Appendix 13 Interviews

Appendix 5 Interview Protocol
Interview Protocol
Date: 01-06-2012

Data interviewee:
Institution: Regus
Interviewee (title and name): Sander Ruben van Dinther
Interviewer: R.P.C. Rosa
Documents obtained: -

Post interview comments or leads:
Sander Ruben van Dinther provided a guided tour throughout two Regus buildings in the Hague and answered some questions, but Sander van Holland later answered the questions more in depth.

Sections:
A: Interview Background
B. ICT trends
C. Real Estate
D. End of interview

Interviews for ‘Corporate Real Estate Portfolios 2040 according to ICT trends’.

Introductory Protocol
To facilitate my note-taking, I would like to audio record our conversations today. For your information, only I will be privy to the recordings which will be eventually deleted after they are transcribed. Essentially, all confidential information will be left out, your participation is voluntary, and we do not intend to inflict any harm. Thank you for your agreeing to participate.

We have planned this interview to last no longer than one hour. During this time, we have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. With your permission, any question after this meeting will be sent via mail.

Introduction
You have been selected to interview because you have been identified as someone who has a great deal to share about ICT trends and their influence on future office use. My research project as a whole focuses on the future demand for offices, with particular interest in understanding how ICT trends influence ways of working regarding the location, time and facilities to support the activities of office workers. This topic is chosen because not much is known about link between ICT and Real Estate Portfolio’s. My study does not aim to evaluate your techniques or experiences. Rather, I am trying to learn more about what how to cope with the changes, and hopefully learn about how to prevent office vacancy.

Briefly describe your role (master student in Real estate & Housing at the TU Delft) as it relates to Corporate Real Estate Portfolios 2040 according to ICT trends (if appropriate).

Main research question
For my master thesis, the following main research question needs to be answered as much as possible:
What is the future demand of office workers for real estate portfolios in the Netherlands in the year 2040 as a result of ICT developments over the next two decades and how can the supply be matched with this demand?

A. Interviewee Background

1. Please tell me more about your organisation and its origin and future vision.
Regus is a multinational corporation that provides flexible workplace solutions including; serviced offices, meeting rooms, video conferencing, business lounges and day offices in business centres across the world. Regus is located at 50 locations in the Netherlands and is planning to double the amount of locations within the next year due to the new ways of working. Regus wants to facilitate the workers at the location they need at a certain time. Regus in the Netherlands is a test site where all test concepts take place.

2. What is your function in this institution?
Office manager

3. How long have you been in your current position and how long at this institution?
Current position:
At this institution:
4. What is your field of work?
   Offices.

5. How are you involved in Corporate Real Estate and/or ICT trends?
   Rent flexible office space available form an hour to years.

6. Interesting background information on interviewee:

B. ICT trends

1. Which trends and developments do you observe?
   Mobile devices combined with internet and video conferencing allows great flexibility in the place and time work is done.

2. How are these developments changing?
   As it comes to acces to internet and mobile devices, not much will change.

3. On what do you base your findings?
   Experience.

(If interviewee did not state anything about physical or virtual communication, propose your own findings. If interviewee did mention anything relevant, continue to next question without explanation.)

4. To what extent can ICT replace natural communication between office workers or between office workers and clients?
   Teleprecense is a quit realistic whay to communicate with people at another location. But if it is possible, physical presence is preferred.

5. What is your vision on office portfolios of companies in the Netherlands in the year 2040 according to current ICT developments?
   That they make use of more third place offices and need less central office space.

C. Real Estate (Offices, Workplaces, Location)

1. Which current and changing trends in ICT influence the demand for office space until 2040?
   (See interview with Sander van Holland)

2. How do the trends influence the use of office space and office location in the extreme situation?
   (See interview with Sander van Holland)

3. How can existing and to develop real estate be matched to the future demand for offices space caused by ICT innovations during the functional life cycle?
   (See interview with Sander van Holland)

C. End of interview

Check if all answers have been answered thoroughly and if not ask how or where you can get the answers. Thank the interviewee for his/her time and cooperation.

Post Interview Comments and/or Observations:
Appendix 5 Interview Protocol

Interview Protocol

Date: 27-06-2012

Data interviewee:
Institution: KPN (Getronics)
Interviewee (title and name): Martin de Boer
Interviewer: R.P.C. Rosa
Documents obtained: -
Post interview comments or leads:

Sections:
A: Interview Background
B. ICT trends
C. Real Estate
D. End of interview

Interviews for ‘Corporate Real Estate Portfolios 2040 according to ICT trends’.

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What is the future demand of office workers for real estate portfolios in the Netherlands in the year 2040 as a result of ICT developments over the next two decades and how can the supply be matched with this demand?

A. Interviewee Background

1. Please tell me more about your organisation and its origin and future vision.
In 2007 KPN took over Getronics. Getronics (now a business line of KPN) owns and manages data centres while KPN makes uses of these data centres. Digital data has been increasing due to the transition of making phone calls to making use of data (e.g. Voice Over IP, Mobile phones becoming computers). KPN provides ICT facilities as a service, mobile and fixed telephony and data traffic.

2. What is your function in this institution?
Consultant

3. How long have you been in your current position and how long at this institution?
Current position: ICT Business Consultant KPN (Getronics)
At this institution: 3 years

4. What is your field of work?
ICT

5. How are you involved in Corporate Real Estate and/or ICT trends?
Borders of the new way of working: ICT. The new way of working is being able to work flexible and being facilitated in doing so. This means making agreements on how to do it. It is about a framework in which rules, norms and values are stated about how to handle with each other.

6. Interesting background information on interviewee:
- 

B. ICT trends

1. Which trends and developments do you observe?
Hypes are new and upcoming innovations that are expected to be important. De Boer refers to the Hype Cycle of Gartner. De Boer recognises two important hypes, which are Cloud Computing and Big Data.

2. How are these developments changing?
Cloud computing and Big data could take up to five to ten years to be generally adopted. This has to do with the fact that there is no such thing as a company. Companies can be of different sizes, employing from one to 40,000 employees or even more. These different size companies have different adoption curves. Smaller companies who are competitive are able to switch over to something quiet easy and fast. For example, small companies can easily switch to cloud computing, because this is financially more attractive, while outsourcing servers, maintenance and making backups. For larger companies it is more difficult to switch over because of all the investments that have been done already, a lot more effort is needed to switch all employees over to cloud computing and sometimes policies do not easily allow certain changes in handling intern data of the company. This difference in company sizes is an example of the difference in adoption of innovations. The complexity of change increases as companies get bigger.

It can take 3 to 5 years for innovations to be on the top of the hype cycle. At this top the allot of it can take another 10 years for 2/3 to 3/4 of businesses (especially traditional businesses like the construction sector) have adopted the innovation. The whole hype cycle can take up to 20 years.

Trends can be described as hypes, which are new and upcoming innovations. Via the Hype Cycle the latest trends and their expected adoption rates can be followed. Different rates of adoption are caused by different sizes and culture of organisations.

3. On what do you base your findings?
Hype cycle

4. To what extent can ICT replace natural communication between office workers or between office workers and clients?
-

5. What is your vision on office portfolios of companies in the Netherlands in the year 2040 according to current ICT developments?
Most companies do not look further than 3 to 5 years ahead, because little can be said that is meaningful. The world can become as thought, but the chances are big that it will be otherwise. Although, research institutions might look further into the future than 5 years. When it comes to office buildings, these can be divided into two types of buildings, namely existing buildings and new buildings. Due to the 14% vacancy rate it becomes less attractive to construct new buildings. Unless these replace existing buildings for more sustainable buildings. Despite of fast changing ICT, it can be easily integrated in existing buildings. So that is not a problem.

Probes: is it changing – why or why not? Who influences the changes (e.g. management teams, workers, clients etc.?)

When it comes to ICT, it is always about the window of opportunity. This window of opportunity is very important, because it is about technology. What can be observed is that innovations are not often innovatory, but it often existing technology that is implemented in new ways. This creates new opportunities. It is about how to apply technology in a different, new of smart way. Demand for innovations does not only come from consumers (also known as consumerisation). What can be observed is that there is a dominant demand for innovation. For example, the world of computers aimed at productivity, because there was still a lot to profit to be gained. The last 20 years ICT focused on productivity, which partly came from the demand of companies. Thereafter, it became easier to consume via internet. This is an example of doing the same but in a better way. At a given moment different technologies came together. Technology of mobile phones, technologies that integrated computers into mobile phones and resulting in, for example, iPad's combined with different technologies like sensors.

ICT is a combination of demand and technology, because technology can and sometimes is developed much further. If you now look at the current trends in ICT, you can have an idea about what is coming in the next years. But not for all ICT trends there is demand for.
C. Real Estate (Offices, Workplaces, Location)
Interviewee indicated to ask the following questions to Arnoud van Brugge (KPN)

1. Which current and changing trends in ICT influence the demand for office space until 2040?
   - Probes: does it have anything to do with generations or other external influences?

2. How do the trends influence the use of office space and office location in the extreme situation?
   - Probes: what will happen on short term (5 years) and what will happen on long term (10 year)?

3. How can existing and to develop real estate be matched to the future demand for offices space caused by ICT innovations during the functional life cycle?
   - Probes: What should be done with existing vacant buildings? What needs to be considered when (re)developing offices?
   - C. End of interview

Check if all answers have been answered thoroughly and if not ask how or where you can get the answers. Thank the interviewee for his/her time and cooperation.

Post Interview Comments and/or Observations:
**Introduction.**

I explained that in my point of view, real estate strategies do not pay enough attention to trends in ICT.

Mr. Bullinga states that trends in the ICT is the most driving factor that you can imagine next to the economy, greying etc. and are things you cannot control. ICT will change the whole building on which you do have control over. If Mr Bullinga was in Real Estate, than he would lay most of his focus on ICT.

Robert: It is done, but in my opinion it is not done enough and there is not looked at far enough into the future.

Marcel: if people understand that you are dragging computers into a building, then indeed you do not need to pay much attention to it. If you look a bit further at the moment, then you will see that ICT will change the essence of the building, the use of materials, the people who are in it and the form of the building itself. This is because the streams of people and products will change due to virtualisation. If you notice this, then you should be worrying more.

Robert: I look at a higher scale level, namely at real estate portfolios of companies. Companies with more than one office building. I will look at what the portfolios would be like and how the compositions are according to ICT that is used by the majority in 2040. The majority as stated in in the adoption curve of Rogers where 50 to 60 per cent of the total population has adopted a certain innovation.

I am looking for the current trends and how it may look like in the future. I know that there is the hype cycle of Gartner in which you can see which innovations are hot item at a given year. Examples of current trends are cloud computing, big data etc.

My main question for you is: which trends and developments do you observe, how are these developments changing and on what do you base your findings.

Marcel: To start with the last part, in my book ‘The future cloud’ 230 literature referrals are stated.

Robert: what is your vision on office portfolios of companies in the Netherlands in the year 2040 according to current ICT developments?

Marcel: in 2040, companies in the Netherlands do not have an office portfolio, but workplace portfolio. There will be a shift from offices to workplace. These workplaces are situated everywhere, around the world, throughout the Netherlands, at peoples home, petrol stations (which will not exist anymore and are transformed to other functions). Offices will not exist anymore in 2040. An office as we experience it nowadays is a unique physical object. In the near future we will not have unique physical objects anymore. We will only have hybrid objects where physical and virtual comes together. This might sound a bit strange. But what is an office nowadays? It is a way to get jobs done, to let people do their work and to work together and therefore we put people physically together in one place. If there is anything hopelessly out-
dated, then this will be it. Every real estate strategist who says that they would have an office portfolio in 2040 is insane.

You must see an office building as a mean and not as a goal. It is a mean to work together. Till today it is a nice way to work together and nothing else was known. But in the future there will be ways of working where teams are being guided, teams who are working together, partly virtually and partly where they physically come together in the same place. It will be capricious and unpredictable. There will be industries who do not need offices, because they will work at a Starbucks or elsewhere to get a project done. ‘Offices’ that are left over will be glorified restaurants. In a restaurant it is fun to meet each other. The co-working places which are currently emerging are the precursors of the future office. This is because herein they have let go the idea that a fixed group of people need to work in the same space during fixed hours. It will be unpredictable and spontaneous, but still organised. It is organised spontaneously and you will incidentally meet people who do not have anything to do with your “scope” of work. We need to obtain the power to guide and manage teams who literary are less visible. We need to find ways to sustain the core values of the company. Therefor we will continue to meet physically, but what will be physical? Nowadays we know that the persons sitting in front of you are made of flesh and blood, but in 2040 we will not see the difference, whether you have a physical deputy of yourself or present yourself in the form of a hologram. 2Pac has become a hologram so you can become a hologram as well.

The stories about holograms and robots are seen by most people as an old-fashioned futuristic story. That is not the case, because over the past fifty years that people talked about it, the technology was not as far. Now the technology is going to be that far. For the biggest part, the technology already is as far. It is just a matter of dripping down from very high and expensive segments to normal life. It will happen fast.

Robert: The people you mentioned say that it is more fiction, but how come? Do they not know anything about what is going on?
Marcel: yes, because they simply do not know anything about it. If you are not keeping yourself busy with all these futuristic aspects, and you do not see the break troughs that are being made in medical, accommodation, technical and other areas, people assume that it will take quite a time for these changes to take place. But it is changing fast. We will get robot colleagues and helping robots, more frequent even outside factories. There will be holograms replacing you at your office place. However, office work will change. Because as far as office work is routine, administrative and controlled, these tasks will disappear. It will be replaced with software, because this software will be far more smarter, more handy and efficient than letting people do it.

Robert: should we actually focus more on creative processes that will be performed by humans?
Marcel: we will focus more on creative processes, design processes and developing tools to remove administrative, hazardous and routine work. However, these tools need to still be designed. Instead of controlling workers, in the future workers will be co-guided. They will be helped with finding their focus in their work and coaching in general. These are all tasks that will maintain.

Robert: are you saying that routine processes will be done by software and not by humans existing out of flesh and blood?
Marcel: yes, what you will get is that people who are sitting in offices nowadays will not have to work anymore. They will be sitting in those offices being useless. That is also a reason for not talking about office portfolios anymore, because they will be left out one way or another. The demand for office space is going to reduce anyway. Next to that, as a matter of fact, getting together in other ways will become easier. Work can be done everywhere. That way you will only have different moments left. One, two or three times a week or at least se less than five times a week to physically get together. At that moment you also have two choices, whether you will physically go to the inspirational drink, in the future there will not be work meetings anymore because those are done virtually in the future, or you should go there physically but send your hologram instead if one could not tell the difference. What will happen if someone else cannot see the
difference? However, the threshold to go somewhere physically will become very high. For example your presence here to conduct this interview actually is too crazy for words. It is a useless waste of money, utilisation of train capacity and a waste of time that could be used to interview other important people.

Robert: but even though, we are still doing it.
Marcel: that is because technology is not as far to make it possible to do this from a distance. In the coming five to ten years, the technology will be as far advanced to make it possible. We are going to make choices about that.

Robert: do you have a better picture about that? You have mentioned holograms, but are there more technologies that make it possible to collaborate remotely?
Marcel: every technology that does something with interface and collaboration. We are surrounded by screens and we do things with screens. The whole wall in our houses will be a screen on which you do your homework. Those walls already exist. Walls on which you do your homework as child. Nowadays children grow up with screens and it will be normal for them to get certain functions on screens. They could learn on screens, they could work on screens. For them it is like a game. Whether you are playing a shooting game or with a learning game, the border is not as clear. That is the oncoming game generation for whom it is very normal to cope with screens and gain satisfaction from it, do their work and let out their frustration. They do not think it is strange. Things should not necessarily come from the city around the corner. That does not fascinate them, whether it comes from china or elsewhere.

Robert: How do you look at collaborating on a global scale level?
Marcel: that means that competition between organisations and companies will increase significantly, because the whole world becomes everyone’s work and playground. Companies are taking places in chains where before the do not even have to dream about. Virtually, everything lies open and you can go everywhere. A telecom company can become a bank. The functions where strictly separated from each other and never touched each other. Virtually, everything touches each other and that is the earthquake we are going to see the coming 10 to 15 years where whole branches are turned upside down because total newcomers enter due to the fact that everything is virtual. They will shake up everything.

Robert: if we have such technology that we can communicate that well with each other as if it was real and that you cannot separate whether it is real or not, do you think that companies from Holland will hire people overseas for a certain task or work for the company remotely?
Marcel: of course, that will increase extremely. For example now there are companies who are located in Amsterdam. They have to choose out of the labour pool in the surrounding area where those people are physically living because they all have get to the office. If you live in China, you will not commute each day to Amsterdam and back to go to work, but virtually you will.

Robert: So in that case one could get the best knowledge from around the world?
Marcel: the competition in the future will become extremely higher. Now one have to compete locally, but in the future the competition reaches worldwide. However, it also provides many opportunities for personal development. This means that workers need to really do their best to survive in the market.

Robert: looking at the Netherlands, do you think workers will still have permanent contracts or would they be more independent entrepreneurs?
Marcel: I doubt that there still will be permanent contracts. Nor for rent or lease of buildings or people. It will be short term and project based. The whole story about independent entrepreneurs will become larger and larger. There will be more freelance work which requires other working conditions. For example, a Jamaican start-up company that attracts people with two promises: twice a week your whole house will be cleaned for free and you have unlimited holidays. Does that mean that you can lie on the beach 365 days a year? No, because it does not matter how many holidays you take as long as you finish your tasks or finalise your project in time.
Robert: to go further on that topic, if a worker likes to travel and see other countries, do you think it is possible to travel the world as an independent entrepreneur while working at the same time?

Marcel: yes, that is possible. That is the nice part. In the past and today still, you are cut off from your work environment. You could answer your mails, but that is about it. In the future we will see that the whole work environment, in which we are now, is merged into screens. You have access to all the companies’ critical data. You have everything you need to do your work as long as it is virtual work that you do. In the case of a construction worker for example it becomes difficult, because he really needs to physically be present at his work.

There are two types of jobs. A job where you physically need to be at the location and jobs where you do not need to be physically present. Until today, office work belonged to the first category, but that is not the case anymore.

Robert: so one could work everywhere for a company that is located anywhere in the world.

Marcel: yes, but therefor environments are needed in which everything is transparent. The worker needs to be transparent. It is critical to know what the worker is able to, his qualifications, whether he is telling the truth, if he is not defrauding with his Curriculum Vitae, does he have a proven track record of tasks and projects, are payments done, is he checked? Those are environments that are currently emerging, like ‘Elance’ for example, which an environment in which one can bid on tasks and auctions etc. That is currently in development, with its ups and downs however. Transparent environments are a necessity for working from a distance for different jobs to work. It is in development which will take some time, but soon several standards will come out.

Robert: if we look at the current generations from 4 to 18 years old who currently are growing up with those screens you have mentioned earlier and other devices, do you think that soon there will be a tipping point in ways of working and communicating and collaborating?

Because when this generation starts to enter the market, they want to immediately work in an entirely other way than the current and old generations of office worker.

Marcel: this phenomenon can be concluded from the research don by CISCO. This research questioned 3000 young professionals of which 79% said that they do not want to work inside an office. They just do not want to anymore, because they grew up with all these screens. But it will take a while for those who have the power, and who obviously are a bit older, are prepared to go along with this. They would do it only when they are being forced to. They will not do it voluntarily.

Robert: are you actually saying that it is in the management teams their hands to decide whether or not steps will be taken to virtualisation?

Marcel: no, you will do things based on two reasons. Because you think something is the best next thing or because it must be done due to external pressures like the economy and the labour market. A part of the people who switch to virtual are pioneers. Pioneers are people who do things because they are fascinated by something. This group is called the ‘Innovators’. However, the majority do things because it has normal. If at a given time one cannot hire young people with an office located at one location, then you should be scratching behind your ears and wonder if you are not doing anything wrong. That is how it will go.

Robert: now we have all these offices of which 14.1 % are vacant. How do you see this changing? To go a step back, when do you think the majority will switch to virtual?

Marcel: we are already very busy doing that. It is happening very fast. I think it has accelerated with the introduction of the iPad and the iPhone around 2010, which can be seen all around us. The development of Apps gives an explosion of creativity. From these developments, several standards will be originated. Smart collaboration software and smart virtual collaboration environments that are safe and can be trusted
and wherein one knows what can be expected from others literary. Actually, the village will be copied, because in a village you know the butcher, the baker and the greengrocer which is a trusted environment. You know for who you have to watch out, with who you need to be sentimental because he does not give back enough and also who is honest. That is what is going to happen as well, but then virtually. The village will be recreated. It is not the city that will be recreated, because in the city people do not know anything about each other.

Robert: how long will it take for the majority, which is 50 per cent or more of the knowledge-workers, to make use of this?

Marcel: I think that we will get there around 2020. Why? Because everybody is individually trying out and getting along with an iPhone, and when you arrive at the office, you need to work on that stupid computer. People will feel like doing things smarter and better. I suspect that individuals are faster than companies this time. Companies are carrying the weight of all those buildings and ICT the old-fashioned with them. While companies that are starting over again, or starting up from scratch decide to do it in another way. They decide to do it transparent and with BYOD (Bring Your Own Device) and with a Starbucks workplace instead of offices. If you see how huge their lead is in terms of cost reduction and have more fun doing their work and being more motivated. Research shows that 86% of the co-working place users find to be more motivated and more productive.

Robert: your think that in eight years, the majority has switched. By then we still have all those buildings left. What do you think is going to happen with them?

Marcel: they will be standing there being useless. The magic word is ‘transformation’. They must get rid of all those zoning plans. They want to determine everything. They should really stop doing that. It is so annoying.

Robert: zoning plans need to be flexible as well?

Marcel: the best zoning plan is no zoning plan.

Robert: there still are companies planning to construct new buildings or at least are planning on constructing new buildings even when there still are vacant buildings.

Marcel: how is it possible for a complete branch, the construction branches together with the municipality and all the smart, intelligent and expensive people to construct buildings for a market that does not exist? How is that possible? It is like the Euro. They created a currency that directly threatens to go bankrupt as a country.

Robert: then they have missed something about the possible in the future, right?

Marcel: no, they did not miss anything about possible in the future futures. They have let themselves being guided by the financial interests of that moment. And that was that we were in a growing economy where we were able to blindly enter into debt without any perception whether it will ever redeem itself or not. That was possible then, because everyone did it. We have created a fake economy in which a lot of people made money.

Robert: and also lost money with real estate.

Marcel: the people who could not have done anything about it have most likely lost a lot of money. Those who were at top positions and have benefitted from it have made such a benefit that they do not suffer now.

Robert: how can we prevent this from happening again and that in the future the supply does match the demand?

Marcel: you cannot, as long as the financial interests are such that the demand does not matter, this will remain. Therefore there is a desire for transparent markets where future users are involved in designing a building. Constructing something while not worrying what is going to happen inside because your business
Corporate Real Estate Portfolios 2040 according to ICT trends

model is there already is not the way to do it. In their opinion the profit already exists. They took the profit, like bankers do, and let the neighbour, or actually the citizens, pay the depts. Therefore a vacant office found will be created.

Robert: so you are saying that future user participation is needed?
Marcel: that is, however, an element that allows for more transparency and that buildings are constructed for something that is really demanded.

Robert: you indicated that people are going to work at a third, fourth or fifth workplace like a Starbucks, but then you will get a shift in building ownership right?
Marcel: yes, it does not matter to be the owner of a building. Unless you see a building as a goal, then it does matter. But when a building is a mean to perform a certain function like education, collaboration, learning etc., then it does not matter to own property. It does not interest me to own solar panels. It costs me a lot of financial investments while I need to see when I will receive my return on the investment. That does not work. I just want to have access to energy. That does not mean that I specifically need those solar panels, I just want to lease electricity and that I am ensured of getting energy. The same when I want to be ensured for a work stream. This could be a building, a part of a building or a temporarily part of a building. It could also be something else.

Robert: suppose that Starbucks as a workplace is going to be successful and that more and more people are going to do their work there, then Starbucks should be aware of what those people actually want. What kind of workplace they demand, right?
Marcel: if Starbucks is smart, then they will also head to co-workplaces, because co-workplaces in definition are set up to be a workers gathering place with a restaurant function. The restaurant function will seamlessly merge with the working aspect, because that is what makes it fun. Moreover the environment and the building should be inspiring and needs to have a strong identity. Then people like go there. I do not like to go into an office. Everyone who has an office portfolio in his portfolio with offices that are replaceable can forget it. Or you have an office with identity or you have nothing. The co-workplaces have their location and their building designed from Horeca and working. They make it possible that the people who work there are able to meet each other. It is not a must, it is possible. They provide the tools. They do not command to talk with certain people at a certain time. They can make use of the opportunities that are present. Starbucks comes from the private segment. They are a restaurant, a lunchroom or a coffee shop, but that is it. If they are smart, then they will see a new market and also head towards the co-workplaces. They could develop two identities, like the old traditional Starbucks or the Starbucks Pleasure and the Starbucks business or Starbucks workplace or something like that.
Interview Protocol

Date:

Data interviewee:
Institution:
Interviewee (Etrepreneur Urwin Rijkaart):
Interviewer: R.P.C. Rosa
Documents obtained:
Post interview comments or leads:

Sections:
A: Interview Background
B. ICT trends
C. Real Estate
D. End of interview

Interviews for ‘Corporate Real Estate Portfolios 2040 according to ICT trends’.

Introductory Protocol
To facilitate my note-taking, I would like to audio record our conversations today. For your information, only I will be privy to the recordings which will be eventually deleted after they are transcribed. Essentially, all confidential information will be left out, your participation is voluntary, and we do not intend to inflict any harm. Thank you for your agreeing to participate.

We have planned this interview to last no longer than one hour. During this time, we have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. With your permission, any question after this meeting will be sent via mail.

Introduction
You have been selected to interview because you have been identified as someone who has a great deal to share about ICT trends and their influence on future office use. My research project as a whole focuses on the future demand for offices, with particular interest in understanding how ICT trends influence ways of working regarding the location, time and facilities to support the activities of office workers. This topic is chosen because not much is known about link between ICT and Real Estate Portfolio’s. My study does not aim to evaluate your techniques or experiences. Rather, I am trying to learn more about what how to cope with the changes, and hopefully learn about how to prevent office vacancy.

Briefly describe your role (master student in Real estate & Housing at the TU Delft) as it relates to Corporate Real Estate Portfolios 2040 according to ICT trends (if appropriate).

Main research question
For my master thesis, the following main research question needs to be answered as much as possible:

What is the future demand of office workers for real estate portfolios in the Netherlands in the year 2040 as a result of ICT developments over the next two decades and how can the supply be matched with this demand?

A. Interviewee Background

1. Please tell me more about your organisation and its origin and future vision.
CrozzRoads is an young organisation in which interactive applications are central to the core business. Taking techniques typical to the gaming industry and applying them to the commercial market.

2. What is your function in this institution?
   Lead designer

3. How long have you been in your current position and how long at this institution?
   Current position: 4 years
   At this institution: 2.5 years

4. What is your field of work?
   New business, project lead and quality assurance.

5. How are you involved in Corporate Real Estate and/or ICT trends?
   Developing custom mobile apps with compelling new techniques

6. Interesting background information on interviewee:

B. ICT trends

1. Which trends and developments do you observe?
   Augmented Reality and Virtual Reality with Artificial Intelligence

2. How are these developments changing?
   Both techniques are not new but because of the booming mobile industry nowadays those techniques have a big change to become commonly used applications.
   Probes: have you heard of hype cycles and adoption rates?
   Just read some articles on the web.

3. On what do you base your findings?
   (If interviewee did not state anything about physical or virtual communication, propose your own findings. If interviewee did mention anything relevant, continue to next question without explanation.)

4. To what extent can ICT replace natural communication between office workers or between office workers and clients?
   ICT can not totally replace all natural communication but will definitely speed up certain time consuming daily tasks.
   Probes: when can it be replaced and when not?
   It can be replaced if it gets embraced and understand by the users.

5. What is your vision on office portfolios of companies in the Netherlands in the year 2040 according to current ICT developments?
   Probes: is it changing – why or why not? Who influences the changes (e.g. management teams, workers, clients etc.)?
   It is changing just by looking at social channels like Facebook, Twitter and Linkedin. Those portals are often used by people and companies.

C. Real Estate (Offices, Workplaces, Location)

1. Which current and changing trends in ICT influence the demand for office space until 2040?
Online and mobile applications with realtime notifications will have a big influence on the market. We are getting more familiar with social networking and are not afraid for privacy issues anymore. (Example: Podio app)

Probes: does it have anything to do with generations or other external influences?
Yes indeed, the upcoming generations are familiar with next gen smartphones. They are the future and will have those demands.

2. How do the trends influence the use of office space and office location in the extreme situation?

   Trends will give real time accurate information for the flexible demands of future potential tenants.
   Probes: what will happen on short term (5 years) and what will happen on long term (10 year)?
   Holographic location based information applications in your office. No fixed contracts, faster networking.

3. How can existing and to develop real estate be matched to the future demand for offices space caused by ICT innovations during the functional life cycle?

   There should be a budget available for developing innovative ICT applications. Having a good plan can save costs and can be reused for new projects. Using interactive applications will have a better visualization for people that cannot read blueprints.

   Probes: What should be done with existing vacant buildings? What needs to be considered when (re)developing offices?
   When (re)developing offices consider the new demands of upcoming generations. Future tenants wants clear, fast accurate information.

C. End of interview

Check if all answers have been answered thoroughly and if not ask how or where you can get the answers. Thank the interviewee for his/her time and cooperation.

Post Interview Comments and/or Observations:
Appendix 5 Interview Protocol

Interview Protocol
Date: 03-07-2012

Data interviewee:
Institution: NS Stations
Interviewee (title and name): Sebastiaan de Wilde
Interviewer: R.P.C. Rosa
Documents obtained: -
Post interview comments or leads:
This interview was done by Phone.

Sections:
A: Interview Background
B. ICT trends
C. Real Estate
D. End of interview

Interviews for ‘Corporate Real Estate Portfolios 2040 according to ICT trends’.

Introductory Protocol
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We have planned this interview to last no longer than one hour. During this time, we have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. With your permission, any question after this meeting will be sent via mail.

Introduction
You have been selected to interview because you have been identified as someone who has a great deal to share about ICT trends and their influence on future office use. My research project as a whole focuses on the future demand for offices, with particular interest in understanding how ICT trends influence ways of working regarding the location, time and facilities to support the activities of office workers. This topic is chosen because not much is known about link between ICT and Real Estate Portfolio’s. My study does not aim to evaluate your techniques or experiences. Rather, I am trying to learn more about what how to cope with the changes, and hopefully learn about how to prevent office vacancy.

Briefly describe your role (master student in Real estate & Housing at the TU Delft) as it relates to Corporate Real Estate Portfolios 2040 according to ICT trends (if appropriate).

Main research question
For my master thesis, the following main research question needs to be answered as much as possible:
What is the future demand of office workers for real estate portfolios in the Netherlands in the year 2040 as a result of ICT developments over the next two decades and how can the supply be matched with this demand?

A. Interviewee Background

1. Please tell me more about your organisation and its origin and future vision.
NS is aiming at attracting and attaining commuter to commute by train. Therefore it must be attractive for these travellers.

2. What is your function in this institution?
Director Asset Development.

3. How long have you been in your current position and how long at this institution?
Current position:-
At this institution:-

4. What is your field of work?
Developments of NS Stations

5. How are you involved in Corporate Real Estate and/or ICT trends?
-

6. Interesting background information on interviewee:
B. ICT trends

1. Which trends and developments do you observe?
More and more train travellers make use of their mobile devices during their trip. This can be for fun or even doing business.

2. How are these developments changing?
NS is providing Wifi in trains for people to have a better access to internet during their travel and stay at stations.

3. On what do you base your findings?
Experience.

(If interviewee did not state anything about physical or virtual communication, propose your own findings. If interviewee did mention anything relevant, continue to next question without explanation.)

4. To what extent can ICT replace natural communication between office workers or between office workers and clients?

5. What is your vision on office portfolios of companies in the Netherlands in the year 2040 according to current ICT developments?
Concerning NS Stations, together with Regus we are developing workplaces at or near railway stations to provide business travellers to efficiently use their travel time and making their journey more pleasant.

C. Real Estate (Offices, Workplaces, Location)

1. Which current and changing trends in ICT influence the demand for office space until 2040?

2. How do the trends influence the use of office space and office location in the extreme situation?
Workers will perform their work and meeting on their way. They can work in the train and can work more concentrated or meet at the train stations. This shifts office space at the central offices towards ‘on the way’ locations.

3. How can existing and to develop real estate be matched to the future demand for offices space caused by ICT innovations during the functional life cycle?

C. End of interview

Check if all answers have been answered thoroughly and if not ask how or where you can get the answers. Thank the interviewee for his/her time and cooperation.

Post Interview Comments and/or Observations:
Appendix 5 Interview Protocol

Interview Protocol

Date: 11-07-2012

Data interviewee:
Institution: Cisco
Interviewee (title and name): Eric Swart & Koen Dibbets
Interviewer: R.P.C. Rosa
Documents obtained: -
Post interview comments or leads:

Sections:
A: Interview Background
B. ICT trends
C. Real Estate
D. End of interview

Interviews for ‘Corporate Real Estate Portfolios 2040 according to ICT trends’.

Introductory Protocol
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We have planned this interview to last no longer than one hour. During this time, we have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. With your permission, any question after this meeting will be sent via mail.

Introduction
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Briefly describe your role (master student in Real estate & Housing at the TU Delft) as it relates to Corporate Real Estate Portfolios 2040 according to ICT trends (if appropriate).

Main research question
For my master thesis, the following main research question needs to be answered as much as possible:
What is the future demand of office workers for real estate portfolios in the Netherlands in the year 2040 as a result of ICT developments over the next two decades and how can the supply be matched with this demand?

A. Interviewee Background

1. Please tell me more about your organisation and its origin and future vision.
Cisco has been started when a couple who were in love wanted to send messages from a distance in 1984. Nowadays Cisco is one of the biggest leaders in ICT.

2. What is your function in this institution?
Head of Collaboration.

3. How long have you been in your current position and how long at this institution?
Current position: 2 years
At this institution: 2 years

4. What is your field of work?
ICT

5. How are you involved in Corporate Real Estate and/or ICT trends?
Development of collaboration technology.

6. Interesting background information on interviewee:
B. ICT trends

1. Which trends and developments do you observe?
Cisco has already hologram-like solutions called Cyviz. This system is not the science fictional version of holograms that appear in mid-air, but are images projected from the back onto walls creating a 3D image observation without the use of any type of 3D glasses.

Video over internet is one of the biggest and most important trends in communicating and collaborating from a distance. According to a research done by Gartner, 90% of internet traffic will be video related. During my visit to the Cisco office, Swart and Dibbets extensively gave a thorough demonstration of the latest virtual communication and collaboration products from entirely designed Teleconferencing rooms to an application on an iPad. It is important for the software as hardware to be compatible with different platforms and networks for this mean of communication to work easily. In the near future, these virtual communication means will consist holographic or 3D imaging for a more realistic experience.

Virtual communication in combination with cloud computing creates a demand for a variety of workplaces close to traffic hubs and homes or even an instant office with a device that connects the internet from anywhere around the world.

2. How are these developments changing?
As from the beginning, 30 years ago, the company invests a lot in research and development and acquisitions are very typical (136 in total) in contrast to other ICT related companies. The strength of the company is to take over other companies, which could contribute to Cisco’s product development. This is one of the reasons why they launch so large amount of products on the market. Currently the R&D department within Cisco contains 20,000 employees.

3. On what do you base your findings?
Most of the trends are obtained by research done by Gartner.

(If interviewee did not state anything about physical or virtual communication, propose your own findings. If interviewee did mention anything relevant, continue to next question without explanation.)

4. To what extent can ICT replace natural communication between office workers or between office workers and clients?
Virtual communication and collaboration will be used as much as possible because of time and travel efficiency, unless physical meeting is really required, for instance at the first meeting or to interact with physical object or for conversations with emotions involved is preferred physically. Video conferencing could be used as a filter to keep meetings pragmatic and straight to the point. Working from home is accepted for a maximum of two days to prevent losing social cohesion.

5. What is your vision on office portfolios of companies in the Netherlands in the year 2040 according to current ICT developments?

C. Real Estate (Offices, Workplaces, Location)

1. Which current and changing trends in ICT influence the demand for office space until 2040?
Video conference and other collaboration tools allow worker to work outside of the office, namely at home or locations between home and the central office. This means that central office space will drop significantly.

2. How do the trends influence the use of office space and office location in the extreme situation?
Each colleague at Cisco has their own workplace at home for which they get a financial compensation.

3. How can existing and to develop real estate be matched to the future demand for offices space caused by ICT innovations during the functional life cycle?
By looking at the latest ICT that influences the way people work, when and where. Contracts for offices need to be more flexible.

C. End of interview

Check if all answers have been answered thoroughly and if not ask how or where you can get the answers. Thank the interviewee for his/her time and cooperation.

Post Interview Comments and/or Observations:
Appendix 5 Interview Protocol

Interview Protocol

Date: 18-07-2012

Data interviewee:
Institution: JJVO
Interviewee (title and name): Jan-Jaap van Os
Interviewer: R.P.C. Rosa
Documents obtained: -

Post interview comments or leads:

Sections:
A: Interview Background
B. ICT trends
C. Real Estate
D. End of interview

Interviews for ‘Corporate Real Estate Portfolios 2040 according to ICT trends’.

Introductory Protocol
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We have planned this interview to last no longer than one hour. During this time, we have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. With your permission, any question after this meeting will be sent via mail.

Introduction
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Briefly describe your role (master student in Real estate & Housing at the TU Delft) as it relates to Corporate Real Estate Portfolios 2040 according to ICT trends (if appropriate).

Main research question
For my master thesis, the following main research question needs to be answered as much as possible:
What is the future demand of office workers for real estate portfolios in the Netherlands in the year 2040 as a result of ICT developments over the next two decades and how can the supply be matched with this demand?

A. Interviewee Background

1. Please tell me more about your organisation and its origin and future vision.
JJVO is an Interim Management & Consultancy company that guides companies to change to the new way of working.

2. What is your function in this institution?
Consultant.

3. How long have you been in your current position and how long at this institution?
Current position:
At this institution:

4. What is your field of work?
Change management

5. How are you involved in Corporate Real Estate and/or ICT trends?
New ways of working

6. Interesting background information on interviewee:
ICT and accommodation are tools for people to perform their work in a certain way. Getting people to use these tools is important for change to happen. Management of people is most important. Change does not necessarily has to do with different generations or ICT that does not really work or that the tools are not the right ones. Nowadays it more about coaching people and giving them freedom and be responsible.

B. ICT trends

1. Which trends and developments do you observe?

2. How are these developments changing?

3. On what do you base your findings?
   Experience.

(If interviewee did not state anything about physical or virtual communication, propose your own findings. If interviewee did mention anything relevant, continue to next question without explanation.)

4. To what extent can ICT replace natural communication between office workers or between office workers and clients?
   Contact between colleagues will reduce, but at the same time will become more valuable and to the point. Social contact will remain important for control, social cohesion with the company and for remaining a team spirit. Therefore, work can be done from home for 2 days a week at max. Virtual communication and collaboration can be used as much as possible because of time and travel efficiency, unless physical meeting is really required, for instance at the first meeting or to interact with physical object (even though digital representatives of physical object also are becoming popular). It is noticed that virtual communication is being used more and more while you can still see that working from home is accepted for a maximum of two days to prevent losing social cohesion.

Probes: when can it be replaced and when not?

5. What is your vision on office portfolios of companies in the Netherlands in the year 2040 according to current ICT developments?
   In 2040 there will be more company collective buildings like Seats2Meet, Regus Spaces etc. where different people from different companies will work. The mix of different workers from different companies provides cross-fertilisation for new projects or services. It also increases the speed in doing business faster and more efficient compared to arranging this via internet or phone. Your vision on the world will expand, because of the constant flow of new people you meet. The social aspect remains when using third place workplaces. But, a collaboration between these third place providers can provide a wider variety of locations to work at. Working at home will not really increase in the future, but more and more homes will be equipped with office like workplaces or at least work environments to meet people near homes.

Probes: is it changing – why or why not? Who influences the changes (e.g. management teams, workers, clients etc.?)

C. Real Estate (Offices, Workplaces, Location)

1. Which current and changing trends in ICT influence the demand for office space until 2040?

2. How do the trends influence the use of office space and office location in the extreme situation?

3. How can existing and to develop real estate be matched to the future demand for offices space caused by ICT innovations during the functional life cycle?
   In 2040, large companies will not exist anymore. In 2040 organisations will not exceed 100 colleagues. Larger organisations will be to cumbersome compared to small, flexible and agile organisations. This means that large, mono-functional office buildings (like at the Zuid As) will be otiose. These large buildings can be transformed to mixed-use buildings providing workplaces, housing and eventually recreational purposes.
   Offices need to be fun, cosy and more homelike. To obtain this, the users need to participate on beforehand of change.

Probes: What should be done with existing vacant buildings? What needs to be considered when (re)developing offices?

C. End of interview

Check if all answers have been answered thoroughly and if not ask how or where you can get the answers. Thank the interviewee for his/her time and cooperation.
Post Interview Comments and/or Observations:
Appendix 5 Interview Protocol
Interview Protocol
Date: 07-08-2012

Data interviewee:
Institution: Regus
Interviewee [title and name]: Sander van Holland
Interviewer: R.P.C. Rosa
Documents obtained: -
Post interview comments or leads:

Sections:
A: Interview Background
B. ICT trends
C. Real Estate
D. End of interview

Interviews for ‘Corporate Real Estate Portfolios 2040 according to ICT trends’.

Introductory Protocol
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We have planned this interview to last no longer than one hour. During this time, we have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. With your permission, any question after this meeting will be sent via mail.

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Briefly describe your role (master student in Real estate & Housing at the TU Delft) as it relates to Corporate Real Estate Portfolios 2040 according to ICT trends (if appropriate).

Main research question
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A. Interviewee Background
5 years i have been working for Regus.

1. Please tell me more about your organisation and its origin and future vision.
Regus is located at 50 locations and is planning to double the amount of locations within the next year due to the new ways of working. Regus wants to facilitate the workers at the location they need at a certain time. Regus in the Netherlands is a test site where all test concepts take place.

2. What is your function in this institution?
I am almost a year responsible for all the Regus locations in the Netherlands (together with the general manager Eduard Schaepman).

3. How long have you been in your current position and how long at this institution?
Current position: Development Manager
At this institution: 5 years

4. What is your field of work?
Third work places.

5. How are you involved in Corporate Real Estate and/or ICT trends?
Development of Regus locations.

6. Interesting background information on interviewee:
   -

B. ICT trends

1. Which trends and developments do you observe?
   Mostly the use of laptops and other mobile devices with access to internet.

2. How are these developments changing?
   -

3. On what do you base your findings?
   Experience & research.

(If interviewee did not state anything about physical or virtual communication, propose your own findings. If interviewee did mention anything relevant, continue to next question without explanation.)

4. To what extent can ICT replace natural communication between office workers or between office workers and clients?
   Looking at remotely collaborating on a global scale level, video conferencing is quite popular. Businessmen who used to travel several hours and sometimes need a hotel just for a two hour meeting now prefers to use video conferencing. Therefore Regus must keep up with communication means for voice over IP, which is used for (video) calls, to be compatible on the other side of the world. In bigger cities like London, Paris and New York we also have Telepresence, which is quite expensive, but if there is more demand in the Netherlands, then we could implement it here.

Probes: when can it be replaced and when not?

5. What is your vision on office portfolios of companies in the Netherlands in the year 2040 according to current ICT developments?
   Companies will reduce their office space and let employees make use of third place workplaces.

C. Real Estate (Offices, Workplaces, Location)

1. Which current and changing trends in ICT influence the demand for office space until 2040?
   Regus is co-working with a large company who looks 30 years in the future and keeps an eye on ICT developments and early adopters, but they only act just before the majority is going to adopt certain innovations. From a financial point of view, early adopting has high investment costs, so you want to adopt somewhere between the early adopters and the majority, otherwise you are too late.

2. How do the trends influence the use of office space and office location in the extreme situation?
   By being mobile, workers will go to the nearest by third place office to meet or work. These can be located near their homes, near public transport, along highways, in business areas or in city centres.

3. How can existing and to develop real estate be matched to the future demand for offices space caused by ICT innovations during the functional life cycle?

   We are busy with new concepts of which some are already implemented have to do with the new way of working, for example our cooperation with the NS. Our first community centre that we have opened and we are looking to roll out as much as locations as possible in the Netherlands. But these locations will be more and more situated at locations with a lot of traffic. These locations can be a bit smaller and function as a hub where people get in quickly to work or meet and leave again. At the moment we have almost fifty locations and it is expected to grow to 100 locations within a year. This doubling in locations expectation is based on the demand for the new way of working. We want to facilitate people on the location where people need us at that moment that we think they need us. For example you are traveling by train from The Hague to Amsterdam and you miss the train, then you need to call the office that you are running late. Instead, we offer a Regus Gold Card from €25,- per month that gives you access to our business lounge situated in the train station where you can work, get some coffee and save time. If your meeting is very important, a video conference can be set-up instantly. Regus want to facilitate people there where the need us at that particular moment.

   Worldwide Regus has 1200 locations, in the Netherlands we are a test country for all new concepts. The Station2station project in collaboration with NS is a pilot project provided by Eduard Schaepman (General Manager of Regus) who also is a pioneer in new ways of working which allows us to unroll these kinds of test projects in the Netherlands. From there on, if it is noticed that the concepts works, it will be transferred to other countries, same as the community centre at Laaren. Regus as a whole intends to expand to 100 locations within the Netherlands and worldwide to 3000 locations in one or two years. Looking back at the Dutch
history, the Dutch always have been entrepreneurs and have been around the world. In the Netherlands they always are innovatory. The Netherlands is so small that we look beyond our borders.

In the past Regus provided standard office layouts and interior worldwide. Nowadays Regus is changing this standard interior. This has its pro’s and con’s for the user. What we really do is providing our network. With the Regus Gold card you get access to all their Regus centres, business lounges and you get access to an online platform where you can meet other Regus users. A research is done by Mark Dixon founder of Regus) and Phillip Ross in which they state that there barely was internet 20 years ago, there were almost no mobile phones, but there were offices. Regus predicts that over 30 years the internet will exist in a superlative degree; we will make more use of smartphones, social media etc. Maybe even offices will vanish. This might be a bluntly conclusion, but it is important how to deal with these changes. People should work where they are most productive. But when people work at home, they will need professional spaces to meet people. Also people who work from home prefer to have a professional address, which also can be arranged with Regus to use one of their addresses while mail will be forwarder to your home address. The same can be done with telephone, a phone number with a city code representing a city with status and where a Regus office is located can be used. A Regus phone attendant picks up stating your firm name and can put the caller trough to your own phone number or just leave a message.

Regus is now looking at developments to renew certain services and interior. Currently Regus has a corporate image, but now we are looking at the demand in the Netherlands and even locally. What we do is thinking global, but acting local.

New developments are station to station locations, which is a sort of hub where users can easily hop in a Regus office located on a train station. Here, the users can do their work or have a meeting physically or by video conferencing, drink some coffee, maybe have a bit and leave again Regus centres are located in business parks and in city centres. Besides locating at train stations, we are considering moving even closer to the users, namely to villages. In these villages, there are many people who commute to cities to go to their office. We have recently developed a community centre in the centre of Laaren. This community centre is provided with on the ground floor a Starbucks, a small shop, a caterer and different types of trendy workplaces for users to perform different activities. On the first floor there is a standard Regus division with a gym.

C. End of interview

Check if all answers have been answered thoroughly and if not ask how or where you can get the answers. Thank the interviewee for his/her time and cooperation.

Post Interview Comments and/or Observations:
Appendix 5 Interview Protocol
Interview Protocol
Date: 20-08-2012

Data interviewee:
Institution: USMedia
Interviewee (title and name): Casper van Schie
Interviewer: R.P.C. Rosa
Documents obtained: -
Post interview comments or leads:

Sections:
A: Interview Background
B. ICT trends
C. Real Estate
D. End of interview

Interviews for ‘Corporate Real Estate Portfolios 2040 according to ICT trends’.

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We have planned this interview to last no longer than one hour. During this time, we have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. With your permission, any question after this meeting will be sent via email.

Introduction
You have been selected to interview because you have been identified as someone who has a great deal to share about ICT trends and their influence on future office use. My research project as a whole focuses on the future demand for offices, with particular interest in understanding how ICT trends influence ways of working regarding the location, time and facilities to support the activities of office workers. This topic is chosen because not much is known about link between ICT and Real Estate Portfolio’s. My study does not aim to evaluate your techniques or experiences. Rather, I am trying to learn more about what how to cope with the changes, and hopefully learn about how to prevent office vacancy.

Briefly describe your role (master student in Real estate & Housing at the TU Delft) as it relates to Corporate Real Estate Portfolios 2040 according to ICT trends (if appropriate).

Main research question
For my master thesis, the following main research question needs to be answered as much as possible:
What is the future demand of office workers for real estate portfolios in the Netherlands in the year 2040 as a result of ICT developments over the next two decades and how can the supply be matched with this demand?

A. Interviewee Background

1. Please tell me more about your organisation and its origin and future vision.
US Media provides advice and development of digital media.

2. What is your function in this institution?
Client Service Director and Partner

3. How long have you been in your current position and how long at this institution?
Current position: 12 years
At this institution: 12 years

4. What is your field of work?
Digital media.

5. How are you involved in Corporate Real Estate and/or ICT trends?
Not much, we are office users who have integrated a part of the work process in to the physical interior of our office.

6. Interesting background information on interviewee:
We work with creative agencies. We add value by supporting a team, creative and strategic processes from a technological point of view. We work in a multi-disciplinary team whether every team member always is physically present and work very visual. Projects are taken out of the computer and made visual for everyone. This helps all involved persons to get a clear picture of the whole project and results. He success factors are teamwork, physical presence and also perform visual work outside computers. We have always been a digital company and therefore we try to force some activities without the use of computers.

B. ICT trends

1. Which trends and developments do you observe?
   Large digital touch screens are in development, which could replace our visual panels on which we stick paper sheets. However these screens are either too expensive in these large sizes or do not work that flawless yet.

2. How are these developments changing?
   These developments are becoming better, but are not yet good enough to replace with our physical and visual process.

3. On what do you base your findings?
   Experience.

   (If interviewee did not state anything about physical or virtual communication, propose your own findings. If interviewee did mention anything relevant, continue to next question without explanation.)

4. To what extent can ICT replace natural communication between office workers or between office workers and clients?
   In our case ICT does not much replace natural communication. We really force everyone to be physically present at the office and interact with each other. However, communication with clients and companies sometimes take place via virtual communication.

5. What is your vision on office portfolios of companies in the Netherlands in the year 2040 according to current ICT developments?
   We look no further than 5 years ahead and we do not see much change in the coming three to 5 years.

C. Real Estate (Offices, Workplaces, Location)

1. Which current and changing trends in ICT influence the demand for office space until 2040?

2. How do the trends influence the use of office space and office location in the extreme situation?

3. How can existing and to develop real estate be matched to the future demand for offices space caused by ICT innovations during the functional life cycle?

C. End of interview

Check if all answers have been answered thoroughly and if not ask how or where you can get the answers. Thank the interviewee for his/her time and cooperation.

Post Interview Comments and/or Observations:
Interview Protocol

Date: 27-08-2012

Data interviewee:
Institution: Microsoft
Interviewee (title and name): Pieter Burghouts
Interviewer: R.P.C. Rosa
Documents obtained: -
Post interview comments or leads:

Sections:
A: Interview Background
B. ICT trends
C. Real Estate
D. End of interview

Interviews for ‘Corporate Real Estate Portfolios 2040 according to ICT trends’.

Introductory Protocol
To facilitate my note-taking, I would like to audio record our conversations today. For your information, only I will be privy to the recordings which will be eventually deleted after they are transcribed. Essentially, all confidential information will be left out, your participation is voluntary, and we do not intend to inflict any harm. Thank you for your agreeing to participate.

We have planned this interview to last no longer than one hour. During this time, we have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. With your permission, any question after this meeting will be sent via mail.

Introduction
You have been selected to interview because you have been identified as someone who has a great deal to share about ICT trends and their influence on future office use. My research project as a whole focuses on the future demand for offices, with particular interest in understanding how ICT trends influence ways of working regarding the location, time and facilities to support the activities of office workers. This topic is chosen because not much is known about link between ICT and Real Estate Portfolio’s. My study does not aim to evaluate your techniques or experiences. Rather, I am trying to learn more about what how to cope with the changes, and hopefully learn about how to prevent office vacancy.

Briefly describe your role (master student in Real estate & Housing at the TU Delft) as it relates to Corporate Real Estate Portfolios 2040 according to ICT trends (if appropriate).

Main research question
For my master thesis, the following main research question needs to be answered as much as possible:
What is the future demand of office workers for real estate portfolios in the Netherlands in the year 2040 as a result of ICT developments over the next two decades and how can the supply be matched with this demand?

A. Interviewee Background

1. Please tell me more about your organisation and its origin and future vision.
In 2008 Microsoft switched to the new way of working. Because Microsoft is an American company, growth and productivity per person is important. Work/life balance became out of context, which resulted in burnouts. Bill Gates wrote a whitepaper about the new way of work. Herein he states that the world was strongly changing and how technology can contribute to the individual and how to make the individual more productive by allowing the individual to work place and time independent. This concept has been implemented at Microsoft at Schiphol to show businesses and workers their vision on the new way of working.

2. What is your function in this institution?
Marketing of Microsoft products and services.

3. How long have you been in your current position and how long at this institution?
Current position: 3 years
At this institution: 10 years

4. What is your field of work?
Sales and Marketing MKB - Microsoft Netherlands

5. How are you involved in Corporate Real Estate and/or ICT trends?
The new way of working
Corporate Real Estate Portfolios 2040 according to ICT trends

6. Interesting background information on interviewee:

B. ICT trends

1. Which trends and developments do you observe?
Virtual communications is an important backbone to make teleworking possible. A demonstration is held where collaboration software developed by Microsoft called ‘Lync’ is used for virtual meetings, teamwork or just to ask a question to a colleague. It seems as good working software for collaboration, but nevertheless a specific setup of screens, cameras, speakers, microphones and other acoustic measures is required for meetings and collaboration to take place fluently and clear to all participants. A 360-degree panoramic view of the entire room is sent to all far-end participants, providing a continuous view of everyone in the meeting room. In addition, a second video view of the active speaker is also sent, using advanced technology that automatically focuses on the current speaker and tracks the flow of conversation so that the active speaker can always be identified. Both of these video views plus the content being shared are all shown on the same screen for remote participants who are connected to the same live meeting session. Next to virtual communication, Microsoft is also focusing applications that are compatible on different devices to facilitate the Bring Your Own Device phenomenon.

2. How are these developments changing?

3. On what do you base your findings?
Microsoft company

(If interviewee did not state anything about physical or virtual communication, propose your own findings. If interviewee did mention anything relevant, continue to next question without explanation.)

4. To what extent can ICT replace natural communication between office workers or between office workers and clients?
Virtual communication, like Lync, does work for structured meeting. But brainstorm sessions, difficult or personal conversations need to be done face to face due to the lack of facial expressions. However, agreements can be made on when to make use of virtual communication and when not. For example, 60% to 70% via virtual communication and 30% to 40% via natural communication.

5. What is your vision on office portfolios of companies in the Netherlands in the year 2040 according to current ICT developments?
The director mentioned two important things. One, the office is not the workplace and two, the world is the workplace. Indeed, the minimum time per week has been searched for physical contact with colleagues. This resulted in 20% of time per week allowed for meetings at the central office and 80% outside of the office.

There are three types of workers. People who work with their hands, people who perform routine work and information workers. Routine work will be taken over digitalised while the pool of information workers will increase. There are other trends that cause an increase of information workers. Greying causes for workers to be more productive. Also new generations who grew up with internet and digital devices demand certain ways of working. The increasing group of information workers need to be facilitated to work time and place independent to improve their productivity.

C. Real Estate (Offices, Workplaces, Location)

1. Which current and changing trends in ICT influence the demand for office space until 2040?
Internet and mobile devices support workers to be productive anywhere and at any time.

2. How do the trends influence the use of office space and office location in the extreme situation?
Microsoft at Schiphol has a rule that only 20% of work is allowed at the central office. The other 80% office workers should work from home or other workplaces. This 20-80 rule has been introduced as a pilot to maximise teleworking. It becomes less important where you work, no desk is mandatory for a worker to perform his/her activities. A shift needs to be made from managing on working hours to managing on output instead. This is difficult to measure, even so when checking on the amount of hours sitting behind a desk. However, it is better to let workers do their work when they are productive as much as possible. In the end, that is what counts.

3. How can existing and to develop real estate be matched to the future demand for offices space caused by ICT innovations during the functional life cycle?
The type of workplace is important. Therefore workplaces have been furnished as activity-based workplaces to support specific work processes like meeting rooms, concentration spaces, team spaces etc. Because colleagues are seen less, it must be possible to still easily find colleagues. Therefore technology (e.g. Lync) provides information about each colleague’s location, activity and if he or she is available or not. Transparency is very important. Mentally it is always a challenge to implement the new way of working, but management and freedom is important.
C. End of interview

Check if all answers have been answered thoroughly and if not ask how or where you can get the answers. Thank the interviewee for his/her time and cooperation.

Post Interview Comments and/or Observations:
Appendix 5 Interview Protocol

Interview Protocol

Date: 18-09-2012

Data interviewee:
Institution: KNS Automatisering
Interviewee (title and name): Merk de Jager
Interviewer: R.P.C. Rosa
Documents obtained: -
Post interview comments or leads:

Sections:
A: Interview Background
B. ICT trends
C. Real Estate
D. End of interview

Interviews for ‘Corporate Real Estate Portfolios 2040 according to ICT trends’.

Introductory Protocol
To facilitate my note-taking, I would like to audio record our conversations today. For your information, only I will be privy to the recordings which will be eventually deleted after they are transcribed. Essentially, all confidential information will be left out, your participation is voluntary, and we do not intend to inflict any harm. Thank you for your agreeing to participate.

We have planned this interview to last no longer than one hour. During this time, we have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. With your permission, any question after this meeting will be sent via mail.

Introduction
You have been selected to interview because you have been identified as someone who has a great deal to share about ICT trends and their influence on future office use. My research project as a whole focuses on the future demand for offices, with particular interest in understanding how ICT trends influence ways of working regarding the location, time and facilities to support the activities of office workers. This topic is chosen because not much is known about link between ICT and Real Estate Portfolio’s. My study does not aim to evaluate your techniques or experiences. Rather, I am trying to learn more about what how to cope with the changes, and hopefully learn about how to prevent office vacancy.

Briefly describe your role (master student in Real estate & Housing at the TU Delft) as it relates to Corporate Real Estate Portfolios 2040 according to ICT trends (if appropriate).

Main research question
For my master thesis, the following main research question needs to be answered as much as possible:
What is the future demand of office workers for real estate portfolios in the Netherlands in the year 2040 as a result of ICT developments over the next two decades and how can the supply be matched with this demand?

A. Interviewee Background

1. Please tell me more about your organisation and its origin and future vision.
KNSAutomatisering provides complete solutions for automation processes in small and medium-sized enterprises.

2. What is your function in this institution?
General Manager.

3. How long have you been in your current position and how long at this institution?
Current position: 19 years
At this institution: 19 years

4. What is your field of work?
ICT

5. How are you involved in Corporate Real Estate and/or ICT trends?
Automation.

6. Interesting background information on interviewee:
B. ICT trends

1. Which trends and developments do you observe?
Cloud computing and Bring Your Own Device are the most important trends that influence ways of working.

2. How are these developments changing?
More and more these trends are being adopted in businesses.

3. On what do you base your findings?
Experience.

(If interviewee did not state anything about physical or virtual communication, propose your own findings. If interviewee did mention anything relevant, continue to next question without explanation.)

4. To what extent can ICT replace natural communication between office workers or between office workers and clients?
Depending on the person, ICT can completely replace natural communication. But there always are people who prefer to meet in person. This decision also depends on the ICT used to communicate from a distance.

5. What is your vision on office portfolios of companies in the Netherlands in the year 2040 according to current ICT developments?

- 

C. Real Estate (Offices, Workplaces, Location)

1. Which current and changing trends in ICT influence the demand for office space until 2040?
Cloud computing is interesting for small to mid-sized organisations with multiple office or work locations, or organisations that do not want or can invest in (new) ICT. For example when organisation X has a server and computers of more than three years old (it is not common to have computers and servers of more than five years old) mostly the machines become slow or exceed their capacity and it takes a year before measures are taken. Cloud Computing requires a desktop computer or mobile device (PC, Laptop, Tablet or any other device) that has access to the internet. It is important to have fast internet access to and from the cloud, preferably glass fibre. This makes editing files much more pleasant. Cloud computing does not require much hardware power as long as the data connection, input (mouse, keyboard, webcam etc.) and output (screen, speakers, printer etc.) work well. This means that no investments in sophisticated computers are necessary, even old computers work well. Also can Cloud Computing used by mobile devices, which makes it able support BYOD (Bring Your Own Device).

Organisation will become smaller, dynamic, and flexible. The core of the organisation will be reduced. Further to the year 2040, office workers will demand certain facilities to support their desired way of working, if not, they will find a job elsewhere. Toward 2040, more and more people will be working at different hours during the day at the most convenient location while using the most convenient device for a certain job at a certain time.

2. How do the trends influence the use of office space and office location in the extreme situation?
Besides ICT trends, trends within organisations manly caused by ICT trends are discussed as well. Organisation will become smaller, dynamic, and flexible. The core of the organisation will be reduced. Further to the year 2040, office workers will demand certain facilities to support their desired way of working, if not, they will find a job elsewhere. Toward 2040, more and more people will be working at different hours during the day at the most convenient location while using the most convenient device for a certain job at a certain time.

3. How can existing and to develop real estate be matched to the future demand for offices space caused by ICT innovations during the functional life cycle?

- 

C. End of interview

Check if all answers have been answered thoroughly and if not ask how or where you can get the answers. Thank the interviewee for his/her time and cooperation.

Post Interview Comments and/or Observations:
Appendix 5 Interview Protocol

Interview Protocol

Date: 15-10-2012

Data interviewee:
Institution: Talent First
Interviewee (title and name): Saskia Langenberg
Interviewer: R.P.C. Rosa
Documents obtained: -
Post interview comments or leads:

Sections:
A: Interview Background
B. ICT trends
C. Real Estate
D. End of interview

Interviews for 'Corporate Real Estate Portfolios 2040 according to ICT trends'.

Introductory Protocol
To facilitate my note-taking, I would like to audio record our conversations today. For your information, only I will be privy to the recordings which will be eventually deleted after they are transcribed. Essentially, all confidential information will be left out, your participation is voluntary, and we do not intend to inflict any harm. Thank you for your agreeing to participate.

We have planned this interview to last no longer than one hour. During this time, we have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. With your permission, any question after this meeting will be sent via mail.

Introduction
You have been selected to interview because you have been identified as someone who has a great deal to share about ICT trends and their influence on future office use. My research project as a whole focuses on the future demand for offices, with particular interest in understanding how ICT trends influence ways of working regarding the location, time and facilities to support the activities of office workers. This topic is chosen because not much is known about link between ICT and Real Estate Portfolio’s. My study does not aim to evaluate your techniques or experiences. Rather, I am trying to learn more about what how to cope with the changes, and hopefully learn about how to prevent office vacancy.

Briefly describe your role (master student in Real estate & Housing at the TU Delft) as it relates to Corporate Real Estate Portfolios 2040 according to ICT trends (if appropriate).

Main research question
For my master thesis, the following main research question needs to be answered as much as possible:
What is the future demand of office workers for real estate portfolios in the Netherlands in the year 2040 as a result of ICT developments over the next two decades and how can the supply be matched with this demand?

A. Interviewee Background

1. Please tell me more about your organisation and its origin and future vision.
Coach & trainer in change management projects. Since 2010 I focus on the transition towards the new way of working, for example ING and Rabo Bank.

2. What is your function in this institution?
Self-employed.

3. How long have you been in your current position and how long at this institution?
Current position:-
At this institution:-

4. What is your field of work?
The new way of working.

5. How are you involved in Corporate Real Estate and/or ICT trends?
-

6. Interesting background information on interviewee:
-
B. ICT trends

1. Which trends and developments do you observe?
A real new way of working would be where a person plugs in to a project for which he or she really has talent and is good at to successfully finish the project and plug in to the next project. The person you are in combination with your function stands alone from the organisation you work for. This way you can work for different employers. Most people who changed to new ways of working do not want to change back. To be able to work at anyplace at any time can make workers feel at ease and might give them a more entrepreneurial feeling. When working time and location independent, ICT must be working properly to avoid frustration and loss of time.

2. How are these developments changing?
Changes of the way of work is adopted faster by younger generations or is even demanded.

3. On what do you base your findings?
Experience.

(If interviewee did not state anything about physical or virtual communication, propose your own findings. If interviewee did mention anything relevant, continue to next question without explanation.)

4. To what extent can ICT replace natural communication between office workers or between office workers and clients?
Video conferencing is a good way to communicate, especially when one meeting is after another with people from different locations. This provides a threshold to physically meet with clients to save time, energy and costs. Video conferencing is preferred over traveling for a physical meeting. Except for conversations with emotions involved or first time meeting are preferred physically. By video conferencing some emotions will become vague or even disappear. This could be used as a filter to keep meetings pragmatic and straight to the point. When reducing physical meetings with people, the value of these meeting will increase.

5. What is your vision on office portfolios of companies in the Netherlands in the year 2040 according to current ICT developments?
In 2040 there would be almost no large office buildings with one or a few organisations in them. Mostly there will be made use of the so called third places to work at like Seats to Meet etc. where a network of people and knowledge is provided.

C. Real Estate (Offices, Workplaces, Location)

1. Which current and changing trends in ICT influence the demand for office space until 2040?
From an organisational point of view, teleworking is purely a mean to reduce costs by reducing office space, less expenses on traveling etc. For the office worker, tele-working provides a better life-work balance. Even though the demand for teleworking from bottom-up exists, in most cases it is the management team who will determine if and how much teleworking is allowed.

Working at home isolates people from the outside world. Of course it depends on the person’s character. A workplace near to home, clients or transportation hubs become more and more wanted. However, ever these third workplaces are mostly used for a few hours than for a few days.

2. How do the trends influence the use of office space and office location in the extreme situation?
From the human side a trend is that having meaning for your work, nice colleagues and employers are more important than salary. It really is a trend that is becoming important to do something that suits you. Especially the younger generations want to do something that suits them and otherwise they will take the risk and look further. Companies need to act on that. Functions need to become more personal. More and more workers demand to be able to work flexible. It is important to have an inspiring space for people to physically meet each other.

3. How can existing and to develop real estate be matched to the future demand for offices space caused by ICT innovations during the functional life cycle?

C. End of interview

Check if all answers have been answered thoroughly and if not ask how or where you can get the answers. Thank the interviewee for his/her time and cooperation.

Post Interview Comments and/or Observations:
Appendix 5 Interview Protocol
Interview Protocol
Date: 16-10-2012

Data interviewee:
Institution: Saskia de Bel
Interviewee (title and name): Saskia de Bel
Interviewer: R.P.C. Rosa
Documents obtained: -
Post interview comments or leads:

Sections:
A: Interview Background
B. ICT trends
C. Real Estate
D. End of interview

Interviews for ‘Corporate Real Estate Portfolios 2040 according to ICT trends’.

Introductory Protocol
To facilitate my note-taking, I would like to audio record our conversations today. For your information, only I will be privy to the recordings which will be eventually deleted after they are transcribed. Essentially, all confidential information will be left out, your participation is voluntary, and we do not intend to inflict any harm. Thank you for your agreeing to participate.

We have planned this interview to last no longer than one hour. During this time, we have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. With your permission, any question after this meeting will be sent via mail.

Introduction
You have been selected to interview because you have been identified as someone who has a great deal to share about ICT trends and their influence on future office use. My research project as a whole focuses on the future demand for offices, with particular interest in understanding how ICT trends influence ways of working regarding the location, time and facilities to support the activities of office workers. This topic is chosen because not much is known about link between ICT and Real Estate Portfolio’s. My study does not aim to evaluate your techniques or experiences. Rather, I am trying to learn more about what how to cope with the changes, and hopefully learn about how to prevent office vacancy.

Briefly describe your role (master student in Real estate & Housing at the TU Delft) as it relates to Corporate Real Estate Portfolios 2040 according to ICT trends (if appropriate).

Main research question
For my master thesis, the following main research question needs to be answered as much as possible: What is the future demand of office workers for real estate portfolios in the Netherlands in the year 2040 as a result of ICT developments over the next two decades and how can the supply be matched with this demand?

A. Interviewee Background

1. Please tell me more about your organisation and its origin and future vision.
The specialty of my practice, work and welfare, is of course also reflected in my training and experience.

2. What is your function in this institution?
Owner.

3. How long have you been in your current position and how long at this institution?
Current position:-
At this institution:-

4. What is your field of work?
Psychology.

5. How are you involved in Corporate Real Estate and/or ICT trends?
Change management in ways of working.

6. Interesting background information on interviewee:
-
B. ICT trends

1. Which trends and developments do you observe?
   Mobile computing

2. How are these developments changing?
   Laptops and smartphones are more and more used to work from.

3. On what do you base your findings?
   Experience.

(If interviewee did not state anything about physical or virtual communication, propose your own findings. If interviewee did mention anything relevant, continue to next question without explanation.)

4. To what extent can ICT replace natural communication between office workers or between office workers and clients?
   No matter what, the need for physical contact and belonging to a group of people will remain. The human factor remains important. The amount of people who collaborate virtually depends on character of the people. Most people (circa 50%) need people around them and prefer to meet colleagues or clients physically. Also does this type of worker prefer guidance from their team leader because of their lack of self-management. There is a good chance that a part of these workers are capable of self-management, but due to the desire for assurance of having work and doing their job well, they do not make the step to become more independent and work remotely or to even freelance. Due to the fact that more than 50% of workers are capable to work remotely or independently, chances are that in the future they will. Guidance, couching these workers and flexibility of their bosses and clients is indeed important to be successful.

Office workers can be divided into two different types of people. Society exists of 20 per cent wolves and 80 per cent sheep. They have different personal structure. Also do the office workers have different styles in behaviour, which can be determined by tests like the Belbin test.

5. What is your vision on office portfolios of companies in the Netherlands in the year 2040 according to current ICT developments?
   In 2040 big organisations will not exist anymore. Organisations will become smaller and more focused. This means that large office buildings are not needed anymore for one organisation. Office buildings will be shared, like Regus or Spaces.

   Probes: is it changing – why or why not? Who influences the changes (e.g. management teams, workers, clients etc.)?

C. Real Estate (Offices, Workplaces, Location)

1. Which current and changing trends in ICT influence the demand for office space until 2040?
   Working at home isolates people from the outside world. Of course it depends on the person’s character. A workplace near to home, clients or transportation hubs become more and more wanted. However, ever these third workplaces are mostly used for a few hours than for a few days.

2. How do the trends influence the use of office space and office location in the extreme situation?
   -

3. How can existing and to develop real estate be matched to the future demand for offices space caused by ICT innovations during the functional life cycle?
   -

C. End of interview

Check if all answers have been answered thoroughly and if not ask how or where you can get the answers. Thank the interviewee for his/her time and cooperation.
Post interview comments or leads:
Interviewee gave a tour through the Transpolis building in Hoofddorp.

Sections:
A: Interview Background
B. ICT trends
C. Real Estate
D. End of interview

Interviews for ‘Corporate Real Estate Portfolios 2040 according to ICT trends’.

Introductory Protocol
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Introduction
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Briefly describe your role (master student in Real estate & Housing at the TU Delft) as it relates to Corporate Real Estate Portfolios 2040 according to ICT trends (if appropriate).

Main research question
For my master thesis, the following main research question needs to be answered as much as possible:
What is the future demand of office workers for real estate portfolios in the Netherlands in the year 2040 as a result of ICT developments over the next two decades and how can the supply be matched with this demand?

A. Interviewee Background

1. Please tell me more about your organisation and its origin and future vision.
Transpolis is a full-service office with 40 tenants and is service minded like a hotel. Everything can be arranged.

2. What is your function in this institution?
Office manager

3. How long have you been in your current position and how long at this institution?
Current position: 2 years
At this institution: 2 years

4. What is your field of work?
Offices

5. How are you involved in Corporate Real Estate and/or ICT trends?
Office manager

6. Interesting background information on interviewee:
-

B. ICT trends

1. Which trends and developments do you observe?
-
2. How are these developments changing?
-
3. On what do you base your findings?
Experience.

4. To what extent can ICT replace natural communication between office workers or between office workers and clients?

5. What is your vision on office portfolios of companies in the Netherlands in the year 2040 according to current ICT developments?
Offices will be smaller and more spread over shared office buildings. Contracts will be shorter (average of 2.5 years) to obtain flexibility in the size and location of the office. Shorter contracts mean higher rent price, because of higher vacancy risk for the building owner. Companies need to be facilitated with maintenance, arrangements for activities for them to focus on their work. Meeting rooms are shared and vary from small spaces to larger spaces.

C. Real Estate (Offices, Workplaces, Location)

1. Which current and changing trends in ICT influence the demand for office space until 2040?

2. How do the trends influence the use of office space and office location in the extreme situation?

3. How can existing and to develop real estate be matched to the future demand for offices space caused by ICT innovations during the functional life cycle?
Existing office buildings can be re-divided into smaller units from 100m² to 750m² for different users. Providing a network, activities and a restaurant attracts and retains tenants. Transpolis also offers business centres and per day workplaces, but this is not going well yet.

C. End of interview

Check if all answers have been answered thoroughly and if not ask how or where you can get the answers. Thank the interviewee for his/her time and cooperation.

Post Interview Comments and/or Observations:
Appendix 5 Interview Protocol

Interview Protocol

Date: 01-03-2013

Data interviewee:
Institution: Decos
Interviewee (title and name): Paul Veger
Interviewer: R.P.C. Rosa
Documents obtained: -
Post interview comments or leads:

Sections:
A: Interview Background
B. ICT trends
C. Real Estate
D. End of interview

Interviews for ‘Corporate Real Estate Portfolios 2040 according to ICT trends’.

Introductory Protocol
To facilitate my note-taking, I would like to audio record our conversations today. For your information, only I will be privy to the recordings which will be eventually deleted after they are transcribed. Essentially, all confidential information will be left out, your participation is voluntary, and we do not intend to inflict any harm. Thank you for your agreeing to participate.

We have planned this interview to last no longer than one hour. During this time, we have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. With your permission, any question after this meeting will be sent via mail.

Introduction
You have been selected to interview because you have been identified as someone who has a great deal to share about ICT trends and their influence on future office use. My research project as a whole focuses on the future demand for offices, with particular interest in understanding how ICT trends influence ways of working regarding the location, time and facilities to support the activities of office workers. This topic is chosen because not much is known about link between ICT and Real Estate Portfolio’s. My study does not aim to evaluate your techniques or experiences. Rather, I am trying to learn more about what how to cope with the changes, and hopefully learn about how to prevent office vacancy.

Briefly describe your role (master student in Real estate & Housing at the TU Delft) as it relates to Corporate Real Estate Portfolios 2040 according to ICT trends (if appropriate).

Main research question
For my master thesis, the following main research question needs to be answered as much as possible:
What is the future demand of office workers for real estate portfolios in the Netherlands in the year 2040 as a result of ICT developments over the next two decades and how can the supply be matched with this demand?

A. Interviewee Background

1. Please tell me more about your organisation and its origin and future vision.
Decos is a company that connects people to information.

2. What is your function in this institution?
CEO

3. How long have you been in your current position and how long at this institution?
Current position: 25 year
At this institution: 25 year

4. What is your field of work?
ICT

5. How are you involved in Corporate Real Estate and/or ICT trends?

6. Interesting background information on interviewee:

B. ICT trends
1. Which trends and developments do you observe?
During the interview Paul and I passed through the trends that we both found relevant for new ways of working. The trend ‘Crowd sourcing’ was lacking from my research.

2. How are these developments changing?
According to the law of Moore, the rate of ICT innovation and adoption increases exponentially. This results in either improved or cheaper ICT.

3. On what do you base your findings?
Research and experience.

(If interviewee did not state anything about physical or virtual communication, propose your own findings. If interviewee did mention anything relevant, continue to next question without explanation.)

4. To what extent can ICT replace natural communication between office workers or between office workers and clients?
In the past, the office was a place where people work. Nowadays an office is and will remain a place where people meet. We make use of video conferencing a lot, but traveling now and then seem to have some important value. Physical meeting will remain important.

5. What is your vision on office portfolios of companies in the Netherlands in the year 2040 according to current ICT developments?
In 2040 people will work paperless (paper will be replaced by tablets) and transparent. This is the only way to cooperate good and efficiently with the new generations of professionals. The classical model will disappear. To promote certain behaviour, aspects that allow other behaviours need to be get rid of. For example, by leaving out paper, printers and file cabinets from the office, workers are forced to work paperless. Workers do not always know what is better for them. It is up to management to force change and let them find out for themselves. A balance between private and business is important and with working from home one day a week is sufficient. Efficiency is important.

C. Real Estate (Offices, Workplaces, Location)

1. Which current and changing trends in ICT influence the demand for office space until 2040?
Workers are stuck in traditional structure and prefer doing things the way they have always done. To obtain creative thinking, these workers need to be taken out of their structure and need to work in inspiring environments.

2. How do the trends influence the use of office space and office location in the extreme situation?
A relevant aspect for ways of working is Crowd sourcing is micro tasking. Micro tasking is about separating a large job into smaller segments that could be processed by different people, and require flexible and anywhere working.

Other trends were robots and autonomous vehicles. Autonomous vehicles can cause less traffic jams, allows passengers (which used to be the driver) to use travel time efficiently (e.g. by working in the car) and relocating parking facilities elsewhere. Owning the car becomes less relevant.

Working at home one day per week and working at third place offices will promote networking with other professionals and allows to be inspired by others.

3. How can existing and to develop real estate be matched to the future demand for offices space caused by ICT innovations during the functional life cycle?

- Probes: What should be done with existing vacant buildings? What needs to be considered when (re)developing offices?

C. End of interview

Check if all answers have been answered thoroughly and if not ask how or where you can get the answers. Thank the interviewee for his/her time and cooperation.

Post Interview Comments and/or Observations:
Appendix 5 Interview Protocol

Interview Protocol

Date: 08-03-2013

Data interviewee:
Institution: YNNO
Interviewee (title and name): Pieter van der Laan
Interviewer: R.P.C. Rosa
Documents obtained: -
Post interview comments or leads:

Sections:
A: Interview Background
B. ICT trends
C. Real Estate
D. End of interview

Interviews for 'Corporate Real Estate Portfolios 2040 according to ICT trends'.

Introductory Protocol
To facilitate my note-taking, I would like to audio record our conversations today. For your information, only I will be privy to the recordings which will be eventually deleted after they are transcribed. Essentially, all confidential information will be left out, your participation is voluntary, and we do not intend to inflict any harm. Thank you for your agreeing to participate.

We have planned this interview to last no longer than one hour. During this time, we have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. With your permission, any question after this meeting will be sent via mail.

Introduction
You have been selected to interview because you have been identified as someone who has a great deal to share about ICT trends and their influence on future office use. My research project as a whole focuses on the future demand for offices, with particular interest in understanding how ICT trends influence ways of working regarding the location, time and facilities to support the activities of office workers. This topic is chosen because not much is known about the link between ICT and Real Estate Portfolio's. My study does not aim to evaluate your techniques or experiences. Rather, I am trying to learn more about what how to cope with the changes, and hopefully learn about how to prevent office vacancy.

Briefly describe your role (master student in Real estate & Housing at the TU Delft) as it relates to Corporate Real Estate Portfolios 2040 according to ICT trends (if appropriate).

Main research question
For my master thesis, the following main research question needs to be answered as much as possible:
What is the future demand of office workers for real estate portfolios in the Netherlands in the year 2040 as a result of ICT developments over the next two decades and how can the supply be matched with this demand?

A. Interviewee Background

1. Please tell me more about your organisation and its origin and future vision.
YNNO is a consultancy Bureau for new ways of working. Cases are being integrally approached from the human point of view, technology and accommodation.

2. What is your function in this institution?
Workplace Strategist

3. How long have you been in your current position and how long at this institution?
Current position: 10 years
At this institution: 10 years

4. What is your field of work?
Ways of working and workplaces.

5. How are you involved in Corporate Real Estate and/or ICT trends?
Consultancy for people, technology and space.

6. Interesting background information on interviewee:
B. ICT trends

1. Which trends and developments do you observe?
   Every worker has its own laptop, smartphone and iPad, some organisations even provide a budget for workers to decide what
devices they want to have, which is BYOD.

2. How are these developments changing?
   -

3. On what do you base your findings?
   Research and experience.

(If interviewee did not state anything about physical or virtual communication, propose your own findings. If interviewee did
mention anything relevant, continue to next question without explanation.)

4. To what extent can ICT replace natural communication between office workers or between office workers and clients?

Probes: when can it be replaced and when not?

5. What is your vision on office portfolios of companies in the Netherlands in the year 2040 according to current ICT
developments?
   The demand for new ways of working comes from a combination of management and users. The work environment also needs
to be prepared for the new generation who wants freedom and responsibility. Offices will be more meeting places than work places.
Meeting places where workers from other organisations are present.

C. Real Estate (Offices, Workplaces, Location)

1. Which current and changing trends in ICT influence the demand for office space until 2040?
   Mobile devices allow workers to work where and when they want. But some organisations will try to keep workers at the
central office. Mostly new generations who are entering the work floor are immediately asking where their workplace is. They
search for their own space instead of being flexible and work anywhere. They want guidance and learn to work.

2. How do the trends influence the use of office space and office location in the extreme situation?
   -

3. How can existing and to develop real estate be matched to the future demand for offices space caused by ICT innovations
during the functional life cycle?
   By combining different types of functions within a building. Herby the connection can be made between the human, space and
technology.

C. End of interview

Check if all answers have been answered thoroughly and if not ask how or where you can get the answers. Thank the
interviewee for his/her time and cooperation.

Post Interview Comments and/or Observations:
Interview Protocol

Data interviewee:
Institution: Spaces
Interviewee (title and name): Paul Somers
Interviewer: R.P.C. Rosa
Documents obtained: -
Post interview comments or leads:

Sections:
A: Interview Background
B. ICT trends
C. Real Estate
D. End of interview

Interviews for ‘Corporate Real Estate Portfolios 2040 according to ICT trends’.

Introductory Protocol
To facilitate my note-taking, I would like to audio record our conversations today. For your information, only I will be privy to the recordings which will be eventually deleted after they are transcribed. Essentially, all confidential information will be left out, your participation is voluntary, and we do not intend to inflict any harm. Thank you for your agreeing to participate.

We have planned this interview to last no longer than one hour. During this time, we have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. With your permission, any question after this meeting will be sent via mail.

Introduction
You have been selected to interview because you have been identified as someone who has a great deal to share about ICT trends and their influence on future office use. My research project as a whole focuses on the future demand for offices, with particular interest in understanding how ICT trends influence ways of working regarding the location, time and facilities to support the activities of office workers. This topic is chosen because not much is known about link between ICT and Real Estate Portfolio’s. My study does not aim to evaluate your techniques or experiences. Rather, I am trying to learn more about what how to cope with the changes, and hopefully learn about how to prevent office vacancy.

Briefly describe your role (master student in Real estate & Housing at the TU Delft) as it relates to Corporate Real Estate Portfolios 2040 according to ICT trends (if appropriate).

Main research question
For my master thesis, the following main research question needs to be answered as much as possible:
What is the future demand of office workers for real estate portfolios in the Netherlands in the year 2040 as a result of ICT developments over the next two decades and how can the supply be matched with this demand?

A. Interviewee Background

1. Please tell me more about your organisation and its origin and future vision.
Spaces has been founded by Martijn Roordink and Frederik Keuning. Spaces allows each member to have their own identity in a building. The building is designed with different kinds of spaces for different kinds of work activities for different kinds of people.

2. What is your function in this institution?

3. How long have you been in your current position and how long at this institution?
Current position:-
At this institution:-

4. What is your field of work?

5. How are you involved in Corporate Real Estate and/or ICT trends?
Third Place workplace provider.

6. Interesting background information on interviewee:

B. ICT trends

1. Which trends and developments do you observe?
   Internet, mobile devices, bring your own device, cloud computing and virtual communication allow anywhere and anytime working.

2. How are these developments changing?
   -

3. On what do you base your findings?
   R&D and experience.
   (If interviewee did not state anything about physical or virtual communication, propose your own findings. If interviewee did mention anything relevant, continue to next question without explanation.)

4. To what extent can ICT replace natural communication between office workers or between office workers and clients?
   -
   Probes: when can it be replaced and when not?

5. What is your vision on office portfolios of companies in the Netherlands in the year 2040 according to current ICT developments?
   Spaces started five years ago and are the front runner in the market. Spaces provides their members with everything (i.e. workplaces, meeting places, teleconference etc.) they need to work on any given time of the day. The target group is the urban worker who is used to the city life. For them events are organised to provide them fun, business, sport activities and emotional wellbeing.

C. Real Estate (Offices, Workplaces, Location)

1. Which current and changing trends in ICT influence the demand for office space until 2040?
   Internet is making work flexible while real estate is not allowing as much flexibility. Nowadays most people have mobile phones and many have tablets so most people can already work anywhere. 3 to 5 year old kids already are accustomed to mobile devices. This will influence how people will learn, work, commute and connect together. The world will become a more facilitated environment.

2. How do the trends influence the use of office space and office location in the extreme situation?
   Spaces is spread in Amsterdam (Zuid-As and City Centre) and in The Hague for different branches and types of businesses. The business model is that upstairs (where office space is rented by international as Mid-Small businesses with 1 to 5 year contracts) partly pays for down stairs where membership holders can make use of unassigned workplaces.

3. How can existing and to develop real estate be matched to the future demand for offices space caused by ICT innovations during the functional life cycle?
   As already mentioned, internet is making things flexible while real estate is the most inflexible product in the world. Real estate needs to become flexible as well. Spaces beats the market with a client focus and with a brand and a very client related focus. This is something new in real estate. Depending on the type of location (City Centre, Highway/public transport location) the connectivity and accessibility is very important.

C. End of interview

Check if all answers have been answered thoroughly and if not ask how or where you can get the answers. Thank the interviewee for his/her time and cooperation.

Post Interview Comments and/or Observations:
Appendix 5 Interview Protocol

Interview Protocol

Date: 01-04-2013

Data interviewee:
Institution: Campus Development (The Hub)
Interviewee (title and name): Thijs Croon
Interviewer: R.P.C. Rosa
Documents obtained: -
Post interview comments or leads:

Sections:
A: Interview Background
B. ICT trends
C. Real Estate
D. End of interview

Interviews for ‘Corporate Real Estate Portfolios 2040 according to ICT trends’.

Introductory Protocol
To facilitate my note-taking, I would like to audio record our conversations today. For your information, only I will be privy to the recordings which will be eventually deleted after they are transcribed. Essentially, all confidential information will be left out, your participation is voluntary, and we do not intend to inflict any harm. Thank you for your agreeing to participate.

We have planned this interview to last no longer than one hour. During this time, we have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. With your permission, any question after this meeting will be sent via mail.

Introduction
You have been selected to interview because you have been identified as someone who has a great deal to share about ICT trends and their influence on future office use. My research project as a whole focuses on the future demand for offices, with particular interest in understanding how ICT trends influence ways of working regarding the location, time and facilities to support the activities of office workers. This topic is chosen because not much is known about link between ICT and Real Estate Portfolio’s. My study does not aim to evaluate your techniques or experiences. Rather, I am trying to learn more about how to cope with the changes, and hopefully learn about how to prevent office vacancy.

Briefly describe your role (master student in Real estate & Housing at the TU Delft) as it relates to Corporate Real Estate Portfolios 2040 according to ICT trends (if appropriate).

Main research question
For my master thesis, the following main research question needs to be answered as much as possible:
What is the future demand of office workers for real estate portfolios in the Netherlands in the year 2040 as a result of ICT developments over the next two decades and how can the supply be matched with this demand?

A. Interviewee Background

1. Please tell me more about your organisation and its origin and future vision.
The HUB Amsterdam is a habitat for social innovators, entrepreneurs and professionals to meet, work, connect and learn. We are part of a global network of change makers, working across disciplines, acting across sectors, with amazing people putting ideas into action. The HUB hosting team is at the core of our DNA: we inspire and support social entrepreneurs to scale up their projects and enterprises and create a positive impact on society.

2. What is your function in this institution?
User

3. How long have you been in your current position and how long at this institution?
Current position: -
At this institution: -

4. What is your field of work?
Real Estate

5. How are you involved in Corporate Real Estate and/or ICT trends?
Developer & Consultant in Real Estate
6. Interesting background information on interviewee:

B. ICT trends

1. Which trends and developments do you observe?
Mobile devices, like laptops and smartphones, together with internal networks and access to internet are rapidly developing.

2. How are these developments changing?
These trends become more the basic needs to run a business. Devices are becoming faster, more reliable and easier to use. This makes working allot more fun.

3. On what do you base your findings?
Experience.

(If interviewee did not state anything about physical or virtual communication, propose your own findings. If interviewee did mention anything relevant, continue to next question without explanation.)

4. To what extent can ICT replace natural communication between office workers or between office workers and clients?
ICT can replace natural communication quite a bit, but is it what people want? Especially in the Netherlands, people can easily travel to meet each other (outside rush hours). It is a matter of planning.

5. What is your vision on office portfolios of companies in the Netherlands in the year 2040 according to current ICT developments?
Large offices will be a thing of the past. People want to work in an environment that they feel comfortable in so they can be more productive and creative. Other people with different backgrounds inspire new ideas and ways of thinking. Co-workplaces will be more a thing of the future.

C. Real Estate (Offices, Workplaces, Location)

1. Which current and changing trends in ICT influence the demand for office space until 2040?
Mobile devices and cloud computing will increase the demand to work at other places than the central office the employer is providing.

2. How do the trends influence the use of office space and office location in the extreme situation?
Office space will be more creative and related to nature. Creative spaces will be shared. Each third workplace will have its own character for its customers.

3. How can existing and to develop real estate be matched to the future demand for offices space caused by ICT innovations during the functional life cycle?
Existing real estate can be quite easily transformed into a creative workspace. Location and image of the building are important.

C. End of interview

Check if all answers have been answered thoroughly and if not ask how or where you can get the answers. Thank the interviewee for his/her time and cooperation.

Post Interview Comments and/or Observations:
Mr. Bullinga states that trends in the ICT is the most driving factor that you can imagine next to the economy, greying etc. and are things you cannot control. ICT will change the whole building on which you do have control over.

If people understand that you are dragging computers into a building, then indeed you do not need to pay much attention to it. If you look a bit further at the moment, then you will see that ICT will change the essence of the building, the use of materials, the people who are in it and the form of the building itself. This is because the streams of people and products will change due to virtualisation. If you notice this, then you should be worrying more.

If you are not keeping yourself busy with all these futuristic aspects, and you do not see the break troughs that are being made in medical, accommodation, technical and other areas, people assume that it will take quite a time for these changes to take place. But it is changing fast.

We will get robot colleagues and helping robots, more frequent even outside factories.

There will be holograms replacing you at your office place.

We are surrounded by screens and we do things with screens. The whole wall in our houses will be a screen on which you do your homework. Those walls already exist. Walls on which you do your homework as child. Nowadays children grow up with screens and it will be normal for them to get certain functions on screens. They could learn on screens, they could work on screens. For them
it is like a game. Whether you are playing a shooting game or with a learning game, the border is not as clear. That is the oncoming game generation for whom it is very normal to cope with screens and gain satisfaction from it, do their work and let out their frustration.

We need to obtain the power to guide and manage teams who literary are less visible. We need to find ways to sustain the core values of the company. Therefor we will continue to meet physically, but what will be physical? Nowadays we know that the persons sitting in front of you are made of flesh and blood, but in 2040 we will not see the difference, whether you have a physical deputy of yourself or present yourself in the form of a hologram. 2Pac has become a hologram so you can become a hologram as well.

The stories about holograms and robots are seen by most people as an old-fashioned futuristic story. That is not the case, because over the past fifty years that people talked about it, the technology was not as far. Now the technology is going to be that far. For the biggest part, the technology already is as far. It is just a matter of dripping down from very high and expensive segments to normal life. It will happen fast.

that means that competition between organisations and companies will increase significantly, because the whole world becomes everyone’s work and playground. Companies are taking places in chains where before the do not even have to dream about. Virtually, everything lies open and you can go everywhere. A telecom company can become a bank. The functions where strictly separated from each other and never touched each other. Virtually, everything touches each other and that is the earthquake we are going to see the coming 10 to 15 years where whole branches are turned upside down because total newcomers enter due to the fact that everything is virtual. They will shake up everything.

if we have such technology that we can communicate that well with each other as if it was real and that you cannot separate whether it is real or not, do you think that companies from Holland will hire people overseas for a certain task or work for the company remotely? Marcel: of course, that will increase extremely. For example now there are companies who are located in Amsterdam. They have to choose out of the labour pool in the surrounding area where those people are physically living because they all have get to the office. If you live in China, you will not commute each day to Amsterdam and back to go to work, but virtually you will.

the competition in the future will become extremely higher. Now one have to compete locally, but in the future the competition reaches worldwide. However, it also provides many opportunities for personal development. This means that workers need to really do their best to survive in the market.

Offices will not exist anymore.
Offices will not exist anymore in 2040. An office as we experience it nowadays is a unique physical object. In the near future we will not have unique physical objects anymore. We will only have hybrid objects where physical and virtual comes together.

what is an office nowadays? It is a way to get jobs done, to let people do their work and to work together and therefore we put people physically together in one place. If there is anything hopelessly out-dated, then this will be it. Every real estate strategist who says that they would have an office portfolio in 2040 is insane.

You must see an office building as a mean and not as a goal. It is a mean to work together. Till today it is a nice way to work together and nothing else was known.

But in the future there will be ways of working where teams are being guided, teams who are working together, partly virtually and partly where they physically come together in the same place. It will be capricious and unpredictable. There will be industries who do not need offices, because they will work at a Starbucks or elsewhere to get a project done.

office work will change. Because as far as office work is routine, administrative and controlled, these tasks will disappear. It will be replaced with software, because this software will be far more smarter, more handy and efficient than letting people do it.

we will focus more on creative processes, design processes and developing tools to remove administrative, hazardous and routine work. However, these tools need to still be designed. Instead of controlling workers, in the future workers will be co-guided. They will be helped with finding their focus in their work and coaching in general. These are all tasks that will maintain.

what you will get is that people who are sitting in offices nowadays will not have to work anymore. They will be sitting in those offices being useless. That is also a reason for not talking about office portfolios anymore, because they will be left out one way or another. The demand for office space is going to reduce anyway. Next to that, as a matter of fact, getting together in other ways will become easier. Work can be done everywhere. That way you will only have different moments left. One, two or three times a week or at least se less than five times a week to physically get together. At that moment you also have two choices, whether you will
physically go to the inspirational drink, in the future there will not be work meetings anymore because those are done virtually in the future, or you should go there physically but send your hologram instead if one could not tell the difference. What will happen if someone else cannot see the difference? However, the threshold to go somewhere physically will become very high. For example your presence here to conduct this interview actually is too crazy for words. It is a useless waste of money, utilisation of train capacity and a waste of time that could be used to interview other important people.

P 1: Marcel_Bullinga_Interview_Office_Portfolios 2040_29_juni_2012.txt - 1:19 [technology is not as far to ma..] (35:35) (Super)
  Codes:[Innovation adoption]
  No memos
  
technology is not as far to make it possible to do this from a distance. In the coming five to ten years, the technology will be as far advanced to make it possible. We are going to make choices about that.

P 1: Marcel_Bullinga_Interview_Office_Portfolios 2040_29_juni_2012.txt - 1:20 [I doubt that there still will ..] (50:50) (Super)
  Codes:[Future demand]
  No memos
  
I doubt that there still will be permanent contracts. Nor for rent or lease of buildings or people. It will be short term and project based. The whole story about independent entrepreneurs will become larger and larger. There will be more freelance work which requires other working conditions. For example, a Jamaican start-up company that attracts people with two promises: twice a week your whole house will be cleaned for free and you have unlimited holidays. Does that mean that you can lie on the beach 365 days a year? No, because it does not matter how many holidays you take as long as you finish your tasks or finalise your project in time.

P 1: Marcel_Bullinga_Interview_Office_Portfolios 2040_29_juni_2012.txt - 1:21 [In the past and today still, y..] (53:53) (Super)
  Codes:[Anywhere working]
  No memos
  
In the past and today still, you are cut off from your work environment. You could answer your mails, but that is about it. In the future we will see that the whole work environment, in which we are now, is merged into screens. You have access to all the companies’ critical data. You have everything you need to do your work as long as it is virtual work that you do.

P 1: Marcel_Bullinga_Interview_Office_Portfolios 2040_29_juni_2012.txt - 1:22 [In the case of a construction ..] (53:55) (Super)
  Codes:[Physical presence]
  No memos
  
In the case of a construction worker for example it becomes difficult, because he really needs to physically be present at his work.

There are two types of jobs. A job where you physically need to be at the location and jobs where you do not need to be physically present. Until today, office work belonged to the first category, but that is not the case anymore.

P 1: Marcel_Bullinga_Interview_Office_Portfolios 2040_29_juni_2012.txt - 1:23 [Robert: so one could work ever..] (57:58) (Super)
  Codes:[Anywhere working] [Transparent environment]
  No memos
  
Robert: so one could work everywhere for a company that is located anywhere in the world.
Marcel: yes, but therefor environments are needed in which everything is transparent. The worker needs to be transparent. It is critical to know what the worker is able to, his qualifications, whether he is telling the truth, if he is not defrauding with his Curriculum Vitae, does he have a proven track record of tasks and projects, are payments done, is he checked? Those are environments that are currently emerging, like ‘Elance’ for example, which an environment in which one can bid on tasks and auctions etc. That is currently in development, with its ups and downs however. Transparent environments are a necessity for
working from a distance for different jobs to work. It is in development which will take some time, but soon several standards will come out.

Robert: if we look at the current generations from 4 to 18 years old who currently are growing up with those screens you have mentioned earlier and other devices, do you think that soon there will be a tipping point in ways of working and communicating and collaborating? Because when this generation starts to enter the market, they want to immediately work in an entirely other way than the current and old generations of office worker.

Marcel: this phenomenon can be concluded from the research done by CISCO. This research questioned 3000 young professionals of which 79% said that they do not want to work inside an office. They just do not want to anymore, because they grew up with all these screens. But it will take a while for those who have the power, and who obviously are a bit older, are prepared to go along with this. They would do it only when they are being forced to. They will not do it voluntarily.

you will do things based on two reasons. Because you think something is the best next thing or because it must be done due to external pressures like the economy and the labour market. A part of the people who switch to virtual are pioneers. Pioneers are people who do things because they are fascinated by something. This group is called the ‘Innovators’. However, the majority do things because it has normal. If at a given time one cannot hire young people with an office located at one location, then you should be scratching behind your ears and wonder if you are not doing anything wrong. That is how it will go.

in 2040, companies in the Netherlands do not have an office portfolio, but workplace portfolio. There will be a shift from offices to workplace. These workplaces are situated everywhere, around the world, throughout the Netherlands, at peoples home, petrol stations (which will not exist anymore and are transformed to other functions). Offices will not exist anymore in 2040.

The co-working places which are currently emerging are the precursors of the future office. This is because herein they have let go the idea that a fixed group of people need to work in the same space during fixed hours. It will be unpredictable and spontaneous, but still organised. It is organised spontaneously and you will incidentally meet people who do not have anything to do with your “scope” of work.

when do you think the majority will switch to virtual?
Marcel: we are already very busy doing that. It is happening very fast. I think it has accelerated with the introduction of the iPad and the iPhone around 2010, which can be seen all around us. The development of Apps gives an explosion of creativity. From these developments, several standards will be originated. Smart collaboration software and smart virtual collaboration environments that are safe and can be trusted and wherein one knows what can be expected from others literary.

Actually, the village will be copied, because in a village you know the butcher, the baker and the greengrocer which is a trusted environment. You know for who you have to watch out, with who you need to be sentimental because he does not give back enough and also who is honest. That is what is going to happen as well, but then virtually. The village will be recreated. It is not the city that will be recreated, because in the city people do not know anything about each other.

I think that we will get there around 2020. Why? Because everybody is individually trying out and getting along with an iPhone, and when you arrive at the office, you need to work on that stupid computer. People will feel like doing things smarter and better. I suspect that individuals are faster than companies this time. Companies are carrying the weight of all those buildings and ICT the old-fashioned with them. While companies that are starting over again, or starting up from scratch decide to do it in another way. They decide to do it transparent and with BYOD (Bring Your Own Device) and with a Starbucks workplace instead of offices. If you see how huge their lead is in terms of cost reduction and have more fun doing their work and being more motivated. Research shows that 86% of the co-working place users find to be more motivated and more productive.

Robert: your think that in eight years, the majority has switched. By then we still have all those buildings left. What do you think is going to happen with them?

Marcel: they will be standing there being useless. The magic word is ‘transformation’. They must get rid of all those zoning plans. They want to determine everything. They should really stop doing that.

the best zoning plan is no zoning plan.

Robert: there still are companies planning to construct new buildings or at least are planning on constructing new buildings even when there still are vacant buildings.
how can we prevent this from happening again and that in the future the supply does match the demand?
Marcel: you cannot, as long as the financial interests are such that the demand does not matter, this will remain. Therefore there is a desire for transparent markets where future users are involved in designing a building. Constructing something while not worrying what is going to happen inside because your business model is there already is not the way to do it. In their opinion the profit already exists. They took the profit, like bankers do, and let the neighbour, or actually the citizens, pay the depts. Therefore a vacant office found will be created.

Robert: you indicated that people are going to work at a third, fourth or fifth workplace like a Starbucks, but then you will get a shift in building ownership right?
Marcel: yes, it does not matter to be the owner of a building. Unless you see a building as a goal, then it does matter. But when a building is a mean to perform a certain function like education, collaboration, learning etc., then it does not matter to own property. It does not interest me to own solar panels. It costs me a lot of financial investments while I need to see when I will receive my return on the investment. That does not work. I just want to have access to energy. That does not mean that I specifically need those solar panels, I just want to lease electricity and that I am ensured of getting energy. The same when I want to be ensured for a work stream. This could be a building, a part of a building or a temporarily part of a building. It could also be something else.

if Starbucks is smart, then they will also head to co-workplaces, because co-workplaces in definition are set up to be a workers gathering place with a restaurant function. The restaurant function will seamlessly merge with the working aspect, because that is what makes it fun. Moreover the environment and the building should be inspiring and needs to have a strong identity. Then people like go there. I do not like to go into an office. Everyone who has an office portfolio in his portfolio with offices that are replaceable can forget it. Or you have an office with identity or you have nothing. The co-workplaces have their location and their building designed from Horeca and working. They make it possible that the people who work there are able to meet each other. It is not a must, it is possible. They provide the tools. They do not command to talk with certain people at a certain time. They can make use of the opportunities that are present. Starbucks comes from the private segment. They are a restaurant, a lunchroom or a coffee shop, but that is it. If they are smart, then they will see a new market and also head towards the co-workplaces. They could develop two identities, like the old traditional Starbucks or the Starbucks Pleasure and the Starbucks business or Starbucks workplace or something like that.

This system is not the science fictional version of holograms that appear in mid-air, but are images projected from the back onto walls creating a 3D image observation without the use of any type of 3D glasses.
Video over internet is one of the biggest and most important trends in communicating and collaborating from a distance. According to a research done by Gartner, 90% of internet traffic will be video related. During my visit to the CISCO office.

It is important for the software as hardware to be compatible with different platforms and networks for this mean of communication to work easily.

In the near future, these virtual communication means will consist holographic or 3D imaging for a more realistic experience.

Virtual communication in combination with cloud computing creates a demand for a variety of workplaces close to traffic hubs and homes or even an instant office with a device that connects the internet from anywhere around the world.

Each colleague at Cisco has their own workplace at home for which they get a financial compensation.

Virtual communication and collaboration will be used as much as possible because of time and travel efficiency, unless physical meeting is really required, for instance at the first meeting or to interact with physical object or for conversations with emotions involved is preferred physically. Video conferencing could be used as a filter to keep meetings pragmatic and straight to the point. Working from home is accepted for a maximum of two days to prevent losing social cohesion.

Virtual communications is an important backbone to make teleworking possible.

Microsoft at Schiphol has a rule that only 20% of work is allowed at the central office. The other 80% office workers should work from home or other workplaces. This 20-80 rule has been introduced as a pilot to maximise teleworking. It becomes less important
where you work, no desk is mandatory for a worker to perform his/her activities. A shift needs to be made from managing on working hours to managing on output instead. This is difficult to measure, even so when checking on the amount of hours sitting behind a desk. However, it is better to let workers do their work when they are productive as much as possible. In the end, that is what counts.

Codes:[Virtual communication] [Work from home]
No memos

It is noticed that virtual communication is being used more and more while you can still see that working from home is accepted for a maximum of two days to prevent losing social cohesion.

Codes:[Innovation adoption]
No memos

adoption cycle of Rogers to give more insight in the adoption rate.

P 6: 8. Interview Sander van Holland-Regus 07-08-2012.txt - 6:1 [Looking at remotely collaborat..] (68:68) (Super)
Codes:[Global scale collaboration] [Virtual communication]
No memos

Looking at remotely collaborating on a global scale level, video conferencing is quite popular. Businessmen who used to travel several hours and sometimes need a hotel just for a two hour meeting now prefers to use video conferencing. Therefor Regus must keep up with communication means for voice over IP, which is used for (video) calls, to be compatible on the other side of the world. In bigger cities like London, Paris and New York we also have Teleprecense, which is quite expensive, but if there is more demand in the Netherlands, then we could implement it here

P 6: 8. Interview Sander van Holland-Regus 07-08-2012.txt - 6:2 [Regus is co-working with a lar..] (78:78) (Super)
Codes:[Innovation adoption]
No memos

Regus is co-working with a large company who looks 30 years in the future and keeps an eye on ICT developments and early adopters, but they only act just before the majority is going to adopt certain innovations. From a financial point of view, early adopting has high investment costs, so you want to adopt somewhere between the early adopters and the majority, other ways you are too late

P 6: 8. Interview Sander van Holland-Regus 07-08-2012.txt - 6:3 [Companies will reduce their of..] (73:73) (Super)
Codes:[Third Place workplaces]
No memos

Companies will reduce their office space and let employees make use of third place workplaces.

P 7: 12. Interview Saskia Langenberg-Talent First 15-10-2012.txt - 7:2 [from an organisational point o..] (73:73) (Super)
Codes:[Teleworking]
No memos

From an organisational point of view, teleworking is purely a mean to reduce costs by reducing office space, less expenses on traveling etc. For the office worker, tele-working provides a better life-work balance. Even though the demand for teleworking from bottom-up exists, in most cases it is the management team who will determine if and how much teleworking is allowed.

P 7: 12. Interview Saskia Langenberg-Talent First 15-10-2012.txt - 7:3 [working at home isolates peopl..] (75:75) (Super)
Codes:[Work from home]
No memos
Working at home isolates people from the outside world. Of course it depends on the person’s character.

P 7: 12. Interview Saskia Langenberg-Talent First 15-10-2012.txt - 7:4 [A workplace near to home, clie..] (75:75) (Super)
Codes:[Third Place workplaces]
No memos

A workplace near to home, clients or transportation hubs become more and more wanted. However, ever these third workplaces are mostly used for a few hours than for a few days.

P 7: 12. Interview Saskia Langenberg-Talent First 15-10-2012.txt - 7:5 [Video conferencing is a good w..] (65:65) (Super)
Codes:[Physical presence] [Virtual communication]
No memos

Video conferencing is a good way to communicate, especially when one meeting is after another with people from different locations. This provides a threshold to physically meet with clients to save time, energy and costs. Video conferencing is preferred over traveling for a physical meeting. Except for conversations with emotions involved or first time meeting are preferred physically. By video conferencing some emotions will become vague or even disappear. This could be used as a filter to keep meetings pragmatic and straight to the point.

P 8: 13. Interview Saskia de Bel-Saskia de Bel 16-10-2012.txt - 8:1 [no matter what, the need for p..] (68:68) (Super)
Codes:[Natural communication] [Virtual communication]
No memos

No matter what, the need for physical contact and belonging to a group of people will remain. The human factor remains important. The amount of people who collaborate virtually depends on character of the people. Most people (circa 50%) need people around them and prefer to meet colleagues or clients physically. Also does this type of worker prefer guidance from their team leader because of their lack of self-management. There is a good chance that a part of these workers are capable of self-management, but due to the desire for assurance of having work and doing their job well, they do not make the step to become more independent and work remotely or to even freelance. Due to the fact that more than 50% of workers are capable to work remotely or independently, chances are that in the future they will. Guidance, couching these workers and flexibility of their bosses and clients is indeed important to be successful.

P 8: 13. Interview Saskia de Bel-Saskia de Bel 16-10-2012.txt - 8:2 [office workers can be divided ..] (69:69) (Super)
Codes:[Personlaities and characters of office workers]
No memos

Office workers can be divided into two different types of people. Society exists of 20 per cent wolfs and 80 per cent sheep. They have different personal structure. Also do the office workers have different styles in behaviour, which can be determined by tests like the Belbin test.

P 8: 13. Interview Saskia de Bel-Saskia de Bel 16-10-2012.txt - 8:3 [Working at home isolates peopl..] (79:79) (Super)
No codes
No memos

Working at home isolates people from the outside world. Of course it depends on the person’s character.

P 8: 13. Interview Saskia de Bel-Saskia de Bel 16-10-2012.txt - 8:4 [A workplace near to home, clie..] (79:79) (Super)
Codes:[Third Place workplaces]
No memos

A workplace near to home, clients or transportation hubs become more and more wanted. However, ever these third workplaces are mostly used for a few hours than for a few days.
In 2040 big organisations will not exist anymore. Organisations will become smaller and more focused. This means that large office buildings are not needed anymore for one organisation. Office buildings will be shared, like Regus or Spaces.

Cloud computing is interesting for small to mid-sized organisations with multiple office or work locations, or organisations that do not want or can invest in (new) ICT. For example when organisation X has a server and computers of more than three years old (it is not common to have computers and servers of more than five years old) mostly the machines become slow or exceed their capacity and it takes a year before measures are taken. Cloud Computing requires a desktop computer or mobile device (PC, Laptop, Tablet or any other device) that has access to the internet. It is important to have fast internet access to and from the cloud, preferably glass fibre. This makes editing files much more pleasant. Cloud computing does not require much hardware power as long as the data connection, input (mouse, keyboard, webcam etc.) and output (screen, speakers, printer etc.) work well. This means that no investments in sophisticated computers are necessary, even old computers work well.

Also can Cloud Computing used by mobile devices, which makes it able support BYOD (Bring Your Own Device).

Organisation will become smaller, dynamic, and flexible. The core of the organisation will be reduced. Further to the year 2040, office workers will demand certain facilities to support their desired way of working, if not, they will find a job elsewhere. Toward 2040, more and more people will be working at different hours during the day at the most convenient location while using the most convenient device for a certain job at a certain time.

During the interview Paul and I passed through the trends that we both found relevant for new ways of working. The trend ‘Crowd sourcing’ was lacking from my research.

According to the law of Moore, the rate of ICT innovation and adoption increases exponentially. This results in either improved or cheaper ICT.
In the past, the office was a place where people work. Nowadays an office is and will remain a place where people meet. We make use of video conferencing a lot, but traveling now and then seem to have some important value. Physical meeting will remain important.

In 2040 people will work paperless (paper will be replaced by tablets) and transparent. This is the only way to cooperate good and efficiently with the new generations of professionals. The classical model will disappear. To promote certain behaviour, aspects that allow other behaviours need to be get rid of. For example, by leaving out paper, printers and file cabinets from the office, workers are forced to work paperless. Workers do not always know what is better for them. It is up to management to force change and let them find out for themselves. A balance between private and business is important and with working from home one day a week is sufficient. Efficiency is important.

A relevant aspect for ways of working is Crowd sourcing is micro tasking. Micro tasking is about separating a large job into smaller segments that could be processed by different people, and require flexible and anywhere working.

Other trends were robots and autonomous vehicles. Autonomous vehicles can cause less traffic jams, allows passengers (which used to be the driver) to use travel time efficiently (e.g. by working in the car) and relocating parking facilities elsewhere. Owning the car becomes less relevant.

Working at home one day per week and working at third place offices will promote networking with other professionals and allows to be inspired by others.

Internet, mobile devices, bring your own device, cloud computing and virtual communication allow anywhere and anytime working.

Spaces provides their members with everything (i.e. workplaces, meeting places, teleconference etc.) they need to work on any given time of the day.
Internet is making work flexible while real estate is not allowing as much flexibility. Nowadays most people have mobile phones and many have tablets so most people can already work anywhere. 3 to 5 year old kids already are accustomed to mobile devices. This will influence how people will learn, work, commute and connect together.

Internet is making things flexible while real estate is the most inflexible product in the world. Real estate needs to become flexible as well. Spaces beats the market with a client focus and with a brand and a very client related focus. This is something new in real estate. Depending on the type of location (City Centre, Highway/public transport location) the connectivity and accessibility is very important.

Trends can be seen in mobile devices. They become faster and more powerful and might take over computers. Also cloud computing, augmented reality, gamification and virtualisation.

Video conferencing can partly replace natural communication, but natural communication remains easier when it comes to explaining things or when giving a demonstration.

Mobile devices in combination with cloud computing make it possible for people to work at different locations.

A central office space, even a small one, will remain for some companies to store their belongings and protect confidential material.

Augmented reality, gamification and virtualisation will improve interaction with persons or objects from a distance.
Offices will be smaller and more spread over shared office buildings. Contracts will be shorter (average of 2.5 years) to obtain flexibility in the size and location of the office. Shorter contracts mean higher rent price, because of higher vacancy risk for the building owner. Companies need to be facilitated with maintenance, arrangements for activities for them to focus on their work. Meeting rooms are shared and vary from small spaces to larger spaces.

P17: 18. Interview Thijs Croon - Campus Development (The Hub) 01-04-2013.txt - 17:1 [Mobile devices, like laptops an..]  (56:56) (Super)
Codes:[Bring Your Own Device] [Cloud Computing]
No memos

Mobile devices, like laptops and smartphones, together with internal networks and access to internet are rapidly developing.

P17: 18. Interview Thijs Croon - Campus Development (The Hub) 01-04-2013.txt - 17:2 [ICT can replace natural commun..]  (66:66) (Super)
Codes:[Natural communication] [Virtual communication]
No memos

ICT can replace natural communication quite a bit, but is it what people want? Especially in the Netherlands, people can easily travel to meet each other (outside rush hours). It is a matter of planning.

P17: 18. Interview Thijs Croon - Campus Development (The Hub) 01-04-2013.txt - 17:3 [Large offices will be a thing ..]  (69:69) (Super)
Codes:[Co-workplaces]
No memos

Large offices will be a thing of the past. People want to work in an environment that they feel comfortable in so they can be more productive and creative. Other people with different backgrounds inspire new ideas and ways of thinking. Co-workplaces will be more a thing of the future.

P17: 18. Interview Thijs Croon - Campus Development (The Hub) 01-04-2013.txt - 17:4 [Mobile devices and cloud compu..]  (74:74) (Super)
Codes:[Anywhere working] [Bring Your Own Device] [Cloud Computing]
No memos

Mobile devices and cloud computing will increase the demand to work at other places than the central office the employer is providing.

P18: 16. Interview Pieter van der Laan - YNNO 08-03-2013.txt - 18:1 [Every worker has its own lapto..]  (57:57) (Super)
Codes:[Bring Your Own Device]
No memos

Every worker has its own laptop, smartphone and iPad, some organisations even provide a budget for workers to decide what devices they want to have, which is BYOD.

P18: 16. Interview Pieter van der Laan - YNNO 08-03-2013.txt - 18:2 [The demand for new ways of wor..]  (71:71) (Super)
Codes:[Anywhere working] [Change of office work] [Future demand] [Generations] [Third Place workplaces]
No memos

The demand for new ways of working comes from a combination of management and users. The work environment also needs to be prepared for the new generation who wants freedom and responsibility. Offices will be more meeting places than work places. Meeting places where workers from other organisations are present.

P18: 16. Interview Pieter van der Laan - YNNO 08-03-2013.txt - 18:3 [Mobile devices allow workers t..]  (76:76) (Super)
Codes:[Anywhere working] [Bring Your Own Device] [Physical presence]
No memos
Mobile devices allow workers to work where and when they want. But some organisations will try to keep workers at the central office. Mostly new generations who are entering the work floor are immediately asking where their workplace is. They search for their own space instead of being flexible and work anywhere. They want guidance and learn to work.

P18: 16. Interview Pieter van der Laan-YNNO 08-03-2013.txt - 18:4 [By combining different types of..] (82:82) (Super)

Codes:[Co-workplaces] [Corporate real estate portfolio’s]

No memos

By combining different types of functions within a building. The connection can be made between the human, space and technology.
Corporate Real Estate Portfolios 2040 according to ICT trends

Acces versus ownership
Anywhere working
Big Data
Bring Your Own Device
Change of office work
Cloud Computing
Co-workplaces
Commuting
Compatibility
Competative future
Corporate real estate portfolio’s
Crowd sourcing
Current supply
Future demand
Generations
Global scale collaboration
Hologrpams
Hype Cycle
ICT Trends
Influence of ICT on Corporate Real Estate
Innovation adoption
Mismatch current supply
Natural communication
Personlaities and characters of office workers
Physical presence
Screens
Teleworking
Third Place workplaces
Transparent environment
Trends
Virtual communication
Work from home