

MASTER

Urban development in Dubai

an international study to improve the Dutch urban development process

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Urban development in Dubai



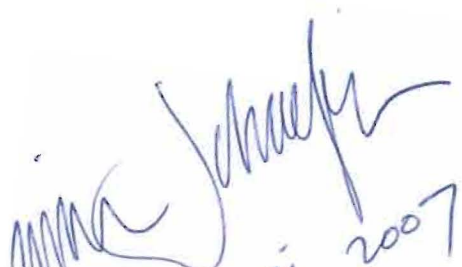
“An international study to improve
the urban development process in the Netherlands”

In cooperation with the University of Technology Eindhoven



Tim & Bas

Final Report April 2007


90 mei 2007

***“We have to
make history and
approach the future
with steady steps, not
wait till the future comes to us”***

His Highness Sheikh Mohammed Bin Rashid Al Maktoum,
Vice-President and Prime Minister of the UAE and Ruler of Dubai.

Colophon

Title: Urban development in Dubai
Subtitle: An international study to improve the Dutch urban development process

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This report is developed as our graduation project at the department Construction Management and Engineering in cooperation with the University of Technology Eindhoven. The British University in Dubai, CB Richard Ellis Middle East and AT Osborne participated in the development of this report.

Preface

The clear vision and entrepreneurial approach for the long-term of Sheikh Rashid Bin Saeed Al Maktoum, who was ruler of Dubai from 1958 till 1990, changed everything in Dubai. His son and present ruler of Dubai, His Highness Sheikh Mohammed Bin Rashid Al Maktoum explored the vision of his father further on. Oil revenues were used to invest in major heavy industries and infrastructure. The success in diversifying sources of income has compensated for low oil reserves. Dubai's economic development is now supported by an infrastructure that is not directly affected by oil. The construction and real estate market, representing each more than 10 per cent of Dubai's GDP, are booming right now. Urban development projects are developed right now on a large scale and there are a lot of new projects in the pipeline representing billions of dollars.

In the Netherlands we see different issues that are causing a stagnating process in the (re)development of industrial areas. There is a need to improve the stagnating market, and the government in the Netherlands is aware of that fact. Stagnation causes a disturbance of the economic growth in our country. The time it takes in the Netherlands to develop an urban development project is eight years and by that time the market demand can be changed already.

To learn more about the urban development approach in this attractive market we decided to do our graduation project in Dubai. By using Dubai as an international 'best practice' case we might be able to deliver a contribution to accelerate the urban development process in the Netherlands and with that, economic growth.

In our study about Dubai's approach, we are focusing on the business organisations that are managing these urban development projects. What are the most important organisational and process characteristics for urban development projects in Dubai? And how should we set up a business organisation for an urban development project with this knowledge from an international study?

Research information is an underdeveloped item in Dubai. First hand information is difficult to obtain. As a result, we have checked local resources in practice on readiness and availability. Dubai is growing so fast that companies have to do their own research to set up their database. Statistical databases from the municipality are available until 2005, but when it comes to data on the subject of urban development and the organisations behind these projects, it's confidential within most companies.

Dubai is the most liberal Emirate out of seven Emirates that form the United Arab Emirates (UAE). This doesn't mean that the Emirate of Dubai and its state-structure is comparable to the state-structure in the Netherlands. Sometimes people are not allowed to share information they have, or the information is simply not written down in a report.

This report will not give an opinion about the political, social and economical environment of Dubai. Furthermore, it is not our aim to compare the Netherlands with Dubai or the other way around. The development of Dubai is unique in the world. With this background information we have written this report.

We know each other from the College of Professional Education Hogeschool Brabant Tilburg and together we participated in the board of study association of CoUrsE! at the University of Technology Eindhoven in the year 2004 - 2005. It was on a day in March 2006 when we decided during a coffee break to finalise our graduation study in Dubai. That particular moment was the start of our journey to and through Dubai. With an entrepreneurial view we always developed our international adventure, step by step.

With regards,

Ing. Tim van Helmond & Ing. Bas van Montfort

Acknowledgments

We have written this report with the use of different sources and activities. Different expert interviews, case studies and our symposium in January 2007 were most important for our research in Dubai. Therefore we want to thank:

The professionals we interviewed*:

- Sanjive Khosla, Director of Strategy and Business Development of TECOM Investments;
- Mohamed El-Hage, Director of Strategy from The Executive Office;
- Richard Wynne-Jones, Project Consultant and Client Representative from Dubai Chamber of Commerce and Industry;
- Ray Karbor, Technical Director from Deerns Consulting Engineers;
- Ralf Laurijssen, Development Manager of Dubai Festival City and,
- Fouad Bokhash, Director of Building Designing of the Ministry of Public Works.

* Other interviewed professionals requested us not to publish their names in our report.

The attending guests at our symposium:

- Nicholas Maclean, Managing Director of CB Richard Ellis Middle East;
- Iris Dinu, Associate Director and Head of Middle East Research
- Dr. Mohammed Arif, British University in Dubai;
- Richard Wynne-Jones, Project Consultant and Client Representative from Dubai Chamber of Commerce and Industry;
- Andy McTiernan, Editor in Chief of Property World Middle East;
- Maarten Reenalda, Arup Major Projects;
- Ray Karbor, Technical Director from Deerns Consulting Engineers;
- Prof. dr. ir. Wim Schaefer, University of Technology Eindhoven;
- Prof. dr. Leo Verhoef, University of Technology Eindhoven and;
- Ir. Erik Blokhuis, University of Technology Eindhoven.

From Dubai Eye Radio:

- Siobhan Leyden and Andy McTiernan who invited us for an interview live in the Property Show.

From Property World Middle East magazine:

- Andy McTiernan who invited us to publish our symposium article in his magazine in March 2007.

Organisational and financial support made it possible for us to travel to Dubai in September 2006. The development of our graduation project was only possible with the support of:

The Netherlands:

- University of Technology Eindhoven;
- AT Osborne.

Dubai:

- British University in Dubai;
- CB Richard Ellis Middle East and;
- Van Oord Gulf FZE.

We want to thank our supervisors from the TU/e for their time and support in all stages of our research. We appreciated your support as we set up our project, as you shared your input via instant messages during our research, and most importantly, as you participated in our symposium in Dubai.

A special thanks goes to our colleagues from CB Richard Ellis Middle East, especially to Managing Director Nicholas Maclean. He believed in us and invited us to develop this report at his office situated in the Dubai International Financial Centre with the use of all needed facilities and support.



And last but not least, our acknowledgement goes to the company Van Oord Gulf FZE, especially Commercial Manager Peter Meijer. Our half year stay in Dubai was only possible because of his support in providing accommodation.

Enjoy reading our report!

Yours Sincerely,

Tim van Helmond & Bas van Montfort

Eindhoven, April 2007

Summary

This report presents a new process model for urban development in the Netherlands. We have studied for six months in Dubai about Dubai's urban development approach. The conclusions from Dubai as a practise approach are translated to the urban development process in the Netherlands. This report is especially written for professionals who have a relation with urban development projects in the Netherlands. Furthermore, we want to contribute with our process model to the discussion about accelerating the urban development process.

The National government in the Netherlands is aware of the fact that urban development will increase not only employment, but also economic growth. The ministry of Economic Affairs presented a report that displays the need of new industrial areas. The development process of new industrial areas takes on average eight years with the risk that the market demand after project delivery already has been changed. Different issues caused a stagnating market and the urban development process needs improvement to achieve acceleration back again.

We will discuss the approach and the state of affairs that cause a stagnating market and the subsequent slowing of economic growth. The urban development process in the Netherlands is very dynamic but complex. Strategic long-term plans are being formulated by the National government and shouldn't have a direct relation with the four-year political cycle which we have in the Netherlands. The government should focus on the national strategic plan and laws and regulations on a high level base. Because of this the execution of the plans rests by the province, municipalities and private companies. Through the stagnation and lack of control on province level we see that municipalities start carrying out the urban development policy of the National government on their own. A bottom up approach is the result, whereby municipalities skip the province level and carry out the long-term plans of the National government. The National government is loosing control on her long-term urban development projects when individual municipalities start carrying out these projects. The province needs to coordinate projects of the National government to guarantee the quality and sustainable development.

The research question in this report is about; the key characteristics for a business organisation to accelerate the urban development process in the Netherlands with the input of a practice approach from Dubai. We will design and utilise a general business organisation model with a new approach of urban development projects in the Netherlands. The main goal of this research is to design the model in such a way, that a better aim for all involved participants on province level and municipality level can be achieved.

We focused our research in Dubai on the subjects:

- State structure;
- Vision;
- Cluster developments;
- Free Zone developments and;
- Gated communities.

We organised a symposium in Dubai to obtain reliable and first hand information from professionals and we focused ourselves on different case studies and expert interviews.

In general we see that the entrepreneurial role of the Dubai government is a key factor for the urban development approach in Dubai. The role and attitude of Dubai government challenges semi-governmental and private companies to move to higher levels of competitive performance. The Dubai government developed a long-term policy with defined economic pillars of national importance. Dubai's strategic plan is based on a long-term vision and strategy with a focus on cluster developments. Local investors and Foreign Direct Investment (FDI) are used to finance the urban development projects. For the implementation of an urban development project a business organisation is established in the semi-governmental and/or private sector. Within defined boundaries and mandates the business organisation can develop the project.

To improve the urban development approach in the Netherlands we present some important conclusions. The whole governmental system must implement a more entrepreneurial approach to challenge the private sector. The National government should develop a long-term strategy with a long-term policy based on different economic pillars of national importance. Porter's cluster strategy should be

implemented in the strategic plan of the Netherlands and the urban cluster developments can support the defined economic pillars. The province should focus on the development of laws and regulations on a high level base to attract investors to projects of national importance. Another task is to coordinate the implementation of the strategic plan on province level and municipality level.

Our process model presents how the government and the private business organisation are organised in the urban development process. The process model aims for a project cluster approach for each specific urban development project of national importance.

The core business of the government is defining laws and regulations on a high level base and the national strategic plan should focus on cluster developments. The government has the role of initiator and a private business organisation is responsible for the project development.

The business organisation is mandated for the whole process development. The main objective of the business organisation is to achieve long-term commitment between the principal, developer and investor to gain sustainable development. The investor takes the responsibility for exploitation and services and facilities of a development in the beginning. After a few years this can be outsourced to a specialised company. The quality of the project is guaranteed because the investor earns his revenues over the long-term.

A central management role in the process model is there for the Project Government Cluster Authority. This authority is taking care of laws, regulations and procedures within the public domain. Direct communication between the business organisation and the involved public department is another role of this authority. The authority consists of people from the concerned level of the government as well as the business organisation. It is important that these people are mandated for the project by their own organisation.

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Short reference list

BIZA	= Ministry of Interior (Binnenlandse Zaken)
BOM	= Dutch development company (N.V. Brabantse Ontwikkelings Maatschappij)
DCCI	= Dubai Chamber of Commerce and Industry
DED	= Department of Economic Development
DEWA	= Dubai Electricity and Water Authority
DIC	= Dubai Internet City
DIFC	= Dubai International Financial Centre
DKV	= Dubai Knowledge Village
DMC	= Dubai Media City
DSP	= Dubai Strategic Plan
FDI	= Foreign Direct Investment
GCC	= Gulf Cooperating Council
GDP	= Gross Domestic Product
NBC	= Netherlands Business Council
RTA	= Road and Transport Authority
TU/e	= University of Technology Eindhoven
UAE	= United Arab Emirates
UN	= United Nations
UNESCO	= United Nations Educational, Scientific and Cultural Organisation
VROM	= Ministry of Housing, Spatial Planning and the Environment (Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer)

Definitions

Controlled democracy	= we came up with this definition for the Dubai government because the way they work over here is comparable with a dictatorship. The way they doing it is very friendly but the government always decides what you can or cannot do.
His Highness	= Sheikh Mohammed Bin Radshid Al Maktoum, ruler of Dubai, Vice-President and Prime Minister of the United Arab Emirates.
Freehold	= The purchase of property on freehold basis means that the property is put in the owner's name for live, and the owner has the right to sell, lease or rent his/her property at his/her own discretion. [01]
Long-term Leasehold	= usually ranges between 25 to 99 years. A property may be leasehold, which means that the land on which the property is built is not part of the sale. You have to make a one time payment to ground rent to the owner of the land for the whole period. The owner is called the freeholder. In addition to ground rent on a leasehold property, you may have to pay an annual service charge. This usually happens with a flat. The service charge covers such items as maintenance and repairs to the buildings, cleaning of common areas and looking after the grounds. [01]
Commonhold	= If the property is commonhold, it means that you can buy the freehold of a flat and own common parts of the building jointly with the owners of other flats in the building (known as commonhold association). [01]
Dubai government	= His Highness and his Executive Committee and supporting departments.
Infrastructure	= roads, bridges, sewers, etc. regarded as a country's economic foundations (an exception are the scientific analysis models in this report).



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1. Introduction

1.1 For whom is this report

Our report presents a proposal for a new business organisation that can be used for a new development. With our report we want to start the discussion of how new foreign influences can accelerate the process for new urban developments in the Netherlands. Therefore we use new ideas we have seen in Dubai and implement these in the Dutch urban development process. The report is especially written for all professionals who are working in or have any relation to the urban development process in the Netherlands. It is also interesting for anyone who wants to know more about the differences between the urban development approach in Dubai and the Netherlands.

1.2 Structure of this report

Our research encloses two volumes; the final report and the appendixes. The structure of this research report consists of four main parts: introduction, analysis phase, design phase and the final conclusions.

Introduction

The introduction is the first chapter in which we explain the possible benefits for the Netherlands to do our research in Dubai.

Analysis phase

This part contains the chapters two till seven that give an analysis of the different topics covered by our research. Chapter two informs us about the general problems of urban development in the Netherlands and how it causes stagnation in economic growth. The third and fourth chapter will each give detailed information about our goals in Dubai and about the specific focus of our research. This is where you will find our central research question. In chapter four we describe the research methodology we set up, how we are going to use it, which tools we are going to use and our expectations for the results.

After this there is chapter five about the whole urban development process in Dubai. In chapter five we will tell about the symposium we held in Dubai to obtain reliable first hand information from professionals in the Netherlands and Dubai. We summarise this information in chapter seven that contains the most important conclusions that can be used to improve the Netherlands' urban development process for new developments. In this chapter you can also found a scheme which shows how the conclusions are related with our research.

Design phase

The design phase exists of one chapter where we develop our new process model by using a case project at the campus of our university. The result exists of two models; a general process model and a model for the Science Park on our university campus.

Final conclusions

In this final chapter, chapter nine, we describe the final conclusions of our research and give recommendations on how to improve the urban development process in the Netherlands.

1.3 Not a comparison but a description

In this research we focus on the aspects that cause stagnation in the process of the development of new industrial areas. With this demarcation we can find a connection with the research of Prof. dr. ir. W.F. Schaefer and ir. E.G.J. Blokhuis. Their research has a wider focus and looks at the redevelopment as well as development of industrial areas. Redevelopment is not an important aspect at this moment in Dubai because they are just in the development phase. So we leave redevelopment out of the reach of our research. By doing this is it possible for us to use information and conclusions that they have included in their own research report about this subject. Our contribution is focused on accelerating the developing process in the Netherlands by using Dubai as a 'best practice' case.

The goal of our study is not to create a comparison between Dubai and the Netherlands. Instead, we want to learn from certain aspects of Dubai's approach regarding to urban development. The most important research results will be implemented into our process model for a business organisation for a Dutch case study project. The reason you cannot compare Dubai with the Netherlands is because there are too many major differences between the two countries, including the state-structure, investment climate, religion and leadership. In the figure below you see how our research makes a connection with research from our university.

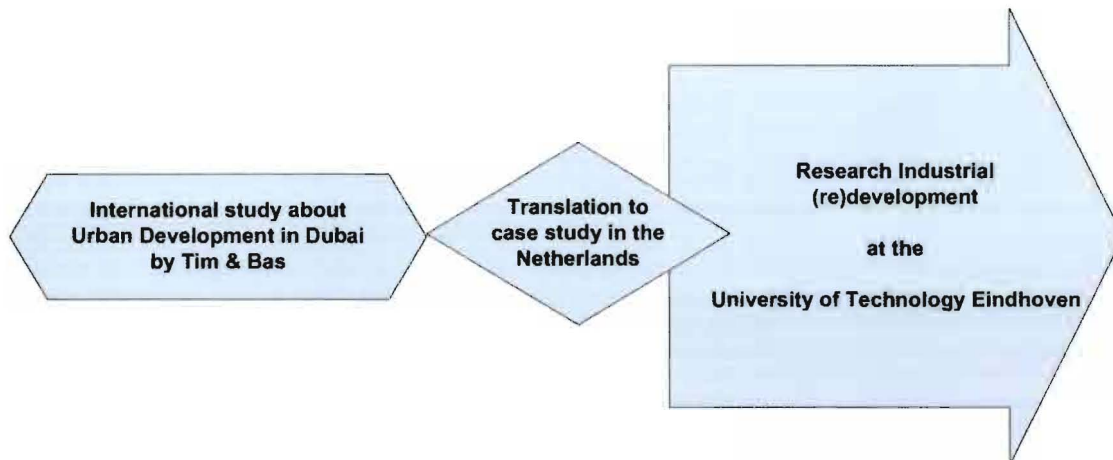


Figure 1: Connection Dubai study with TU/e research (Authors Tim & Bas)

1.4 Roadmap to Dubai

In this first paragraph of the 'Roadmap to Dubai' we will give a short introduction about the period between March 2006 and September 2006. During this period we did most of the preparations for our graduation. At the beginning of March we already decided that we would do our graduation together in Dubai. To achieve our goal it was necessary to write a clear, achievable plan for our project. Our planning for the pre-graduation phase contains: go / no-go moments, milestones and appointments with institutions in the Netherlands and Dubai to participate in our research. For more information about this approach we will refer to our research proposal. In the attachment you can also read a short introduction of the history of Dubai.

The companies we have contacted in the Netherlands were CB Richard Ellis in Amsterdam and AT Osborne in Utrecht. In Dubai we have contacted Arup Major Project and the British University in Dubai. All the companies showed a lot of interest to collaborate in our research. The participation of these institutions acted as our starting point and guarantee to start our independent research in Dubai. For a more detailed overview see appendix 'Roadmap for Dubai'.

ANALYSIS PHASE

In the first chapter we will point out the actual issues about urban development in the Netherlands. In the chapter three and four we present and explain our central research question and the research methodology we used. Chapter five gives an elaborated description of the present urban development approach in Dubai. Our symposium that was part of our research methodology will be discussed in chapter six. Finally, in chapter seven we summarise the conclusions from the previous chapters, which could be useful to implement in the Netherlands to improve the urban development process.

2. Problem finding urban development in the Netherlands

2.1 Urban development approach and state of affairs

This paragraph will give a description about the situation of urban development in the Netherlands. We will discuss the approach and the state of affairs that cause a stagnating market and the subsequent slowing of economic growth. The government is aware of the fact that redevelopment of industrial areas or construction of new industrial areas will increase not only employment, but also the economic growth of the Netherlands.

In actual terms, this means that the ministry of economical affairs, together with business, knowledge centres and decentralised government must put in efforts to realise an area aimed economic policy. The government authorities who should turn this policy into practise are the province and municipality. [02]

The Netherlands needs industrial areas for sustainable economic growth. The document 'Actieplan Bedrijventerreinen' mentions the actions required to stimulate this process for the years 2004 till 2008. This does not mean it will be only redevelopment of industrial areas but also new development of these areas. At this moment there are 21.000 hectares that need to be redeveloped, which is 20 per cent of the available area. For these areas, the problems are so drastic that regular maintenance is not enough anymore. A major part of the need for new industrial areas can only be realised by building new industrial areas.

Experience tells us that there will be a limited availability of new areas when redeveloping industrial areas. By the end of 2020 there will be a need for 23.000 hectares of new industrial areas. The redevelopment as well as development of new industrial areas is an extremely complex process that can easily run into a lot of issues in spite of all efforts from the involved parties.

The realisation of a new project takes more than eight years. It is then important to start on time when preparing new locations. The goal is to further to reduce the turnaround time by 20 per cent for the redevelopment and development of industrial areas by the end of 2020.

The quality of an industrial area is often custom-made. The government will not mention general demands about quality for industrial areas. An exception is the management of industrial areas. In this case, the government ensures that there is a considered park management system in place.

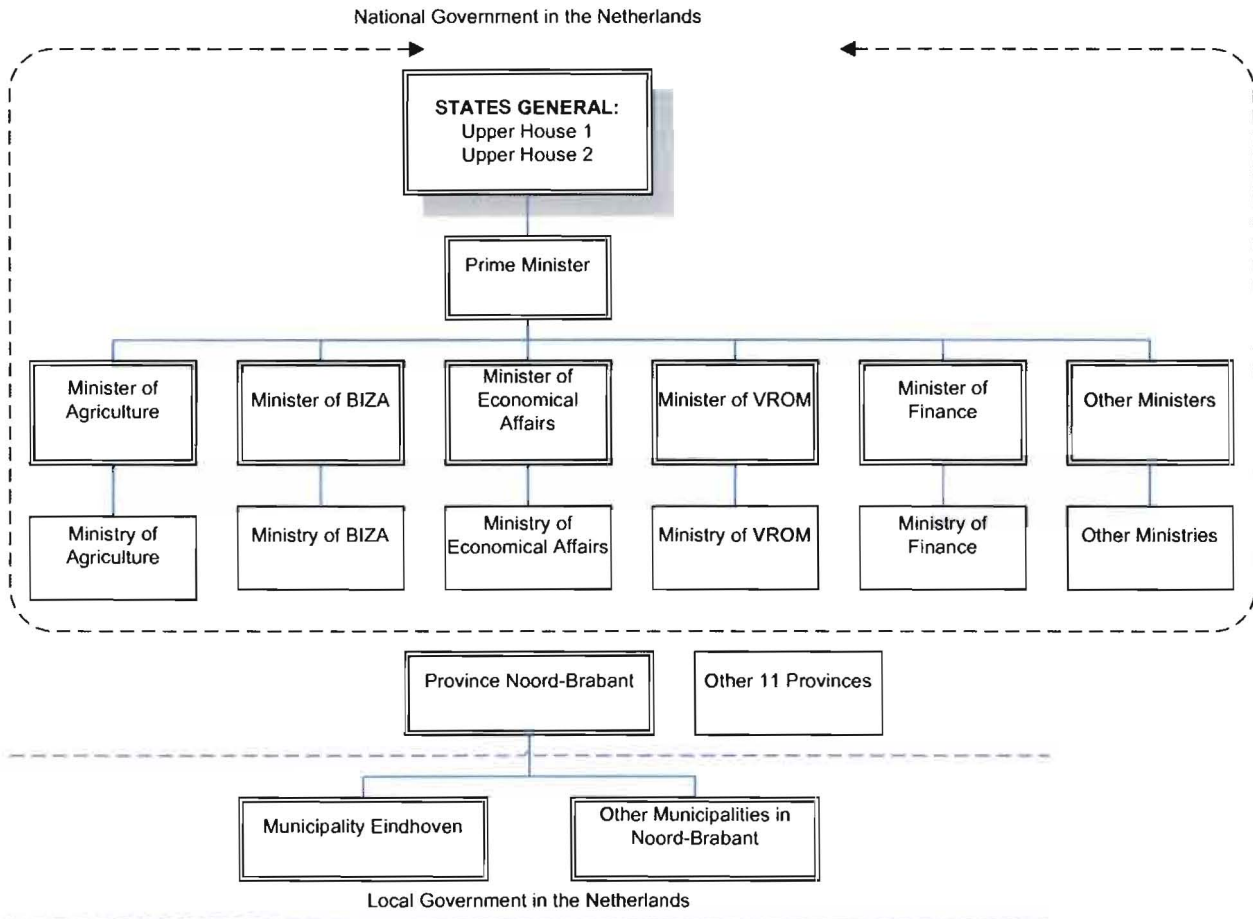
Within the government the ministry of economical affairs is the coordinating authority for industrial areas. This authority has to deal with the general policy for industrial areas, as well as formulating laws and regulations and find solutions for general bottlenecks. One of their main targets is to focus on the most important areas that can contribute a maximum surplus value to the Netherlands economy. This enables the government to appoint specific industrial projects (Topprojecten) that have an important value for the Netherlands economy. By doing this the government is able to participate in the realisation of these industrial projects. For these 'Topprojecten' there are 3.500 hectares available for redevelopment and 7.000 hectares for new development. The redevelopment and new development of the other industrial areas is a task of the municipality. [03]

At this moment the urban development process of industrial areas in the Netherlands is a dynamic and complex challenge. Normally these development questions are translated into strategically and economically important projects with a long-term commitment. In these processes we see that the government is pulling back and giving more and more responsibility to private companies. In the future we expect that end users will influence the decision-making process more and more, which will have an impact on the final result. The targets for development are defined by the shared value of the stakeholders and their realisation by the subsequent collaboration of these stakeholders.

It appears that 'the site' is no longer a leading factor in the success of an urban development project. In its place, the stakeholders in both private and public areas are becoming more important. We have to consider that projects with national importance are vital to the economic growth of the Netherlands.

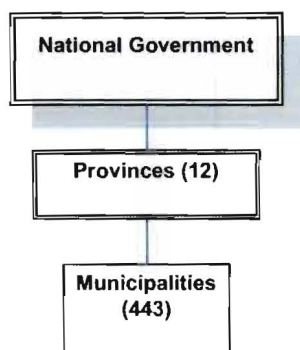
Further, we see that stakeholders in the Netherlands have become more and more critical of a success factor in the development of urban projects. The short-term success of a project's development is also caused by the political cycle. Projects with a maximum surplus value for the Netherlands' economy experience a lot of opposition through different factors from different parties. To make sure that these kinds of projects can be a success there is a need for a straighter course and long-term strategy. [04]

The government is the highest authority on a certain area. In the Netherlands we have a parliamentary democracy. In there the parliament has the final word. Furthermore, the government exist of a Federal government and a head of state. In the Netherlands this is a king or a queen. Also the chosen parliament in the provinces (the Provincial States) and the management of the provinces (Delegate and Commissioner of the queen) are part of the government. Just as the parliament in the municipality and the municipality council (City Council) are part of the government. [05]



Scheme 1: State structure of the Netherlands (Authors Tim & Bas)

In the Netherlands the state structure exists out of three layers. From top till bottom we see the National government, 12 different provinces (regions) and the 443 different municipalities. The task of the 12 provinces is to implement and coordinate national governmental decisions. In the scheme below we presented the simple state structure of the government in the Netherlands.



Scheme 2: Simple state structure of the government in the Netherlands (Authors Tim & Bas)

2.2 Main issues for stagnating market

In the next paragraph we will write about the most important issues in the available literature about the main cause of the stagnation in economic growth in the Netherlands.

Achieving consensus in the Netherlands' planning process is still important but there are increasing complaints that the difficult decision-making process is more about political gain than urban improvement. The negotiations do not end after legal plans are approved. Even after the legal boundaries are approved by the central and local governments, stakeholders are very creative in their interpretation of these boundaries. [06]

According to (BCI & BRO, 1999), there are five different kinds of stakeholders involved in each urban development project: the municipality, government, settled companies, business associations and private investors. [07] It is in the joint interest of the municipality, settled companies and private investors to produce a good, functioning industrial area.

It is not possible just to build an industrial area before you have gone through an elaborate process of preparation. All governmental authorities are involved, sometimes in a collaborative way, sometimes in an opposite way, but often on an interactive basis with involved participants. In the development of an industrial area, the role of the governmental and provincial authorities is generally limited to preventing inconveniences to residential housing, nature and the environment.

By contrast, the municipality has an important involvement in the policy for industrial areas. Higher governmental authorities represent interest groups, which can result in major delays in the development of industrial areas. [08]

The main goal of the government is primarily focused on the redevelopment of industrial areas. Only when this redevelopment is not sufficient for economic growth can a municipality begin developing new areas. [09] After a redevelopment or new development is completed, the government has to take care of maintenance of the developed area. This guarantees that the area is attractive to new customers. [10]

Another goal of the government is to attract private investors. At this moment it appears that the market for industrial areas is a monopoly dominated by the government. For private investors it should not be hard to enter this market because there are no special law and regulations.

According to (Kapteyn, 2006) there are three main reasons for the relatively small percentage of institutional investors: [11]

1. Investors are not investing in this market for traditional reasons;
2. There is less development for the private sector;
3. Most of the buildings are user-specific, which is not interesting for investors because it is not easy to rent these kinds of buildings.

Complicated laws and regulations are also infecting the development process. A lot of projects get delayed because of this, which causes uncertainty for the municipality and private investors. [03] We also see that while there are a lot of legal instruments that can delay the development process for industrial areas, there are few instruments that can stimulate this process. [08]

When we take a look on how projects are being realised we see that there is stagnation in the provincial level. The National government develops long-term strategical plans like the 'Nota Ruimte' and 'Pieken in de Delta'. In these long-term plans is the vision on urban development of the government translated to concrete goals for what they want to achieve in a certain period of time. Most of these long-term strategical plans are concerned with projects which are of national importance. These kinds of plans have mostly no relation with the four year political cycle which we have in the Netherlands.

Because of the stagnation and lack of control on province level we see that municipalities start carrying out the urban development policy of the National government on their own. A bottom up approach is the result, whereby municipalities skip the province level and carry out the plans of the National government. The National government is loosing control on her long-term urban development projects when individual municipalities start carrying out these projects. The province needs to coordinate projects of the National government to guarantee the quality. When a project is divided over more municipalities they also take care of a smooth cooperation, communication and that there is the same interest between the involved municipalities.

Arcadis and STEC Groep from the Netherlands organised on the 10th April 2007 the symposium 'Lelijke dozen of prachtige werklocaties' in the Verkadefabriek in Den Bosch. Main goal of the symposium was to have discussions between public sector and the private sector. What are the possibilities to develop industrial areas?

Regional adjustment between governmental institutions is necessary and a regional development company that is responsible to keep 'plot exploitations' levelled with future demand. The question rises: are private companies better than the public sector in achieving these goals? Long-term project developments, maintenance and exploitation are familiar to them and government institutions are apparently pulling back from plot exploitations. [12]

For the development of industrial areas it is important that municipalities are collaborative with private parties in an early stage of each project. The municipality should take the responsibility to define boundary conditions and in a second stage the municipality is formulating together with private parties the political boundaries. [13]

During the workshop 'Management Drives & Regional Collaboration' as part of this symposium Peter van Geffen from STEC Groep presented his perspective. Vision for the development of industrial areas must be the responsibility of a higher governmental level, National government or province level. The second step is to search for joint interests on province level or municipality level. And last but not least, develop joint interests where regional collaboration is possible. [14]

2.3 Conclusions

In the continuation of our research we want to develop our new process model which will improve the present situation. We will present a new approach how the different institutions can work and communicated better with each other. Therefore we will use some aspects we have seen in Dubai as input for this new process model for the Netherlands.

For the conclusions mentioned below we think we can find interesting solutions during our research in Dubai. We will use them to present the solutions of our case study for the new business organisation for urban development projects.

- The government in the Netherlands should use a more entrepreneurial approach during the urban development process;
- The government should explore and set defined boundaries in which urban development takes place. Planning, development and implementation should be done by private companies;
- The four year political cycle of the government should not affect projects which are of national importance for the Netherlands economy. These projects need long-term strategies that are separate from the four-year political cycle.

3. Central research question

3.1 Research objective

With the knowledge about Dubai's development approach we are looking at the fundamental issues in the Dutch development approach as described in chapter 2, Problem finding about urban development in the Netherlands. In the design phase of this report we are going to work out a case project in the Netherlands using the main characteristics of the urban development approach in Dubai.

Our research objective is defined as:

"We are going to set up our process model for an urban development case project at the campus of our university with the knowledge and main characteristics of the urban development approach in Dubai".

When we are talking about processes in the context of our process model, we specify 'process' as:

"A process is a sequence of decision-making steps in time from initiative to exploitation in an urban development project."

3.2 Central research question

"What are the key characteristics for a business organisation to accelerate the urban development process in the Netherlands with the input of a practice approach from Dubai, and how can this be utilised?"

Sub questions are:

- What are the most important organisational characteristics for urban development projects in Dubai?
- What are the most important process characteristics for urban development projects in Dubai?
- How should we develop a business organisation for an urban development project in the Netherlands, and which processes are important for that?

To answer these sub questions we are analysing different urban development projects in Dubai. The aim of analysing these projects is to **"analyse how business organisations are organised for urban development projects in Dubai."** The main questions for analysing these projects are:

- What does the business organisation consist of?
- How is the business organisation managing the urban development project in Dubai?
- Which processes are directed by the business organisation?

3.3 Research relevance and demarcation

The relevance of this research is that the TU/e is doing research on (foreign) urban development approaches in order to improve and accelerate the urban development process in the Netherlands. Our research 'Urban development in Dubai' is a foreign study and our conclusions are additional to the research of TU/e.

The company 'Brabantse Ontwikkelings Maatschappij', BOM is going to publish a book in 2007 in cooperation with the TU/e. The conclusions from our research in Dubai by applying a new approach about urban development will be integrated in that book to contribute to the discussion around urban (re)development in the Netherlands.

Our research is focusing on the process behind urban development projects. We will explain Dubai's urban development approach in terms of strategy, policy, decision-making and entrepreneurship in the public sector and private sector. We will conclude with lessons that can be learned by the Netherlands from Dubai.



3.4 Final result

We will design and utilise a general business organisation model with a new approach of urban development projects in the Netherlands. The main goal of this research is to design the model in such a way, that a better aim for all involved participants on province level and municipality level can be achieved. To give an impression of how the model could work we used it to design the business organisation for a campus project at our University of Technology Eindhoven. The development of this campus project can be classified as a Science Park.

4. Research approach and methodology

4.1 Introduction

Our study will be congruent to the research of prof. dr. ir. W.F. Schaefer and ir. E.G.J. Blokhuis at the University of Technology Eindhoven about urban (re)development in the Netherlands. They have studied the Expo 98 development in Lisbon as a best practice project. Our study about Dubai can be used as another practice study and our findings can be implemented into the research at our university. In general our research will be used for a modified approach and to answer the question "How can the Netherlands improve their urban development market?"

4.2 Research approach

In the preface of this report we explained that we have checked the availability of research information in Dubai. We obtained first hand information by using the following resources:

- Interviewing experts from public and private institutions;
- Case studies in Dubai;
- Symposium organised by the writers of this report in Dubai;
- Available information from different public and private institutions in Dubai and;
- Visiting presentations, exhibitions and conferences in Dubai. [15]

With the use of the resources above we were able to gather the information we needed for this research by constantly putting a lot of energy into:

- The organisation around our graduation project;
- Our personal and project website <http://www.TimenBasinDubai.com>;
- Our student membership in the Netherlands Business Council and;
- Introducing ourselves to public and private institutions as Masters Students from the University of Technology Eindhoven using our own business card (see figure below).

4.3 Applied methodology

We have thought about a plan to obtain first hand information about urban development in Dubai. Our plan indicated different phases to design our own process model at the end of our research for a case study project in the Netherlands. The different phases of our plan are shown in the appendix 'Research approach and methodology scheme'. This scheme changed a little bit since the time we finished our research proposal. The two plans are available in the same appendix. The difference between the first scheme and reality is that the analysis phase took more time. There is one reason for this. At the time that we were studying aspects One to Four, we were working on 'problem finding.' All four aspects could be a central topic for a graduation study. After our mid term presentation on December 21 in the Netherlands we made the choice to focus our research on business organisations developing urban development projects. Our research proposal and ideas were approved on the 21st of December by our professors and we discussed the working out of our graduation project, which would conclude in the end of March 2007 with our final report.

First hand information about Dubai is not always available. People are not always in the position to answer each question. We decided to rely on expert interviews, a symposium organised by the two of us in Dubai and to analyse case studies in Dubai. Therefore, our research methodology consists of these three items. In all three items professionals and academics have been asked for their points of view. The personal argumentations and points of view are not generally applicable. They are only applicable in this situation and with these references.

4.4 Symposium

We organised our symposium 'Value creation through sharing knowledge in urban development' because this was the best way to obtain first hand information in just one event. In our symposium it was possible for fifteen people from two different countries to share knowledge and discuss different approaches. Two presentations were followed by discussion sessions, which made it possible to organise this meeting and learn more from both approaches. Below you can see the program of our January 30 symposium, including the invitation we designed ourselves:

Goal: Discuss the urban development market in the Netherlands and Dubai with professionals and academics representing public and private institutions from both countries.

Take effect: Program of the morning session was:

- Presentation by prof. dr. ir. Wim Schaefer about the stagnating urban development market in the Netherlands.
- Discussion session where we presented different questions; (Coffee break);
- Presentation by Nicholas Maclean, managing director of CB Richard Ellis Middle East about the urban development market in Dubai.
- Discussion session where we presented different questions; (Lunch).

Game theory: We started the morning session by asking everybody to introduce themselves by explaining where they were from and giving a brief description of their profession. This introduction round contributed to the open atmosphere for the whole group. We tried to invite everybody to share in the discussions because that would influence directly the outcome of this symposium.

Our expectations for the symposium were:

- A better understanding about Dubai's urban development approach;
- First hand information
- Input to our research from professionals and academics

To start the discussion we asked the following questions:

What is the vision of His Highness behind Dubai's (sustainable) urban planning?

- What kind of supervision or overall management is there to be recognised in the planning process?
- We see developments of different urban projects with different functions like Healthcare City, Dubai Marina, Business Bay, etc.
- What is the management organisation behind these developments?

Is it possible for European business organisations to comply with the Dubai urban development approach?

- The Netherlands: long-term planning in start up phase (achieve consensus with all participants) to achieve sustainable urban development in the end.
- Dubai: no or ad hoc (master) planning in start up phase. Sustainable use of urban planning is to be questioned (e.g. recent traffic and residential area issues).

How can we identify Dubai's general urban development approach when it comes to:

- Landownership?
- Project financing?
- Program management?
- Role of public and private institutions?
- Exploitation and maintenance?

What can we learn from the Dubai approach and implement this in the European urban development process?

- Is it possible to start with an entrepreneurial approach (like the approach in Dubai) in the European planning process?

4.5 Case studies through expert interviews

In our symposium professionals and academics discussed both general and specific issues of urban development. It is clear that one must analyse different case studies to understand precisely how a specific project is developed, which stakeholders were involved and what kind of business organisation was managing the process. That is why we have chosen case studies in Dubai. We began by analysing the available literature and other information about a specific project. Next, we planned interviews with experts to get first hand information. However, we learned that some experts could not answer all of our

questions because there were details they were not allowed to discuss. In that case, we note this roadblock and include it in our summary of the interview.

Our plan for making an analysis for the different case projects was to research similar aspects as our professors did for the analysis of Expo 98 in Lisbon. By using this method it is easier to structure the case projects and conclude with improvements for the Netherlands.

Goal: Understanding about Dubai's urban development approach and the process from project initiative to project exploitation.

Take effect: Analyse different urban development projects by interviewing experts, on-site visits and available literature.

The case study projects are:

- TECOM Free Zone;
- Dubai Festival City and;
- Gated Communities (The Lakes and The Springs).

The questions that we asked are formulated in the appendix 'Analyse Case Studies'.

Our expectations from the case studies combined with the expert interviews are 'analysing how business organisations are organised for urban development projects in Dubai.' Therefore we want to answer:

- What does the business organisation consist of?
- How is the business organisation managing the urban development project in Dubai and;
- Which processes are directed by the business organisation?

4.6 Roadmap in Dubai

Our road through Dubai was not possible without setting up a solid project organisation for this graduation project. The idea to graduate in Dubai was born in March 2006. From March till September we developed our total project (including the finances). For more information about our project organisation please read chapter two of our research proposal for the companies and institutions participating in this project.

In our roadmap in Dubai we reproduce our process, which started on September 21, 2006. For all the different and important meetings, company visits, exhibitions, presentations and other informative visits we refer to the appendix 'Roadmap in Dubai'. This paragraph will explain more about our discussion sessions with our professors from the University of Technology Eindhoven by which they followed our process. This paragraph will also point out the fundamental choices that make our report what it is.

Method of communication

After a few personal meetings in the Netherlands with our supervisors from the university we traveled to Dubai on the 20th of September. The setup of our communication between Dubai and Eindhoven was to communicate by using instant messaging and email.

We used instant messaging for instant messaging. We used instant messaging during the first two sessions with our supervisors. Another way of communicating was by telephone with a speaker function. We were able to listen both to the same conversation at the same time. This method was used most of the time. The third method was using email. We have been using email during our six month stay in Dubai to exchange our research proposal, invitations for our symposium, feedback and to hand in our final report.

Workout of the meetings

In our first two sessions we noticed that the speed of the internet connection played an essential role in the communication. The connection in Dubai is slower than in the Netherlands and it caused too much delay during the conversation. Another reason was that the UAE does not always allow to use instant messaging programs and therefore they were blocked.

Our conversations by phone were satisfying. The connection was good. One thing that we had to take into account was the time delay. There was a time delay from one or two seconds and that made it sometimes hard to express yourself on the phone. The result was sometimes a disorderly conversation from both sides.

The program Microsoft Outlook was used for email messages. The use of email is good for exchanging documents. If possible we avoided email messages for discussions with our supervisors. It's not possible to see each others 'emotional reaction' by email. We used a few meetings with our supervisors to discuss

our progression in our project. In these meetings we had to discuss important and specified subjects and that's why we preferred conversations by telephone. Just to avoid misunderstanding between us and our supervisors from university.

Conclusions and recommendations

There are different tools to use for a conversation between Dubai and our university in the Netherlands. Every tool has its own advantages and disadvantages. Our choice for each tool depended on what we had to discuss with our supervisors.

Fundamental choices in our process

In our process we have recognised different fundamental choices that made our project till what it is. The most important for our advantage will be highlighted here.

Our first acquaintance in Dubai was with Consul General of the Kingdom of the Netherlands, Bart Twaalhoven on the 24th of September. Bart Twaalhoven introduced us in Dubai with some facts and explanation about the state structure in the UAE. After this conversation Bart Twaalhoven invited us for the Dutch Big 5 reception and the monthly meeting from the Netherlands Business Council (NBC) in October. In October we became members from the Nederlandse Vereniging and the board of the NBC approved a 'student membership' for the both of us and that is exceptional. During the monthly meetings from the NBC we were able to extend our network in Dubai. From our network in Dubai we were able to held interviews and project visits and arrange our accommodation in Dubai. Therefore these where some of our fundamental choices in the process.

In the Netherlands we started to get in contact with CB Richard Ellis Dubai. We wrote a letter to this company including our curriculum vitae in English but without response. When we arrived in Dubai I tried again to arrange a meeting with managing director Nicholas Maclean to present ourselves and this time with success. On the 22nd of October 2006 we had a meeting with Nicholas Maclean and he explained that a report about urban development is interesting for his office. He offered us all the facilities to work in the office of CB Richard Ellis, The Gate building part of Dubai International Financial Centre.

The third fundamental choice was to organise our symposium about urban development in Dubai. CB Richard Ellis made it possible to organise this symposium where we obtained first hand information from academics and professionals from public and private companies for our research. Without these three fundamental steps it would have been very difficult or impossible to do our research in this way and relay on first hand information from the Dubai market.

5. Urban development in Dubai

5.1 State structure

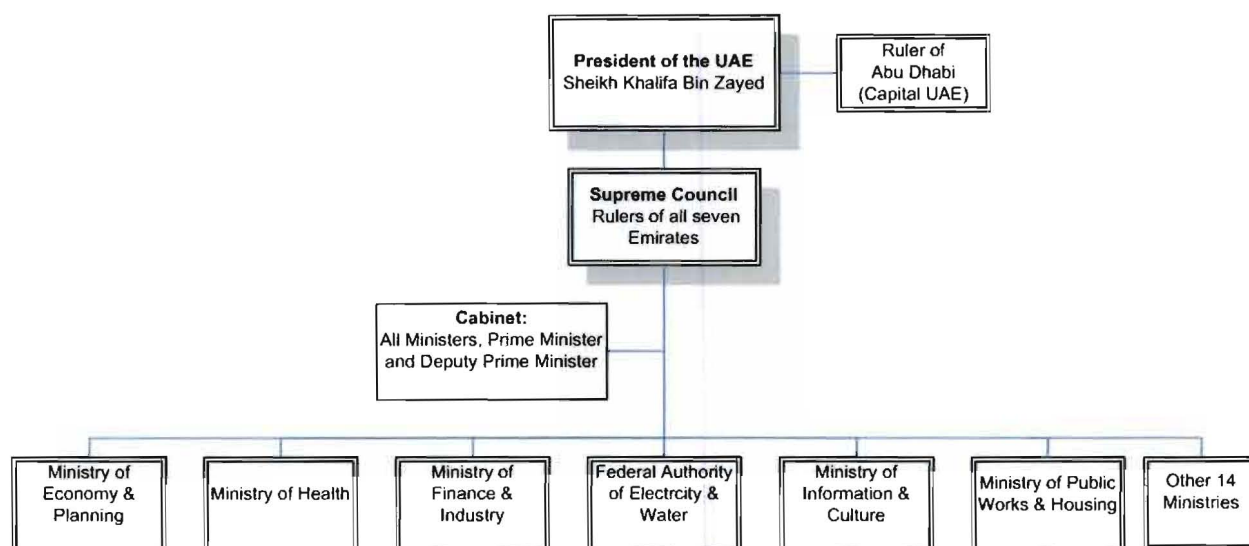
5.1.1 Federal Government

Until the early 1970s, this area was known as the Trucial States, as each emirate had a separate treaty with Britain. In 1971, the seven Emirates came together to establish a federal state officially entitled *Dawlat al Imarat al Arabiyya al Muttahida* (State of the United Arab Emirates).

In May 1996, the Federal Supreme Council approved an amendment to the provisional Constitution, naming Abu Dhabi as the capital of the state and declaring a revised document to be the country's permanent Constitution.

The new federal system of the government established in 1971 included a Supreme Council, a Cabinet (or Council) of Ministers, a parliamentary body, the Federal National Council, and an independent judiciary, at the apex of which is the Federal Supreme Court (see scheme below for the UAE Federal government).

In a spirit of consensus and collaboration, the rulers of the seven Emirates agreed during the process of federation that each would be a member of the Supreme Council, the top policy-making body in the new state. They also agreed that they would elect a President and a Vice-President from amongst their number, to serve a five-year term of office. [16]



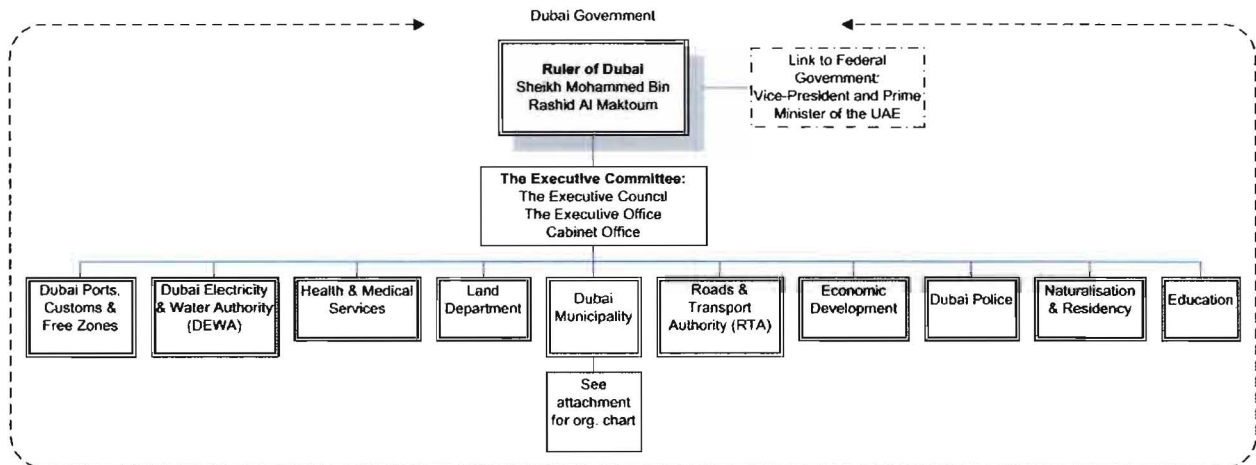
Scheme 3: UAE Federal government (Authors Tim & Bas).

The UAE has a centralised policy translated into the Federal government, which exists to support all seven Emirates. Although all Emirates have expanded significantly as a result of the country's growth over the last 34 years, the improvements differ in size and complexity from Emirate to Emirate depending on a variety of factors, such as population, area, and the degree of development. Decision-making takes place on the federal level, with most of the expertise combined in the Federal government. In theory, the administrative structure of the UAE is comprised of three layers: Federal government, seven Emirates (regions) and the municipalities. In practice, we see two independent public actors: the Federal government and the local government in each Emirate. Because Abu Dhabi and Dubai are self sufficient (see below), the Federal government primarily exists to support the other five Emirates. Each Emirate may develop its own strategy and developments.

5.1.2 Dubai government as entrepreneur

Dubai has its own government which is independent from the Federal government. The ruler of Dubai, His Highness Mohammed Bin Rashid Al Maktoum, is managing his governmental departments in such a way that Dubai doesn't need the Federal government for assistance (see scheme Dubai government). The administrative structure in Dubai is composed of local departments that are managed by the

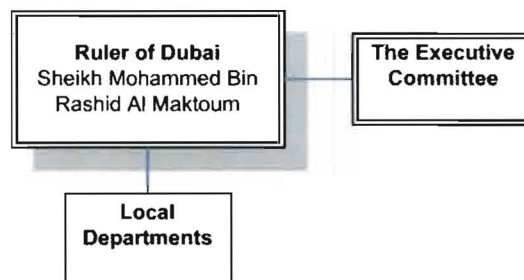
Executive Committee. Each department has its own organisational structure (see appendix 'Organisation chart Dubai municipality').



Scheme 4: Dubai government (Authors Tim & Bas).

When His Highness became ruler of Dubai in 2006, the Executive Office was split up into three 'offices'. The aim of the Executive Committee is to support His Highness in his different roles as ruler of Dubai, Vice-President and Prime Minister of the UAE. A short explanation about the three offices:

1. *The Executive Council:* The Executive Council supports His Highness in his role as ruler of Dubai.
2. *The Executive Office:* This is the office of His Highness, which exists to support, manage, report, and define the vision for Dubai and to manage the overall strategy of the Emirate of Dubai.
3. *Cabinet (Federal) Office:* The cabinet exists to support His Highness in his role as Vice-President of the UAE.



Scheme 5: Simple state structure of the Dubai government (Authors Tim & Bas).

For a macro-environmental analysis of Dubai on Political (and Legal), Economical, Social and Technological aspects (PEST), see appendix 'PEST analysis Dubai'. [17] The outcome of the PEST analysis is that Dubai scores good on the political level and high on the economic level. Social development takes place in the shadow of a booming construction market and is therefore a point of attention. Technological developments are in the start up phase and there is distinct need for strong innovation.

As a simplified organisation structure, we see Dubai's government in the scheme above. We looked at the configurations of Mintzberg to say more about the Dubai government in terms of 'structure', 'the role of the government' and 'key characteristics' of this public organisation. Mintzberg defined seven organisational configurations. We will give a description of the entrepreneurial start up (also called the simple structure) as defined by Mintzberg:

The simple structure is characterised, above all, by what is not elaborated. Typically, it has little or no technostructure, few support staffers, a loose division of labour, minimal differentiation among its units, and a small managerial hierarchy. Little of its behaviour is formalised, and it makes minimal use of planning, training, and liaison devices.

Coordination in the simple structure is effected largely by direct supervision. Specifically, power over all important decisions tends to be centralised in the hands of the chief executive officer. Thus, the strategic apex emerges as the key part of the structure; indeed, the structure often consists of little more than a one-person strategic apex and an organic operating core.

Most organisations pass through the simple structure in their formative years. The environment of the simple structure tends to be at one and the same time simple and dynamic. A simple environment can be comprehended by a single individual, and so enables decision-making to be controlled by that individual. A dynamic environment means organic structure: Because its future state cannot be predicted, the organisation cannot effect coordination by standardisation. [18]

Dubai's strategy - to become a global hub for tourism, business and living - is supported by an organisation structure that is controlled by the ruler of Dubai. We analysed the organisation of Dubai government using the 7-S framework of McKinsey (see appendix '7-S Framework of McKinsey'). [19] The outcome of the 7-S analysis is as follows: the leadership comes from His Highness with the support of his Executive Committee. Dubai's government is constantly in close contact with the most important external institutions (semi-government and private companies) to ensure the rapid development of Dubai. The cluster strategy (explained in chapter 5.4) as a system is integrated in the Dubai Strategic Plan 2015. The small staff supporting His Highness completed their education and worked abroad or at some of the bigger UAE universities. Expatriates bring with them a lot of the needed knowledge and expertise. His Highness is personally involved with all major developments. Clear communication from top to bottom is used in this organic organisation.

We typify Dubai government, with His Highness as ruler of Dubai, as an organisation that shows close relations with 'the entrepreneurial start up configuration' of Mintzberg.

5.1.3 Entrepreneurial approach

From four till six December 2006 we visited the Cityscape exhibition in Dubai. Cityscape is the annual event for international property investment and development. The construction industry presented its project developments and visions for the coming years (see appendix 'Map of Major Projects Dubai'). This year's event was really overwhelming, with the most ambitious projects being presented. This great abundance of new projects has led us to conclude there is simply an overload of urban development projects. Because there is no clear, unambiguous reference in the market for all the new projects, we have to ask: "Is there a need for all the presented projects in the Middle East?" A lot of companies presented enormous and impressive urban development projects for the whole Middle East, which was confusing (see appendix 'Interview with a real estate company').

This entrepreneurial approach comes from His Highness, who is in close contact with the main real estate developers (Dubai Holding, Emaar and Nakheel). These are the companies that have built Dubai to its current state. Supply is outpacing demand, and as a result most of the projects in the pipeline are delayed by 6 to 24 months. This means the supply pipeline has to slow down in Dubai. There is a lack of capability from the Dubai Electricity and Water Authority (DEWA) to connect all different urban development projects. This gives DEWA the power to slow these developments, thus creating more of a balance between supply and demand in the market (source: Symposium Tim & Bas).

We have heard from different sources (who requested to not be mentioned by name in this report) about the changes in management to develop the Dubailand project initiated by the Dubai government. Dubailand is the largest urban development project in Dubai with a main focus on tourism and living (see appendix 'Map of Major Projects Dubai').

Dubailand is divided into large plots of land and many different project developers are working on this huge project initiated by His Highness. From the start of this project the Dubai municipality was responsible for the overall master planning. In a second stage His Highness was not satisfied about the progression of the developments regarding to the master planning. Capacity problems occurred within the Dubai municipality to manage the master planning development. His Highness was not convinced about the feasibility to finish this project in time. At that point the responsibility changed to the Road and Transport Authority (RTA) and the Dubailand business organisation. Master planning was now the responsibility of the business organisation Dubailand and RTA is responsible for the approvals regarding roads and transport and capacity issues. The crux of this example is that there was a sanction for the Dubai municipality because they didn't succeed their goals for this development and therefore the responsibility to manage the master planning changed to other players in the public and private sector.

The theoretical perspective from Michael Porter about the role of government is clear. According to Porter's Diamond Model, the role of government is to act as a catalyst and challenger; it is to encourage – or even push – companies to raise their aspirations and move to higher levels of competitive performance. They must encourage companies to raise their performance, to stimulate early demand for advanced products, to focus on specialised factor creation and to stimulate local rivalry by limiting cooperation and enforcing anti-trust regulations. [20]

In Dubai we see that the entrepreneurial approach starts with the role of its government. From there, the entrepreneur takes the risk and the idea and he is convinced to solve any problem on his way. This is in contrast to traditional democratic development, where many people discuss for many years and find consensus and describe all the project risks. An entrepreneur in Dubai follows a different approach: His Highness and his supporting Executive Committee know exactly what is going on, what the problems are and which approach is needed for the future. The next challenge for Dubai is what kind of extra functionality they can offer in terms of social development, infrastructure and energy so that people are going to stay in this area (source: Symposium Tim & Bas).

A business organisation (semi-governmental or private companies) will take the initiative and the responsibility for urban development or industrial development. The start up phase for a new development project means that the Dubai municipality defines where a project development can be planned according to Dubai's master plan. Guidelines for the development of a project are formulated by Dubai municipality on a high level basis. Dubai municipality analyzes the master plan of a new project development on major aspects like parking facilities, number of buildings, and the height of the different buildings. After 'planning approval' by the municipality, the project architect can design his project to a detailed design. The municipality will check the major aspects before the developer and contractor get their 'building approval'. Overall the start up phase is short because it is not necessary to give feedback on a detailed level to the municipality after laws and regulations have been approved on a high level basis (see appendix for interviews with Dubai Festival City and TECOM Investments).

The question is: Do we want to follow the same process as in the UAE? Then we have to create an entrepreneurial approach within the government and semi government, and then run that 'government company' like a business with entrepreneurial people. This will compress the planning process to the finest detail to be profitable in the end.

5.1.4 Conclusions

In general we see that the role of the Dubai government as an entrepreneurial start up configuration is a key factor for the urban development approach in Dubai. The Executive Committee is the most important establishment for His Highness and his different roles in Dubai and for the UAE. The vision and objectives are set by His Highness. In the whole development and planning process, the Dubai government with His Highness as ruler, finally decides what, when and where the development takes place.

The role and attitude of the Dubai government challenges semi-governmental and private companies to move to higher levels of competitive performance. The guidelines are set by the government as initiator on a high level basis and the private sector has the knowledge and expertise for urban and industrial planning.

5.2 Vision for Dubai

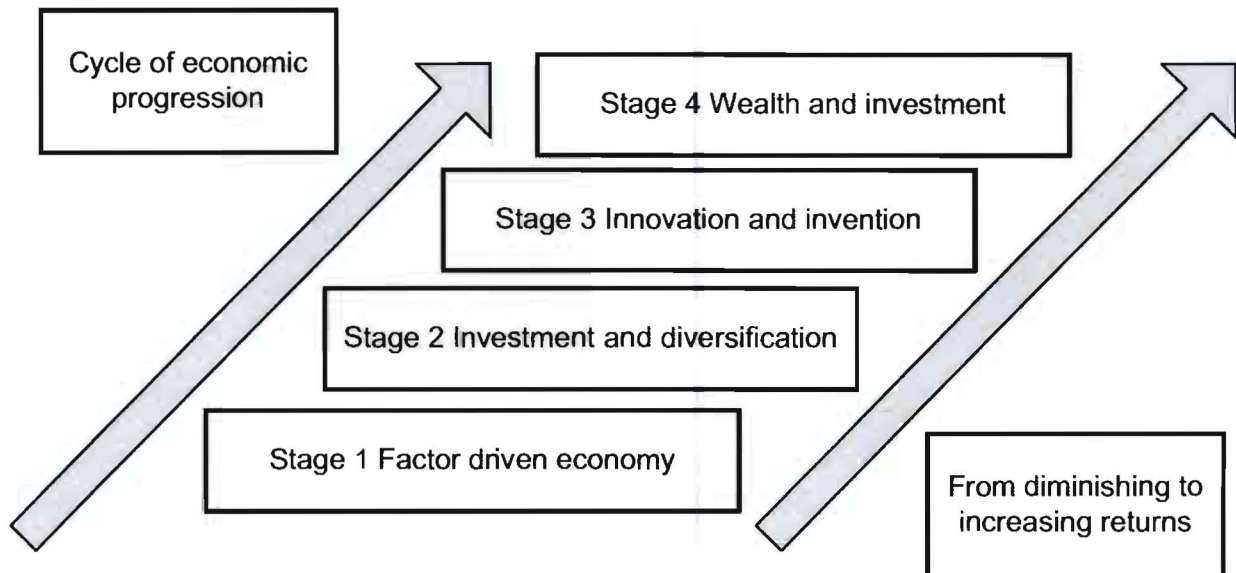
The vision for Dubai was started by ruler Sheikh Rashid Bin Saeed Al Maktoum (1912 – 1990), a man who understood the danger of relying on oil alone. His vision for Dubai was clear and flourished thanks to long-term effort, entrepreneurialism and shrewd investment. To ensure that his legacy would last, he convinced his sons in sharing this same vision.

5.2.1 Porter's Diamond model for the competitive advantage of nations

Before we talk about the vision for Dubai it is good to know about the competitive advantages of Dubai as compared to other nations. The Diamond Model from Michael Porter can be used to understand the relative position of a country in global competition. A country is analysed on four aspects to discover its competitive advantage compared to other nations. These four aspects are: firm strategy, structure and rivalry, demand conditions. Relating supporting industries and factor conditions are worked out below for Dubai. The complete model can be found in appendix 'Porter's Diamond model for competitive advantage of nations'.

5.2.2 Dubai Strategic Plan 1996

Oil was discovered in 1966 in Dubai and with the revenues of selling they started building up their industry. In the 70's and 80's they built the aluminium smelter, dry docks, Jebel Ali Free Zone and started Emirates Airlines. With all these developments, Dubai attracted a lot of people that needed housing, infrastructure and leisure. Soon they realised that all these developments needed some kind of master planning to organise. In the mid 90's the government wrote their first strategic plan for Dubai. The plan was written in cooperation with the DED in Dubai and the United Nations (UN); it was also based on Michael Porter's 'Competitive advantage of nations'. The plan presented a model with a four stage approach about the cycle of economic progression for Dubai.



Model 1: UNESCO model for development of Dubai's economy (source: Presentation 'Dubai and its development').

Stage 1: In the first stage Dubai has to build a factor-driven economy that relies on basic factors like capital, labour and raw materials. With this economy they can generate revenues that can be invested in the next stage

Stage 2: With the surplus revenues from the first stage, Dubai is able to invest in new economies. This allows diversification, which means Dubai does not have to depend only on the factor driven economy like in the first stage. Dubai can build different economies that contribute to the total economical growth.

Stage 3: With a diversified economy Dubai is ready for innovations and inventions. It is important that you can rely on the economy that is built up in stage one and two. These support the innovations and inventions with their revenues.

Stage 4: During the last stage of the whole economic progression Dubai could invest in wealth and investments. This last stage develops a lot of revenues that are good for Dubai.

This Dubai Strategic Plan (DSP) 1996 formed the basis for the Dubai Vision 2010. The DSP 1996 included the first mention of a 'cluster strategy' for Dubai. This strategy is developed by Michael Porter and means that an economy has to develop itself around certain clusters. The clusters for Dubai are: trade, transport, tourism, higher level services and manufacturing (see 5.4 Cluster Strategy).

5.2.3 Vision 2010

Vision 2010 was formulated by His Highness and in a recent speech he highlighted the core of Vision 2010:

1. Introduce a progressive and transparent government;
2. First-class social and economic infrastructure;
3. "We run Dubai as a company, and a very successful one". 'Dubailnc.' has produced remarkable achievements in all major sectors of the city's economy;
4. Encourage the diversification of the economy based on talent, innovation and entrepreneurship;
5. Digital opportunity as an engine of growth. [21]

The ideas and the recommendations mentioned in the DSP 1996 were translated to operational tasks for the future. Vision 2010 presented different objectives that Dubai wants to achieve by the end of 2010. These objectives are classified into three categories: economic, market and social. More information about the completion of these categories can be found in appendix 'Vision 2010'.

By the end of 2005 Dubai realised some of the aspects that were mentioned in the Vision 2010, including:

1. Dubai is evolving into the Hong Kong and Singapore of the 21st century;
2. It has made amazing social, economic, business and technological progress;
3. The progress has been made despite regional instability and volatile oil and gas prices;
4. The city of Dubai hosts many nationalities and is becoming the accepted hub for regional business, trade and finance;
5. Dubai will establish itself globally in transportation, investment, education, finance and tourism. [22]

They had the plan in 2000 to increase the GDP to \$30 billion by 2010. This was already achieved in 2005 with a GDP reaching \$37 billion. The plan also included an increase of GDP per capita to \$23,000 by the year 2010. In 2005 the average GDP per capita reached \$31,000. So in other words, in five years they exceeded the economic targets that were originally planned for a ten-year period. [23]

5.2.4 Dubai Strategic Plan 2015

Vision 2010 came into effect in the year 2000 and was practically finished by the end of 2005, His Highness explained in his speech. So Dubai had to come up with another plan with their objectives for the future. This resulted in the presentation on 3rd February of the DSP 2015. The following description is a short summary of the DSP 2015 with the headlines where Dubai wants to put particular focus until the year 2015. The DSP 2015, despite having its own logic and specific goals, is within the national arena of the UAE, and is aligned with the country's overall strategic plan. The plan is also free of the direct influence of oil price fluctuations. They have succeeded in diversifying Dubai's sources of income and reduced dependence on oil (which only contributes 3 per cent to Dubai's GDP). The plan covers five key sectors:

1. Economic development;
2. Social development;
3. Infrastructure, land and environment;
4. Security, justice and safety;
5. Government excellence. [23]

A summary of this plan and more details about the five main key sectors they are focusing on can be found in appendix 'Dubai Strategic Plan 2015'. The Executive Committee will monitor the progress of the DSP 2015 program and will remove any obstacles to ensure proper implementation and rapid execution.

5.2.5 Conclusions

Dubai wants to become a global hub in tourism, business and living. To achieve this goal they formulated the strategic plan in which the objectives are mentioned. They are focusing on different aspects that need to be well developed to support and have an effect on the strategy.

For the first DSP of 1996, five different clusters were formulated. In general we can see that most of the aspects from the clusters trade, transport, tourism and manufacturing are realised. The cluster which focuses on higher level services is being development but still needs a lot of attention.

5.3 Models for analysing the organisation of Dubai

5.3.1 SWOT analysis

This tool is used to get more information about the Strength, Weakness, Opportunities and Threats (SWOT) from the organisation of Dubai. It is split up in internal factors and external factors and is also a random indication about the current position. [24] The SWOT analysis can be found in appendix 'SWOT analysis'.

5.3.2 Value Chain Dubai

With Michael Porter's value chain it is possible for companies to define their core competencies and the activities where they can achieve a competitive advantage compared to their competitors. [25] We believe that the model can be used to analyse the government of Dubai. The government can be seen as an organisation that in this case has to rule a city instead of a company. As we explained in chapter 5.1.2, the Dubai government as an entrepreneurial start up configuration according to Mintzberg.

We used this model to determine how a city like Dubai can achieve a competitive advantage compared over other competing cities. The model can be found in appendix 'Value chain for organisation Dubai'. The value chain shows weak aspects and where improvements can be made. For Dubai this is useful because the city has developed very quickly over the last fifteen years. With the value chain it's possible to indicate future development challenges for Dubai.

5.3.3 Conclusions

With the SWOT analysis we have got more insight into the present affairs of how the government of Dubai operates. Normally you use the results of a SWOT analysis to design a new strategy for the organisation. In our case we are not going to develop a new strategy because it is not of interest for our research. We only used it to get a better understanding of the things that happen in the field of urban development in Dubai. Interesting aspects for our research are: involvement of the private sector, attracting foreign direct investments and the development of Free Zones.

Core competences and competitive advantages according to the value chain can be achieved in different areas. The core competence for Dubai is the very direct and straight policy which is executed by the government. By this it is relatively easy for companies or investors to start business in Dubai. Competitive advantages must be seen as extra aspects that other countries do not have compared to Dubai. Dubai has a first class airline company for transportation of people and cargo, which allows Dubai to be accessible from all over the world. The development of Free Zones gives an advantage in attracting foreign investors and companies. Some of these advantages include no taxes and 100 per cent ownership of your company within the Free Zone. The development of a financial centre and the most luxurious hotels also contributes to the competitive advantage.

The general conclusion of the value chain is that Dubai is attracting foreign investments which are invested in the economy and contribute to the realisation of the strategy to become a global hub for tourism, business and living.

5.4 Cluster Strategy

5.4.1 Introduction

The DSP 1996 presented five key sectors (Trade, Transport, Tourism, Higher Level Services and Manufacturing). New developments were clustered around the key sectors as part of the DSP initiated by the Dubai government. To understand what clustering is and how this is integrated in Dubai's urban development approach we will start with the following definition:

"A cluster is a critical mass, in one geographical space, of similar businesses, all supported by their specialist suppliers and services that are tied to that industry" (source: presentation Dubai Chamber of Commerce and Industry, Richard Wynne-Jones, project consultant and client representative).

We interviewed Chief of Strategy Mohamed El-Hage from The Executive Office, who explained why clustering is important (see appendix 'Interview with The Executive Office'):

1. Clustering creates economic benefits;
2. Laws and regulations are more friendly for these areas and;
3. Clustered areas are attracting global companies.

From a theoretical perspective, Michael Porter says: "Clusters are geographic concentrations of interconnected companies, specialised suppliers, service providers, and associated institutions in a particular field. They grow on locations where enough resources and competences amass and reach a critical threshold, giving it a key position in a given economic branch of activity, with a decisive sustainable competitive advantage over others places, or even a world supremacy in that field". Porter says clusters can influence competition in three ways:

1. They can increase the productivity of the companies in the cluster;
2. They can drive innovation in the field;
3. They can stimulate new businesses in the field. [20]

Richard Wynne-Jones from DCCI was talking at our symposium about the presence of Michael Porter in Dubai:

"Seven years ago Michael Porter gave a speech to a large audience including His Highness. Porter was impressed by all the building activities in Dubai. This is amazing with all these high-rise developments. "It's not what I expected". He asked the next question to the audience. "If I may ask, where is the value been added?" This impressed the audience and changed the strategy in the top of Dubai. In the early days Sheikh Rashid built the Ports, Jebel Ali Port, Dubai International Airport and started the Emirates Airline. There was a feeling that you created value first and the urban infrastructure followed. To a large extend this is the Western model. Because you're not going to built a place where there are now jobs and there is now value being created for very good economical, social and political reasons. What you have today is Dubai is on a transition point. Dubai is developing the urban infrastructure and manages that the money and the jobs will come here. That's a big change that is occurring in my opinion. See change in strategy that has occurred. Now they are building apartments and villa's so that people can come and live here. The next step is to shape employment. The people will bring work and money with them and that is a high risk policy" (source: Symposium Tim & Bas).

In 2001 Porter gave a presentation the 'Ridderzaal' in The Hague, the Netherlands. Porter was speaking at the 'Innovation Lecture' annually organised by the Ministry of Economical Affairs. His message was that innovation can be accomplished through effective collaboration between consumers, manufacturers, suppliers, research institutions and government. This form of collaboration, so called 'clusters', is asking for out of the box thinking over the borders of industry branches. [26]

5.4.2 Cluster strategy applied in Dubai

This is exactly what we see in Dubai. Dubai is supported with a strong and focused leadership over three generations. Continuity and clarity in vision are translated in the DSP and the cluster theory is part of the DSP. That's why the cluster strategy is working so well.

The five key sectors from the DSP 1996 are each developed into different projects (see appendix 'Dubai Strategic Plan 1996'). The strength of the clustering is that there is a relation between different

developments in different clusters. By doing this, different project developments are beneficial to more than one key sector of the DSP. This will stimulate Dubai's economic growth.

We have studied the TECOM Free Zone and combined this with a project visit and an expert interview with Sanjive Khosla, Director of Strategy and Business Development of TECOM Investments. Each Free Zone (urban or industrial development projects with specified rules and regulations separate from the Federal government, see chapter 5.5 Free Zones) is an example of a business concept. In practice each business concept is translated to business communities. An example of a business concept is the TECOM Free Zone. TECOM Investments developed the Free Zones DIC, DMC and DKV. These three entities are developed as communities within the TECOM Free Zone (see chapter 5.5.3).

In practice we see that the result of these 'cluster developments' is that it's attracting global companies with similar businesses in each cluster. The TECOM Free Zone development is focusing on higher level services. The projects DIC, DMC and DKV are consequences of the cluster strategy explained in the DSP 1996.

5.4.3 Sustainability

In the last quarter of 2006, Dubai International Financial Centre (DIFC) released a document and it explains that half of the Middle East investors' majority is investing now in the GCC. That is a shift from the year 2000 where the Middle East majority invested their money in Europe. September 11th 2001 is seen as a turning point for investments. It's important is that there comes a balance in the investment flow in GCC and non-GCC countries. We see now that the international financial institutions are coming in to Dubai. That is a step in the right direction (source: Symposium Tim & Bas).

Dubai's Strategic Plan is based on the philosophy of Michael Porter. Fluctuations in oil prices and tourism will affect Dubai's economy. Dubai has an economy based on trading and in the future they need to go to higher level services. This will add value to the process. This is the big challenge for Dubai.

Every economy needs manufacturing because you will need a balance from low to high income in every economy. Dubai's economy is now based on the construction market - 11 per cent - and real estate - 10 per cent – (see appendix 'Dubai, United Arab Emirates geographical', figure 1). This needs to be replaced in the near future if Dubai is to reach a sustainable and balanced economy. Dubai's economy needs a process where people are adding value, and that will stimulate its economy (source: Symposium Tim & Bas).

TECOM Investments took the responsibility to develop a sustainable plan for their business organisation. All their new projects have to be designed, constructed and operated to the US Green Building Council's 'Leadership in Energy and Environment Design' (LEED). TECOM Investments came up with this policy because the Dubai municipality was not capable of coming up with these developments on a short-term (see appendix 'Interview Dubai Technology and Media Free Zone').

We think this is not the right market approach. Dubai's government should develop laws and regulations and policies. There is a need for new laws and regulations and policies on international standards on subjects as energy, safety, quality of building (e.g. there is no standard building code), waste management, environmental issues (carbon dioxide expulsion), etc. When every private company is developing its own standard for quality, environmental issues, safety and energy, this will influence the sustainability of urban planning in Dubai in a negative way.

Every project as part of the clustering will set its own standard on the aspects mentioned above. Most of the inhabitants in Dubai are foreigners and they are used to international standards. In the end when the construction boom is over, and supply and demand is more balanced, there will be choice enough for investors to rent or buy office space. Only the urban development projects developed on international standards will make it in the end. Therefore the government of Dubai should take the initiative and responsibility to develop a new approach, based on international standards for energy, safety, quality of building, and environmental issues. They are not thinking about this next step to make Dubai's economic fundamentals strong. This is important for future developments because investors will look at the fundamentals of this economy before they will invest in this area.

5.4.4 Conclusions

The government of Dubai takes the responsibility for new urban developments and presents its vision and objectives for urban and industrial developments. Therefore the Dubai government developed the DSP and implemented the cluster strategy explained by Michael Porter.

5.5 Free Zones

5.5.1 Introduction

According to the World Federation of Free Zones (FEMOZA), a free zone is a portion of clearly defined and isolated land or setting, with a special tax, customs and imports regime, usually involving a status of extra-territoriality.

Everything in a Free Zone is oriented towards allowing each of its client companies to conduct its business without any hindrance. In order to facilitate this easily, the Free Zones are regulated by the established laws from the government of each country, and in many locations by separate entity – or a Free Zone Authority. The activities permitted in the Zone are:

- Regulated by a Free Zone law;
- Controlled by the operator, who can be public, private or mixed;
- Used by user companies previously authorised, who have decided to develop their economic activities partially in a Free Zone. [27]

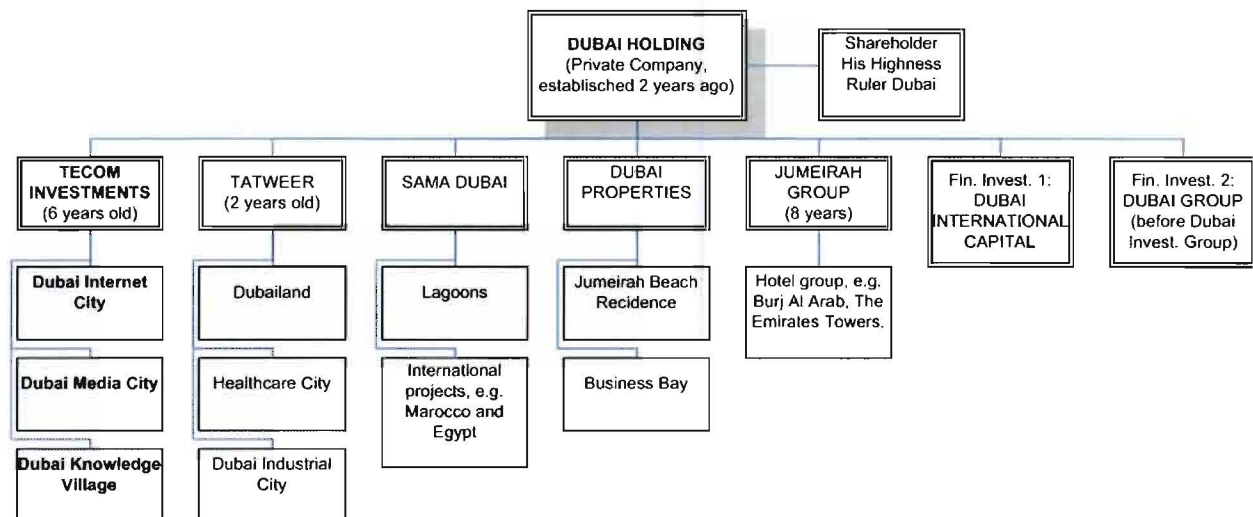
Next paragraphs are specified on *TECOM Free Zone* (see appendix '*TECOM Free Zone*').

The Dubai Technology and Media Free Zone (TECOM Free Zone) is a visionary project encompassing free zones dedicated to innovation in information, communication, media and knowledge industries. A vibrant community designed for entrepreneurs, TECOM offers a range of business opportunities for local, regional and international companies. TECOM is the new hub of innovative business leaders of the region, promoting a fast-paced corporate lifestyle.

TECOM consists of Dubai Internet City (DIC), Dubai Media City (DMC) and Knowledge Village (DKV). The Free Zone is a home to hundreds of global companies that serve technology, media and knowledge industry. The stress-free administrative services and 100 per cent ownership of companies are two of the key benefits of this free zone. Add a convenient location in the hub of Dubai's new innovative developments and economic growth factor, and you have yourself a winning proposition (source: TECOM Investments).

The Dubai Technology and Media Free Zone was initially established in 2000 to support and develop three separate clusters, one for the ICT sector, one for the media sector and a third for companies that create and disseminate knowledge including training institutions. The first brand at the Free Zone was launched in October 2000 as DIC. DMC was officially launched in January 2001 followed by DKV in October 2003.

TECOM Investments, the project developer of TECOM Free Zone, is part of and owned by Dubai Holding, the organisation structure can you see in the scheme below.



Scheme 6: Business structure of Dubai Holding (Authors Tim & Bas).

5.5.2 Strategy

The Free Zone developments are focusing on higher level services. The projects DIC, DMC, DKV, and Dubiotech (a new project from TECOM Investments) are consequences of the cluster strategy explained in the DSP 1996. In the figure below you can see a cluster of business communities developed by TECOM Investments around higher level services.

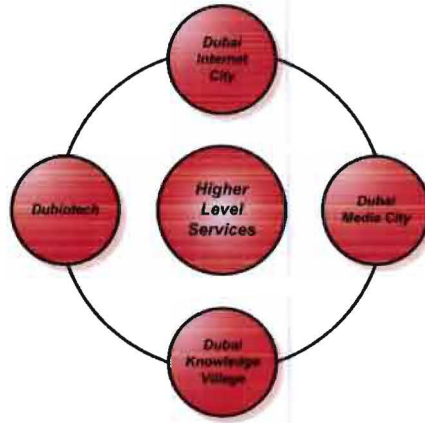


Figure 2: Higher Level Services with business communities as part of a cluster (Authors Tim & Bas).

The general strategy of TECOM Investments is to focus on new economies and start new businesses in new economies. TECOM Investments is focusing on; IT, telecom, etc. The strategy for the development of a new Free Zone for a new economy is divided in two steps:

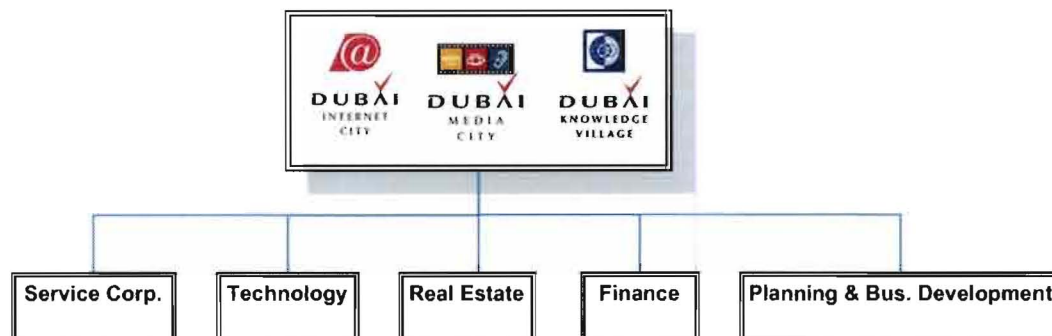
- Step 1:** Build a local industrial hub for a new economy. To accomplish this start building real estate, design a regulatory framework for the hub.
- Step 2:** When a local hub is operational start developing a similar hub in other countries and sell services to other foreign companies.

5.5.3 Development of urban planning

TECOM Investments developed till now on DIC, DMC and DKV in different phases (see appendix 'Master plan TECOM Free Zone'). The development of each phase and the dimension of each business community are depending on the economic market situation. In the figure and scheme below you will see the structures of DIC, DMC and DKV and the different departments which support the entities of the Free Zone.



Figure 3: Structures of DIC, DMC and DKV (source: TECOM Investments).



Scheme 7: Departments which support the entities of the Free Zone (source: TECOM Investments).

The business organisation TECOM Investments was established as a private company with one shareholder, His Highness. The Dubai Technology and Media Free Zone Authority is a Government Authority established in 2000 by His Highness. The Government Authority as a public organisation is close to TECOM Investments. The Government Authority is concerned about the development of TECOM Free Zone. There are other Government Authorities which look after the other Free Zones. The Government Authority reports directly to the Executive Council. The Government Authority also gives laws and regulations to TECOM Investments about the areas they need to develop, such as IT and education. As a conclusion we can say that TECOM Investments is a private company owned by the government of Dubai. As a result from the DSP, the government takes responsibility and formulates the governmental framework for the development of this Free Zone.

To establish the Dubai Technology and Media Free Zone, TECOM Investments has been mandated to carry out the following:

- Project management, financing and tendering;
- Urban planning and issue plots;
- Maintenance;
- Define laws and regulations;
- Contract local investors;
- Issue licenses for companies in the Free Zone;
- Set up lease contracts for all real estate and;
- Marketing and commercial activities.

TECOM Investments as a private company is financed by the Dubai government. TECOM Investments bought the total plot of land from His Highness at a very low price. The ownership of the total plot of land can be seen as start up capital for the development of DMC, DIC and DKV. Other financing of the TECOM Free Zone development came from local investors. Some plots are sold to local investors from UAE and GCC countries. Here we see an example of the inevitable influx of foreign direct investment (FDI) into the Free Zone. Local investors are developing office space and hotel facilities on their plots. The supply and demand for office space in the TECOM Free Zone is managed by TECOM Investments.

The real estate in this Free Zone is a 'leasehold concept'. Leasehold means that the ownership belongs to TECOM Investments and for some other plots in this Free Zone to local investors. The companies who established their business in the Free Zone are leasing the property from TECOM Investments.

Private equity firm Capital Partners from the United States signed an agreement with Dubai Technology and Media Free Zone for the investment of \$197 million to develop the 'RiverWalk' project in the TECOM Free Zone. The RiverWalk project is valued at \$1 billion when completed. RiverWalk is going to be a Venetian-style development with a car-free environment covering more than 1.6 million square feet of land and will include more than 5 million square feet of residential apartments, offices, boutique shops, galleries, cafes and an international hotel. The development of this project has been delayed because the developer couldn't meet certain milestones given by TECOM Investments. At this moment TECOM Investments is looking for a new developer together with Capital Partners. [28]

5.5.4 Process of decision-making

Step one in the process of decision-making is that TECOM Investments develops the concept strategy and benchmarking for this new Free Zone (this is called the conceptual phase). This concept strategy will be discussed with the overall management of TECOM Investments and will result in an approval. During this process, TECOM Investments collaborates with the private company Dubai Properties. In the appendix 'Interview Dubai Technology and Media Free Zone' we explain the process of decision-making for the development of the TECOM Free Zone.

After the management approval of the concept strategy, the plan will move to the Zoning Authority. The Zoning Authority is part of Dubai Properties and is concerned with master planning. Different consultancy companies are asked to design their plan for the Free Zone, which results in a final master plan for the new Free Zone. The final master plan must then be approved by TECOM Investments as final master plan for the new Free Zone.

In the second step TECOM Investments is concerned with infrastructural planning and cost estimates (also known as a feasibility study). Acting once again as the project management partner, Dubai Properties works with their consultants to develop the infrastructural planning and to conduct a feasibility study. Dubai Properties will then deliver the results to TECOM Investments for final approval.

The third step is a business plan developed and approved by TECOM Investments. Once the business plan can be implemented (step 4), sales and marketing activities are developed in-house by TECOM Investments' Sales and Marketing Department. On the other side construction activities will be outsourced to a third private party.

After the project has been developed and sold, the facility management department of Dubai Properties will take over maintenance of the Free Zone (step 5). To control this process and to keep an overall view, the managers of both TECOM Investments and Dubai Properties will be responsible. (Note: There are relatively small teams working at the different departments at TECOM Investments: For example, the Sales and Marketing Department at DIC consists of 17 people.)

Project delays on all TECOM's projects are between six months and 24 months, mostly because there is a dramatic imbalance between demand and supply in the Dubai construction market. The booming real estate market in Dubai means that resources are not always readily available and all major companies are occupied with large orders.

The start up phase (when the Dubai government defines where the Free Zone can be planned) for TECOM Investments projects is relatively short. Because planning a Free Zone is part of the overall master planning for the city of Dubai, developing its rules and regulations is given a lot of high-level attention. TECOM Investments doesn't need approval from the Dubai municipality for the development of the Free Zone itself, meaning that the start up phase is very short because it is not necessary to give feedback to the municipality.

In practice there are organisational bottlenecks. One major bottleneck for TECOM Investments is the fact that institutions like DEWA and RTA are not involved in each step of the process. These institutions are involved in the start up phase but there is no transparency or consultation about the exact project plans between the participants. This makes it very difficult to participate in the process and to carry out their expertise of the institutions.

When we look at the laws and regulations there are different aspects that need improvement. There is no uniform building code or a standard for quality; these should be issued by the municipality. From a process angle there is a need for upgradated skills of personnel in different organisations.

Conclusion out of the TECOM process scheme:

The principle idea is that this project organisation walks through the same fundamental laws and processes for approval by the Dubai government but they don't have to queue for the different permissions. This saves a lot of time. Furthermore, plan development and plan implementation are the responsibility of the TECOM Investment business organisation. When it comes to planning we see that this business organisation is more reactive than pro-active. The process requires a more detailed level of planning to tackle issues during the development in a pro-active way.

5.5.5 Infrastructure and maintenance

All infrastructure within the Free Zone is financed by TECOM Investments, except in the cases of smaller roads within plots that have already been sold to local investors. This varies on a case-by-case basis when it comes to the interchanges and bridges connected to the Free Zones, as some have been built solely to serve projects developed by TECOM Investments, Nakheel and Emaar. This means the costs of these interchanges and bridges have been shared by these companies and the RTA. TECOM Investments earns back this investment through the land lease and commercial office rents and by levying other service charges.

One of the financial constructions applied to finance infrastructure in Dubai is the participation of banks or funds. As an example we have our case study project Dubai Festival City, which is under development by the private sector (see our interview with a development manager at Dubai Festival City for more information about this project). Funds like ADCB Macquarie and ZonesCorp are infrastructure funds. The costs for developing the total infrastructure are worth \$1 million for the total project. From the total price of each plot of land that is sold, ten per cent is used to pay back infrastructure and the other 90 per cent is for the rest of the project. The investments can be calculated on ten to 12 years and the average profit for the fund is ten to 12 per cent. The fund is payed annually. [29]

The organisational strategy of DIC and DMC is to focus on enabling services and business support to the industry while non-core aspects (like infrastructure) are taken care of by investors and third parties. Private investors are investing in the Free Zone's infrastructure development of DMC and DIC. In the appendix 'Map of Major Projects Dubai,' you will see the plots, indicated with red ellipses, where local investors are developing. Property Management Leasing Agreements (PMLA's) are used for private investors. This is an investment model that allows private investors to develop buildings on Free Zone land while the Free Zone runs and manages the property. After completion of a new property by local investors, TECOM Investments takes over the responsibility for leasing and licensing the buildings. Maintenance of the building must be done by the developer but it is possible to outsource this to the maintenance department of TECOM Investments.

5.5.6 Conclusions

As a result, the DSP Dubai government has taken the responsibility to formulate the governmental framework for the development of this Free Zone.

The private business organisation TECOM Investments, as part of Dubai Holding, is established within defined boundaries to develop the business communities DMC, DIC and DKV with a clear vision and strategy. Plan development and plan implementation are in one hand with TECOM Investments as the responsible business organisation. TECOM Investments is mandated for different aspects to develop the TECOM Free Zone. The mandates for decision-making during the development process guarantee a fast process development. In practice we do see a lot of issues because different stakeholders are not participating from the start of the project. The Government Authority is involved in the development process as supervisor and will report directly to The Executive Committee.

TECOM Investments is the long-term investor for this Free Zone and takes responsibility for leasing of the property and its exploitation. Other investments are done by local investors as well as foreign direct investors.

5.6 Gated communities

5.6.1 Introduction

Gated communities refer to a physical area that is fenced or walled off from its surroundings. Entrance into these areas is controlled by gates or booms. It includes residential areas with restricted access, as well as controlled access villages for work, recreational, and/or commercial purposes. Gated communities can include both enclosed neighbourhoods and security villages.

Enclosed neighbourhoods refer to existing neighbourhoods that have controlled access through gates or booms across existing roads. Many of these neighbourhoods are fenced or walled-off, with a limited number of controlled entrances/exits. Security villages refer to private developments where the entire area is developed by a (private) developer. These areas (for example, secured golf estates, townhouse complexes, office parks, etc.) are physically walled-in or fenced off and usually have a security gate or controlled access point. [30]

5.6.2 Gated communities in Dubai

When we take a closer look at Dubai we see that, except for the city centre, Dubai is divided into different areas for living, working and leisure. The gated communities we lived in were built by Emaar. Emaar is one of the biggest developers in Dubai; they built all the residential gated communities on the main land. Nakheel is another developer who built residential gated communities on the artificial islands for the coast, like the Palm Jumeirah, Palm Jebel Ali, Palm Deira and the World. Dubai Holding builds leisure and business developments which can in some way called communities. In Dubai we can distinguish two kinds of communities; the gated communities and normal communities. A gated community is physically fenced and guarded from the environment and people who do not live there. While a community can sometimes be fenced but is open for public and only the buildings itself were closed for public. In appendix 'Map of Major Projects Dubai' you can see the different communities and where they are located in Dubai.



Photo 1: Aerial view gated community the Lakes under construction (source: UAE Locator)

5.6.3 Our experience with gated communities

During our six month stay in Dubai we have had the experience to live in different gated communities. Below we give a short description about our experience in the gated communities 'The Springs' and 'The Lakes'. Buildings in these gated communities are on freehold and/or leasehold ownership basis. Freehold ownership is the most exclusive right of holding land and building forever. There are no restrictions on the duration of ownership, which is even transferable to your relatives. Leasehold ownership is exactly the same as freehold ownership except for the duration, which is currently limited to 30 or 40 years. In both cases there is always the risk that your plot of ground can be reclaimed by the government and you will have to look for another building. There is also a third type of ownership called commonhold, which means that you pay an amount for the management and maintenance of the common areas and are always vested in the respective of the owner. The maintenance of your own building is for your own responsibility.



When entering a gated community you have to pass the security guard, who asks for some general details. In our community they wrote down our car number plate and asked us about the area and villa where we lived. The security is not tight in the way you have to show identification cards. When you have entered the gated community you experience a totally different feeling than in the city. It is very quiet and nice environment compared to hectic pace of the city and the roads.

Photo 2: Entrance gated communities (Authors Tim & Bas).

A disadvantage of these communities is the lack of contact you have with other residents. Most of the residents live their own life and in some way it is a kind of ghost city. In the morning everyone leaves for work and returns late in the evening. During the day the community is very quiet and you only see the maids and gardeners.



Photo 3: Impression gated communities (Authors Tim & Bas).



Because they are built so quickly, the quality of the villas is often very poor. For example, it is common for foundations to be bad and for cracks to appear on most walls. Also the finishing and materials used for those houses are not comparable to international standards. When it is raining the water enters the villa through the windows because they are not fixed in properly. Maintenance of all villas, public facilities and the whole area is for the responsibility of the developer Emaar. So when there is something broken you can give them a call and they will take care of it, with or without costs.

Photo 4: Impression gated communities (Authors Tim & Bas).

The facilities in these communities are mostly very good as you can see in the pictures. There is always a small shopping centre where you can buy the much needed things. Other facilities which are available are a swimming pool, BBQ places and sport facilities.



Photo 5: Facilities gated communities (Authors Tim & Bas).



In this picture you see the swimming facilities we had in The Springs. These were located in the centre with all the villas around it for easy access.

Photo 6: Facilities gated communities (Authors Tim & Bas).

5.6.4 What is useful for the Netherlands

What we have seen and experienced in Dubai is that in some way the community approach could work as a new urban development approach in the Netherlands. Our personal experience was limited to residential gated communities by ourselves but we read about the other types of communities. If we look to our case project for the realisation of a science park at our university campus we could use the following method: The project area should be defined and a private investor takes care of the development, construction, general facilities and maintenance of the whole area. The government should only give general input on the regulatory framework regarding where the development can take place and leave the exact completion to the private investor. By doing this the investor can develop an economical, sustainable and attractive project that can satisfy the demands from the market.

An important aspect here is trust. In Dubai we have seen that private companies can achieve an equal quality level that meets the demands of the municipality. We see here that it is not always necessary for the municipality to enforce regulations when the development takes place by a private company. A private company also knows that when they are known for offering low quality, customers stay away and there are no revenues.

The whole development should focus on one specific business segment only. Then you can attract all kind of companies that are related to that particular business segment. It is also possible that an investor offers the established companies a list of services which are provided in the area and where they can make use of these services.

Two important conclusions from the article of Landman [30] are:

- There are several critical concerns and indications that gated communities have the potential to negatively impact the goal of urban sustainability.
- Recognising that urban sustainability is one of the goals for urban planning and management, all urban development must be considered in relation to the dimensions of urban sustainability. Within this framework, the appropriateness of gated communities as a type of development for the urban future needs to be carefully considered.

We can reflect these conclusions on the gated communities in Dubai to see what kind of impact gated communities have here on the urban development.

- It accentuates the difference between the high income and low income group;
- It closes down a large area of the urban infrastructure of the town. This has an impact for the mobility of people who do not live here and emergency services who have to drive around these areas because they cannot pass through;



5.6.5 Conclusions

The use of gated communities and communities developed by private companies are observed in the urban development of Dubai. Private companies are also responsible for the maintenance, services and facilities available to the tenants in the community. Revenues for the private companies who developed these communities are earned over a long period of time. Therefore it is necessary that they focus on a high level of quality and long-term sustainability of the community. The decision to build these residential communities is taken by the government. After decision-making, the government sets up a regulatory framework for these developments. After this, private companies are responsible for the development and implementation of the project.

5.7 Outcome symposium and case studies through expert interviews

5.7.1 Introduction

In chapter 4 we introduced our research methodology. We focused ourselves on the organisation of a symposium and different case studies through expert interviews and on-site visits. In chapter 4 we explained how we organised these methods and our expectations beforehand. In this chapter we will explain the outcome of our research methodology and if our expectations became reality.

5.7.2 Symposium

By starting the morning session with a short 'game theory' we achieved an open atmosphere between us and between our guests. This resulted in good discussion sessions with recent examples from the professionals and academics from Dubai and the Netherlands. This is what we expected in the end. After the symposium we summarised the conclusions for each discussion session. The summary of the presentations and the discussion sessions can be found in appendix 'Value Creation Through Sharing Knowledge In Urban Development'. Because of this symposium we got a better understanding about Dubai's urban development approach.

After the symposium we talked about our conclusions on the Dubai Eye Radio show, presented by Siobhan Leyden and broadcast by Arabian Radio Network in Dubai. We were live on the show with Siobhan Leyden on Sunday the 4th of February from 12.10pm till 12.45pm. The Editor-in-Chief of *Property World* magazine, Andy McTiernan, also joined us on the radio show. Mr. McTiernan also attended on our symposium.

We translated our conclusions into an article (see appendix 'Drawing on Dubai') and the article was published in the March edition of *Property World Middle East* magazine. Writing this article was only possible by obtaining first hand information. As a conclusion we can say that all our expectations for this symposium were feasible and achieved and gave us more input for this report.

5.7.3 Case studies through expert interviews

To understand more about Dubai's urban development approach and the process from project initiative to project exploitation we reviewed different case studies. The project studies were TECOM Free Zone, Dubai Festival City and gated communities The Lakes and The Springs.

With all of the projects it was possible to have an on-site visit. We visited TECOM Free Zone by ourselves, Dubai Festival City with a development manager and we lived in two gated communities during our stay in Dubai. About these on-site visits we can say that the information was beneficial to our Dubai analysis. From our own experience in the gated communities we can say how the project developer is taking care of central facilities and maintenance of the project.

We also conducted interviews for the TECOM Free Zone project and for Dubai Festival City. These interviews have allowed us to describe the urban development process in terms of decision-making in different phases. This was the insight information we needed and where we focused our questions (see appendix 'Analyse Case Studies'). Our aim was to study about more projects in depth but that eventually proved impossible. The transcription of the interviews, together with the available literature in the office of CB Richard Ellis took more time than we expected. The time and effort to arrange an interview was also an important factor.

In general we can conclude that we have met our expectations about the case study projects together with the expert interviews, but our aim was to review more case studies. The result of an analysis about more case studies would have given us a more balanced analysis about decision-making processes in different projects. Still, we are satisfied with the number of case studies and the information that came out of it to apply in this report.

6. Conclusions Symposium

As Masters Students of Construction Management and Engineering we organised the symposium: “Value Creation Through Sharing Knowledge In Urban Development”. For our graduation project we were in Dubai to do research about urban development. In the Netherlands we have a stagnating urban development market. How can the Netherlands improve? Dubai’s entrepreneurial approach is used as a best practice. At our symposium we discussed the urban development approaches in Dubai and the Netherlands. Below we will describe our conclusions (see also our published article ‘Drawing on Dubai’ in the March edition of the *Property World Middle East* magazine as appendix).

Dubai is getting ready for more overall planning in urban development projects. After the entrepreneurial approach we saw in the start-up phase, it is ready to implement specified laws and regulations and risk management to accompany the future developing process. As it stands today, when problems occur, they must be solved on the spot, which causes delays. Proactive planning done in advance can prevent most problems.

In Dubai we see a select group of people holding most of the ground positions. This is easy when developing a project because there are only a few stakeholders. This contrasts with the Netherlands, where ground positions are widely spread between investors (30 per cent) and private users (70 per cent). To obtain the required ground you have to go through compulsory procedures, which take a lot of time. The implementations of these aspects will show that projects can be finished on time and have the unique identification for good planning of urban development projects.

Development companies in Dubai take the responsibility and the leadership to nurture urban development projects. The developer has to develop and take care of the complete infrastructure. In the Netherlands, private companies develop the initial project, while the government operates as the long-term investor and is responsible for infrastructure, traffic and maintenance of the building environment.

We see Dubai has to deal with traffic congestion, as well as capacity problems on Dubai’s main road system. Demand is currently outpacing supply. More research and knowledge is needed to translate feasibility studies, where future growth and capacity analysis gets implemented into urban plans. In the end this will add value to the whole urban development process. The challenge is to find a balance between demand and supply as Dubai is currently going through the economic cycle which Europe has already experienced.

The urban development approach in Dubai has changed since the early years when the value of its economy was first initiated by creating employment, then by establishing the urban infrastructure. Today we see Dubai’s development is driven by investment.

Dubai is searching for the right model to use for future urban development. Religion is an important aspect in the development of Dubai, as are the demands for good education, healthcare and family life. In comparison to the Netherlands, Dubai’s developers are willing to make mistakes, learn from them, and move on very fast.

To ensure stability for future development, Dubai is attracting international investors for long-term investments. Dubai’s economy has been based on the construction market and trading since the early days. In the future, however, the construction market needs to be replaced by high level services and intelligence. This will allow Dubai to develop a sustainable urban development plan that is ready for the future.

As part of our research methodology we are studying the outcome of different expert interviews, case studies and scientific papers. We can already give some conclusions. We had an interview with a prominent member of The Executive Office that helped us understand the Dubai Strategic Plan (DSP) 2015. Two days later on the 3rd of February His Highness Sheikh Mohammed Bin Rashid Al Maktoum unveiled his plans in a presentation to the public. This strategic plan sets out the strategic approach which focuses, among other things, on Dubai’s urban development sector. The objectives in the previous plan for the years 2000 till 2010 were already completed by the end of 2005. This is dramatically different than in the Netherlands, where achieving consensus with all involved participants is our starting point, which

takes a lot of valuable time. On average the planning process for an urban development project takes about eight years in the Netherlands - in Dubai it takes only five years to complete an entire plan! The Netherlands now wants to reduce the time for the planning process by 20 per cent by the end of the year 2020.

To accelerate the urban planning process we can see that the project initiatives, responsibilities and leadership come from the Dubai government; the private sector is also becoming a more active and involved partner. The role of the Dubai government is what we call an 'entrepreneurial approach', in that it is accessible to foreign investors, consultancy companies and other institutions because of laws and regulations that are changing to more international standards.

In the Netherlands we see a drawback from the government, because the initiatives and leadership are expected to come from private companies. To accelerate the process for complex urban and industrial development projects we could manage this governmental system in a more proactive way. It could be run more as a business with entrepreneurial approaches to accelerate and contribute to the development of those complex projects.

For the complete summary of the symposium, see appendix 'Value Creation Through Sharing Knowledge In Urban Development').

Note: The conclusions of this symposium are based on the discussions we had with all attending professionals at the symposium on the 30th of January 2007 in The Emirates Towers, Dubai. The conclusions are based on what has been discussed in our symposium. The conclusions are formulated by the authors of this summary, Tim van Helmond and Bas van Montfort.

7. What can the Netherlands learn from Dubai?

7.1 Introduction

In this chapter our conclusions from previous chapters will be translated to lessons for the Netherlands. These lessons are the input for our business organisation model presented in chapter 8.



Scheme 8: From research question to lessons for the Netherlands (Authors Tim & Bas).

With our model we present a new urban development approach for the Netherlands that will help accelerate the process. Our model is examined by different expert institutions from the Netherlands and the result of that is written in chapter 9.

7.2 Lessons for the Netherlands

From chapter 5.1 with the use of expert interviews, literature and our symposium we can say that: In general we see that the role of the Dubai government as an entrepreneurial start up configuration is a key factor for the urban development approach in Dubai. The Executive Committee is the most important establishment for His Highness and his different roles in Dubai and for the UAE. In addition to determining Dubai's vision and objectives, His Highness works with Dubai government to decide what, when and where future development will take place.

The role and attitude of Dubai government challenges semi-governmental and private companies to move to higher levels of competitive performance. The laws and regulations are set by the government as initiator on a high level basis and the private sector has the knowledge and expertise for urban and industrial planning.

General lesson 1:

The whole governmental system must implement a more entrepreneurial approach to challenge the private sector.

Translation to the situation in the Netherlands:

With an entrepreneurial approach the government is challenging the semi-government and/or private sector for urban development projects. Especially when urban development projects are of national economic importance, the government and private business organisations should take an entrepreneurial approach to nurture these projects together. Developing these projects in a short period of time and in such a way that they parallel market demand and the National government's future strategic plan requires long-term strategy and long-term policy. The government should set up laws and regulations on a high level base (a regulatory framework) and rely on knowledge and expertise of the private developers.

From chapter 5.2 with the use of expert interviews, literature and our symposium we can say that: Dubai wants to become a global hub in tourism, business and living. To achieve this goal they formulated the strategic plan containing these objectives. They are focusing on different aspects that need to be well developed to support and have an effect on the strategy.

The first DSP of 1996 included five different clusters. Of these, the goals for trade, transport, tourism and manufacturing have generally been realised. The last cluster, higher level services, is under development and still needs a lot of attention.

General lesson 2:

The National government should develop a long-term strategy with a long-term policy based on different economic pillars of national importance.

Translation to the situation in the Netherlands:

The National government should present the strategic plan for the next ten to 20 years and define the economic pillars for urban development in the Netherlands. These projects of national importance should not be influenced by the four-year political cycle and changes in budgets and policies. Instead, they should be separate entities that are not tied to any one political party.

From chapter 5.4 with the use of expert interviews, literature and our symposium we can say that: Porter's cluster strategy is implemented in the Dubai Strategic Plan. The cluster strategy is based on a long-term vision and strategy with a focus on urban development. All the initiated urban development projects are connected to one or more clusters. As a result each project will add value to Dubai's economy.

General lesson 3:

Porter's cluster strategy should be implemented in the strategic plan of the Netherlands and the urban cluster developments can support the defined economic pillars.

Translation to the situation in the Netherlands:

Porter's theory about clustering should be implemented in the Netherlands. In the past we have seen the implementation of 'T-Zones' in the Netherlands. Those T-Zones were developed from a poverty perspective at that time. The idea behind the cluster developments in Dubai is a government focusing on economic growth. That is a different perspective. A marginal note we have to make is that the laws and regulations applied to cluster development projects in Dubai could be in conflict with our European instructions defined in Brussels. A follow-up study could give more insight in the opportunities of cluster developments within Europe. The cluster project focus should have an international dimension for a follow-up study to financial markets and transparency.

We see a stagnating market in 'De Randstad' and in 'Noord-Brabant'. The semi-governmental organisation BOM says there are opportunities for clustering in the province Noord-Brabant. The BOM is focusing on healthcare development as a cluster development. Large companies like Philips and Akzo Nobel are based in this province. By taking one step backwards, we can bring acceleration and growth to this stagnating market. However, it will require the National government to collaborate with the private sector to create a long-term strategy.

From chapter 5.5 with the use of expert interviews, case studies and our symposium we can say that: The private business organisation TECOM Investments, as part of Dubai Holding, is established within defined boundaries to develop the business communities DMC, DIC and DKV with a clear vision and strategy. Plan development and plan implementation are in one hand with TECOM Investments as the responsible business organisation. TECOM Investments is mandated for different aspects to develop the TECOM Free Zone, which guarantees a fast process development. In practice we see a lot of issues because different stakeholders are not participating in the process from the start of the project. The Government Authority is involved in the development process as supervisor and will report directly to The Executive Committee.

TECOM Investments is the long-term investor for this Free Zone and takes responsibility for leasing and exploiting the property. Other investments are done by local investors as well as foreign direct investors.

General lesson 4:

A business organisation is established within defined boundaries in the semi-governmental and/or private sector with the needed mandates for the development of a specific urban development project. Project development and project implementation are in one hand.

Translation to the situation in the Netherlands:

The BOM could have a role in establishing a business organisation with all needed mandates for the development of an urban development project of national importance in the Netherlands. To guard the progression and define laws and regulations, a Government Authority must be established for each project. This Government Authority should report directly to the responsible department within the National government.

From chapter 5.6 with the use of case studies, literature and our own experience we can say that: The use of gated communities and communities developed by private companies are observed in the urban development of Dubai. Private companies are also responsible for providing exploitation, maintenance and services and facilities to the tenants in a community. Revenues for these private companies are earned over a long period of time. Therefore it is necessary that they focus on a high level of quality and long-term sustainability of the community. The decision to build these residential communities is taken by the government, who then establishes a regulatory framework for these developments. It is then the responsibility of the private companies to develop and implement the project.

General lesson 5:

The developer takes the responsibility for exploitation and services and facilities in a community. The quality of the project is guaranteed because the developer earns his revenues over the long-term. Therefore the developer can be a long-term investor.

Translation to the situation in the Netherlands:

Exploitation and services and facilities should be carried out by one organisation that is responsible for balancing supply and demand for different facilities. The facilities have to possess the needed quality level, which will positively affect the liveability and sustainability of the project. As a result, these urban development projects will need less redevelopment over time.

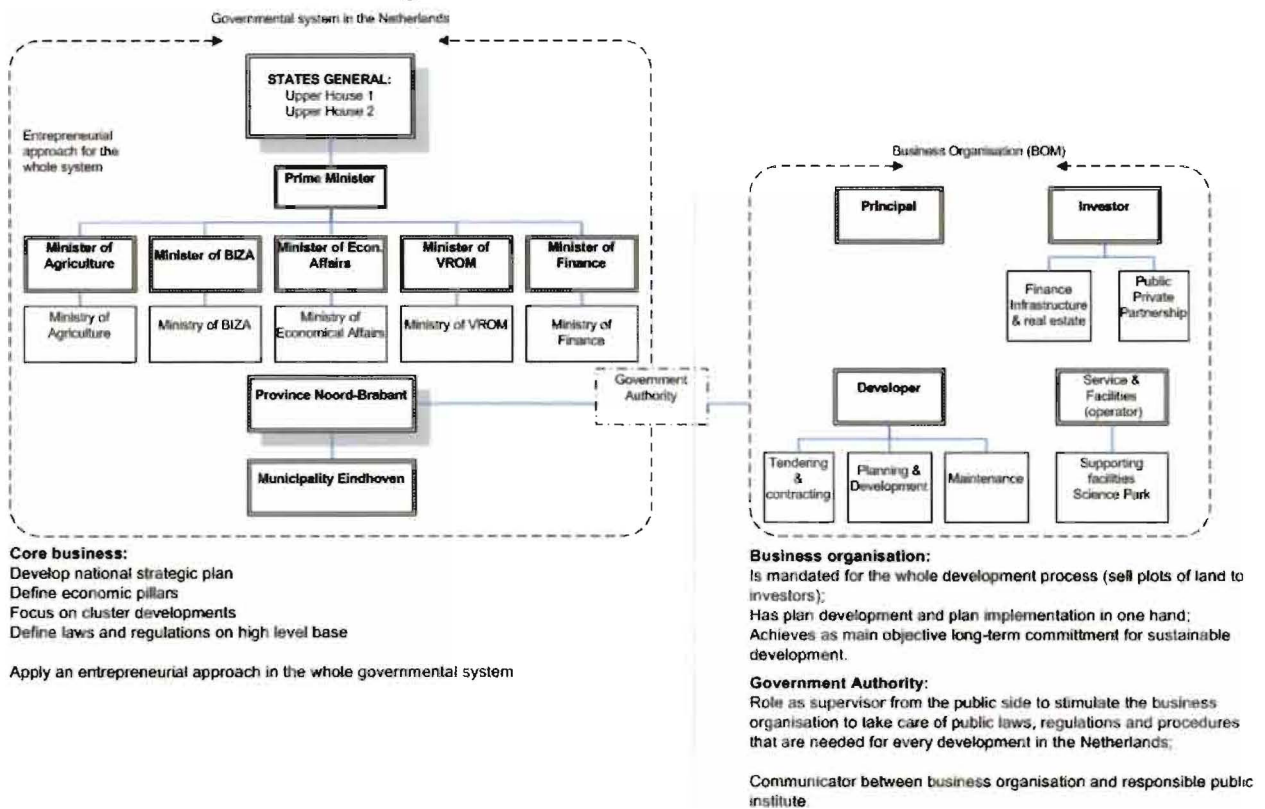
DESIGN PHASE

8. Case study in the Netherlands

8.1 Introduction

Our process model below will focus on private institutions and the (decentralised) government in the Netherlands. We present a 'general business organisation model' for urban development projects of national importance in the Netherlands. The second business organisation model is specified on the 'Science Park' case project. With our general model we want to deliver results for acceleration in the development process in the Netherlands.

8.2 General business organisation model



Model 2: General business organisation model (Authors Tim & Bas).

The governmental system in the Netherlands consists of three entities with their own specific tasks; National government, province and municipality (see model above). Derived from our Dubai analysis we defined the role of the different entities in our governmental system.

We look at the development of the Science Park in a general way. We assume that the plot of land is in governmental ownership. The government and private parties took the decision to develop the Science Park as knowledge based project of national importance.

The Government Authority defines laws and regulations for this specific project. A private development company can operate and develop this project. This private development company is established with the input of the BOM (operating on province level) and is mandated to develop certain aspects, such as:

- Project management;
- Financing;
- Tendering;
- Urban planning and selling plots of land;
- Exploitation.

Because this private development company is operating without interference by the government, the project can be developed in a short period of time and respond to the economic demands of the market.

In general some points of attention for the different governmental levels:

National government: The National government should focus on a national strategic plan that focuses on urban development and industrial area development on the long-term. This plan shouldn't have a direct relation with the four-year political cycle in the Netherlands. One of these pillars can be the development of a knowledge based economy. Our science park case project as an example could be a project of national importance.

Furthermore, the National government should take the initiative to implement Porter's cluster strategy; as clusters can influence competition in three ways (see chapter Cluster Strategy). In the case of Dubai, we have seen that cluster developments attracts more international business which is beneficial to their economy.

Province "Noord-Brabant": The province should focus on the development of laws and regulations on a high level base to attract investors to main projects that are defined by the National government. Another task is to coordinate the implementation of the strategic plan on province level and municipality level.

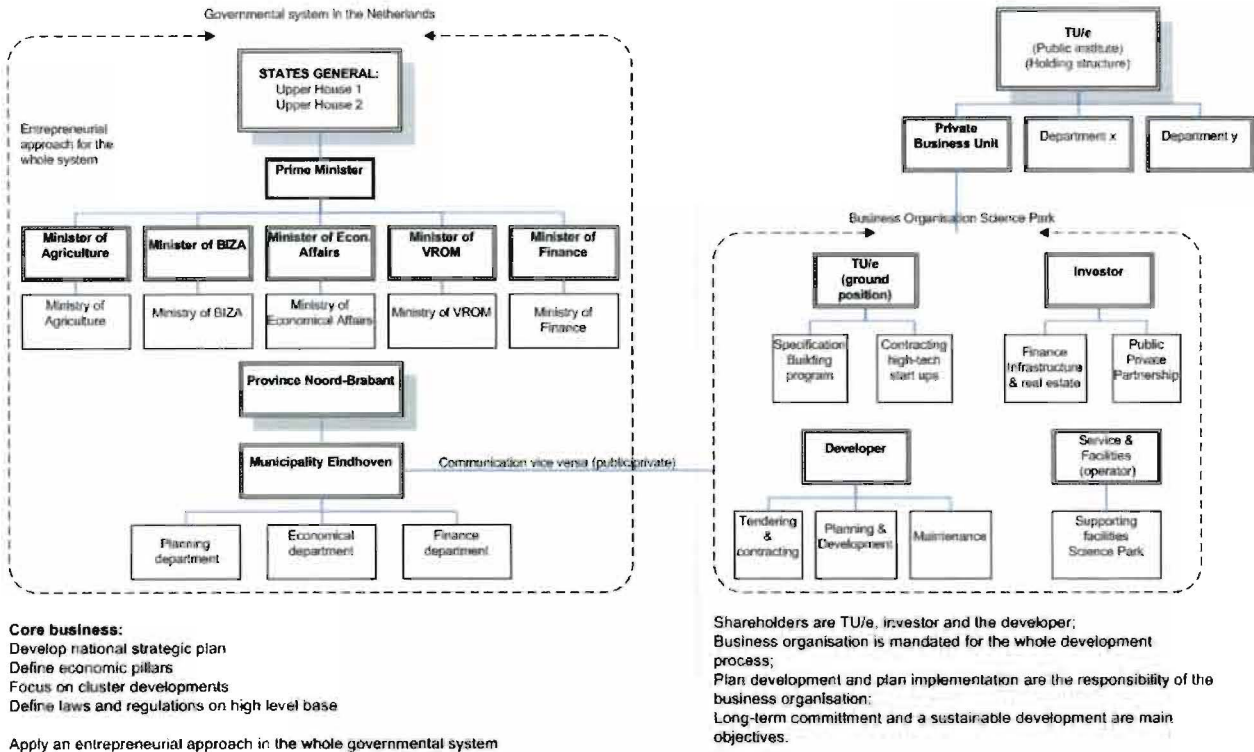
Municipality Eindhoven: For the whole governmental system, including the three different layers, there must be a more entrepreneurial approach to challenge the private sector. In terms of the proposed science park, the municipality Eindhoven can implement her entrepreneurial role by challenging the TU/e to develop this project in the area of knowledge and innovation. This is justified because the outcome of this new urban development project can be of national importance. The TU/e organisation owns the plot of land and can develop the 10 hectares within the boundaries of the zoning plan developed by the municipality Eindhoven. The zoning plan allows the development of education and research related real estate. The overall objective of municipality Eindhoven is to succeed in developing enough projects that are beneficial to the strategic plan of the National government. This means the government also has a role in these developments.

In general our advice for the governmental system is to run it in a more entrepreneurial way. To be effective and have the same approach as in the private sector, an entrepreneurial method should be implemented in the whole system and not only within municipality Eindhoven.



Photo 7: Aerial view of Science Park development location (source: Google Earth, March 2007)

8.3 Science Park business organisation model



Model 3: Business organisation model 'Science Park' (Authors Tim & Bas).

TU/e holding structure: The TU/e is a public institute. Within the holding structure of the TU/e it is possible to develop a new business organisation called "Business organisation Science Park" as a private holding company. This will require the TU/e to not sell the plot of land. As the principal, the TU/e will have the authority to develop this science park. In this role, one of its aims will be to attract high tech start up companies to the science park. Other developments could include test facilities (laboratory etc.), research and technology institutions, public private collaborations and business unit's facilities for small companies. This is in synergy with all other activities that are deployed at the TU/e. Primary attention inside the TU/e developments are related to research, development and innovation.

The business organisation Science Park is established by the TU/e, investor and developer. These three shareholders guarantee a long-term commitment and sustainable project development. In other words, the business organisation Science Park is a private company owned by three shareholders. Each of the three shareholders has their own tasks and responsibilities (see business organisation model 2). The task of the TU/e is to develop the specifications for the building program, including which facilities are to be developed on the plot of land. Their second task is to contract the high tech start up companies. When we look at the decision-making process during the development of the Science Park, the TU/e has an important role. While the final decisions made during each step are the responsibility of the TU/e, each decision must be clarified with a contract between the principal, investor and developer. The responsibility of the investor is to set the financial boundaries. For financing this Science Park there are more possibilities. We assume that public subsidies for the development of the Science Park will be part of the financial feasibility. Other investments must be obtained from the private sector. A second option is that a bank or institutional investor finances the real estate. Meanwhile, the developer has the responsibility for planning and development, tendering and contracting and maintenance. Tendering and contracting is a main task of the developer because he has the knowledge and experience. Infrastructure and real estate within the Science Park will be maintained by the developer as well. Important facilities within the Science Park are a presentation room, copy shop, secretarial and cleaning services, cafeteria, small supermarket and a small fitness facility. All these facilities exist to support the high tech start up companies. The exploitation of these facilities will be the responsibility of a Service and Facility company, the operator. Just before the project is completed and the high tech start up companies arrive, the operator will be recruited.

In general: The development of this Science Park is a unique project of national importance. The local government and private business organisation Science Park should develop an entrepreneurial approach to develop this project in a short period of time. It should match with the economic demand from the market and the future strategic plan of the National government, particularly in terms of long-term strategy and long-term policy. In the case of the Science Park, the principal (TU/e) has full ownership over the plot of land and is therefore a critical stakeholder in the process. To encourage urban development projects like this we propose that the targets for the province Noord-Brabant and the municipalities are developed by a long-term vision and strategy instead of the four year political cycle that we see right now in the Netherlands. For a successful development in a short period of time it is necessary that this project will not be delayed by governmental laws, regulations and procedures.

8.4 Answer central research question

Sub questions:

- What are the most important organisational characteristics for urban development projects in Dubai?

The whole governmental system in Dubai implemented an entrepreneurial approach to challenge the private sector.

Business organisations are established within defined boundaries in the semi-governmental and/or private sector with the needed mandates for the development of a specific urban development project. Project development and project implementation are in one hand.

The developer takes the responsibility for exploitation and services and facilities in a community. The quality of the project is guaranteed because the developer earns his revenues over the long-term. Therefore the developer can be a long-term investor.

- What are the most important process characteristics for urban development projects in Dubai?

The National government developed a long-term strategy and a long-term policy based on different economic pillars of national importance.

Porter's cluster strategy is implemented in Dubai's strategic plan and urban and industrial cluster developments are supportive to defined economic pillars.

Central research question:

"What are the key characteristics for a business organisation to accelerate the urban development process in the Netherlands with the input of a practice approach from Dubai, and how can this be utilised?"

We refer to chapter 9 for the answer to our central research question.

Discussion:

Dubai's urban development approach is not 'the perfect model' for the urban development process in the Netherlands. We can say that Dubai's urban development approach is a useful model to redesign the governmental approach and with that the urban development process in the Netherlands"

We have to take into account that the economic, political and the governmental system are different in the Netherlands.

9. Final conclusions

9.1 Experts in the Netherlands

Our model is examined by different expert institutions from the Netherlands in this chapter.

- TU/e Innovation Lab; Director Wim Bens (April 2nd);
- AT Osborne; Senior Manager Marcel van Rosmalen (April 3rd);
- BOM; Head industrial areas Rob Gordon and Process Manager industrial areas Jeroen Krijgsman (April 3rd);
- Municipality Eindhoven; Head Economical Affairs Albert Kivits, Account Manager international promotion & acquisition Dré Boidin and Account Manager business relations Peter Vloet (April 4th).

9.2 Comments by experts

Arup Major projects, Dubai

On Thursday 29th of March we have had our expert presentation in Dubai with Maarten Reenalda from Arup Major Projects. His main conclusions about our new process model are:

The model presents a new entrepreneurial approach for the governmental system in the Netherlands. The ideas from Tim and Bas about the National government that should develop a strategic plan based on different economic pillars for the Netherlands in combination with cluster developments are really a new approach.

A business organisation as presented in the model of Tim and Bas which is mandated for a fast development is positive to connect to actual economic demand for urban development projects in the market. Its clear that the role of a Government Authority is to be supervisor from the public side and stimulate the business organisation to take care of public laws, regulations and procedures that are needed for every development in the Netherlands.

In today's situation the National government in the Netherlands is taking care of infrastructural developments. It is a new positive perspective by Tim and Bas that the government in the Netherlands should focus on their core business, defining laws and regulations on a high level basis to stimulate urban development initiatives from the private market which are focused on economic pillars and as a result of national economic importance. The private sector has the knowledge and experience for the development of new projects and they can develop the infrastructure as well.

Expert institutions, the Netherlands

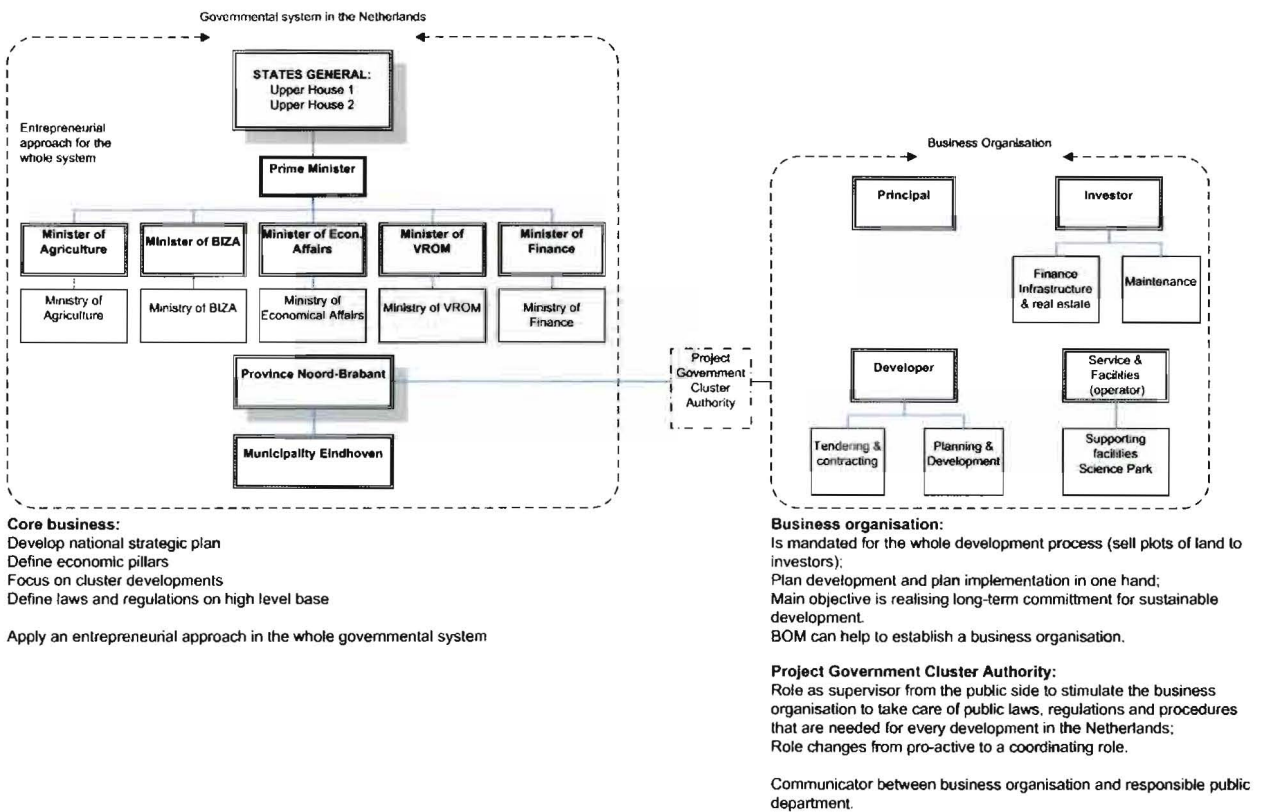
In this paragraph we present the suggestions and recommendations given by the experts we have visited between the 2nd till 4th April in the Netherlands. We didn't split up the suggestions and recommendations by each institution because we heard sometimes the same questions by the different experts. Below the enumeration of suggestions and recommendations:

- Put the Government Authority in the business organisation. By doing this you make the Government Authority together with the other participants in the business organisation responsible for the success of the project;
- The Government Authority should consist of people from the government which have the mandates to make important decisions for a fast continuation of the project;
- Establish a Government Authority on a project base for each individual cluster and create for every project another "Project Government Cluster Authority";
- For the Government Authority it is important that there is clear what the joint interests are, who is mandated for what and which persons take place in this authority;
- The innovative aspect of the Government Authority in our business model is that we can achieve a fast and direct way of communication between the business organisation and the involved authority within the government;
- The role of involved stakeholders will change during the progress of the project. All stakeholders will be involved in the process till the end of the project and there is no possibility to step out of the project earlier;
- It is important that all the assigned mandates for the involved persons in the Government Authority covers the same period of time;

- Sometimes it is better not to integrate the Government Authority into the business organisation. There is a change that through contradictorily interest the representing person from the government undermine there own laws and regulations;
- During the whole process the Government Authority shifts from a pro-active role in the beginning to a coordinating role later in the process.

9.3 Feasibility of our model

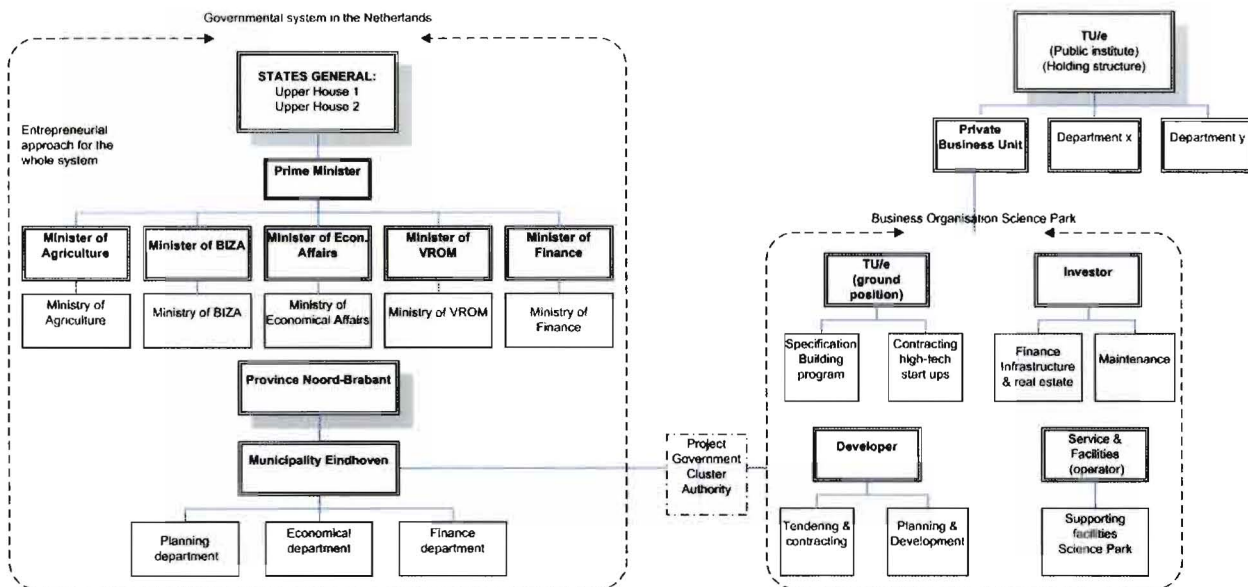
With the suggestions and recommendations from the experts we adjusted our process model towards a more reliable and workable model. Below you can see the adjusted models. Most important change in both models is the establishment of an independent Project Government Cluster Authority between the business organisation and the government. This authority takes care of direct communication between the business organisation and the involved authority within the government. The Project Government Cluster Authority consists of people from the concerned level of the government and business organisation. It is important that these people are mandated for the project by their own organisation. This authority further takes care of the communication between the National government, the province and municipality. It is important that the Project Government Cluster Authority poses some resources to active stimulated developments. You can think of money, clustering etc. Further research after the implementation and use of these resources can be done in a follow-up research.



Model 4: New general business organisation model (Authors Tim & Bas).

Changes compared to our first model

- Project Government Cluster Authority operates as an independent organisation between the government and business organisation. This authority takes care of a direct communication between the two organisations;
- Professionals in the Project Government Cluster Authority come from the government as well as the business organisation and are mandated by their organisation;
- The maintenance part which was first located by the developer is shifted to the investor. This because an investor attach importance to a good maintenance of his property. After a few years the investor can decide to contract out the maintenance to a service and facility operator.



Core business:
 Develop national strategic plan
 Define economic pillars
 Focus on cluster developments
 Define laws and regulations on high level base
 Apply an entrepreneurial approach in the whole governmental system

Shareholders are TU/e, investor and the developer;
 The role of the different shareholders is changing during the development process.
 Business organisation is mandated for the whole development process;
 Plan development and plan implementation are the responsibility of the business organisation;
 Long-term commitment for sustainable development is the main objective.

Model 5: New Business organisation model 'Science Park' (Authors Tim & Bas).

This process model operates almost the same as the general process model and is worked out for the set up of the business organisation for the Science Park on the TU/e-campus. Because we are focusing on the strategic set up of a business organisation we didn't work out in detail the exact completion of the different involved organisations. This can be done in a follow-up research.

The general conclusion after our visits by the experts is that our model can deliver a contribution to a new approach of urban development projects in the Netherlands. Furthermore, it can be used to start a discussion about the improvement of the whole urban development based on influences we have seen in Dubai.

9.4 Personal reflection to our graduation study in Dubai

Personal reflection of Tim van Helmond

First of all this foreign adventure for me was the most spontaneous and impressive one in my life. The decision in the start up phase to develop our graduation study by the two of us was the best choice we have made. The participation from four different companies in our research gave me strength and trust to continue, step by step. The experience to develop this research with a self organised symposium, different case study projects, our network in Dubai, a published article and presenting the conclusions of our symposium on the Dubai radio was impressive.

Traveling in the UAE and Oman gave me an introduction to different cultures in this part of the world. The landscape is changing constantly even in the middle of the desert with the changing colors of the sand hills. Different tours through Deira and Bur Dubai along the creek gave me a clear view about trading and the importance of trading for Dubai. The story of Dubai explained in the Dubai Museum is impressive from the time before oil was discovered and the rapid development of Dubai as a global hub nowadays.

"In the last year I experienced that most important things in life are a warm family, friends, integrity, beauty and love, and the road towards my goals was of more significance than reaching them".



Personal reflection of Bas van Montfort

For me this foreign graduation adventure was a great end of mine construction education at the University of Technology Eindhoven. It was a unique experience to see, feel and study in the biggest construction city called Dubai. I have seen and learned how project management and process management is done in this country. I have also seen the big difference there are in all kind of ways between Dubai and the Netherlands.

The way to collect data for our research was different compared to the Netherlands. We are used to collect this from libraries, internet or databases. In Dubai this was not possible because there are very less libraries and databases available. That is why we had to be creative to get the required data for our research. So this foreign adventure taught me a lot more than when I had done my graduation in the Netherlands.

I can say that these six months has widened my knowledge on all different aspects, like cultural, social and education. I am convinced that this will be very helpful in mine future years as construction engineer.

10. Literature

10.1 Literature resources

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10.2 Experts and companies

- Arup Gulf Ltd, UAE, Maarten Reenalda MSc, operations manager;
- AT Osborne, the Netherlands, Marcel van Rosmalen, senior manager.

- BOM, Rob Gordon, head industrial areas;
- BOM, Jeroen Krijgsman, process manager industrial areas;
- British University in Dubai, UAE, Dr. Mohammed Arif, lecturer – project management, visiting lecturer – University of Manchester, U.K.

- CB Richard Ellis Dubai, Middle East, Nicholas Maclean, managing director;
- CB Richard Ellis Dubai, Middle East, Simon Townsend, director;
- CB Richard Ellis Dubai, Middle East, Iris Dinu, research director;
- CB Richard Ellis Dubai, Middle East, Sophie Llewellyn, associate director;
- Chamber of Commerce and Industry Dubai, Richard Wynne-Jones, Project Consultant and Client Representative;
- Chamber of Commerce and Industry Dubai, Dalal Zaal Khalifa Al Marri, coordinator information services.

- Deerns Consulting Engineers, Middle East, Eng. Huub C.J. van Rooij, MSc;
- Deerns Consulting Engineers, Middle East, Eng. Ray Karbor, MSc;
- Dubai Municipality and Statistical Department, Juma Abdulla Alhosani, Head of Trade and Production Statistics, Economic and Finance Statistics Section;
- Development Board, UAE, Esra Alsamarr'i, administrative assistance – properties dept. director.

- Government of Dubai, Department of Economic Development, Dr. Abdullah Mohammed Al Hassan, economic affairs division;

- Municipality Eindhoven, Albert Kivits, head economical affairs;
- Municipality Eindhoven, Dré Boidin, Account Manager international promotion & acquisition;
- Municipality Eindhoven, Peter Vloet, account manager business relations.

- The Executive Office Dubai, UAE, Mohamad El-Hage, Director of Strategy;
- The Executive Office Dubai, UAE, Anisa Al Sharif, associate project manager, policy and strategy department;
- The Netherlands Business Council, UAE, Titus D.F. van der Werf, chairman 2005-2006;
- The Netherlands Consulate General Dubai, UAE, Mr. Bart Twaalfhoven, consul general;
- TU/e Innovation Lab, Director Wim Bens.

- University of Technology Eindhoven, the Netherlands, Prof. dr. ir. Wim F. Schaefer;
- University of Technology Eindhoven, the Netherlands, Prof. dr. Leo H.J. Verhoef;
- University of Technology Eindhoven, the Netherlands, ir. Erik G.J. Blokhuis.

- Van Oord Gulf FZE, UAE, Pieter van Oord, director;
- Van Oord Gulf FZE, UAE, Peter Meijer, commercial manager;
- Van Oord Gulf FZE, UAE, Maurice de Kok, operations manager.

10.3 Presentations, exhibitions and conferences

- Cityscape Exhibition 2006, <http://www.cityscape-online.com>, 4th December to 6th December, Dubai International Exhibition Centre. This is the international property and investment exhibition.
- Presentation and launch of Downtown Jebel Ali Project, real estate developer Limitless, <http://www.limitless.ae/content/default.aspx>, 15th November 2006, Madinat Dubai.
- INDEX Exhibition 2006, <http://www.index.ae>, 8th November to 11th November, Dubai International Exhibition Centre. This Exhibition is for international corporations, industries, and investments from various markets.
- The Big 5 Exhibition 2006, <http://www.thebig5exhibition.com>, 28th October to 1st November, Dubai International Exhibition Centre. This exhibition is the largest meeting in the Middle East for constructing and contracting.
- The Netherlands Business Council meeting, 15th October 2006, Emirates Towers Dubai. Presentation about "*The current security environment of the Gulf region*" by dr. Christian Koch from The Gulf Research Centre.
- The Netherlands Business Council meeting, 12th November 2006, Emirates Towers Dubai. Presentation about "*Corporate Participation*" by Mrs. Habiba Al Marashi chairman of the Emirates Environmental Group.
- The Netherlands Business Council meeting, 18th February 2007, Emirates Towers Dubai. Presentation about "*Recent changes in UAE laws*" by Mrs. Hélène Mathieu, barrister & solicitor.

10.4 Photos

- Photo on the cover is taken from Dubai Marina, *La Riviera Tower* with an overview of Sheikh Zayed Road.

Our most up to date supporting information is available on our project website till July 2007:

www.TimenBasinDubai.com



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