



**Contact person:** Berneth Koopman

Tel: Email: 011 559 3299 bernethk@uj.ac.za





# SUSTAINABLE BUSINESS AND ECONOMY FOR SMART CITIES

REPORT

**JULY 2019** 







# TABLE OF CONTENTS

1	INTRODUCTION	5
1.1	BACKGROUND	5
1.2	PURPOSE OF REPORT	5
1.3	STRUCTURE OF REPORT	6
2	WELCOME DINNER	7
3	DAY 1 – THE ANGOLAN HISTORY, CULTURE AND CONTEXT	8
3.1	INTRODUCTION	8
3.2	FORTRESS OF SÃO MIGUEL	8
3.3	THE NATIONAL SLAVERY MUSEUM	9
3.4	KILAMBA AND ZANGO	
4	DAY 2 – RESEARCH DESIGN AND SMART CITIES	
4.1	RESEARCH DESIGN AND QUALITATIVE RESEARCH	
4.2	WORKSHOP ON DESIGN THINKING	
4.3	SPEAKER 1: URBAN PLANNING	14
5	DAY 3 - INFRASTRUCTURE	15
5.1	SPEAKER 1 – CITIES FOR CITIZENS NOT FOR CARS	15
5.2	SMART CITIES - THE ROLE OF TECHNOLOGY	
5.3	VISIT TO THE MUSEUM OF COIN	15
6	DAY 4 – SOCIAL, BUSINESS AND ECONOMIC DEVELOPMENT	
6.1	SPEAKER 1 – SOCIAL ENTREPRENEURSHIP	
6.2	SPEAKER 2 - ECONOMIC PROSPECTUS OF ANGOLA	
6.3	SPEAKERS 3 – SUSTAINABLE CITIES IN A CIRCULAR WORLD	
7	DAY 5 – EDUCATION, POLITICS AND ETHINCS LAW	19
7.1	VISIT TO THE ANGOLA'S PARLIAMENT	19
7.2	SPEAKER 1 – ECONOMIC AND POLITICAL ASPECTS OF A SMART CITY	
7.3	SPEAKER 2 – TALKING ABOUT LUANDA AND SMART CITIES	20
8	DAY 6 – PRESENTATIONS	21
8.1	GROUP PRESENTATIONS	21
9	DAY 7 – CLOSING DINNER OFFERED BY THE EMBASSADOR	22
9.1	CLOSING DINNER	22
10	REFERENCES	23

## **1** INTRODUCTION

#### **1.1 BACKGROUND**

The University of Johannesburg International Student Society (UJISS), gladly engaged with the University of Groningen in Netherlands, to send students to join the Summer school in Angola. List of the students from the university of Johannesburg (UJ):

- 1) Kelvin Simão John
- 2) Maiara Luísa Francisco Gaspar
- 3) Vanessa Dinora Simões Torres Gomes
- 4) Eugênio Jelon Adelino Cassumula
- 5) Makaia Matondo Pedro

The team left South Africa on the 5<sup>th</sup> of July and returned on the 14<sup>th</sup>.

The summer school focused on building capabilities and business strategies for Smart Cities. During the summer school we explored some local issues, local perspectives and conducted research projects in small groups. The research results contributed to the model of building smart cities in Africa with a focus on capabilities development and the role of business, government and local communities. Students interviewed several experts in the field, visited the current infrastructure and acquired state-of-the-art knowledge about smart cities. The summer school took place in Angola concretely in Luanda which is the capital city. The course included Lectures and Speakers from different countries and focused in different fields of expertise.

#### **1.2 PURPOSE OF REPORT**

The purpose of this report is to provide the UJISS a cohesive information about what students were doing during the Summer School. It includes the learning outcomes in conjunction with experienced gained during the Summer School, in order for the UJISS coordinator accurately assesses the experience gained.

#### **1.3 STRUCTURE OF REPORT**

The report is structured in accordance of the Summer School programme, which follows:

- Section 1: Welcome Dinner
- Section 2: Day 1
- Section 3: Day 2
- Section 4: Day 3
- Section 5: Day 4
- Section 6: Day 5
- Section 7: Day 6
- Section 8: Closing Dinner

## 2 WELCOME DINNER

On the 6<sup>th</sup> of July 2019 the first day of the program, a welcome Dinner was organized, where the team and their roles were introduced to the students. Students from University of Johannesburg (South Africa), University of Groningen (Netherlands) and University of Agostinho Neto (Angola) gathered to change experience in different fields that they are studying.



Professional Team was formed with experts from different fields, and the team was formed as follow:

- Paulo Morgado : Professor at University of Groningen
- Jose Octavio Van-Dúnen: DEN at University of Agostinho Neto
- Carlos Keta: Professor at University Agostinho Neto

## **3** DAY 1 – THE ANGOLAN HISTORY, CULTURE AND CONTEXT

#### 3.1 INTRODUCTION

Angola is going through a tough time and to present a realistic and effective action plan, we needed to understand its history, culture and actual context. Thereafter a visit to key places to understand the history, culture and actual context of the city of Luanda, capital city of Angola, was conducted.

#### 3.2 FORTRESS OF SÃO MIGUEL

The fortress of São Miguel is located at the Luanda Bay, Luanda, Angola. It was the first fortress built in Angola by a Portuguese called Paulo Dias de Novais in 1576. Later in 1627 it became the administrative centre of slave traffic to Brazil. The fortress holds a lot of the Angolan history, its ceramic tiles tells the story of Angola and its different stages.



Fig. 3.2-1: Queen Nzinga Mbande, who fought for the freedom and stature of her kingdoms against the Portuguese



Fig. 3.2-2: The star right at the entrance represents Victory



Fig. 3.2-3: The view from the Fortress

#### 3.3 THE NATIONAL SLAVERY MUSEUM

The National Museum of Slavery is located in Morro da Cruz, Luanda, Angola. The museum was founded in 1977 with the objective of depicting the history of slavery in Angola.

The museum displays hundreds of items utilised in the slavery trade and was considered as one of the largest slave-traders on the African coast in the first half of the 18th Century.



Fig. 3.3-1: The slavery museum



Fig. 3.3-2: Where they used to baptise the slaves before sending them to Brasil



Fig. 3.3-3: The handcuffs used during the slavery era

#### 3.4 KILAMBA AND ZANGO

Luanda city was initially designed for 500.000 habitants, but right now is populated by 8 million habitants, therefore triggering off the need to decentralize the city. The Kilamba and Zango residential area were developed to move people of different social classes, respectively medium and low class, from the centre of Luanda to these expansion areas. Currently there is a lot to be done in these expansions of Luanda City.



Fig. 3.4-1: The Kilamba urbanisation



Fig. 3.4-2: Kilamba urbanisation, design for medium to medium-high class



Fig. 3.4-3: Zango urbanisation



Fig. 3.4-4: Zango urbanisation

## 4 DAY 2 – RESEARCH DESIGN AND SMART CITIES

#### 4.1 **RESEARCH DESIGN AND QUALITATIVE RESEARCH**

Hosted by Professor Paulo Morgado

#### 4.2 WORKSHOP ON DESIGN THINKING

The workshop was directed by Paulo Morgado, where he implementated a new way of thinking. Despiting the current situation of the city around us he encouraged us to think freely. During the workshop he incentivated the exploration of the question, finding user needs and insights, understanding the underlying network structure of our challenge.

Many participants do not have much experience in a creative way of problemsolving. Coming up with new and original solutions was not easy for them, then he implemented the use of colourful notepads where we had to express what would be a smart city for us and then come up with our own questions and ways to implement them.



Fig. 4.2-1: Formulating question with key features



Fig. 4.2-2: Question finalized

#### 4.3 SPEAKER 1: URBAN PLANNING

Cristina Camaro, a very well-known Angolan urban planner, was our speaker for day 2, she told us about Kilamba and Zango urbanisations that she was worked with and the concepts behind it. One of the difficulties found when building Kilamba was that Angolans do not like to live in high building, but because of the necessity this challenge was overcame.

It was mentioned the construction of the new airport which was stopped for period until now. Professionals are working on finding the problems of the airport, so that it does not cost more than what is already costing to the nation.

### 5 DAY 3 - INFRASTRUCTURE

#### 5.1 SPEAKER 1 – CITIES FOR CITIZENS NOT FOR CARS

Anacleto Melo, an Angolan Urban engineer, presented us the various challenges encountered in the Angolan transportations systems and the idea that one day we might overcome the air pollution that we encounter due to the excessive car usage.

The organization of the city constructions was also issued in the day, but mobility was one of the focus. It was suggested that the city should have more public transports instead of citizen cars which cause traffic, stopping people to move around. Solutions that were taken into consideration are from countries like South Africa and Netherlands.

#### 5.2 SMART CITIES - THE ROLE OF TECHNOLOGY

The questions that the student were supposed to elaborate was then presented to the class, and the key features of the main concern of smart cities were taken into consideration.

#### 5.3 VISIT TO THE MUSEUM OF COIN

The museum of coin is in the Luanda Bay. It has the history of the change of currency in Angola since the Portuguese colonial era, and has a display journey through the centuries into modern day independent Angola.



Fig.5.3-1: Group picture in front of the museum of coin and Angola's Central Bank



Fig. 5.2-2: The kwanza's notes used from 2016 to 2017



Fig. 5.2-3: The cents coin used in 1991

# 6 DAY 4 – SOCIAL, BUSINESS AND ECONOMIC DEVELOPMENT

#### 6.1 SPEAKER 1 – SOCIAL ENTREPRENEURSHIP

Victor Muzadi a social entrepreneur is a former basketball player who has started looking for young talents in sports, and giving them opportunity to have a tour overseas. He has shown that it is possible to make profit for the city out of sports. He himself is a living testimony to where sports can take us when done with passion, hard work and persistency.



Fig. 6.1-1: UJ team with Victor Muzadi

#### 6.2 SPEAKER 2 - ECONOMIC PROSPECTUS OF ANGOLA

Fabio Assuncão, economist from Angola National (Central) Bank brought the figures that pointed where Angola financially is and where is heading to. Angolan economy still relies on Oil and gas which makes 90% of the GDP, the country has international debts and more than 50% of the GDP is to pay the debts. Suggestion like diversification of the economy was introduced and it appeared to be the number one solution for the economic crisis Angola is in.

#### 6.3 SPEAKERS 3 – SUSTAINABLE CITIES IN A CIRCULAR WORLD

For more than 120 years, Dow has strived to create value through its diversified, market-driven portfolio of specialty chemicals, advanced materials, AgroSciences and plastics businesses.

The DOW team decided to join us and gave insights about what the company is currently doing. Plastic pollution was addressed to the team because it is one of the greatest challenges in the chemical industries. Dow is working with scientists and governments to solve problems concerning pollution. In countries like South Africa, they have a team that is working actively with the population on how to reduce plastic pollution.



Fig. 6.3-1: Professor Paulo Morgado with DOW team

# 7 DAY 5 – EDUCATION, POLITICS AND ETHINCS LAW

#### 7.1 VISIT TO THE ANGOLA'S PARLIAMENT

The parliament of Angola in Luanda is where important topics of the country are discussed. It is a well structure building with high technology. Deputies from different parties, sit together with the president of the parliament to solve the issues concerning the politics and wellbeing of each citizen. This fortress is an example that it is possible to build a smart city with professionals of the country and foreign expertise.



Fig. 7.1-1: Angolan Parliament



Fig. 7.1-2: Infrastructure of the buildings in each province that helps the parliament

#### 7.2 SPEAKER 1 – ECONOMIC AND POLITICAL ASPECTS OF A SMART CITY

Professor Carlos Feijó, a former minister started his class with a key question: Can we find a smart city in Africa continent? Further he pointed that education is a key factor to build a smart city. From his previous experience in politics he affirmed that it is challenging to build smart cities in African countries but excluded the impossibility. Angola still have a long way to go but with collective work Luanda can become a potential city for business.

#### 7.3 SPEAKER 2 – TALKING ABOUT LUANDA AND SMART CITIES

Professor Cesaltina Abreu, Head of Department of sociology at the Faculty of Social Science, University of Agostinho Neto.

It was noted that the expansion of the capital of Angola which is Luanda cause problems to be solved. In the province we find locations where urban areas are next to rural areas. It was also discussed that the solution of the problems Luanda is facing should be resolved involving both government and the population. The participation of Luanda habitants will enable to bring about an effective solution that will benefit everyone in the city.



Fig. 7.2-1: Entire group with the professors

## 8 DAY 6 – PRESENTATIONS

#### 8.1 **GROUP PRESENTATIONS**

The class was divided into 5 groups with 3 participants and conclude with a presentation of how we can build a smart city in African countries. Questions were raised during the presentation and they were all answered by the well-prepared presenters. A collective picture was taken afterwards with the delegation from the three countries that participated in the summer school which took place in the first time in Angola, Luanda.



## 9 DAY 7 – CLOSING DINNER OFFERED BY THE EMBASSADOR

#### 9.1 CLOSING DINNER

The all team was invited to the residency of the ambassador of Netherlands in Angola. He personally introduced himself and described a bit of what the embassy does. They help the Dutch citizens living in the country concerning documentation and they provide Dutch entrepreneurs who want or are investing in the country with precise market evaluation.

The UJ team was well represented, it was an interesting experience that contributes to the development of west African countries. In 2050 the largest cities in the world are expected to be in Africa, and this summer course provided the necessary information on how to build smart cities in Africa.

# 10 REFERENCES

1. <u>https://drive.google.com/drive/folders/1GloFZmm6QrrvW21YlhLRoe64v77ZMSa8?u</u> <u>sp=sharing</u>