don't have to do with Generation Y. Only one interviewee stated that Generation Y is a very independent and mature generation. This company is situated in the western part of the Netherlands.

Some organizations have restrictions for working from home:

- No one is allowed to work from home:
    - unless approved (each time) by management
    - to protect employees
- Not everyone is allowed to work from home:
    - if this is allowed is decided on an individual basis
- Everyone is allowed to work from home:
    - but not more than one day a week
    - technical solutions are available, but working from home is not encouraged
    - the office is only a meeting place, not a working place, per se

Some interviewees have noticed a change of their role due to Generation Y: they have to work together more with employees more than before.

Three interviewees complained about the poor IT knowledge of Generation Y employees. If tasks become a little bit more advanced, Generation Y does not know how to handle it.

New opportunities for ChangeIT due to Generation Y entering the labour market are:

- To think of solutions to have information (data) available anywhere and anytime
- To think of solutions for maintenance of servers during new office hours (24/7)

3.1.3   Future vision

Not every interviewee has a strong vision for the future. A few interviewees expect and hope that their servers won't be necessary anymore, and everything will be in the cloud. This has a few advantages: servers don't have to be maintained anymore, backups are taken care of, and the purchase of server hardware is not necessary anymore. This would allow employees to work anywhere. Everyone can collaborate with all kinds of devices, and devices will be integrated more with each other. This change would be especially relevant for small organizations since high investment costs in hardware would no longer be necessary. This would mean that ChangeIT would be required to adapt: the delivery and installation of servers would become an unnecessary service. The services ChangeIT offers should therefore be 'cloud ready'. Especially in education, BYOD seems to be unstoppable and will lead to a decrease in regular workstations.

One of the interviewees formulated the future of his role and the role of ChangeIT as follows: The role of an ICT specialist is changing and keeps changing. This causes a change in the role of ChangeIT. The strength of ChangeIT is being available for its customers. Despite the size of the organization, ChangeIT is still 'just around the corner'. The products ChangeIT sells are of good quality, and in case something is wrong you can always reach ChangeIT. As long as ChangeIT proves its added value, keeps its customers informed about the trends in the market and projects of other customers, or organizes events to make sure that its customers know what is possible, ChangeIT has a good future.

3.2 Explanatory Effects Matrix

An explanatory effects matrix helps clarify a domain in conceptual terms. It is therefore a useful first-cut exploration. The matrix helps us understand things temporally. The theory behind an explanatory effects matrix is described in Miles & Huberman (1994, pp. 148-149). For each hypothesis we show if it can be accepted or not. We present a number of quotes from the interviewees to illustrate how some of the interviewees addressed these hypotheses, and give an explanation if necessary.

3.2.1 Hypothesis 1: The consumerization of IT leads to a change of the role of an IT manager

Interviewee	Accept/reject	Quote of interviewee
1	Reject	'We already provide possibilities for employees to log in from other places. From the office there is no need to work in another way. Therefore, my role doesn't change.'
2	Reject	
3	Accept	
4	Reject	
5	Accept	'Yes, my role has to change. It has to be more about optimizing the way of working. I won't be busy with questions of users.'
6	Accept	'Yes. In the past you were only handling a Microsoft product. There were workstations and servers. Nowadays, there are many more platforms. New software is offered more as a cloud solution. The server infrastructure decreases. New technology can save money.'
7	Reject	
8	Accept	
9	Accept	
10	Reject	'I can focus more on things important to the organization, which are project driven activities. With maintaining workstations no money is earned, so if I have more capacity, I can do things to earn money. However, I expect only a minor change of my role.'

3.2.2 Hypothesis 2: Generation Y influences our way of working

Interviewee	Accept/reject	Quote of interviewee	Researchers explanation
1	Reject		
2	Reject	'We don't have that many Generation Y employees. That has to do with the culture of this company. At this moment, we don't notice Generation Y.'	
3	Reject		
4	Reject	'About 13% of this organization is Generation Y. Working at other places and at other times is done, but this is not caused by Generation Y. Generation Y never works from home.'	Gen Y does not work from home because of the function they fulfil, and because there is no demand.
5	Reject		
6	Neutral	'It's difficult to say this for this organization. We try to protect our employees, because employees sometimes have to work very hard. However, it is noticeable that Generation Y is different and values their personal life more than preceding generations.'	
7	Reject		
8	Accept	'I think Generation Y helped to change our way of working. About 25% of the employees is Generation Y. We get feedback from Generation Y as it's a very independent generation.'	
9	Reject		
10	Reject		

3.2.3   Hypothesis 3: The entrance of Generation Y on the labour market leads to a change of the role of an IT manager

Interviewee	Accept/reject	Quote of interviewee	Researchers explanation
1	-		New ways of working are already offered, so Generation Y did not ask for changes. Therefore, the role of the interviewee did not change.
2	Reject	'No, my role doesn't change due to Generation Y.'	
3	-		Not relevant as the interviewee does not notice Generation Y.
4	-		Not relevant as the interviewee does not notice Generation Y.
5	Reject		
6	Reject		
7	Reject	'No, my role doesn't change due to Generation Y'.	
8	Accept	'I was already busy changing my role, but I had to help my IT colleagues in their development. They were not ready yet to cope with Generation Y. It's more about thinking along with users.'	
9	-		Not relevant as the interviewee does not notice Generation Y.
10	Reject		

3.2.4   Hypothesis 4: the security of data is an increasing problem

Interviewee	Accept/reject	Quote of interviewee	Researchers explanation
1	Accept		
2	Accept		
3	Accept		
4	Accept		
5	Accept		
6	Accept	'It's also a good case, the consumerization of IT. (..) There is a lot of discussion about security, and that's a very difficult problem. Security on a tablet cannot be guaranteed. (..)'	
7	Reject		
8	Reject	'Our network has been secured via an SMS passcode.'	Users always have to log in to access company data, so company data is protected.
9	Accept	'Security of data is a tricky problem. More and more is outsourced and hosted externally. We hope the external party takes care of the security. On the other hand, users sometimes have wishes that conflict the desired security level. In the coming years this will be the discrepancy.'	
10	Reject		

3.2.5   Summary

From the hypotheses and the results of the interviews we can conclude that (1) Generation Y does not influence our way of working. Furthermore, (2) the entrance of Generation Y on the labour market does not lead to a change of the role of the IT manager. Finally (3) the security of data is a challenge at almost all organizations.

Hypothesis 1 is interesting for further research. IT managers don't agree if their role is changing due to the consumerization of IT. This might have to do with the responsibilities of the particular IT manager. Some of them only arrange for IT to be available, others are trying to support the organization in a more strategic way.

3.3   Conclusion

3.3.1   Consumerization of IT and future vision

Role of the IT manager
The consumerization of IT has a major impact on the role of IT managers and their teams, although some of them do not yet see or allow this change. Where an IT manager used to prescribe hardware, software and sometimes even procedures, nowadays the IT manager has the role of an internal consultant, inventorying demands, wishes and processes, and serving as the bridge between the internal organization and suppliers. Concepts like Software as a Service and the cloud contribute to and accelerate this change.
According to Chun & Mooney (2009), two types of CIOs can be distinguished: an executive-level manager with focus on innovation and a more traditional CIO with focus on technique. We, however, distinguish three groups of IT managers: trend-setters, followers and executors. Trend-setters actively follow and implement new developments and try to continuously design their own role. In three of the organizations included in this study, this leads to employees and IT finding new solutions together.
In organizations where the IT manager can better be characterized as follower, this happens less often. IT still prescribes the composition of the IT environment. In addition to organizations with trend-setters and followers, there are also organizations where the IT manager does not think along on a strategic level. This does not help the IT manager in changing his or her role in the organization. In these organizations, the management decides upon the IT policy and the IT manager is the executor of this policy. In all cases this prescribed policy can be better characterized as follower rather than as trend-setter.
Using the classification of Chun & Mooney (2009), trend-setters and followers

can be defined as executive-level managers with focus on innovation, where the follower simply takes more time to implement new techniques. The executors can be seen as more traditional IT managers with focus on technique.

The emergence of the cloud
The transition of outsourcing the technical aspect of IT to the cloud will have the biggest influence on the tasks of the IT manager. This trend will inevitably influence the services portfolio of ChangeIT. ChangeIT must change accordingly in order to remain as the best-possible partner for its customers. This means cloud-ready services should be developed to anticipate the possible decrease of server hardware sales and network maintenance services.

A secure but accessible IT environment
The consumerization of IT creates new possibilities but has some downsides as well, with as biggest downside being the risks to the security of data and the tension between what is safe and what is allowed. In the past, the network and infrastructure were configured so that the environment and data were safe. Nowadays employees bring their own devices and use these devices as if they were at home. Creating awareness for potential risks caused by this behaviour can be difficult.

Cost savings
New possibilities offered by the consumerization of IT include less pressure on the IT department, with employees being more careful with their hardware and using less tech support. This might in the end lead to lower costs as well, because employees are more careful and purchase their own devices and bring them to work.

Comparison with theory
These findings, when compared to the figure depicting influential concepts on the consumerization of IT, show that the figure is not complete. The changing role of the IT manager, the challenges concerning the security and accessibility of data and (the demand for) lower costs are not shown. On the next page the figure has changed according to our findings.
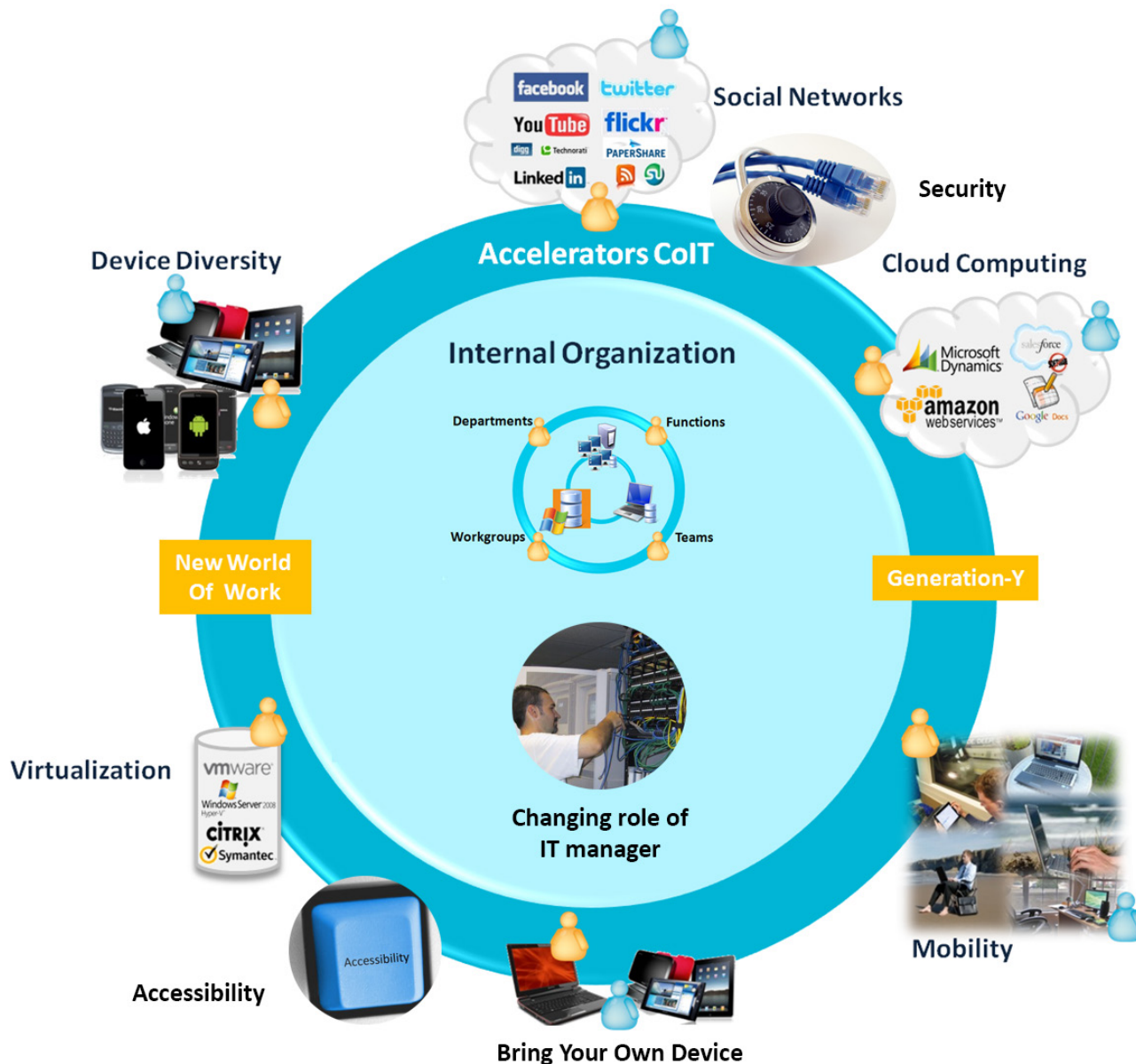
3.3.2   New generation

From our literature review, we expected Generation Y to be very influential, trying to change the way they and their colleagues work. In nine of the ten organizations interviewed, however, the interviewees have responded that Generation Y does not ask for new or different ways to work. In half of the organizations, working from home is already permitted. Technology to enable this already exists in each of these organizations, and in all cases has already existed for a long time. Working from home is not new and definitely not caused by Generation Y entering the organizations.

Nine out of ten interviewees do not report observing the characteristics of Generation Y in practice as described in literature. Half of the interviewees even disagree with these characteristics and state that Generation Y does not attract attention at all. This can have two reasons:

- Generation Y in practice conforms to the culture of the company and in that way does not attract attention.
- IT managers do not see (or want to see) Generation Y as different.

Both can lead to problems: the first explanation shows the full potential of Generation Y is not used. The second explanation shows that IT managers do not really know the employees, which might lead to a gap between their perception of the truth and the actual truth. Generation Y might have wishes that strongly deviate from the perception of IT managers. Over the long term, both explanations could lead to dissatisfaction of Generation Y.

In this chapter we first show the results of the interviews considering the external analysis. In paragraph 4.3 we will analyse the findings of the interviews with the business modelling canvas.

4.1 Business model generation

According to Osterwalder and Pigneur (2010), a business model describes "the rationale of how an organization creates, delivers, and captures value". Al-Debei and Avison (2010) state that "there is agreement on the importance of business modelling for the success of an organization, but the concept is still fuzzy and vague, and there is little consensus regarding its compositional facets". In their research they present many descriptions of the business model concept. "Business models provide powerful ways to understand, analyse, communicate, and manage strategic-oriented choices" (Al-Debei & Avison, 2010; Osterwalder, Pigneur, & Tucci, 2005; Pateli & Giaglis, 2004; Shafer, Smith, & Linder, 2005). Although there is some criticism on the use of the concept, "the authors appreciate the vital role that the business model can play in today's complex and turbulent environment". Based on at least 22 articles, they conclude that the business model consists of four dimensions: value proposition, value network, value architecture and value finance. They also state that business modelling is "an essential conceptual tool of alignment in digital business".

The business model canvas we use in this research was developed by Alexander Osterwalder and published in 2010. The canvas consists of nine building blocks: customer segments, value propositions, channels, customer relationships, revenue streams, key resources, key activities, key partnerships and cost structure.

4.2 Representation of findings

The questions asked are listed in Appendix 1. Appendix 2 provides a summary every interview. Appendix 5 gives an overview of the answers to the questions about the external analysis.

Most of the interviewees purchase most of their hardware at ChangeIT. Mainly small parts are bought elsewhere, due to several reasons:

- The ordering process at ChangeIT is considered time-consuming.
- The availability of products is not always clear.
- Other suppliers are more flexible in the installation of hardware.

ChangeIT should improve its information supply. Customers want to know if products are in stock, what the delivery time will be, and they want to be informed about changes in delivery times.

The expectations that the different companies have of ChangeIT are varied. Some interviewees only want a hardware vendor, some want a partner who thinks along in a strategic way and advises about future investments. They expect a quick ordering process and a quick and reliable delivery. A strong focus on the quality of the service is expected as well.

Most of the interviewees compare prices of products. They do this in three ways:

- Always before they buy
- Occasionally before they buy
- Occasionally afterwards, if a competitor of ChangeIT wants to make an offer

Some interviewees do not compare prices, for the following reasons:

- They trust ChangeIT to offer a good price.
- Advice, warranty and after sales are considered more important than the best price.

Usually the interviewees have a list of web shops to compare prices with. These are: 4Launch, Alternate, Azerty, CentralPoint, Informatique, Misco, and ScholtenAwater. In additionto the competitors used for price comparisons, the following hardware vendors are seen as competitors as well: Bechtle, Dell, HP, Infotheek, Staples and SCC.

Especially in the case of Apple products, hardware is frequently bought elsewhere. Prices are the same, and because ChangeIT has no Apple products in stock MediaMarkt and the Apple Store (online) are faster alternatives.

Most of the interviewees recommend ChangeIT to other organizations, because they are satisfied with the way ChangeIT conducts business. Some do not recommend ChangeIT, for several reasons:

- Something has to be very good before they recommend it to others.
- ChangeIT does not stand out as a hardware vendor if one already knows what is needed (there are quicker and cheaper parties then).
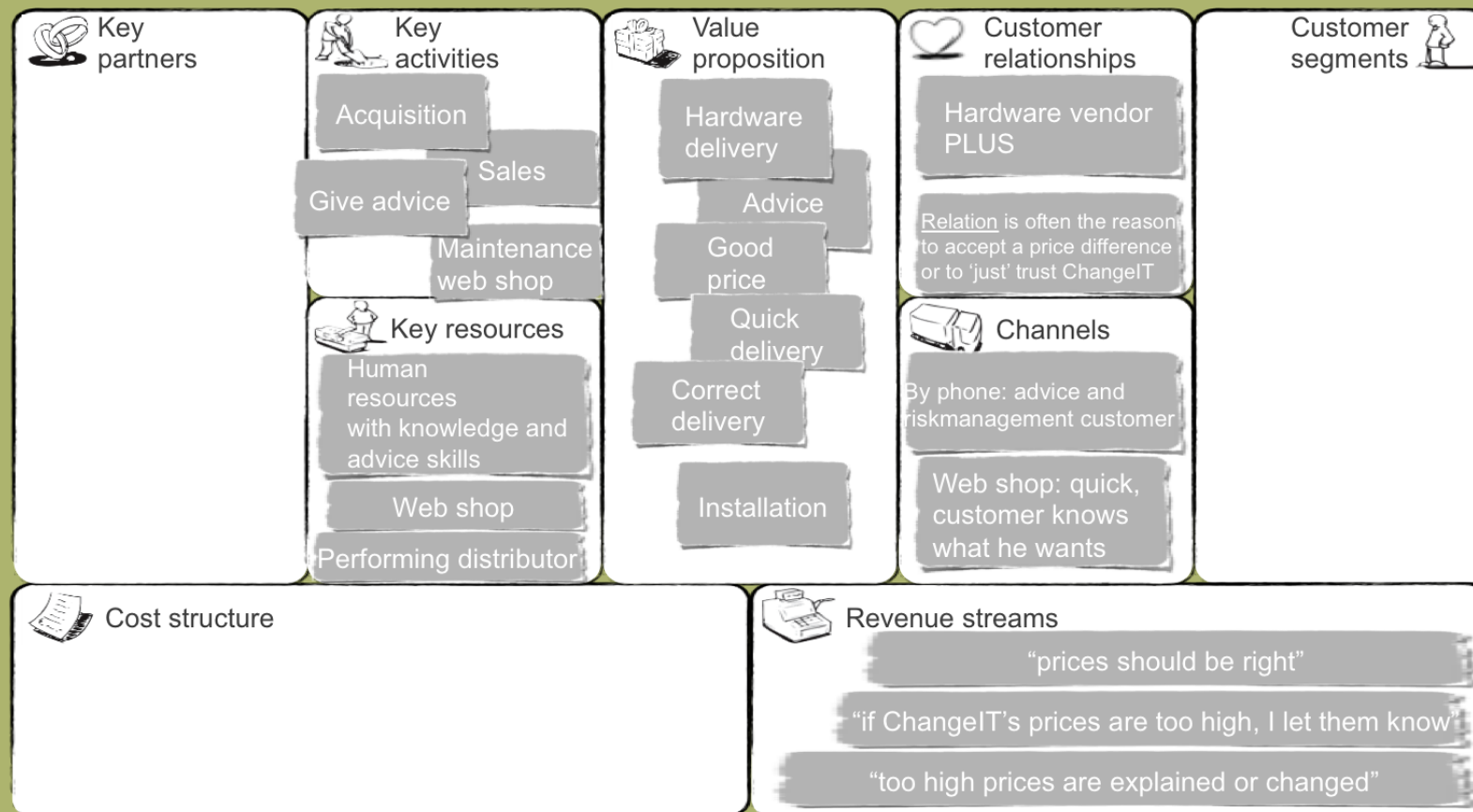
None of the organizations profiled has a formal company policy concerning the purchase of hardware. However, most interviewees execute a policy:

- To stick to one brand only
- To stick to one supplier only; this is easier in the case of a need for support.

4.3   Business model generation at ChangeIT
We wanted to test if the data from the interviews deviates from the view of the management of ChangeIT. Therefore, in this section we plot the interview data in a business model canvas. In addition, in a workshop a business model canvas was made together with the management of ChangeIT. The canvases are compared in this section and the gap between the view of IT managers and the view of the management of ChangeIT is made visible. The goal of these sessions has been to involve ChangeIT in the results of the interviews and to assist in formulating planned future steps.

Key partners	Key activities	Value proposition	Customer relationships	Customer segments
	Acquisition	Hardware delivery	Hardware vendor PLUS	
	Sales	Advice		
	Give advice	Good price	Relation is often the reason to accept a price difference or to 'just' trust ChangeIT	
	Maintenance web shop	Quick delivery		
	Key resources	Correct delivery	**Channels**	
	Human resources with knowledge and advice skills		By phone: advice and riskmanagement customer	
	Web shop	Installation	Web shop: quick, customer knows what he wants	
	Performing distributor			

Cost structure	Revenue streams
	"prices should be right"
	"if ChangeIT's prices are too high, I let them know"
	"too high prices are explained or changed"

www.businessmodelgeneration.com

Figure 2: Business model canvas: Result of the interviews

The components 'Key partners', 'Cost structure' and 'Customer segments' were not found in the interviews.

'Revenue streams' is used to present the price perception of the interviewees.

4.3.1 Set-up

We interpreted the data according to the business model canvas of Osterwalder and Pigneur (2010). We plotted the results of the interviews on the canvas. After that, two workshops were organized, each consisting of two parts:

- Explanation of the method 'Business Model Generation'
- Fill in the business model canvas based on the vision of employees of ChangeIT
- Break
- Presentation of the canvas based on the interviews
- Comparison between interview canvas and ChangeIT canvas, determination of the gap, discussion

Two workshops were held, due to practical reasons. The workshops were identical.
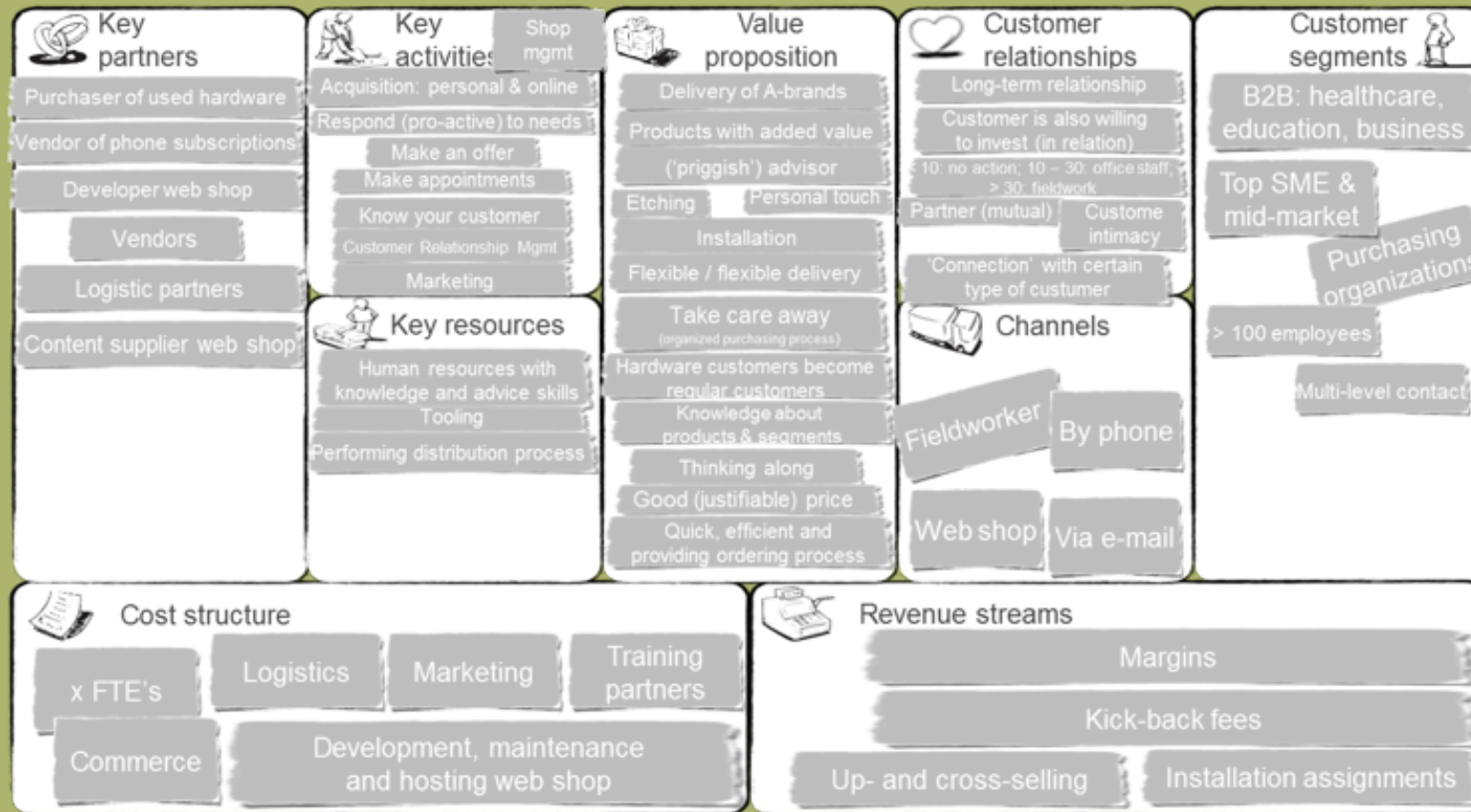

Figure 3: Business model canvas: Result of the workshops

4.3.2   Comparison of business model canvases

This paragraph shows the most important differences between the interviews and the sessions at ChangeIT. Because the interview questions were not developed based on the Business Model Canvas, only key activities, key resources, value proposition, customer relationships and channels are compared. On the left is the result of the interviews, on the right the result of the workshops.

The interviewees expect more than just a vendor, they expect advice. The list of key activities composed in the workshops is more extensive, because key activities were not present in the interviews.

From the interviews it can be derived that the quality and speed of delivery are important elements for customers. The interviews did show that the interviewees are not always satisfied about the quality and speed of delivery. To improve these aspects, a well-performing distribution process is a necessity. In the workshop with the management of ChangeIT, optimizing the speed and quality of delivery has been prioritized.

The preferred channels vary among the interviewees. Some like to order via the web shop, others like to call and get advice. Recently one fieldworker has been added to the hardware sales team, although none of the interviewees showed a need for that.

Value proposition

- Hardware delivery
- Advice
- Good price
- Quick delivery
- Correct delivery
- Installation

Value proposition

- Delivery of A-brands
- Products with added value
- ('priggish') advisor
- Etching
- Personal touch
- Installation
- Flexible / flexible delivery
- Take care away (organized purchasing process)
- Hardware customers become regular customers
- Knowledge about products & segments
- Thinking along
- Good (justifiable) price
- Quick, efficient and providing ordering process

The value proposition customers want and ChangeIT offers seems to be unbalanced. Still, customers are satisfied with the services ChangeIT offers. Some interviewees want less of the value proposition, for instance no advice when they buy products. Apparently ChangeIT offers some services that are not used by the majority of its customers or not seen as value-adding.

Customer relationships

- Hardware vendor PLUS
- Relation is often the reason to accept a price difference or to 'just' trust ChangeIT

Customer relationships

- Long-term relationship
- Customer is also willing to invest (in relation)
- < 10: no action; 10 – 30: office staff; > 30: fieldwork
- Partner (mutual)
- Custome intimacy
- 'Connection' with certain type of custumer

The interviews show that the relationship between the interviewees and ChangeIT is very important. The relationship is often the reason to buy; ChangeIT is seen as a partner. Though this is mainly seen as good feedback, it is a potential risk as well. It is important that customers see the added value as a reason to buy at ChangeIT, in addition to (and not only based on) a good relationship.

4.4 Gaps and conclusion

The external analysis led to two especially important findings, which we elaborate on in this section, namely:

• the speed and reliability of delivery and the accompanying information supply
• the importance of the relationship

Eight organizations mentioned the importance of the speed and reliability of the delivery. The factor 'speed' is related to the internal planning at the customers of ChangeIT: the installation of the hardware is planned based on the estimated time the hardware is expected to arrive. In all cases it is more important that the information supply is accurate than that the delivery arrives very quickly. Planning is much more important. The customers want to know when the hardware will be delivered so that an employee's schedule can be adapted to the forecast of ChangeIT. Unfortunately, the information ChangeIT provides is often incorrect or not available. These two points, indicated as very important in the BM workshop with the management of ChangeIT, should be improved.

To create awareness amongst the employees of ChangeIT to improve the service level, two more BM sessions will be planned. Participants in the first session will include employees of purchase, quality management and distribution. Participants in the second session will include employees of inside staff (account managers). In this last session the management of ChangeIT will attend as well.

The relationship between customer and supplier appeared to be very important. At least half of the interviewees said that they did compare prices, but that they order at least 80% of the time from ChangeIT. This is due to a number of reasons: good advice, good prices, and decent after-sales. In addition, it is more practical to have one supplier in case hardware breaks.

4.5 Contribution to the Business Modelling method

The business modelling canvas is usually filled in based on the viewpoints of stakeholders, and not with the viewpoints of external parties (i.e. customers, suppliers), although Osterwalder & Pigneur (2010) in Business Model Generation advise to scan the environment of the business model, including interviewing domain experts.

Our research shows that interviewing customers, plotting their ideas into the canvas and comparing canvases provides added value, for the following reasons:

• An organization creates value for its customers. The view of its customers on the business model of an organization is therefore highly important.
• One canvas is hard to use as input for a discussion, two (or more) canvasses show the difference(s) between the different views and lead automatically to a discussion, which might lead to an improvement of the business model.
• Stakeholders can generate new ideas or think of improvements in their business model because of the need shown by the market.
• Stakeholders can test if their current or new business model, plotted in the canvas, corresponds with the wishes or demands of the market.

5 Conclusion and discussion

5.1 Conclusion

We started this research with the question 'How can a B2B ICT vendor cope with the changing demands of the market influenced by Generation Y and to what extent does the consumerization of IT play a role?'. In this chapter the answer to this question will be given.

5.1.1 External analysis

The external analysis shows two important findings for ChangeIT:

- the speed and correctness of delivery and the accompanying information supply are not satisfactory to customers and should be improved
- the relation between supplier and customer is very important: ChangeIT is seen as a partner, not as supplier

The business modelling canvas together with the interviews gave us the possibility to discuss the views of the interviewees and of the stakeholders of ChangeIT in a quick and easy way, enabling everyone to understand the different views. The interviews contributed to business modelling generation and created topics for discussion.

5.1.2 Consumerization of IT

The consumerization of IT has a major impact on the role of IT managers and their teams, although some of them do not yet see or allow this change. We distinguished between three types of IT managers: trend-setters, followers and executors.

The transition of outsourcing the technical aspect of IT to the cloud will be the biggest influence on the tasks of the IT manager. This will also influence the services portfolio of ChangeIT.

Downside of the consumerization of IT is the security of data and the field of tension between what is safe and what is allowed.

New possibilities offered by the consumerization of IT include a lower pressure on the IT department, with employees being more careful with their hardware and more self-supporting. This leads to lower costs.

5.1.3 New generation

We expected Generation Y to be very influential, trying to change the way they and their colleagues work. Nine out of ten organizations state however that Generation Y does not ask for ways to work in another way. Nine out of ten interviewees do not see the characteristics of Generation Y in practice as described in literature. Half of the interviewees even disagree with these characteristics and state that Generation Y does not attract attention at all. This could be due to two reasons:

- Generation Y in practice conforms to the culture of the company and therefore does not attract attention.
- IT managers do not see (or want to see) Generation Y as different.

Both can lead to problems: the first explanation shows the full potential of Generation Y is not used. The second explanation shows that IT managers do not really know the employees, which might lead to a gap between their perception of the truth and the actual truth. Generation Y might have wishes that strongly deviate from the perception of IT managers. Over the long term, both explanations could lead to dissatisfaction of Generation Y.

5.1.4 Recommendations for ChangeIT

The consumerization of IT leads to a decrease of traditional business, like new network infrastructure and new workstations. Employees however do need devices to do their work, and if the company does not provide these devices employees will do that themselves. It is important to target that segment, and compensate the decrease of company-bought hardware.

IT managers need a partner to guide them in their transition from maintaining servers themselves to the outsourcing of these services to the cloud. The services ChangeIT offers should be prepared for this. This means that ChangeIT has to inventory what services might be unnecessary if their customers 'go to the cloud' and think of solutions to service these customers in another way: the services of ChangeIT should be cloud-ready. Besides that the security of data is an important issue in all organizations. ChangeIT should offer its customers an easy solution for securing their environment but enabling employees to access company data in an easy way.

5.2   Discussion

5.2.1   Marginal notes and critical reflection

A number of critical comments should be made. If this research is repeated, these comments should be taken into account. Firstly, the selection of interviewees has not been too representative for the external analysis. These are all project customers or even customers with maintenance contracts. Some of them can be indicated as shoppers, but most of them are very loyal. This does not have its influence on the results of the building blocks consumerization of IT and new generation.

The consumerization of IT is a broad topic and needs to be defined clearly. Most of the time it is more about BYOD and CYOD than about the consumerization of IT, although the consumerization of IT is more than the other concepts. It can be that some interviews were more about BYOD than about consumerization. The consumerization of IT has its influence on the role of the IT manager. Remarkable is that about half of the interviewees state their role hasn't changed, while the other half states otherwise.

Looking at the new generation, it is remarkable that practice deviates so much from the descriptions of this generation in literature. It is rather unbelievable that Generation Y acts opposite to the characteristics described in literature. Only one interviewee endorsed the characteristics of Generation Y. Interestingly, this interviewee worked at the organization situated in Zuid-Holland. There is a possibility that Generation Y is less striking in the eastern part of the Netherlands. Other reasons can be the level of education of Generation Y and the culture of the organization.

5.2.2   Recommendations for further research

The changing role of the IT manager is interesting for further research. Why don't they agree that their role is changing? Does that have to do with the size of the organization, or with their own responsibilities and the way they are assessed?

Furthermore it is very interesting to find out if the differences between theory and practice considering Generation Y have a geological reason, or if there is another reason. This research indicates two possible reasons why the IT managers did not recognize the characteristics of Generation Y from the literature in practice. It is worth some investigation to see if Generation Y is indeed struggling to conform with the culture of an organization, or if there is another reason the characteristics of Generation Y are not seen in practice.

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Appendices

Appendix 1: interview questions

Common
1. What are the main activities of the organization?
2. What is your role within the organization? How long have you been in your current position?
3. How many workplaces do you maintain?

Competitors
1. Does your organization purchase its hardware only from ChangeIT, or from other
   hardware vendors as well?
   a. Do you look at the offers of other hardware vendors? What do you like about their services?
   b. At what other hardware vendors do you purchase? Why? What should ChangeIT do better? What is the added value of the services of other hardware vendors?
2. What do you expect of ChangeIT?
3. Do you recommend ChangeIT to other organizations? Why (not)?
4. Do you compare ChangeIT with other hardware vendors? With what organizations do you compare ChangeIT?
5. Who are, in your opinion, competitors of ChangeIT?
6. What is the policy within your organization concerning hardware purchases?

Consumerization of IT
1. To which extent does the consumerization of IT play a role within your organization?
2. What is your policy concerning this trend? (encourage/allow/refuse)
   a. Are employees allowed to bring their own devices?
   b. Are employees allowed to choose their own devices? To which extent is this supported?
   c. Could you be better supported? How is support taken care of?
3. Do you expect a change concerning your policy?
4. Do you notice a change of your role due to this trend?
5. How do you cope with the security of data concerning the consumerization of IT?
6. What does this trend mean for ChangeIT, in your opinion?

New generation
1. To which extent does the organization demand new ways of working (other places, times) and is this demand caused by Generation Y?
2. What is done with these questions?
3. Do you notice a change of your role due to this trend?
4. What does this trend mean for ChangeIT, in your opinion?

Appendix 2: interview summaries

Interview 1
Date of interview: 6 July 2012
Initials interviewee: HS
Function of interviewee: System administrator/Application administrator/software developer
Branch: Accountancy

General
Organization 1 is an accountancy organization with three locations: in Hoogeveen, Coevorden and Emmen. HS has worked at Organization 1 for 11 years. The number of workplaces is about 50.

External analysis
Organization 1 buys all hardware at ChangeIT. HS looks at other hardware suppliers, but only for big projects. Incidental purchases are done without comparing prices. ChangeIT is usually the cheapest vendor. Furthermore, HS finds a good relationship very important. Because of the long cooperation with ChangeIT, ChangeIT has knowledge of the organization and can therefore give better advice. HS appreciates the quick way of problem solving of ChangeIT. He thinks ChangeIT is doing "just good".
Selling hardware is, in the opinion of HS, not only ordering and delivery, but it is also about giving advice. It's about anticipating customers' needs. The solutions should match the future plans of an organization. HS does recommend ChangeIT with others, because of good experiences.
In cases where ChangeIT is compared to other suppliers, the ChangeIT solution is shown to another supplier. The other supplier is asked if this is a good solution, and what this solution would cost if bought there. If the difference is little, the solution is bought at ChangeIT (because ChangeIT originally came up with the solution).
HS thinks competitors are regionally situated, and knows no national competitors. In the case of Organization 1, iBeheer is a competitor of ChangeIT.
Within Organization 1 there is no company policy for the purchase of hardware.

Consumerization of IT
The employees of Organization 1 who have email on their smartphone all have a company phone (Blackberry). Using private devices is prohibited. This is mainly due to the fact that Organization 1 is an accountancy organization and all information

they deal with is confidential. Confidential information should not be on private devices, in the opinion of HS.
Company policy is therefore that if someone wants company email, contacts and calendar on his/her mobile phone, (s)he gets a Blackberry from Organization 1. The same goes for tablets: they can be used but not with company email, contacts and calendar and not employees cannot reach company data. HS expects a change, namely the accessibility of data, but the device will in future still be owned by Organization 1.
HS does not notice nor expect a change of his role.
HS thinks the consumerization of IT is something many more organizations want to implement, but have problems with the security of data (Dropbox). ChangeIT could develop a service for a private cloud, with apps for smartphones and tablets to access data.

New generation
From the organization there is no Generation Y-driven demand to work in another way. Organization 1 already offers ways to work from home for a long time. Everything is accessible with a token.
HS thinks a chance for ChangeIT might be the improvement of accessibility of data; working anywhere, anyplace and anytime.

Interview 2
Date of interview: 2 July 2012
Initials interviewee: EG
Function of interviewee: IT Manager
Branch: Building industry

General
Organization 2 consists of several organizations, all suppliers for the construction sector. EG sees these organizations as his customers and for these customers he is responsible for the availability of IT and the telephone service.

External analysis
In the case of big projects where an entire solution is bought from ChangeIT, Organization 2 buys hardware from ChangeIT. If it is only about small purchases (one printer, one pc) then Organization 2 has another supplier. That supplier was the preferred supplier in the past and that is one reason for the use of this supplier. Besides that, the other supplier also does service management and system maintenance and is very flexible in delivering and installing new hardware. ChangeIT is, according to EG, more formal in the ordering and delivery processes. The current supplier is very flexible and EG doubts if ChangeIT can do the same. In order to let Organization 2 purchase all hardware at ChangeIT a tailor-made solution should be developed, including the configuration of hardware. Logistics should be taken care of completely.
EG does recommend ChangeIT at others because of his good experiences.
EG compares prices occasionally, for both ChangeIT and their other supplier. This is a company policy.
EG sees many competitors for the hardware vendor part. However, price is not most important.

Consumerization of IT
Organization 2 is familiar with the concept of consumerization of IT but there are no problems yet in terms of management. Bringing own devices is neither encouraged nor discouraged. There is a company policy for using own devices. Business use is supported, private use is not (but not prohibited). Organization 2 has no own apps.
People can choose their own device. There is a budget, built up in three years. Platforms are limited (iOS and Android). The number of brands of Android devices is limited to Samsung and HTC, in order to have some standardization.
What would be a nice feature for EG is a portal that shows the devices and prices.

In this way he could narrow the possible devices down to only a few suitable devices. Because the volume is low at Organization 2, a portal is not necessary. Support of these devices is quite easy: there is no technical support on these devices. Functional support is done by system management, but only for the functions supported according to the company policy (mail, calendar, contacts).
EG expects a change in the use of tablets. Now Organization 2 uses a few tablets and these are circulated. EG expects an increase in the use of tablets. He hopes to have insight in security issues to complete a policy about the use of tablets or to solve security issues with tooling. Functional support is necessary. EG has noticed no change in his own role due to the consumerization of IT.
Currently security measures do not exist; it is the responsibility of the individual. The consumerization of IT is, according to EG, a chance for ChangeIT. Not in terms of the delivery of hardware (everyone can do that) but in terms of initial configuration of tablets within the existing IT environment and support and maintenance of these devices.
EG says the construction sector is quite traditional and therefore the consumerization of IT is not a very hot topic yet.

New generation
Organization 2 has a very low turnover of staff. The average age of employees of Organization 2 is therefore quite high. The new generation has not yet been able to change the way of working within Organization 2. However, new ways of working are used, although not stimulated by Generation Y. Working from home is done, but on a low scale during office hours.
Working from home demands more hours uptime of IT. IT should be available not only during office hours, but 24/7. This asks for a change in maintenance of total IT infrastructure. ChangeIT could provide a service for this problem.

Interview 3
Date of interview: 10 July 2012
Initials interviewee: PH
Function of interviewee: Manager ICT
Branch: Health care

General
Organization 3 is a care organization for people with mild cognitive handicaps, mainly younger people but sometimes adults. Organization 3 offers counselling. PH manages the IT department of Organization 3 and coordinates projects. He has worked for Organization 3 for 1.5 years. Organization 3 has about 450 workplaces.

External analysis
Organization 3 purchases its hardware from ChangeIT, but not all hardware is bought from ChangeIT. PH is satisfied with the selection (also small parts) and the speed of delivery of ChangeIT. Especially minor orders should be delivered quickly in the opinion of PH. At Organization 3 installation is done by the organization itself. PH also purchases at Misco, Staples, Contict (iPads), Mediamarkt (iPads, in stock). In the perception of PH, ordering small parts is difficult, because of the procedure: first a price quote is done, while at Misco and Staples it is possible to select the desired product, see if it is available, and order it. "Ordering should be on the fly." PH expects a quick and reliable delivery. In the past, the delivery sometimes was not reliable. It can occur that products are not available soon after purchase. Then the order has to be changed, and the price has to be negotiated again. This can be frustrating. However, problems are solved quickly.
PH does not recommend ChangeIT for hardware delivery, but he recommends no organization for hardware delivery. "Something should be very good if I want to recommend it with others, and ChangeIT does not stand out as a supplier of hardware."
With big purchases prices are compared, but the supplier does not have to be the cheapest. If ChangeIT prices don't deviate too much from the mentioned competitors, the products are ordered at ChangeIT. If there is more deviation, ChangeIT is confronted with these prices. If ChangeIT decides to stick with the prices, products are bought at competitors. PH indicates that this doesn't happen often.
Company policy is to look at the functionality of hardware as first criterion, and second criterion is the price.

Consumerization of IT
Organization 3 tries to keep the consumerization of IT outside. Employees of Organization 3 can't bring in phones and tablets. Support is too difficult, because of the diversity of the devices.
There are two mobile phones available for employees, everyone can choose freely between those two. Ordering and support don't cause any trouble.
If employees have a need for a tablet, they don't bring their own device, but ask one from their employer. The role of PH has changed: two years ago everything was tightly organized and now he has to be more flexible concerning devices. Mobile phones and tablets have become more and easily integrated within the IT infrastructure.
To access company data on a tablet, Citrix is used. Employees are not allowed to store (company) data on a tablet. Policy is no data on a tablet, unless destroyable by IT.
PH hopes and expects a contribution of ChangeIT on the side of control of mobile devices. Solutions to improve the maintenance and security of tablets would be appreciated.

New generation
Organization 3 recently started a project to implement a new way of working ('Het nieuwe werken' in Dutch). This allows employees to work from home at unusual times. PH thinks this is not pushed by Generation Y. The management of Organization 3 initiated the start of this project.
There is no need for ChangeIT to do something with this trend.

Future
PH expects the integration of all devices to increase over the next few years.

Interview 4
Date of interview: 13 July 2012
Initials interviewee: JWE
Function of interviewee: Coordinator business office
Branch: Software development

General
JWE is responsible for planning internal and external projects. He has seen many problems with purchasing. That's why he started with purchasing all telecom and ICT hardware and solutions.
Organization 4 is an independent organization in the Netherlands, although there is a connection with the head office in Canada. Organization 4 develops software for accountancy organizations. Organization 4 has about 800 customers and about 15000 users. JWE has worked for three years for Organization 4.
ChangeIT does the maintenance at Organization 4. There are 28 workplaces.

External analysis
Organization 4 buys hardware at ChangeIT, but not everything. The servers and infrastructure are purchased at ChangeIT, but all workstations are purchased at Dell. JWE does not know why (something from the past) and likes to buy workstations at ChangeIT as well. He will try to do that in future.
JWE likes the short lines at ChangeIT, he has only two contact persons at ChangeIT. Depending on the question, at Dell JWE has more contact persons (one for PCs, one for parts, one for issues, etc.).
JWE expects good prices, a quick and reliable delivery, and good support in the implementation and maintenance of hardware. JWE likes to call to place an order, instead of ordering via the web shop. That is because he wants advice.
JWE now does recommend ChangeIT to other organizations, however he does not always understand ChangeIT's way of doing business. Sometimes, Organization 4 has to wait too long. Most of the time, this is a communication issue.
JWE does not compare ChangeIT with other organizations at the moment, because there is an agreement with ChangeIT for the maintenance of the infrastructure.
A competitors of ChangeIT is Dell, in the opinion of JWE.

Consumerization of IT
The consumerization of IT does play a role within Organization 4. As a present, all employees of Organization 4 received an iPad last year, mainly for private use. People get used to the easy way of working with these kinds of devices and expect the same thing at work (i.e. back-ups). The director of Organization 4 likes gadgets, this makes it easier for others to also bring their own devices. Besides that, Organization 4 develops software for mobile devices so it's a necessity to keep up with trends in the market.
JWE finds it necessary to work in a standardized way. In the past contracts did not end at the same time. This led to many complaints of employees who did not receive a new phone at a certain moment, compared to employees who did.
JWE does not expect a change concerning this trend. JWE does not notice a change in his role.
Organization 4 uses Dropbox to read company documents on mobile devices. Security is indeed an issue.
In the opinion of JWE ChangeIT should do something with the consumerization of IT. This can be done with an article in a newsletter, just to inform about potential risks. JWE also expects a change in the services portfolio of ChangeIT.

New generation
One day a week working from aplace than the office is fine and done by many employees. However, this is not due to Generation Y. Generation Y never works from home. This is partly due to the function they have. JWE does see a difference between generations. Babyboomers don't leave at 1700h sharp while gen Yers do, although gen Yers still read their emails after work hours.

Future vision
JWE expects a wireless network, accessible for all devices, connected to a cloud environment where the data can be accessed. The internal servers won't be necessary anymore. This means a change for ChangeIT, the services ChangeIT offers should be 'cloud ready'. This is especially relevant for small organizations.

Interview 5
Date of interview: 17 July 2012
Initials interviewee: MP
Function of interviewee: ICT manager
Branch: Trading

General
Organization 5 was founded 20 years ago and is a trader in window decoration solutions. MP manages applications and takes care of reports and information analysis. He has worked for Organization 5 since 2004 and is member of the MT. Organization 5 has about 100 workplaces.

External analysis
Organization 5 purchases about 90% of the hardware at ChangeIT. MP wants an easy and fast ordering process, cheap products and a quick delivery. These are arguments for ordering elsewhere from time to time, especially if he needs small parts. MP thinks the webshop (ChangeITdirect.nl) is bad.
The prices of ChangeIT are most of the time conform to market price. MP trusts ChangeIT to ask a good price for its products. MP purchases also at Apple (via the Apple online store, due to the availability of products) and at Informatique. He likes the speed of delivery and the ease of searching and comparing in the web shop at Informatique. The availability of products is clear and accurate in that web shop.
MP does not expect much from ChangeIT: he expects a quick ordering process and a quick delivery, for a good price. It shouldn't take too much time for him; hardware doesn't bother MP much.
MP is satisfied about ChangeIT and does recommend ChangeIT if he is asked to give advice.
If MP wants to buy something, he occasionally compares prices. There may be a difference, but that difference cannot be too big. MP does not see direct competitors of ChangeIT, because hardware doesn't bother him much. It doesn't bother him if he buys his hardware at Dell or at another supplier. However, MP admits service is important.
There is no company policy within Organization 5 to buy at only one supplier, but MP has his own policy to stick to one brand of workstations only.

Consumerization of IT
Company policy is that no one may bring his or her own devices, but it is tolerated in practice. However, there are no high demands from the organization. Employees are not free to choose a company device, the kind of device corresponds with the function an employee has. MP has some trouble with the support of various platforms and struggles with the question of what should support. MP has no problem with new technology, but does not want to spend too much time on this. Within Organization 5 there are tight rules about bringing (regular) cell phones to work. In some functions, this is not allowed.
MP thinks his role should change (due to the changes in the market). However, he has limited time and is busy with the primary process.
MP says user-friendliness is increasing, but this diminishes the possibilities of applications. Things can only be done in one way, to keep it easy for a user. Knowledge of users becomes more and more superficial.
On personal devices, only Outlook is used. Security of data is an issue.
In the opinion of MP, ChangeIT should be able to support the platforms Organization 5 use.

New generation
There is an increasing demand to work from other places than from the office, but this is not caused by Generation Y. Management struggles with the question of who can work from home and who can't. It's about deciding upon when work is done properly, and if employees have an obligation to produce a certain result, or an obligation to perform to the best of one's ability. This is not yet clear at Organization 5.
There are a few people who use facilities to work elsewhere, but the MT recently decided to not increase these possibilities.
Looking at the role of MP, he struggles with the requests from the organization, because he has to defend the company policy.

Interview 6
Date of interview: 11 July 2012
Initials interviewee: EJ
Function of interviewee: Head of ICT
Branch: Event organization

General
Organization 6 is an event organization. EJ works about a year for Organization 6 and is responsible for standard IT maintenance, audio- and video systems around the stadium, security systems in and around the stadium and connections with Hilversum (television). This means everything---the club, the company, the football company and the stadium--- needs to function in terms of ICT. EJ manages 235 work places.

External analysis
Organization 6 buys almost all hardware at ChangeIT. There are some exceptions: cables, payment solutions, audio and video hardware, LED boarding and video walls and the VoiP system are all ordered at other suppliers. However, all computer hardware is purchased at ChangeIT.
EJ randomly checks the prices of the products of ChangeIT. Competitors of ChangeIT try to become supplier of Organization 6. EJ tests the prices of ChangeIT by giving these competitors the opportunity to make an offer for something ChangeIT recently delivered. In this way he can compare prices. Most of the time ChangeIT's prices are appropriate. EJ knows margins on hardware are very small, but he likes to know if the prices he pays conform market prices. If prices are not appropriate, EJ asks ChangeIT to explain why the prices are too high. In the past, too-high prices have been changed after a remark of EJ and EJ then still purchases at ChangeIT.
EJ likes the short lines at ChangeIT. He experiences ChangeIT as an open organization. EJ illustrates this as follows: if he calls ChangeIT, the attendant knows who he is and knows whom he needs to speak with. He knows the people at ChangeIT and met them in real life. EJ is for ChangeIT definitely not a number. The human aspect is important, because of the support he might need in future.
EJ never buys hardware via the web shop of ChangeIT, because the web shop is not user friendly. He therefore always calls Patrick to order hardware.
EJ does not look for a supplier, but for a partner. He expects people who work together and give information (seminars) about new trends in IT. He expects them to visit Organization 6 from time to time, to evaluate the cooperation. This is important for a good relationship.

EJ does recommend ChangeIT to others.
EJ sees ScholtenAwater as competitor of ChangeIT. Besides that there are many local organizations (Schutte Automatisering, ICT Spirit, Lesscher). EJ sometimes compares ChangeIT with Lesscher.
There is no company policy to buy all hardware at ChangeIT, but it is easier in case of problems to always buy at ChangeIT.

Consumerization of IT
The consumerization of IT is a topic within the Organization 6 organization. It occurs that employees bring their own devices (mainly mobile phones, no tablets). IT supports this to a certain degree: people get help setting their mailbox but that's it.
The management team uses tablets, provided by Organization 6, but have no network access. However, they can access their own email.
From the broader society, there is always attention paid to an organization like Organization 6. This means that the data of Organization 6 is interesting to everyone. (Everyone wants to know the content of the contracts of players of Organization 6.) EJ tries to make the organization aware of potential risks. The consumerization of IT brings along a potential risk of the security of information.
EJ finds it difficult to create awareness for these risks, mainly because people are used to the way of sharing information and working with IT (as they do at home). The organization is looking for ways to keep security at a good level.
EJ expects an increase in the use of privately owned smartphones at work, but he does not expect this trend for tablets.
EJ does notice a change of his role due to the consumerization of IT. In the past, he was only working with one platform. Nowadays, many more platforms have to be managed and new solutions are more frequently offered as SaaS solutions. EJ thinks the consumerization is unstoppable and brings many advantages. The only disadvantage is the security of data.
EJ thinks this trend may lead to a decrease in sales of internal IT systems for ChangeIT. A need for good workstations, an Active Directory server and a firewall will continue to exist, but the remainder can be in the cloud. There is a chance for ChangeIT in securely connecting all services and offering a domain in the cloud.

New generation
The management of Organization 6 knowingly decided to limit ways to work more flexibly to protect their employees. Organization 6 is a turbulent organization, and that's why working from home is limited. However, the organization is asking more to work in another way than before.

EJ sees a change coming, caused by Generation Y. Generation Y seems to leave at 17h sharp, instead of working more than contractually agreed upon.

In the opinion of EJ the role of an ICT manager is changing. In the past an ICT manager maintained the servers and pushed his technology to the users. Nowadays, an ICT manager discusses functionalities with the users of software and fills the gap between supply and demand. The ICT manager becomes the consultant within the organization. EJ expects this trend to continue.

The role of an ICT specialist is changing and keeps changing. This causes a change in the role of ChangeIT. The strength of ChangeIT is being available for its customers. Despite the size of the organization, ChangeIT is still 'just around the corner'. The products ChangeIT sells are of good quality, and in case something is wrong you can always get back to ChangeIT. As long as ChangeIT proves its added value, keeps its customers informed about the trends in the market and projects at other customers, or organizes events to make sure that its customers know what is possible, EJ thinks ChangeIT has a good future.

Interview 7
Date of interview: 17 July 2012
Initials interviewee: RZ
Function of interviewee: Responsible for ICT
Branch: Trading

General
Organization 7 is a trade organization in oil and lubricants. Organization 7 sells to wholesalers and B2B. Organization 7 is part of a holding. The sister organization produces the oil as OEM products and sells this to several companies. RZ maintains about 75 workplaces. RZ has worked for 10 years at Organization 7.

External analysis
Organization 7 buys small hardware parts at ChangeIT, via the ChangeIT web shop (iPads, iPhones, switches, etc.). More recently workstations have begun to also be purchased at ChangeIT. Workstations are purchased from one supplier only. RZ also buys at other organizations. If he compares ChangeIT with other organizations, he compares the web shop of ChangeIT with other web shops. ChangeIT scores only average, concerning the availability of products and speed of delivery. Prices at ChangeIT most of the time conform market price.
RZ compares ChangeIT with Azerty, 4Launch and Infotheek. Organization 7 has some servers of Infotheek. Infotheek has good prices.
The webshop of ChangeIT should improve the information about the availability of products. ChangeIT cannot give information about when something will be delivered. This complicates the planning process. Furthermore, it sometimes occurs that something other than what was ordered is delivered.
RZ expects a quick and reliable delivery, within the estimated delivery time.
RZ likes the support on the phone when he wants to order something.
RZ does not yet recommend ChangeIT as a hardware supplier. He knows better hardware suppliers. If you already know what you need, ChangeIT is not the best party. If you need advice, ChangeIT is a good party.
RZ almost always compares prices. Most of the time it's purchased at the cheapest vendor. Availability of the product is important as well.
Competitors in case of services are ICT Spirit and Lesscher.
There is no company policy for the purchase of hardware, although RZ likes to keep with one brand.

Consumerization of IT
The consumerization of IT is not a hot topic at Organization 7. Private smartphones and tablets can be used, if employees agree with the security policy that is automatically applied by Exchange. There is no support for these devices. Employees are not allowed to choose their own device. Some employees have a company iPad. Organization 7 uses several apps on these iPads.
BYOD should lead to more self-support and less questions for the IT department. RZ notices that this is not the case. That's the reason why he chooses the devices. RZ expects a change concerning this trend. See 'Future vision'.
RZ thinks ChangeIT should offer cloud services, but also thinks it will diminish the sales of hardware.
RZ needs a party to guide him with his (future) wish to go to the cloud, explain which steps should be taken, and execute some of these steps (depending on the wishes of RZ). RZ admits the IT environment becomes more complex and more diverse. This is a challenge for both RZ and ChangeIT.

New generation
Working from home is allowed in individual cases, but not caused by Generation Y. Generation Y is not very visible within the organization. RZ is astonished by the fact that mostly young people have very little knowledge of IT.
There is a need to work from other locations. This is requested by the MT and fieldworkers.
RZ recognises the trend of young people leaving at 1700h sharp.
If working from home is allowed, it still depends on the situation. Not everyone is allowed to work from home. This is also caused by the costs of these facilities.
A chance for ChangeIT might be the availability of an IT support desk after working hours.
General comment: RZ would like it if ChangeIT could use the same working hours as its customers. Organization 7 starts at 8.00h, while ChangeIT starts at 9.00h. Most incidents happen in the morning, so the unavailability of the helpdesk can be frustrating.

Future vision
RZ thinks and hopes there will be a day there are no servers within the company anymore, everything will be in the cloud. He likes this idea because then he won't have to maintain servers, will not need to make backups, and will not have to buy hardware. Disaster recovery will be taken care of. Besides that, it will allow users to work anywhere.
At this moment he thinks the price for these services is too high.
RZ does not expect a major change in his role. He might then be able to spend more time to projects and important things.

Interview 8
Date of interview: 3 August 2012
Initials interviewee: MK
Function of interviewee: ICT coordinator
Branch: Consultancy

General
Since 2009, Organization 8 has consisted of two companies: a location in Rijswijk (for governmental and healthcare organizations) and a location in Woerden (for education).
MK maintains fewer and fewer physical work places. Organization 8 has about 150 employees and every employee has about two to three devices. MK maintains therefore between 300 and 450 devices. MK has worked since 2008 for Organization 8.

External analysis
Organization 8 purchases its hardware at several hardware vendors, depending on the product. All server infrastructure is bought at ChangeIT. Tablets, notebooks, mobile phones and PCs are bought at other vendors. Reason can be the price, but a good chemistry is also important. Organization 8 has a long relationship with a company in Leiden, who sell tailor-made PCs as well. Organization 8 is looking for a party who thinks along, instead of being hardware vendor only. ChangeIT does that. For parts that can't be found elsewhere, hardware is ordered at Misco.
MK expects information of ChangeIT about trends in IT. MK does not want to be early adopter, but wishes to be a little more modern than the mass. This desire has to do with the culture of Organization 8. Until a year ago it was not possible to access the company network from places other than the office (only in a very complicated way). Now everyone can access the complete network on all devices via Citrix. This makes the offices a meeting place instead of a place to work. Working from home is important for most of the employees of Organization 8.
MK recommends ChangeIT to other organizations. At other companies in the Randstad he notices that others think a company in the east of the Netherlands is too far away. MK suggests to buy out a company in the Randstad.
Organization 8 recently introduced a 'choose your own device' programme. For example, employees can choose from three mobile phones, and choose between a laptop and an ultra-book. Employees have a budget, and if they exceed this budget they have to pay the difference themselves. The mind-set has changed; because employees have a choice, they are more careful with their devices. The IT department notices a change already: there are less repair requests.

For the CYOD programme a portfolio has been composed. For these products a supplier has been selected as well. Mobile phones are purchased at the telephone company, but notebooks and ultra-books are purchased at ChangeIT. At the time the portfolio was composed prices were compared.
MK does not compare ChangeIT with others, as ChangeIT offers a complete solution, where others tend to skip the hardware vending. MK sees Ictivity and Avantage as competitors of ChangeIT's services. Competitors of ChangeIT as hardware vendor, he sees Infotheek, SCC and Bechtle as competitors. MK misses a bit of expertise (good advice) at those organizations.

Consumerization of IT
MK explains both digital natives and digital migrants are present within the organization. The consumerization of IT is, in the opinion of MK, working in a smart way with all your devices.
To allow and encourage the consumerization of IT, Organization 8 created one standardized way of working, accessible with all devices. Digital natives see IT as a commodity: they think it should 'just' work. Digital migrants think more about the products they work with.
MK expects that the roll out of 4G networks will accelerate the consumerization of IT, offering enough speed to work everywhere on mobile devices.
The new way of working was mainly initiated by the management of Organization 8. However, there are employees who ask if they may use their own devices. MK thinks that is no problem. This is all secured via Citrix and SMS passcodes.
Purchase and support of various devices is no problem. MK and his colleagues have enough knowledge to answer questions concerning the various devices.
MK expects that the company policy concerning the consumerization of IT won't change in the coming years. MK sees a change in his role: he thinks it's getting more interesting. In the past, one thought IT would prescribe everything. Nowadays, there is more interaction between the 'users of IT' and the IT department. IT works together with certain parts of an organization to realise a solution.
MK advises to develop a vision, and make sure it is supported by the management. In the opinion of MK ChangeIT already anticipated on this trend. He thinks it's good that the engineers of ChangeIT are able to translate the technical possibilities to business chances for its customers.
MK wants to point to a negative aspect of the consumerization of IT: he thinks it's not good to always be available for work. There should be a good policy for that.

New generation
25% of the employees of Organization 8 are Generation Y. MK confirms the

characteristics of this generation: "It is a very independent (mature) generation". There is a need to work from other places than the office, and the remarks of Generation Y contributed to the implementation of a new platform that enables everyone to work everywhere.

MK tells about a study showing that younger people work less from home: if you join an organization you have to present yourself to get to know people and let people to get to know you. Working from home doesn't help with that.

MK does notice a change due to the new generation: he has to work together more with users more than before.

MK thinks this trend does mean something for ChangeIT: the new generation cares about quickly exchanging information. ChangeIT should think of solutions to have information (data) available (anywhere, anytime).

Organization 8 organizes workshops from time to time for employees to get in touch with new technology, discuss security issues (Dropbox), etc.

Future vision
Everyone can in the future will be able to collaborate with all kinds of devices. This will make work more fun.

Interview 9

Date of interview: 21 August 2012
Initials interviewee: DZ
Function of interviewee: Head of ICT department
Branch: Education

General

Organization 9 is a secondary school, distributed among six locations. They have 3000 students, 650 employees and 1100 workplaces. The IT department consists of 8 people.

External analysis

ChangeIT is the preferred supplier of Organization 9. DZ sometimes orders hardware at other suppliers, but keeps coming back to ChangeIT. From time to time he is disappointed with the service ChangeIT provides: the quality of service is decreasing.

DZ has never been a price buyer, he thinks advice and after sales are more important than price.

Looking at other suppliers, DZ likes the direct contact and the keeping of one's promises. Warranty and after sales are better than at ChangeIT most of the time. Example: DZ buys workstations at another supplier, because he receives five years of warranty at this supplier. This is important for him.

DZ expects a strong focus on the quality of the service level of ChangeIT. ChangeIT used to work together with its customers, but this decreased. Example: servers were ordered, with the agreement that delivery would be on time. Organization 9 had to contact ChangeIT a week before the latest delivery date, to check if delivery would be on time. Furthermore, the delivery appeared to be incomplete. The engineers were not able to install the servers, because ChangeIT forgot to order some parts. He expected the worries to be taken away, which did not happen. This has happened more than once.

However, DZ does recommend ChangeIT to other organizations: it can't be the case DZ buys his hardware at ChangeIT but advises against ChangeIT to others. Besides that, he has no alternative. He tried other hardware vendors, but they all have their weaknesses. In times of crisis you would expect otherwise.

DZ compares ChangeIT with other organizations. Important criteria are a quick and reliable delivery. He likes it if hardware is unwrapped and installed by the supplier. DZ tried other suppliers to check if the service is better elsewhere. He compared ChangeIT with a supplier in Hengelo and a supplier in Assen. The supplier from Assen was a disappointment, but HCS does a little better than ChangeIT.

Dell and HP can be competitors of ChangeIT. DZ does not do business with such organizations, because he wants a local party with good (extra) service.
There is no company policy within Organization 9 to buy at only one supplier.

Consumerization of IT

The consumerization of IT is a hot topic at Organization 9, because not everyone has his own workstation. Hardware is shared and there is not always a computer available for everyone. For students this is also interesting. These are good reasons for the implementation of BYOD. DZ sees this as trend, especially for education. He always predicted the arrival of BYOD at his organization; he thinks it is impossible to refuse to let students bring their own devices.

BYOD devices are separated from the regular infrastructure: BYOD devices are connected wirelessly, while the school hardware is connected via copper. Only internet and internet-based applications can be accessed with BYOD devices. The devices won't be managed.

Every location has wireless hotspots, but not every location has full coverage. The expansion of the wireless network is in progress.

As there is only shared hardware, neither employees nor students are allowed to choose their own hardware (except BYOD).

The new IT policy plan is very different than the last plan, indicating the impact of this trend. Users have more freedom compared to the situation some time ago. Everything should be possible within certain security boundaries. It's not about the management of the workplace anymore, but about offering a safe environment.

DZ does not notice a change of his role: he sees it as his task to keep track of trends. However, he sees a change for his department: instead of support of workplaces, there is support of users now.

The security of data is an issue. More data is outsourced, so more external parties take care of the security of data. On the other side, users have more demands conflicting with the desired security level. In the coming years, DZ expects the search for a balance between what is safe and how much freedom should be given.

For ChangeIT the selling of workplace hardware will decrease due to the consumerization of IT. ChangeIT should, in the opinion of DZ, do something with this decrease, for instance by offering hardware (for BYOD) to employees instead of organizations.

New generation

In education, the boundaries between work and private life always have been vague, so working in another way (different place or time) is already done. This is certainly not caused by Generation Y.

DZ points to gaps in knowledge of IT with Generation Y employees. He is very surprised by that.

Working from home is encouraged. Teachers have about 23 contact hours. The remainder can be done from places other than the school. Demands from the organization to work from other places did not increase.

Future vision

Students will bring their own devices, because they want to and because it is too expensive for a school to maintain workplaces. DZ is not sure if this leads to an increase of the quality of education; in his opinion the way of educating students has to be changed as well, and that is difficult. Innovation in education is very difficult.

Interview 10
Date of interview: 6 July 2012
Initials interviewee: RH
Function of interviewee: Application manager
Branch: Financial services

General
Organization 10 is an insurance office, divided into a mediation department and an authority department (for the settlement of cases). Besides that, there is also a sister company where the IT is also managed by RH and his colleagues. In total there are about 60 workplaces. The task of RH is the configuration of systems and development of custom software. One of his current projects is the digitalization of mail processes with authorization.

External analysis
Organization 10 buys its hardware mainly at ChangeIT. Only once has an exception been made, and that experience was not satisfying. A telephone exchange was bought at Unica. Although Organization 10 since then always purchases at ChangeIT, prices of hardware are always compared with a number of competitors (Alternate, Tweakers pricewatch, CentralPoint). ChangeIT does not have to be the cheapest, but the prices should be appropriate. If ChangeIT is more expensive than others, Organization 10 contacts ChangeIT to ask why prices are higher. Sometimes, in the case of small investments, hardware is bought at other hardware vendors, like Mediamarkt.
RH expects more than the delivery of hardware from ChangeIT. ChangeIT should also keep RH informed about trends in IT. This is now done by a meeting (frequency depending on needs of Organization 10) with the account manager. These regular meetings are valuable for Organization 10. ChangeIT is seen as a partner to give solutions (also because of its knowledge of Organization 10), not as a hardware vendor.
RH does recommend ChangeIT at other organizations, because of good cooperation. Two customers of Organization 10 have become customers of ChangeIT as well.
There is no company policy for the purchase of hardware.

Consumerization of IT
The consumerization of IT is not a very hot topic at Organization 10. People may bring their own devices and use the Wifi network of Organization 10. Besides that, (company bought) tablets are used by a group of people. There was no plan for the use of these tablets, and it appears that the tablets are mainly used to access email. There are no apps yet to access company applications.
At this moment there is a possibility to access the company network, but this solution is not ideal (Citrix). Organization 10 is currently preparing a solution together with ChangeIT in order to give employees access to company data via a NAS. Because Organization 10 already provides new technology to certain groups within Organization 10, employees don't have to bring their own devices. If a company smartphone is not provided, employees sometimes bring their own devices. Organization 10 helps these employees to use the Wifi network and to access company email. To conclude: the consumerization of IT plays a role at Organization 10, but not because of 'bring your own device'.
RH does not expect an increase of the consumerization of IT.

New generation
Organization 10 is a conservative organization. Although there are excellent facilities for working from home, working from home is not done. The management does not appreciate working from home, so this is more a cultural issue. Management is between 40 and 55 years old, which may be a reason for their view. RH thinks employees would like to work from home more often.
RH sees a trend in the increase of availability of tools of suppliers, allowing people to work anywhere, anyplace and anytime. Technical ability is no longer the restriction.
Organization 10 is implementing a time registration system. This system might lower the barriers to work from home.
In the opinion of RH, ChangeIT does not need to do something to respond to this trend unless asked for it by Organization 10.

Appendix 3: Summary of interview results concerning the consumerization of IT

The following table shows the responses of the interviewees to the most important questions concerning the consumerization of IT:

Question 1: Is the consumerization of IT a trend within your organization?
Question 2: Did your role change due to the consumerization of IT?
Question 3: How do you cope with security, considering the consumerization of IT?
Question 4: What, in your opinion, does the consumerization of IT mean for Switch?

	Question 1	Question 2	Question 3	Question 4
Interview 1	No, because of security policies	No	By refusing privately owned devices.	Switch could offer solutions, like a private cloud solution.
Interview 2	Yes	No	Is the responsibility of the employee.	Chance for Switch in terms of initial configuration and integration within the existing IT environment. Support and maintenance of devices.
Interview 3	No, because of policy	Yes, mobile devices are more and more integrated within the IT infrastructure. This requires solutions.	Arranged via Citrix and policy (no data on device unless destroyable by IT).	Hopes and expects a contribution of Switch in order to improve the maintenance and security of mobile devices.
Interview 4	Yes	No	Is an issue, Dropbox is used to share documents but this is not ideal.	Informing its customers and change of the service portfolio.
Interview 5	Yes, but only minor	Yes, due to changes in the market.	Security of data is an issue, no solution yet.	Switch should be able to support the (increasing number of) platforms the organization uses.
Interview 6	Yes	Yes, working with many platforms and new solutions as SaaS and consumerization of IT is unstoppable and brings many advantages.	Security of data biggest disadvantage of the consumerization of IT. It is hard to create awareness for risks among employees.	Might lead to a decrease in old-fashioned business, but a chance is securely connecting all services (devices) and offering a domain in the cloud.
Interview 7	Yes, but only minor	No, only a small change due to future developments (more in the cloud).	Only Outlook is used on mobile devices, Exchange takes care of the security.	Being the guide for going to the cloud (explain which steps should be taken, and execute some of these steps).
Interview 8	Yes	Yes, IT doesn't prescribe anymore. Nowadays, solutions are developed together.	Network is only accessible via Citrix and an SMS passcode.	Switch already anticipated on this trend.
Interview 9	Yes	No, not for IT manager but does notice a change for the role of his team.	Devices owned by employees and students are connected wirelessly and not connected with the normal network. These devices only have internet access. Internet services/applications take care of security of data.	Selling of workplace hardware will decrease due to the consumerization of IT. Switch should do something with this increase, for instance by offering hardware to employees instead of organizations.
Interview 10	No	No.	New solution (in development) gives access to company data in a secure way.	-

Appendix 4: Summary of interview results concerning Generation Y

The following table shows the responses of the interviewees to the most important questions concerning Generation Y:

Question 1: Is there a demand from the organization to work in another way caused by Generation Y?
Question 2: Has Generation Y caused your role to change?
Question 3: What does this trend, in your opinion, mean for Switch?

	Question 1	Question 2	Question 3
Interview 1	No new demand, already offers other ways of working. Not caused by Generation Y.	No	-
Interview 2	Yes, but not caused by Generation Y.	No	Due to working 'anytime' is 24/7 support and uptime important. Might be a chance.
Interview 3	Yes, not caused by Generation Y, rather initiated by management.	No	-
Interview 4	Yes, but not caused by Generation Y. Generation Y never works from home (and shows no desire to do so).	Not caused by this trend, but role does change.	Switch should have 'cloud ready' services.
Interview 5	Yes, but not caused by Generation Y. Management struggles with the question of who can work from home and who can't.	No, but struggles with the conflicting demand of the employees and the policy of the company.	-
Interview 6	Working in another way is limited to protect employees, although the demand is increasing. A change is noticeable: Generation Y leaves at 17h sharp.	Not caused by this trend, but role does change: no more maintenance of servers, instead the internal consultant; filling the gap between supply and demand.	The role of an IT specialist is changing and keeps changing. This causes a change in the role of Switch. Switch should keep up with the changes in the market.
Interview 7	Yes, but not caused by Generation Y. Generation Y is not very visible within the organization.	Not caused by this trend.	-
Interview 8	There is a need to work from places other than the office. Generation Y demands this as well, but it's not mainly caused by Generation Y.	Yes, the interviewee has to work together with users more than before.	Generation Y cares about quickly exchanging information/data. Switch should think of solutions to make information available (anywhere/anytime).
Interview 9	In education, the boundaries between work and private life have always been vague. Working in another way is already done and not caused by Generation Y.	No	-
Interview 10	There is a demand from the organization, but this is prohibited by the management. It's not caused by Generation Y.	No	-

Appendix 5: Summary of interview results concerning the external analysis

The following table shows the responses of the interviewees to the most important questions concerning the external analysis:

Question 1: Where do you buy your hardware?
Question 2: What do you expect of Switch?
Question 3: With which organizations do you compare Switch?

	Question 1	Question 2	Question 3
Interview 1	Only at Switch, because of the good relationship.	Work together with its customers, solutions should match future plans of the organization.	Knows no national competitors. Local competitor: iBeheer.
Interview 2	At Switch in projects, at another supplier with single PCs.	A tailor-made solution, logistics and installation taken care of.	Not clear.
Interview 3	Mainly at Switch, but also at Misco, Staples, Contict and Mediamarkt. Ordering at Switch is seen as difficult because of the ordering process.	Quick and reliable delivery, accurate information about availability.	See Question 1.
Interview 4	At Switch (servers, infrastructure) and Dell (laptops). Change is expected, laptops will be bought at Switch as well in future.	Advice before purchase. Good prices, a quick and reliable delivery and a good support in the implementation and maintenance of hardware.	Does not compare, is not useful because of the maintenance contract with Switch.
Interview 5	90% at Switch, 10% at Apple and Informatique.	An easy and fast ordering process, cheap products and a quick delivery.	Informatique, but only ocassionally.
Interview 6	Only at Switch, but prices are checked (at random).	Work together with customers, give information about trends in IT, good relationship.	ScholtenAwater, Lesscher, Schutte Automatisering, ICT Spirit.
Interview 7	Small hardware parts and workstations at Switch, but also at Azerty, 4Launch and Infotheek.	Quick and reliable delivery, within the estimated delivery time.	Azerty, 4Launch, Infotheek.
Interview 8	Sever infrastructure at Switch, notebooks in future as well. PCs are purchased at a company in Leiden (longstanding business relationship). Spare parts are bought at Misco.	Work together with its customers, give information about trends in IT.	Infotheek, SCC and Bechtle, but there is too less expertise at those organizations to compete with Switch.
Interview 9	Switch is preferred supplier. Hardware is bought elsewhere, but they keep coming back to Switch.	A strong focus on the quality of the service level, and work together with its customers.	Holland Computer Systems, Blencom, Dell and HP.
Interview 10	Mainly at Switch, occasionally at Mediamarkt.	More than delivery only. Give information about trends in IT as well. Switch is seen as a solutions partner.	Alternate, CentralPoint.