APPENDIX

Paola Montserrat
Bautista Gauna
Master Thessis
TU Delft, 2019

CHAPTER 14: ADDENDUM

Appendix A: Interview with experts on the field

	Who	What	Where
A	Pierre Mukadi Kaningu	PHD Student at University of Antwerp, Belgium - Diagnosis of malaria and sleeping sickness among diagnostic laboratories in Democratic Republic of the Congo.	Democratic Republic of the Congo
B	Jérémie Ilunga	Medical Biologist Laboratory manager at Programme National de Lutte contre la Trypanosomiase Humaine Africaine (PNLTHA)	Guinea
C	Dr. Skhumbuzo Mbizo	Veterinarian Parasitologist	South Africa
D	Dr. Yahaya Adam	Head of Tsetse and Trypanosomosis Control Unit of the Veterinary Services Directorate of the Ministry of Food and Agriculture	Ghana
E	Sakara Yakubu	Farmer & Animal Health Technician	Ghana
F	Sabine Liebenehm	Development and agricultural economics	Germany
G	Mr. Alirah Weyori	Development and agricultural economics	Germany

Interview Veterinary

Research topic

"What are the main needs in the context where Trypanosomiasis is develop?"

Introductory script

1. Thank the interviewee for taking part in the interview.
2. Inform the interviewee about the usage of the data collected
3. Confidentiality: stress the possibility for anonymity if desired. If anonymity is not necessary, ask for consent of being quoted. If consent for quotation is given, ask if it would be necessary to share the transcripts and/or quotations
4. Ask for consent to be recorded.
5. Offer that questions after the interview are always possible. Provide mobile phone number and email.
6. Start off with first part of interview protocol.

Hello! My name is Paola Bautista, I am a master student in Strategic Design at TU Delft University in Netherlands. For my graduation project I am working with Aidx Medical BV. The area I have decided to focus on the detecting the main needs in the context where Trypanosomiasis is developed.

I want to thank you for taking part in the interview; and I am interested to hear your opinion and experience on this topic, as it will be very valuable information. For the purpose of my project it will be really useful if I can quote some of the things you say today, in there. Is this okay for you? And would you like to remain anonymous if I quote you?

Can I audio record this conversation? Since I cannot make notes while we are talking!

Feel free to ask questions or interrupt me at any time if you need to. Let me know if you need to take a break at any point. If you feel uncomfortable with the interview just let us know, we can stop it anytime.

Ok, let's begin! This should take about 45 minutes to one hour!

Interview Guide

Part #00: General questions

1. Can you tell me about a little bit about yourself?

2. Who you are?
3. Age?
4. What do you do for living?

Part #01: Work day

1. Can you describe me a normal day?
2. What are your daily activities like?
3. What animals do you normally treat?
4. Do you treat livestock?
5. What are the most frequent diseases you treat for cattle?
6. How many times the week/month do they call you for African Animal Trypanosomiasis(ATT)?

Part #02: Disease Journey

Please, can you tell me a story about the last time you treated a case of trypanosomiasis?

1st Step Contact

1. What person contacts you when they have an AAT disease problem?
2. How did the person or farmer contact you?
3. Did the disease cow arrived in your medical facility or do you go to the farms?

2nd Step: Examination

4. What is the first step you do when you exanimate a cow?
5. What are the symptoms for AAT?
6. How do you make a decision to do an AAT test?
7. What AAT test do you do?
8. How do you do the AAT test?
9. Where do you do this AAT test?
10. How much time does an AAT involves?
11. How much money an AAT involves?

3rd Step: Treatment

12. What do you do when an animal has a positive or negative AAT test?
13. How many times a week or month a cow is tested with positive AAT?
14. How many AAT test in a week or month results negative AAT?
15. How expensive is to treat AAT?
16. How long does it take to treat AAT?

4th Step: Monitoring

17. What do you do after a cow is treated of AAT?
18. How do you monitor the incident of infection?

19. Do you create any report of infection for the district or government?
20. How often is the reinfection in the cattle?

Part #03: Personal Experience

1. What are your top 3 hardest moments you have face when you treat AAT?
2. Why were they hard?
3. How did you solve it now?
4. Do you think that solution can be improved?
5. What are your top 3 proudest or happies moments you have face treating a trypanosomiasis disease?

Part #04: External Relationships

1. Generally, how is your relationship with the farmers?
2. What do you think about how the farmers treat the disease of AAT?
3. How is the relationship of the government, with veterinaries and AAT disease?

Extra questions

What types of farmers exists?
How many cows and income do they have this different types of farmers?
How much money is for the equipment?
Why they can't have an equipment on the field?
How much money is for the test?
How much money is for the medicine?
How much money is to hire a veterinarian?
Does trypano resistance occurs? If it happens, what happens to the cow?
Giving constant toxi medicine to the cow does not devaluate its value?

Interview Researcher

Introductory script

1. Thank the interviewee for taking part in the interview.
3. Inform the interviewee about the usage of the data collected
4. Confidentiality: stress the possibility for anonymity if desired. If anonymity is not necessary, ask for consent of being quoted. If consent for quotation is given, ask if it would be necessary to share the transcripts and/or quotations
5. Ask for consent to be recorded.
6. Offer that questions after the interview are always possible. Provide mobile phone number and email.
7. Start off with first part of interview protocol.

Hello! My name is Paola Bautista, I am a master student in Strategic Design at TU Delft University in Netherlands. For my graduation project I am working with Aidx Medical BV. The area I have decided to focus on the detecting the main needs in the context where Trypanosomiasis is developed.

I want to thank you for taking part in the interview; and I am interested to hear your opinion and experience on this topic, as it will be very valuable information. For the purpose of my project it will be really useful if I can quote some of the things you say today, in there. Is this okay for you? And would you like to remain anonymous if I quote you?

Can I audio record this conversation? Since I cannot make notes while we are talking!

Feel free to ask questions or interrupt me at any time if you need to. Let me know if you need to take a break at any point. If you feel uncomfortable with the interview just let us know, we can stop it anytime.

Ok, let's begin! This should take about 45 minutes to one hour!

Interview Guide

Part #00: General questions

1. Can you tell me about a little bit about yourself?

Part #01: Trypanosomiasis Disease

1. Where does the disease comes from?

2. What are the different kinds of Trypanosomiasis?
3. How long does it take to show the symptoms after exposure?
4. How long does it take to diagnose the disease after exposure?
5. How do you treat AAT when it is in acute phase? And how long does it take?
6. How do you treat AAT when it is chronic disease? And how long does it take?
7. How much does it cost the medicine for every phase?

Part #02: Trypanosomiasis Diagnosis

1. Who makes the AAT diagnosis test?
2. Does the diagnosis test detect what type of AAT is?
3. What is the normal cost of an AAT diagnosis test?
4. Do the cattle owner are able to pay for the AAT diagnosis?
5. How long does it take an AAT diagnosis test to do?
6. Does the AAT diagnosis detect the length of the disease? If not, how the treatment is decided?
7. It is common the reinfection in animals? How often the reinfection occurs?
8. What are the top 3 difficult process in making a diagnosis?
9. Why were they hard?
10. How did people solve it now?
11. Do you think that solution can be improved?

Part #03: Context

1. Who is the people involved when there is a case of AAT?
2. Do you think there is another person capable to do the diagnosis? Why?
3. What do you think about the education the farmer has about the AAT disease?
4. How is the support of the government or other organizations treating AAT?

Appendix B: Semi-structured Interviews

	Who	Category	Title
H	Dr. Bigirwa Godfrey	Veterinarian	Lecturer at College of Veterinary Medicine in Makerere University
I	Dr. Wilfred Enelau	Veterinarian	Lecturer at College of Veterinary Medicine at Mekerere University
J	Dr. Francis Mutebi	Veterinarian	College of Veterinary Medicine at Mekerere University
K	Dr. Ben Sekera	Veterinarian	Veterinarian at the Ministry of Agriculture Animal Industry and fisheries (MAAIF)
L	Dr. Joshua Nabangi	Animal Health Technicians	Laboratory technician at Makerere University
M	Dr. Cesar Owak	Animal Health Technicians	Jubaili Pharmaceuticals [Kampala-Uganda]. Animal production technologist marketing vet pharmaceuticals for a wholesaler
N	Alex Taremwa	Pharmacist & Animal Health Technician	Animal Production Technologist Marketing Vet Pharmaceuticals for Jubaili Pharmaceuticals
O	Muhigirwa Edward	Pharmacist	Co-founder of ERAM Uganda LTD
P	Dr. Muhigirwa Alicia	Pharmacist	Co-founder of ERAM Uganda LTD
Q	Dr. Angubua Sylvia	Uganda Veterinary association (UVA)	President of UVA; lecturer at Makerere University
R	Dr. Charles Waiswa	Control of Trypanosomiasis in Uganda (COCTU)	Director of COCTU
S	Dr. Gerard Nizeymana	Food and Agriculture Organization of the United Nations (FAO)	Postdoctoral Researcher at FAO
T	Dr. Joseph Nkamwesiga		Director of IAMAT

Field Interview

1. Presentation

I am Paola Montserrat; I am originally from México, however currently I am studying in Netherlands. I am doing my master's in strategic design in TuDelft University. For my graduation project, I am working with Aidx Medical BV.

Aidx Medical BV, a tech start-up, is currently developing a portable, field compatible, affordable and smart optical diagnostic instrumentation for early detection of African Animal Trypanosomiasis (AAT) infection and other Hemoparasitic infections in animals. The area I have decided to focus, it is on the development of a business model that has a positive social impact, yet it is financially sustainable.

2. Short Interview

I want to thank you for taking part in the interview; and I am interested to hear your opinion and experience on this topic, as it will be very valuable information. For the purpose of my project it will be really useful if I can quote some of the things you say today, in there. Is this okay for you? And would you like to remain anonymous if I quote you?

1. Please, can you tell me about a little bit about yourself? (name, age profession)
2. What is your relationship with the disease of Animal African Trypanosomiasis?
3. Please, can you tell me a story about the last time you treated a case of trypanosomiasis?
4. What devices generally there are used to treat Trypanosomiasis?
5. Where do you buy these devices?
6. Who buys these devices?
7. When do you buys these devices? In which situations
8. Why these devices? What is your process for buying these devices?
9. What is the most important characteristic to choose a specific device? (price, functions, aesthetics, brand)

3. Device Presentation

4. Present Story boards - Present Scenario

5. Ask advantages & disadvantages

6. Thanks!

Consent to take part in research
Trypanosomiasis Diagnostic Device

I..... voluntarily agree to participate in this research study.

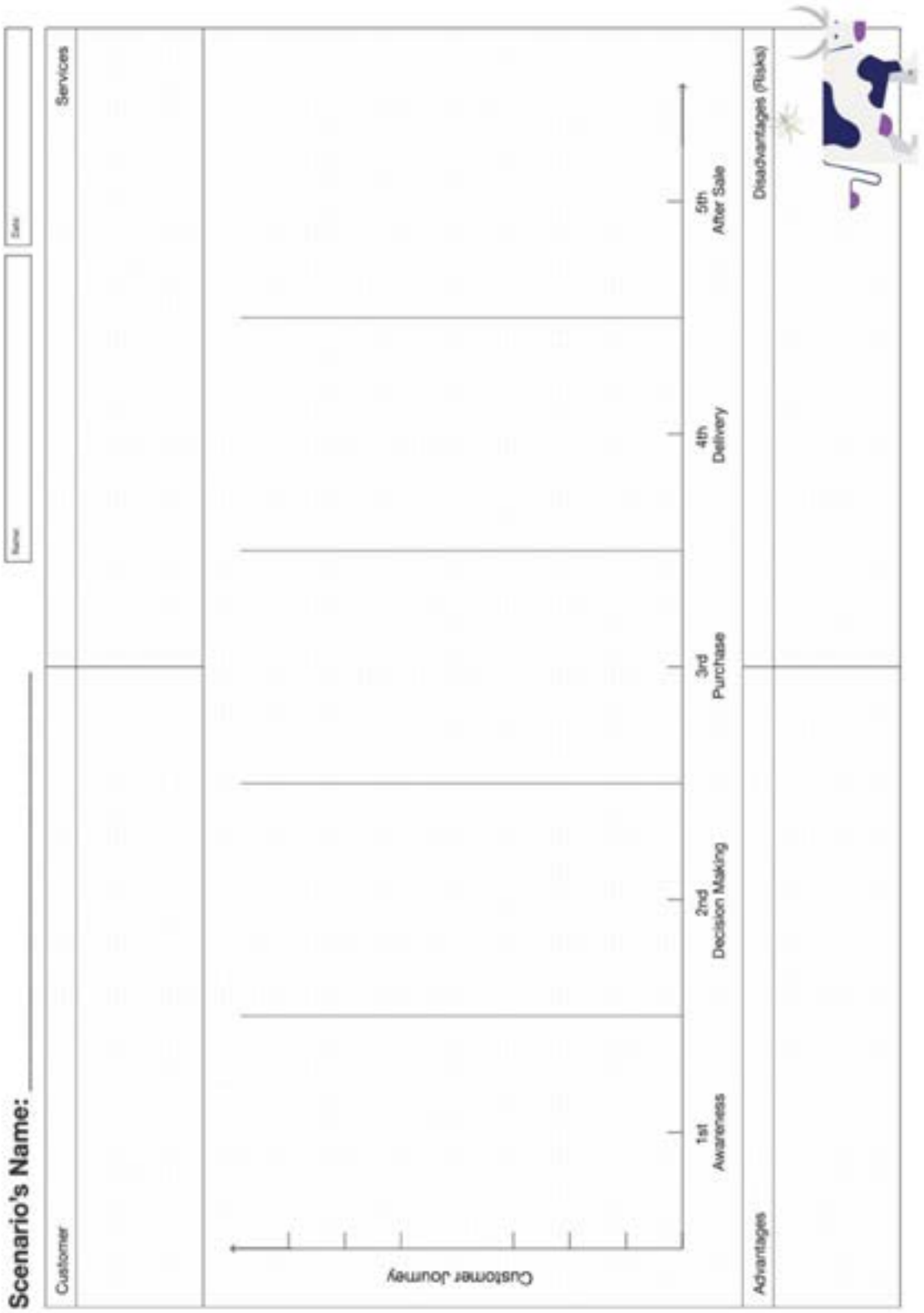
- I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- I understand that I can withdraw permission to use data from my interview.
- I understand that I will not benefit directly from participating in this research.
- I agree to my interview being audio-recorded.
- I understand that all information I provide for this study will be treated confidentially.
- I understand that in any report on the results of this research my identity will remain anonymous. This will be done by changing my name and disguising any details of my interview which may reveal my identity or the identity of people I speak about.
- I understand that if I inform the researcher that myself or someone else is at risk of harm they may have to report this to the relevant authorities - they will discuss this with me first but may be required to report with or without my permission.
- I understand that I am free to contact any of the people involved in the research to seek further clarification and information.

Name

Degrees

Signature of research participant

Appendix C: Distribution Channel Framework



Appendix D: List of 38 countries Affected by Tsetse Flies

Appendix E: Information about SA T

South American Trypanosomiasis

Trypanosomiasis not only exist in Africa; it has spread to other continents. It is assumed that the disease was introduced in 1830 into South America (SA) by imported cattle from Senegal to French Guyana and Antilles (Dávila & Aguilar M.S. Silva, 2000). The parasite has now spread to ten of the thirteen countries of the South American continent. These new trypanosome stocks are called New World, and the main behavioral difference between the Old and New World is the inability to infect Tsetse flies (Wells, 1984). The New World T. is transmitted by parasite-laden secretions from hematophagous triatomine insects (Pereira Nuñes, Dones, Morillo, Encina, & Ribeiro, 2013). These triatomine insects are also known as kissing bugs, assassin bugs, and vampire bugs. The insects acquire trypanosomes via blood meal. After 2-4 weeks of development, some of the parasites travel to the hindgut creating infective feces. The infection occurs when bug either during or after feeding defecate on the host, facilitating parasite transmission through mucous membranes or breaks in the skin. Humans and animals can also be infected by eating triatomine insects or insect feces (Center for Food Security & Public Health, 2017).

Four species of New World T. have social or economic importance in SA. T. cruzi causes human trypanosomiasis also called "chagas" disease. T. brucei equiperdum affects horses; the disease is called "mal de caderas." The last two species T. vivax viennei and T. brucei evansi afflict horses and cattle causing the disease "derrengadera", also known as "peste boba" or "murrina" (Wells, 1984). Derrengadera also affects other mammals like water buffalo, monkeys, alpacas, and llamas. The clinical signs of derrengadera are similar with AAT that are fever, suppression of milk yields, abortion, occasionally deaths lethargy, and weight loss (Dávila & Aguilar M.S. Silva, 2000).

Currently, it is estimates than 11 million head of cattle are at risk from infection in the Brazilian Pantanal and Bolivian lowlands. This could create with potential losses in excess of US$160 million (Jones & Dávila, 2001). However, the disease is not a problem in other areas of SA. For example, the study of Richard Zapata Salas, in the north region of Antioquia in Colombia, shows that only 3,6 and 0% of the cattle suffer T. vivax and T. evansi respectively (Zapata Salas, et al., 2017).

Appendix F: Compound names of medicines

Compound	Trade name	Activity in the field	Object
Diminazene aceturate	Berenil Veriben Ganaseg	T. congolense T. vivax (T. brucei) (T. evansi)	Cattle Small ruminants [dogs] [equidae]
Homidium chloride	Novidium	T. congolense T. vivax	Cattle small ruminants pigs [equidae]
Homidium bromide	Ethidium		
Isometramidium chloride	Samorin Trypamidium	T. congolense T. vivax T. brucei T. evansi	Cattle small ruminants equidae camels
Quinapyramine dimethylsulphate	Trypacide sulphate	T. congolense T. vivax. T. brucei T. evansi T. equinum T. simiae	Camels equidae pigs dogs
Quinapyramine dimethylsulphate	Trypacide Pro-salt		
Suramin	Naganol	T. evansi	Camels Equidae

Source: (Peregrine, Chemotherapy and delivery systems: haemoparasites, 1994)

DESIGN FOR our future

TU Delft

IDE Master Graduation

Project team, Procedural checks and personal Project brief

This document contains the agreements made between student and supervisory team about the student's IDE Master Graduation Project. This document can also include the involvement of an external organisation, however, it does not cover any legal employment relationship that the student and the client (might) agree upon. Next to that, this document facilitates the required procedural checks. In this document:

- The student defines the team, what he/she is going to do/deliver and how that will come about.
- SSC E&SA (Shared Service Center, Education & Student Affairs) reports on the student's registration and study progress.
- IDE's Board of Examiners confirms if the student is allowed to start the Graduation Project.

USE ADOBE ACROBAT READER TO OPEN, EDIT AND SAVE THIS DOCUMENT

Download again and reopen in case you tried other software, such as Preview (Mac) or a webbrowser.

STUDENT DATA & MASTER PROGRAMME

Save this form according the format "IDE Master Graduation Project Brief_familyname_firstname_studentnumber_dd-mm-yyyy"
Complete all blue parts of the form and include the approved Project Brief in your Graduation Report as Appendix 1 !

family name	Bautista Gauna
initials	P.M.
given name	Paola Montserrat
student number	4721721
street & no.	Bosboom-Toussaintplein 221
zipcode & city	2624 DN Delft
country	Netherlands
phone	06 333 00 162
email	paolamontser@gmail.com

Your master programme (only select the options that apply to you):

IDE master(s): ☐ IPD ☐ DfI ★ SPD

2nd non-IDE master:

individual programme: (give date of approval)

honours programme: ☐ Honours Programme Master

specialisation / annotation: ☐ Medisign ☐ Tech. in Sustainable Design ☐ Entrepreneurship

SUPERVISORY TEAM **

Fill in the required data for the supervisory team members. Please check the instructions on the right !

** chair	Dr. ir. Diehl, J.C.	dept. / section:	DE/DFS
** mentor	Willemijn Brouwer	dept. / section:	PIM/MOD
2nd mentor	Mirte Vendel		
organisation:	Aidx Medical BV		
city:	Delft	country:	Netherlands

comments (optional)

Chair should request the IDE Board of Examiners for approval of a non-IDE mentor, including a motivation letter and c.v..

Second mentor only applies in case the assignment is hosted by an external organisation.

Ensure a heterogeneous team. In case you wish to include two team members from the same section, please explain why.

TU Delft

Procedural Checks - IDE Master Graduation

APPROVAL PROJECT BRIEF
To be filled in by the chair of the supervisory team.

chair Dr. ir. Diehl, J.C. date - 04 - 2019 signature

CHECK STUDY PROGRESS
To be filled in by the SSC E&SA (Shared Service Center, Education & Student Affairs), after approval of the project brief by the Chair.
The study progress will be checked for a 2nd time just before the green light meeting.

Master electives no. of EC accumulated in total: 24 EC
Of which, taking the conditional requirements into account, can be part of the exam programme: _____ EC
List of electives obtained before the third semester without approval of the BoE

★ YES all 1st year master courses passed
NO missing 1st year master courses are:

name _____ date - 04 - 2019 signature _____

FORMAL APPROVAL GRADUATION PROJECT
To be filled in by the Board of Examiners of IDE TU Delft. Please check the supervisory team and study the parts of the brief marked **.
Next, please assess, (dis)approve and sign this Project Brief, by using the criteria below.

- Does the project fit within the (MSc)-programme of the student (taking into account, if described, the activities done next to the obligatory MSc specific courses)?
- Is the level of the project challenging enough for a MSc IDE graduating student?
- Is the project expected to be doable within 100 working days/20 weeks ?
- Does the composition of the supervisory team comply with the regulations and fit the assignment ?

Content: APPROVED NOT APPROVED
Procedure: APPROVED NOT APPROVED
comments

name _____ date - 04 - 2019 signature _____

Initials & Name Paola Montserrat Bautista Gauna Student number 4721721

Title of Project Designing the Business Model for a Social Start-up

TUDelft

Personal Project Brief - IDE Master Graduation

Designing the Business Model for a Social Start-up

project title

Please state the title of your graduation project (above) and the start date and end date (below). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

start date 01 - 04 - 2019 26 - 08 - 2019 end date

INTRODUCTION **

Please describe the context of your project, and address the main stakeholders (interests) within this context in a concise yet complete manner. Who are involved, what do they value and how do they currently operate within the given context? What are the main opportunities and limitations you are currently aware of (cultural- and social norms, resources (time, money, ...), technology, ...)

Tsetse are blood-feeding insects that transmit trypanosome pathogens which causes the potentially fatal disease of African Animal Trypanosomiasis (AAT) in livestock. Tsetse flies infest approximately 10 million km2 of the continent affecting 38 sub-Saharan countries (Murray & Gray, 1984). It is estimated that the annual direct production losses in cattle breeding alone amount to between US$6-12 billion, while animal deaths reach 3 million (Hursey & Slingenbergh, 1995). Since no vaccine for AAT is currently available for use, there is the urgent need for controlling the disease, including case detection, treatment, and vector control.

Diagnosis is notoriously difficult because there are no specific clinical signs and standard diagnostic methods are complex. There are two standard method for detecting ATT. The first one is the Giemsa Stain, which examines through multiple microscopy stained blood films. The other method is Buffy Coat, which concentrates the blood through centrifugation in a hematocrit tube. Both methods are not very accurate in the detection. Besides that, both requires expensive, professional instrumentation and specialists in the field.

Aidx Medical BV, a tech start-up, is currently developing a portable, field compatible, affordable and smart optical diagnostic instrumentation for early detection of AAT infection and other Hemoparasitic infections in animals. An optical smart parasite detection technique using automated smart algorithms integrated into a potentially low-cost imaging platform is being developed by the R&D team. The new prototype is already producing promising results. Its aim is to create a rapid and reliable diagnosis on the field that can be carried out by unskilled personal. The functionality of the diagnostic instrument will also be extended to detect Bovine Babesiosis, a tick-borne infection endemic in Europe, America and, since recently, in Australia.

The goal for my Master thesis project at the start-up is to develop a business model and positioning to help the new venture start their business.

space available for images / figures on next page

Initials & Name Paola Montserrat Bautista Gauna Student number 4721721

Title of Project Designing the Business Model for a Social Start-up

Personal Project Brief - IDE Master Graduation

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introduction (continued): space for images

image / figure 1: Cattle of South Africa

image / figure 2: Tsetse fly

Initials & Name Paola Montserrat Bautista Gauna Student number 4721721

Title of Project Designing the Business Model for a Social Start-up

Personal Project Brief - IDE Master Graduation

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PROBLEM DEFINITION **

Limit and define the scope and solution space of your project to one that is manageable within one Master Graduation Project of 30 EC (= 20 full time weeks or 100 working days) and clearly indicate what issue(s) should be addressed in this project.

Aidx Medical BV is currently developing a portable, field compatible, affordable, smart optical diagnostic instrumentation for early detection of AAT infection and other Hemoparasitic infections in animals. So far, the prototype is showing promising results. It is expected that the final product will be 30 times more sensitive, 20 times faster, and being able to be used by nonprofessionals. At the moment, the start-up is devoting all their resource into the production of a fully functional prototype. However, as a company they need to start defining the answer to simple questions as: How is the product going to be distributed?

Aidx Medical BV needs to turn their visionary idea into a successful business. It is critical to define how they will create, deliver and captures the value of their product to their customers. The start-up requires to define themselves as a business and prepare a strategic plan for development. They need to define the major components of their business, like customer segments, value proposition, channels and cost structure among other components. This is possible with a well-defined business model. A business model is like a blueprint for a strategy to be implemented through organizational structures, processes, and systems (Osterwalder & Pigneur, 2010). Having a business model will help them to define a strategic path at the moment the product is ready for introducing into the market.

ASSIGNMENT **

State in 2 or 3 sentences what you are going to research, design, create and / or generate, that will solve (part of) the issue(s) pointed out in "problem definition". Then illustrate this assignment by indicating what kind of solution you expect and / or aim to deliver, for instance: a product, a product-service combination, a strategy illustrated through product or product-service combination ideas. .... In case of a Specialisation and/or Annotation, make sure the assignment reflects this/these.

In this graduation project I will design a business model and positioning to help the new venture define the path of their business.

Firstly, the business model will help to express their business. This will be an overview of the company, their mission, vision, and the main problems and solutions they are tackling. Secondly, a business model will help to define the value proposition of the company, this is a statement of the specific benefits the company delivers. Thirdly, it will help to validate their product expectations and define their market opportunities. In the development of a business model, it is needed to research with experts, customers and other stakeholders to ensure that the business model not only sounds promising, but also responds to the actual needs of the market. Finally, a business model is very helpful to enhance the selling proposition. It will help to explain to prospective investors the social and economic value of the business.

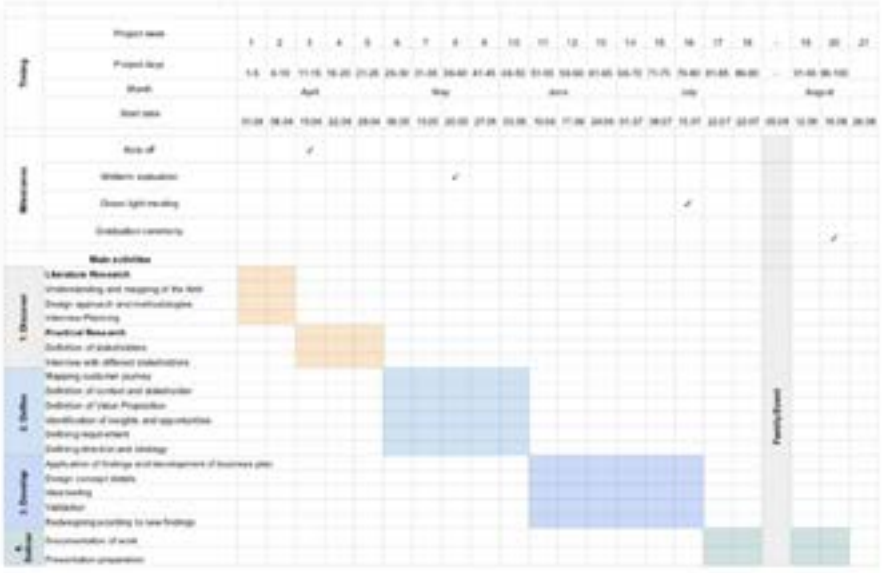
Initials & Name Paola Montserrat Bautista Gauna Student number 4721721

Title of Project Designing the Business Model for a Social Start-up

PLANNING AND APPROACH **

Include a Gantt Chart (replace the example below - more examples can be found in Manual 2) that shows the different phases of yo project, deliverables you have in mind, meetings, and how you plan to spend your time. Please note that all activities should fit wit the given net time of 30 EC = 20 full time weeks or 100 working days, and your planning should include a kick-off meeting, mid-ter meeting, green light meeting and graduation ceremony. Illustrate your Gantt Chart by, for instance, explaining your approach, and please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any, for instance because of holidays or parallel activities.

start date 01 - 04 - 2019 26 - 08 - 2019 end date



The project is divided into four phases. The first phase is "Discover", that is divided in two subsections: literature research and practical research. The literature research will focus on the understanding of the disease Trypanosomiasis and the context where and how it is developed. Furthermore, it will include the study of methodologies and the development of business models. In the third to fifth week, I will start interviewing experts and stakeholders. The second phase is called "Definition" where the material from the research from the first phase is analyzed and the main insights are defined. Once all this research is conducted, the third phase, "Develop", will start. The third phase will be about designing the positioning for the startup and delivering it. The final phase, "Deliver," will be destined to work on the finalization of the report and other deliverables preparations. The final presentation is expected to happen towards the middle or end of August, considering tentative vacation times of the supervisors.

The project should conclude and be presented before the end of August. This plan considers some weeks of room for unexpected requirements or events.

Personal Project Brief - IDE Master Graduation

TU Delft

MOTIVATION AND PERSONAL AMBITIONS

Explain why you set up this project, what competences you want to prove and learn. For example: acquired competences from your MSc programme, the elective semester, extra-curricular activities (etc.) and point out the competences you have yet developed. Optionally, describe which personal learning ambitions you explicitly want to address in this project, on top of the learning objectives of the Graduation Project, such as: in-depth knowledge on a specific subject, broadening your competences or experimenting with a specific tool and/or methodology; .... Stick to no more than five ambitions.

During my bachelor, I was a volunteer in the youth led, non-profit, Latin organization TECHO. TECHO seeks to overcome poverty in slums, through the joint work of families in extreme poverty with youth volunteers. I was volunteer for more than 3 years, and this experience made me passionate about humanitarian projects.

I started the program of Strategic Product Design, without thinking it will be possible to combine my profession and my extracurricular activity. For my surprise, it is possible to combine both in my master thesis. I will be working for a social start-up company. I will furthermore get practical experience, as I will be working in the field with a project which has an important purpose.

My learning aim is to get a deeper understand of business model innovation, so I will be able to translate the company strategy, combined with the market opportunities into a strong product. Additionally, by the end of the thesis, I want to have gained the experience of using different design methods, like explained in the Design Delft Guide, that enables me to get insights and tools to maximize the end results.

Bibliography:
Osterwalder, A., & Pigneur, Y. (2010). Business Model Generation. Hoboken, New Jersey, United States: John Wiley & Sons Inc.
Hursey, B., & Slingenbergh, J. (1995). The tsetse fly and its effects on agriculture in sub-saharan Africa. A Quarterly Journal on Animal Health, Production and Products: 50 Years . Retrieved from FAO - Food and Agricultural Orhanization of the United Nations: http://www.fao.org/3/v8180t/v8180T0s.htm#bibliography
Murray , M., & Gray, A. (1984). The Current Situation on Animal Trypanosomiasis in Africa. Preventive Veterinary Medicine, 2, 23-30.

FINAL COMMENTS

In case your project brief needs final comments, please add any information you think is relevant.

Initials & Name Paola Montserrat Bautista Gauna Student number 4721721

Title of Project Designing the Business Model for a Social Start-up