



# FLOWER E-POWER

*“How to design a profitable logistical supply chain for distributing fresh flowers in urban areas, while optimizing the societal values Entrepreneurship, Environment, Education and Emotion?”*



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Delft, March 2017

## Preface

This master thesis is written in conclusion of my Master of Science in ‘Systems Engineering, Policy Analysis and Management’ at the faculty of Technology, Policy and Management. During my studies, I often wondered what I would be doing once graduated as an engineer. For my bachelors thesis I spent three months working in the Ministry of Economy and that taught me that working in the public administration was not an option. Maybe then become a consultant, or be employed by an energy company, or an engineering firm? When a good friend of mine asked me to join him and take over in a couple of years his father’s flower export company, Fleur-o-Marché, I didn’t need to think twice, since it is a financially healthy company that still presents many opportunities for optimizing processes and for implementing several efficiencies – all those things that you learn so extensively in Delft.

Once taken that decision, I started to think and see the world as an entrepreneur, looking for opportunities - but not just for making profit myself but also for making the world a better place. Looking through these eyes, innumerable opportunities popped up, one after the other. It became an habit to connect my flower business with every social or environmental problem that I came across. The need to green the economy, the youth unemployment problem in Europe, traffic congestion and air pollution in inner cities caused by the growth of E-commerce, the importance of Small & Medium Enterprises for the local economy and social cohesion, the lack of innovative startups... In some or other way, all those issues could be addressed and be integrated in the Flower E-Power business model.

Two particular problem fields stood out that, combined, were selected to be addressed and processed in the business model to be elaborated: the accessibility/attractiveness/livability of inner cities (green city logistics ) and youth unemployment/entrepreneurship.

Along the way, discussing my ideas with literally dozens of advisors, professionals and business people in different sectors, I gradually elaborated my own vision of doing business and organizing a company that is both financially sustainable and optimizes its societal impact, human flourishing and interpersonal relationships. This new way of organizing is condensed in the ‘5 E-model’. Just read my thesis to get to know more about this new way of organizing the economy and a company – Flower E-Power!

I express my warm gratitude to the persons that composed my graduation committee, for their stimulating remarks and directions given, as well as for their flexibility and patience. I was lucky to have such an eminent team accompanying me in this adventure: prof. dr. ir. L. Tavasszy, dr. J.H.R. van Duin and ir. A.R. Wetters. Special thanks go to my external advisor, dr. J. Vrancken, who was with me all the time, patiently absorbing all the twists and turns that it took.

## Abstract

At the most general level, this study concerns the contribution that the business world can and should make to address the combined global challenges of livable urban areas, innovative green growth and youth employment / entrepreneurship. The concrete challenge for the present study is to develop a business case which embodies this alternative approach. The underlying idea of the present study is to take the principle of Corporate Social Responsibility one step further: from the Triple Bottom Line of the 3 P's - People, Planet and Profit – to the optimization of Public Value via the 5E's of Entrepreneurship, Environment, Economy, Education and Emotion. Most of this study will thus be dedicated to answer the following research question: *“How to design a profitable logistical supply chain for distributing fresh flowers in urban areas, while optimizing the societal values Entrepreneurship, Environment, Education and Emotion?”* Two problem areas will be addressed in particular, which are youth unemployment and the deficient education of youth entrepreneurship, on the one hand, and the reduced accessibility and livability of city centers, related to urban logistics and mobility, on the other hand. And then the challenge is to embody and further these goals in a viable business proposition. The first step we took was a literature study of the three subject matters: youth unemployment and entrepreneurship, city logistics, and purpose economy. The second step consisted of a series of interviews with a great number of top level professionals with expertise in the three subject matters. Thirdly, the outcomes and insights of the literature overview and the interviews were compared and contrasted. Probably, the most surprising outcome of the exploratory phase was that the exploration process itself became a process of co-creation, involving a good part of the professionals that were interviewed. Almost naturally, after having explained the reason of my visit and the contours of the Flower E-Power company, the interviewees connected and engaged, came up with critical comments and new ideas and suggested additional inroads and resource persons. A good number of interviewees expressed their readiness not only to continue the brainstorm and be available for further advice, but also to join the effort and cooperate in a concrete way. This should, however, not surprise us too much neither, as it confirms the hypothesis that we are entering the era of purposeful organizations and that people are looking for purpose and meaning. This refers to the 5th E, of Emotion of the 5E-Model, the experience of being part of an effort for a greater purpose, one that transcends the mere me, here and now. It is about engagement, co-creation and cooperation, going beyond narrow selfish motives of money, power and status. Concerning the financial analysis / outcome of the business proposition, it should be noted that its feasibility is shown for a single block and a single district. Scaling it up to the level of an entire city, or even to several cities, would of course increase the profitability of the company overall, by realizing economies of scale (lower fixed and running costs, higher efficiency).



## Executive summary

Surely, the consciousness that we have to take care for our planet, for both the natural and built environment, is on the increase. It is our common home. And the same can be said for the sense of responsibility for the quality of society, the living together in diversity, and for a decent life for everyone. The so-called common good is an assignment that cannot be left to others, to politicians and the state, but should be the concern of each and every person, citizen, consumer and business. With regard to the latter sector, more and more companies assume their Corporate Social Responsibility (CSR), recognizing that they are not there just for selfish reasons i.e. to make profits, but that they are to further social and environmental goals as well.

Still, one wonders if the pace of positive changes in attitudes and practices is fast enough to counter and offset the ongoing environmental degradation, increasing social inequality and societal fragmentation and conflict. Too many people, politicians and companies alike, seem to pay only lip-service to change but in practice stick to the old destructive routines. Some companies seem to use CSR merely as a marketing tool (window dressing), while the better ones take great pains in showing that they do their best to limit the social and environmental costs of their operations.

The urgent challenge of today is that companies, being crucial societal actors, recognize their potential and their corresponding responsibility not only to limit the harm but to positively contribute to the common good. This would imply that:

- *first*, they screen their entire business model on its overall impact on the natural and built environment (degradation/enhancement), persons (e.g. human depletion/flourishing, selfishness/sociability) and society (e.g. fragmentation/cohesion, violence/peace); and
- *secondly*, that they actively further and promote each and every of those aspects of the common good. The entire business model should add as much as possible value to environment, persons and society.

This idea is reflected in the concept of **public value**, as developed by Mark Moore and by Timo Meynhardt, amongst others. Public value describes the value that an organization contributes to society and the common good (Moore, 1997; Meynhardt, 2009). Or, in the words of Aaron Hurst, writer of the bestseller ‘The Purpose Economy’, we are entering a new economic era, which is driven by connecting people to their purpose. It is an economy where value lies in establishing purpose for employees and customers—through serving needs greater than their own, enabling personal growth and building community (Hurst, 2014).

While social, economic and organizational innovation is in the air, mainstream companies still dominate the economy and change is slow if not altogether cosmetic because of powerful vested interests and iron hierarchical routines. **Startups** that take up these social trends and address and tackle the most pressing problems in the economy and society may fill up this “niche in society”, as

Klomp c.s. claim (Klomp et al., 2016). They are social enterprises right from the beginning. By doing so, they may conquer relevant market shares and develop new markets, and at the same time they will have an impact on society and the public opinion that in turn may push the mainstream companies to adjust their policies and assume their responsibility to positively contribute to the common good. Thus, startups may contribute in very different ways to the common good.

Of course, social enterprises always have to balance success and financial sustainability with their motivation and drive to serve the people and contribute to the common good. The entrepreneur that adopts public value as her/his leading business principle just for selfish reasons (profits, personal status etc.) will ultimately run into legitimization problems. The desire to do something useful for society, to contribute to solving the pressing problems of this world and making this planet a better place should be recognized as genuine by the public, if it is to work and the entrepreneur is to be successful. To a certain extent, this is the *paradox that any social entrepreneur* will have to deal with. In this vein, Timo Meynhardt (Meynhardt, 2016) gives the following advice to young entrepreneurs: “Consider your business model from the very beginning also from the perspective of society. Then you better recognize the needs of the target group and can respond comprehensively to the whole community. A contribution to the common good pays, but it is important that it is not only meant well, but also well done. Entrepreneurship is not about naivety, but to exist in financing rounds and to have long-term financial success. Business value has to go hand in hand with the common good.”

#### *The challenge – 5E-undertaking*

The research problem addressed in the present study is multi-layered.

At the most general level, this study concerns the contribution that the business world can and should make to human flourishing and societal and planetary resilience. The hypothesis is that the current Triple Bottom Line approach is largely insufficient and misleading and that it should be replaced by a more stimulating and creative notion, i.e. Public Value as embodied in the proposed 5E-model.

At the more practical level, the challenge is to develop a business case which embodies this alternative approach. This study will thus be dedicated to find out how Entrepreneurship, Environment, Education and Emotion can be optimized while integrating them in a concrete Economically sound business case. This research problem is laid down in the following research question:

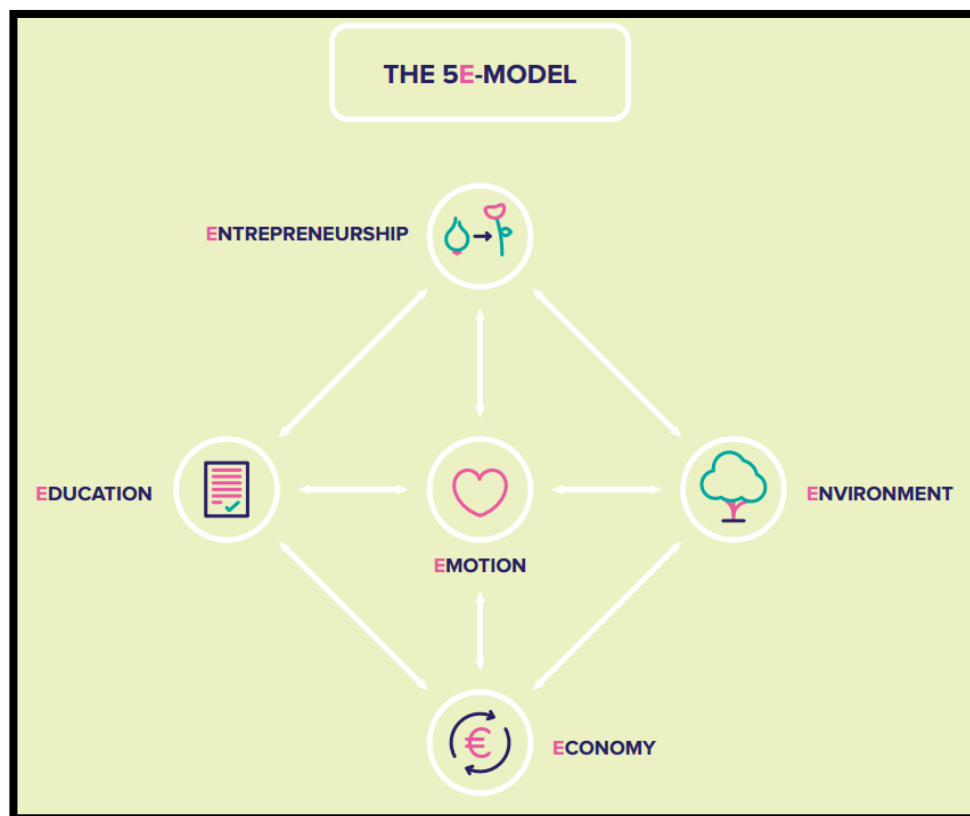
*“How to design a profitable logistical supply chain for distributing fresh flowers in urban areas, while optimizing the societal values Entrepreneurship, Environment, Education and Emotion?”*

Two problem areas (involving the aforementioned public values) will be addressed in particular, which are youth unemployment and the deficient education of youth entrepreneurship, on the one hand, and the reduced accessibility and livability of city centers, related to urban logistics and

mobility, on the other hand. The challenge then is to embody these (and eventually other) public values in a viable business proposition.

#### *5E versus 3P*

The underlying idea of the present study is to take the principle of Corporate Social Responsibility one step further: from the Triple Bottom Line of the 3 P's - People, Planet and Profit – to the optimization of Public Value via the 5E's of Entrepreneurship, Environment, Economy, Education and Emotion.



**Figure 1 | The 5E-model**

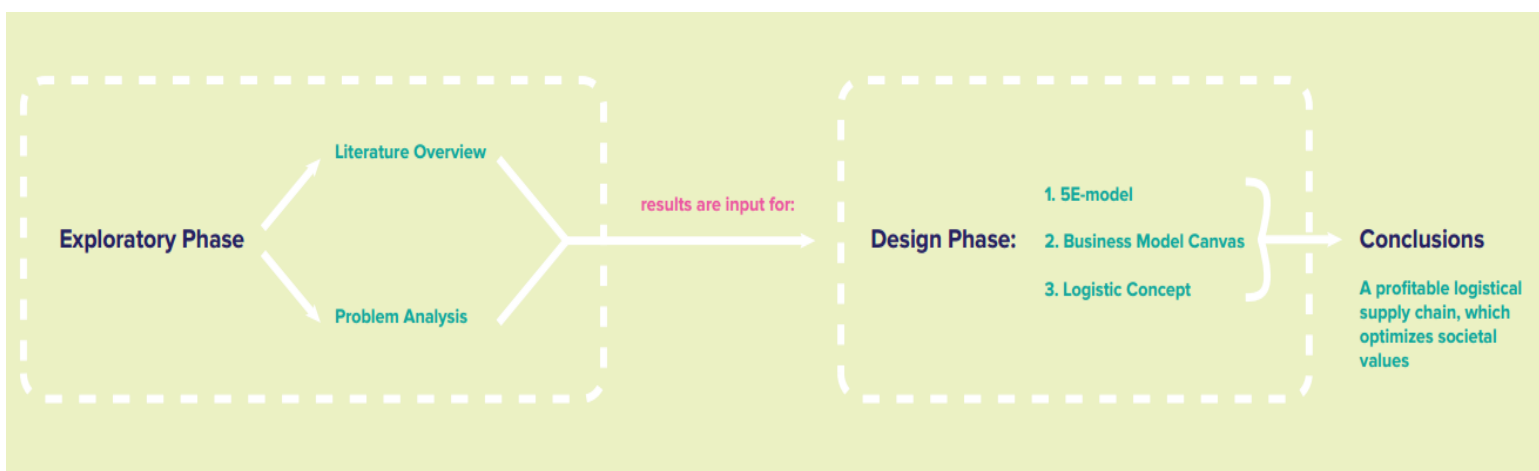
In the past two decades, the Triple Bottom Line (TBL) has become the most widely used formula to promote and evaluate business' responsibility towards the community and environment in which it operates. *People* here refers to fair labour practices, to the community and the inhabitants of the region where the business operates; *Planet* refers to sustainable environmental practices; and *Profit* is the economic value created by and for the organization. Many organizations have adopted the TBL or 3P framework and it has surely been instrumental in making both the business world and the general public aware of the irresponsible practice of businesses that make big profits while externalizing the social and ecological costs; externalizing, that is, transferring those costs to the wider society, the planet and future generations.

Now, the next step is of course to not only reduce the adverse effects of doing business on people and planet but to do business in such a way that its positive effects on people, community, society and the environment are optimized. Why limit the social (environmental and societal) responsibility to the Do No Harm principle?

That is where the idea of Public Value comes in, as embodied in the 5E-model. Its basic idea is to screen each and every step in the value chain for possibilities to increase the Public Value, without compromising the reasonable profit that is needed to secure the sound development of the enterprise itself as – again - a generator of Public Value.

The challenge thus is to execute profitable entrepreneurial activities while contributing optimally to the common good of society. The Public Values which the FEP-project wants to contribute to are the following:

- Care for the Environment:
  - Sustainable products and services (eco and people friendly);
  - Efficient Urban Mobility and Accessibility (city logistics , Last Mile Delivery);
  - Sustainable Urban Mobility: “Safe, Clean and Livable City” (air pollution, traffic congestion and nuisance)
- Promoting and training Youth Entrepreneurship and Employment:
  - Entrepreneurial Skills and Attitudes;
  - Social and Cooperative Skills by Experiencing Teamwork;
  - ‘Learning by Doing’ (complementing existing educational programs with real life practice)
  - Employment and working experience for young persons with occupational disabilities in order to enhance their employability
- Promoting Innovation and Economic Development:
  - Contributing to a Start-Up and SME (small and medium enterprise) and social enterprise friendly Ecosystem.



**Figure 2 | Research framework**



## Conclusions

### General

- The research question that guided the present study was : “How to design a profitable logistical supply chain for distributing fresh products in urban areas, while optimizing the societal values Entrepreneurship, Environment, Education and Emotion?” Its objective was to develop a business case which optimizes Public Value applying the 5E-model, that is, by integrating Entrepreneurship, Environment, Education and Emotion in an Economically viable business model. The project focused on two specific problem areas, which are youth unemployment and the deficient education of youth entrepreneurship on the one hand, and the reduced accessibility, attractiveness and livability of city centers, related to urban logistics and mobility, on the other.
- The challenge thus was to design a social enterprise that combines the following three goals: to reduce youth unemployment and stimulate youth entrepreneurship; to increase the accessibility, attractiveness and liveability of city centers; and to embody these (and eventually other) public values in a viable business proposition.
- Both the literature reviewed and the interviews with top professionals in the different domains confirm a broad societal trend towards organizing business in a new way, i.e. one that transcends the narrow profit focus. A new societal consensus is growing, i.e. that if people, society and planet are to flourish, the economy should *not make use* of people and planet, *but add value* to people and planet. We are indeed entering the era of the purpose economy and of purposeful organizations.
- Underlying is apparently a wider, cultural transition in Western society, away from the traditional incentives money, power and status towards more human and society-centered values such as meaning, purpose, sustainability, cooperation and community.
- The interviews, even those with “traditional” entrepreneurs, confirmed a heightened interest in doing business with social added value, in co-creation and cooperation. Many of the interviewees spontaneously connected and engaged, came up with critical comments and new ideas and suggested additional inroads and resource persons. A good number of interviewees expressed their readiness not only to continue the conversation / brainstorm and be available for further advice, but also to join the effort and cooperate in concrete, practical ways.
- The Triple P model is unsuitable to account for, let alone orient, this cultural, societal and economic trend. It orients business towards doing no harm - instead of contributing positively - to people and planet. Besides, the concept has been spoilt by old school businesses that have used it as a mere vehicle for window dressing.
- The 5E model (integrating entrepreneurship, education, economy, environment, emotion) better accounts for the purpose-turn in economy and society and is better able to engage and orient both policy making and concrete entrepreneurial initiatives in this direction. It

focuses - not on doing no harm but - on adding value to human flourishing and societal and planetary resilience and bloom. In particular, it takes into account and gives due weight to the human factors of emotion, motivation, recognition, trust and connectedness. People value the experience of being part of an effort for a greater purpose, one that transcends the mere me, here and now.

- The two core problems addressed in the present research / business proposition, Youth unemployment and Green City Logistics , were confirmed as particularly relevant by local authorities and educational institutions as well as by other entrepreneurs, both social and traditional ones. The interviewees from the educational and governmental institutions dealing with these issues showed particular interest in the way the FEP company proposes to tackle the respective problems. This resulted in unexpected opportunities to obtain new assets, such as subsidized employees and even financial resources, for example as remuneration for the entrepreneurship education of vocational school students or as subsidies for contributing in an innovative way to improve the air quality in inner cities.
- The key effort of the present research is of course the implementation of the 5E values in a concrete business case, i.e. the Flower E-Power company. Besides being profitable i.e. financially sustainable, it has to contribute to solving the twin problems of Youth unemployment and Green City Logistics . On top of that, the company should be network-based and co-create and cooperate with likeminded and other companies, with local governmental and educational institutions and financial institutions. Finance, organization and logistics should be based on sound quantitative analysis. And the resulting proposition should be a replicable and scalable company model.
- The three goals of the Flower E-Power company as a social enterprise geared towards creating public value are:
  1. To reduce youth unemployment and stimulate youth entrepreneurship;
  2. To increase the accessibility, attractiveness and liveability of city centers;
  3. To embody these (and eventually other) public values in a viable business proposition.
- The principal merit of this research is that it shows that indeed it is possible to design a company that meets all the demands implied by the 5E-model and that effectively contributes to solving the twin problem of Youth unemployment and Green City Logistics . It indicates how this is to be done and how such a company can function and be scaled up, based on solid quantitative analysis.
- Important insights were obtained by quantifying the logistics model and by developing three scenarios, integrating technical, organizational and financial features: the scenario as expected (assumptions based on available information), a more pessimistic scenario and a more optimistic one. Although the first and even the second scenario will eventually deliver positive results, margins are small and indicate that it is wise to have another look at the logistics process. Thus it may be necessary to stick to the norm of 15 clients services per hour on delivery days, and plan and calculate additional time/costs for promotion and acquisition.

- Concerning the financial analysis / outcome of the business proposition, it should be noted, first, that its feasibility is shown for a single block and a single district. Scaling it up to the level of an entire city, or even to several cities, would of course increase the profitability of the company overall, by realizing economies of scale (lower fixed and running costs, higher efficiency etc.). Besides, no account was taken of the fact that the actual cost for a number of items (e.g. marketing, promotion) will decrease over time.
- And again, concerning the financial outcomes, it should be noted that the financial analysis is based on the one core business of distributing fresh flowers with smart green city logistics and that it does not take into account two other potential sources of income, i.e. subsidies by e.g. local government for contributing to the greening of city centers and/or to solving the youth unemployment problem and the remuneration for assuming part of the entrepreneurship education curriculum by vocational schools. Both sources of income are nevertheless quite feasible, and they would of course increase the profitability of the company overall.

### *Youth unemployment & Entrepreneurship*

- Promoting youth entrepreneurship is confirmed as an effective way to reduce youth unemployment both by local governments, educational institutions and by youngsters themselves.
- In real-life projects, youngsters can experience what it is and how it feels to be an entrepreneur; they are enabled to exploit and develop entrepreneurial skills and attitudes; and they themselves lower the barriers to become an entrepreneur for real, such as a lack of self-confidence, personal problems, lack of skills and how to cope with finance.
- By combining entrepreneurship education, business start-up training and support programs in a broader culture of entrepreneurship, young people acquire the needed attitudes, knowledge and skills that increase their chances to start their own businesses and run it successfully.
- Effective links of cooperation and coordination with other businesses and with local governmental, non-governmental, financial and educational institutions are crucial for creating a start-up friendly ecosystem for young entrepreneurs.

### *City Logistics*

- A logistics model comprising city hubs at the borders of the city and electric cargo bikes for delivery of fresh products in city centers is feasible from a technical, organizational and financial point of view and it will effectively contribute to livable and attractive cities.
- There is a keen interest both from local governments and business and other parties to establish closer cooperation in order to develop long lasting and durable policies to tackle the Last Mile Problem and to green inner city logistics .

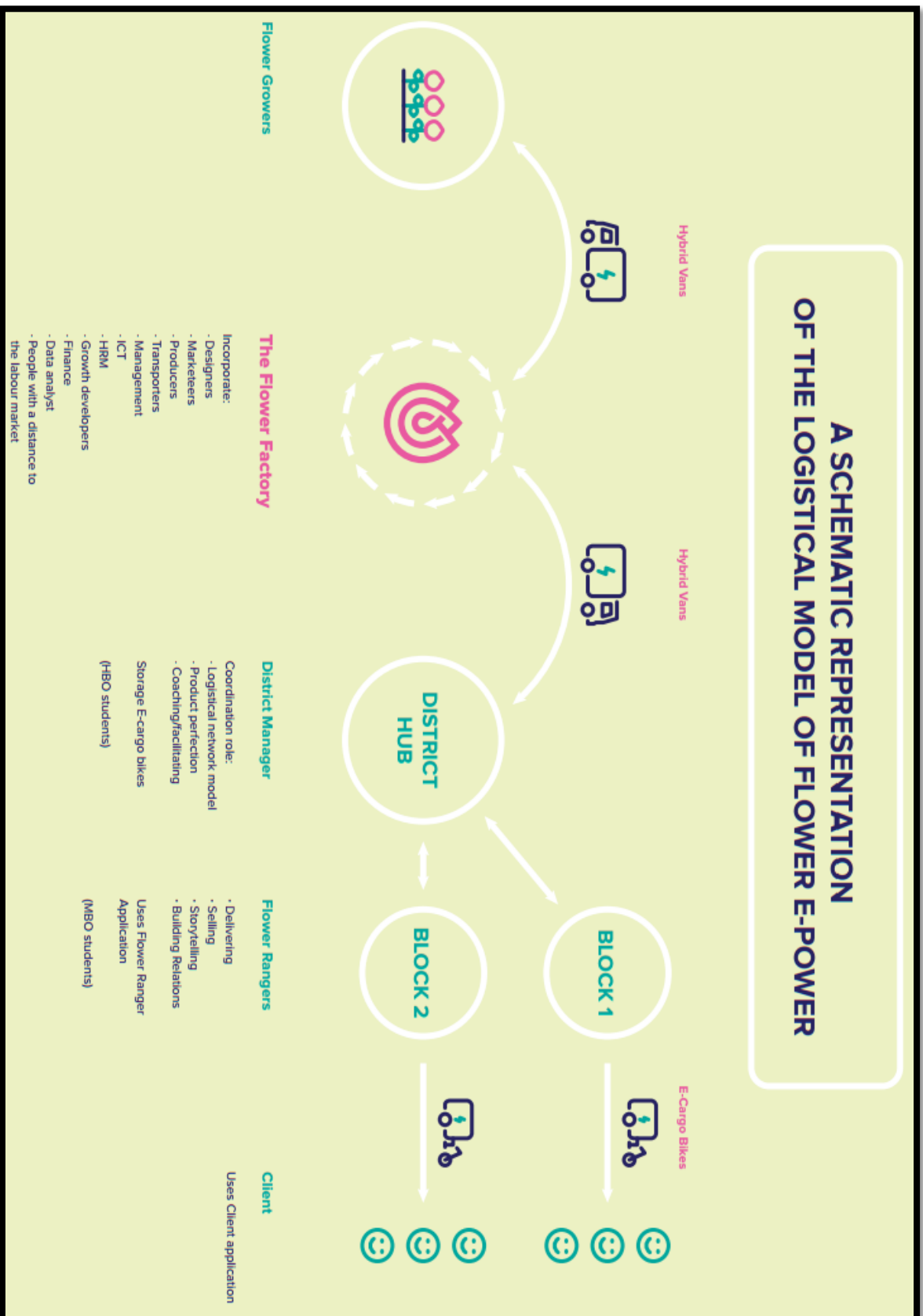


Figure 3 | A schematic representation of the logistical model of Flower E-power

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# 1. Introduction

## 1.1 Theme

Surely, the consciousness that we have to take care for our planet, for both the natural and built environment, is on the increase. It is our common home. And the same can be said for the sense of responsibility for the quality of society, the living together in diversity, and for a decent life for everyone. The so-called common good is an assignment that cannot be left to others, to politicians and the state, but should be the concern of each and every person, citizen, consumer and company. With regard to the latter sector, more and more companies assume their Corporate Social Responsibility (CSR), recognizing that they are not there just for selfish reasons i.e. to make profits, but that they are to further social and environmental goals as well – i.e. the so-called Triple Bottom Line or Triple P of people, planet and profit.

Still, one wonders if the pace of positive changes in attitudes and practices is fast enough to counter and offset the ongoing environmental degradation, increasing social inequality and societal fragmentation and conflict. Too many people, politicians and companies alike, seem to pay only lip-service to change but in practice stick to the old destructive routines. Some companies seem to use CSR merely as a marketing tool (window dressing), while the better ones take great pains in showing that they do their best to limit the social and environmental costs of their operations. But in the current circumstances even that - i.e. reducing the damage they cause - would obviously not be enough.

The urgent challenge is that companies, being crucial societal actors, recognize their potential and their corresponding responsibility to positively contribute to the common good. This would imply that:

- *first*, they screen their entire business model on its overall impact on the natural and built environment (degradation/enhancement), persons (e.g. human depletion/flourishing, selfishness/sociability) and society (e.g. fragmentation/cohesion, violence/peace); and
- *secondly*, that they actively further and promote each and every of those aspects of the common good. The entire business model should add as much as possible value to environment, persons and society.

This idea is reflected in the concept of **public value**, as developed by Mark Moore and by Timo Meynhardt, amongst others (Moore, 1997; Meynhardt, 2009). Public value describes the value that an organization contributes to society and the common good.

There are many good *commercial* reasons for a company to assume public value as its leading governance principle. As Meynhardt (Meynhardt, 2016) states: “Ultimately, there is nothing that

legitimizes a business idea stronger than its contribution to the common good.” This societal legitimization is also referred to as the company’s social license to operate. A positive public perception of the company has a lasting positive impact on the business’ customer loyalty. Loyalty is something that is decided in the minds and hearts of concrete persons, i.e. at the emotional and affective level. Customers value the connection of the product or service with a good cause. These companies, says Meynhardt, “feed from social acceptance to grow. Conversely, they make their products and services to contribute to social development.”

This quest for meaning and purpose beyond profit and personal gain is matched by a trend, at least in the literature, but still incipient in practice, to reorient business to serving good causes. See for example the recent publication *Manual for Meaningful Entrepreneurship – the niche in society* (Klomp, 2016). Or take the bestseller *The Purpose Economy: How Your Desire for Impact, Personal Growth and Community is Changing the World* (Hurst, 2014), which claims that we are entering a new economic era, which is driven by connecting people to their purpose: “It’s an economy where value lies in establishing purpose for employees and customers—through serving needs greater than their own, enabling personal growth and building community.”

Public value creation is fundamentally about meaningful relationships. As Timo Meynhardt states: “Public value creation is situated in relationships between the individual and society, founded in individuals, constituted by subjective evaluations against basic needs, activated by and realized in emotional-motivational states, and produced and reproduced in experience-intense practices” (Meynhardt, 2009, p.212).

While social, economic and organizational innovation is in the air, mainstream companies still dominate the economy and change is slow if not altogether cosmetic because of powerful vested interests and iron hierarchical routines. **Startups** that take up these social trends and address and tackle the most pressing problems in the economy and society may fill up this “niche in society”, as Klomp c.s. claim (Klomp, 2016). They are social enterprises right from the beginning. By doing so, they may conquer relevant market shares and develop new markets, and at the same time they will have an impact on society and the public opinion that in turn may push the mainstream companies to adjust their policies and assume their responsibility to positively contribute to the common good. Thus, startups may contribute in very different ways to the common good.

Of course, social enterprises always have to balance success and financial sustainability with their motivation and drive to serve the people and contribute to the common good. The entrepreneur that adopts public value as her/his leading business principle just for selfish reasons (profits, personal status etc) will ultimately run into legitimization problems. The desire to do something useful for society, to contribute to solving the pressing problems of this world and making this planet a better place should be recognized as genuine by the public, if it is to work and the entrepreneur is to be successful. To a certain extent, this is the *paradox that any social entrepreneur* will have to deal with.

In this vein, Timo Meynhardt (Meynhardt, 2016) gives the following advice to young entrepreneurs: “Consider your business model from the very beginning also from the perspective of society. Then you better recognize the needs of the target group and can respond comprehensively to the whole community. A contribution to the common good pays, but it is important that it is not only meant well, but also well done. Entrepreneurship is not about naivety, but to exist in financing rounds and to have long-term financial success. Business value has to go hand in hand with the common good.”

## 1.2 Context

For a proper understanding of the subject, it may be useful to situate the debate on the relationship between business and society in a broader context. Historically, the Dutch economy and society is characterized by the polder- or consensus model, which after World War II coalesced with the Rhineland model that came up in Germany, Austria, France and Belgium. The basic difference with the model applied in the United States and the UK, the Anglo-Saxon model, is that the first is a stakeholder economy and the other a shareholder one. In the Anglo-Saxon model, the companies receive their capital through the stock exchange, and maximizing the immediate earnings of the shareholders is key. In the Rhineland model companies are work communities composed of different stakeholders. Government, employers and labour unions strive to avoid competition and confrontation but instead cooperate to foster long term growth and permanent added value. In the Netherlands, stakeholders such as civil society organizations representing consumers’ and environmental interests are also part of this societal equation; the so-called polder model variant of Rhineland capitalism.

From the eighties of last century onwards, in a context of globalization (incl. global value chains) and digitalization, the Rhineland economies came under increasing pressure to drift towards Anglo-Saxon style capitalism. In fact, in the past forty years or so, the nature of economic life at the global level has gradually changed; a phenomenon that is called financialization. Ewald Engelen (Engelen, 2016) explains the concept as follows: “Financialization refers to a gradual economic change in which financial values (shareholder value, return on investment, net present value, etc.) become the dominant performance measures, gradually pushing away other outcome criteria (technical excellence, market share, sustainability, solidarity, professionalism, public interest, social justice).” Gradually, features like the dominance of stock market capitalization, strong CEO leadership controlled by the shareholders and short-termism substituted the broader stakeholder involvement and longer term orientation. This development is causing broad concerns about the fate of public, environmental, human and societal, values.

In December 2000 the Dutch Socio-Economic Council - SER published a report with the telling title The profit of values (De winst van waarden), which at that time set the standard for the debate in the Netherlands on corporate behavior (SER, 2000). Profit should not be the primary corporate objective but merely a means in order to add value to human beings and the earth. Corporate social responsibility and the Triple Bottom Line (people, planet, profit) were to become the new

catchwords for business in the 21<sup>st</sup> century. The latter concept was coined already in 1997 by John Elkington, but received with the SER report a real carrier. According to the SER, Corporate social responsibility also implies that a company establishes long-term goals and constantly communicates with its environment, its stakeholders, its own employees with NGOs and everything in between. This was in clear opposition to the concepts of Anglo-Saxon thinking. Remarkably, the SER report also touches upon the deeper, personal and spiritual layers of entrepreneurship: "The personal ethics of a businessman may also reflect a deeper quest for meaning, a sense of spirituality." (SER, 2000, p. 30-31).

A year later, the Bishop of Rotterdam Mgr. Ad van Luyn added this deeper layer to the Triple Bottom Line thinking. In a speech for the employers federation NCW Foundation, he suggested: "Wouldn't it be good to supplement the triad with a fourth P, with a view to give expression to the spiritual dimension that is indispensable for authentic humanity, also in business? I did not immediately find a P-word in English but would the Greek "pneuma" or "psyche" be suitable candidates?" Pneuma is the Greek word for spirit and psyche for soul. This spirituality then is not just a fourth P, but a P that is to be the cornerstone of the Triple P concept, the fourth P that encompasses and gives meaning to the other three as well (Klamer, 2014, p 59).

In the year 2000 as well, the Earth Charter was launched, in which the former Dutch MP Ruud Lubbers played a fundamental role. The Earth Charter is conceived as "an ethical framework for building a just, sustainable, and peaceful global society in the 21st century" (Earth Charter, 2000). One remarkable quote: "Let our time enter into history as an era of the awakening of a new reverence for life, of the determination to effectively realize sustainability, of the intensified struggle for justice and peace, and of the joyful celebration of life."

By 2012, the Dutch employers federation VNO-NCW published a new report on the subject with, again, a telling title: Our Common Future (Onze gemeenschappelijke toekomst). Its concluding phrase reads as follows: "The "sustainability train" is making more and more speed, and it is becoming longer and longer, offering more space for global citizens. The common goal is to contribute to the sustainable development of society based on the principle of human dignity. That is our common future." (VNO-NCW, 2012, p. 65).

Sustainability thus became a broad concept, its horizon being a strong and resilient (global) society, in all its economic, environmental, social and spiritual dimensions. Its unifying core is the principle of human dignity. The human being, seen not merely as a producer or consumer, but as a creative person and a spiritual being. The economy, conceived not merely as the pursuit of more profit and consumption, but as a means to achieve a more just society, reducing poverty and exploitation. Work is seen as a means not only to achieve an income, but also and above all for human flourishing and a contribution to the common good.



The quest for reorienting business to generate public value and contribute to combatting environmental degradation, social inequality and societal fragmentation and conflict has given way to scores of innovative ideas and experiments. Concepts include purpose economy (Hurst, 2014), shared economy, localized economy, co-creation and common shared values. This innovative drive is matched by changes in the broader societal and cultural context. In this vein, both Jan Rotmans and Pope Francis think that “today we are not living an era of change but a change of era” (Rotmans, 2014; Pope Francis, 2015).

Some notable and relevant aspects of this change of era include:

- from Welfare State to Participation Society;
- citizens: from passive receivers of state services and industrial jobs to active and entrepreneurial we-do-it-ourselves;
- democracy: from political games and generalized apathy under the glass domes of The Hague and Brussels to the do-democracy at the local level;
- from a rule driven system world to a value driven life world; from function to relation, from self-interest to common good, from egotism to generosity, from fear and distrust to empathy and trust, from competition to cooperation, from moralizing to morality in action (Van den Brink et al., 2016);
- from hierarchy and command and control to new types of organization (re the 5E-philosophy).

The Flower E-Power project (FEP-project) is inspired by the challenge to develop ways *to do business while optimizing Public Value*.

### 1.3 The challenge – 5E-undertaking

The research problem addressed in the present study is multi-layered.

At the most general level, this study concerns the contribution that the business world can and should make to human flourishing and societal and planetary resilience. The hypothesis is that the current Triple Bottom Line approach is largely insufficient and misleading and that it should be replaced by a more stimulating and creative notion, i.e. Public Value as embodied in the proposed 5E-model.

At the more practical level, the challenge is to develop a business case which embodies this alternative approach. This study will thus be dedicated to find out how Entrepreneurship, Environment, Education and Emotion can be optimized while integrating them in a concrete Economically sound business case. This research problem is laid down in the following research question:

***How to design a profitable logistical supply chain for distributing fresh flowers in urban areas, while optimizing the societal values Entrepreneurship, Environment, Education and Emotion?***

Two problem areas (involving the aforementioned public values) will be addressed in particular, which are youth unemployment and the deficient education of youth entrepreneurship, on the one hand, and the reduced accessibility and livability of city centers, related to urban logistics and mobility, on the other hand. The challenge thus is to embody and further these public values in a viable business model.

### *5E versus 3P*

The underlying idea of the present study is to take the principle of Corporate Social Responsibility one step further: from the Triple Bottom Line of the 3 P's - People, Planet and Profit – to the optimization of Public Value via the 5E's of Entrepreneurship, Environment, Economy, Education and Emotion.

In the past two decades, the Triple Bottom Line (TBL) has become the most widely used formula to promote and evaluate business' responsibility towards the community and environment in which it operates. *People* here refers to fair labour practices, to the community and the inhabitants of the region where the business operates; *Planet* refers to sustainable environmental practices; and *Profit* is the economic value created by and for the organization. Many organizations have adopted the TBL framework and it has surely been instrumental in making both the business world and the general public aware of the irresponsible practice of businesses that make big profits while externalizing the social and ecological costs; externalizing, that is, transferring those costs to the wider society, the planet and future generations.

Now, the next step is of course to not only limit the adverse effects of doing business on people and planet but to do business in such a way that its positive effects on people, community, society and the environment are optimized. Why limit the social (environmental and societal) responsibility to the Do No Harm principle?

That is where the idea of Public Value comes in, as embodied in the 5E-model. Its basic idea is to screen each and every step in the value chain for possibilities to increase the Public Value, without compromising the reasonable profit that is needed to secure the sound development of the enterprise itself as – again - a generator of Public Value.

The challenge thus is to execute profitable entrepreneurial activities while contributing optimally to the common good of society. The Public Values which the FEP-project wants to contribute to are the following:

- Care for the Environment:
  - Sustainable products and services (eco and people friendly);
  - Efficient Urban Mobility and Accessibility (Last Mile Delivery);
  - Sustainable Urban Mobility: “Safe, Clean and Livable City” (air pollution, traffic congestion and nuisance)
- Promoting and training Youth Entrepreneurship and Employment:

- Entrepreneurial Skills and Attitudes;
- Social and Cooperative Skills by Experiencing Teamwork;
- 'Learning by Doing' (complementing existing educational programs with real life practice)
- Employment and working experience for young persons with occupational disabilities in order to enhance their employability
- Promoting Innovation and Economic Development:
  - Contributing to a Start-Up and SME (small and medium enterprise) friendly Ecosystem.

## 1.4 Problem description – the three story lines

### 1. Youth Unemployment and Entrepreneurship

#### *Youth unemployment is a serious challenge to sustainable development in the world today*

Youth unemployment is becoming a worldwide problem, with serious economic, social and humanitarian consequences. In the European Union, more than 4.5 million people aged 15-24 years are currently unemployed, resulting in an unemployment rate that is double the overall unemployment rate: 20% versus 9% (European Commission, 2015).

#### *Entrepreneurship promotion and training is (part of) the solution*

Traditionally, job creation strategies focus on fomenting the growth of certain sectors of industry, such as agriculture, small and medium companies or the services industry, expecting that this growth will be accompanied by or generate new employment opportunities. Carree & Thurik suggest that a different, less traditional instrument for generating growth and employment is to play an important role: policies that generate and promote entrepreneurship (OECD, 1998). Empirical evidence indicates that those countries that have experienced an increase in entrepreneurial activity have also enjoyed higher rates of growth and employment. Entrepreneurship promotion and training is increasingly seen as an important means to boost employment and foster the economic independence of young people. In the words of Juan Somavia, the Director General of the International Labour Organization (ILO): "Entrepreneurship and business creation are ... a growing alternative for young people whose age group often faces a labour market with double digit unemployment rates. Traditional career paths and opportunities are disappearing rapidly." (Schoof, 2006, p.1).

#### *Entrepreneurship education?*

Entrepreneurship cannot be learnt in a classroom setting in the same way as e.g. a language or mathematics. Essential entrepreneurial attributes such as spotting opportunities, taking calculated risks and gaining a commercial edge can only be obtained through experiencing, 'learning-by-doing',

by making mistakes and learning from experience, preferably in real life situations. Many vocational colleges and universities of applied sciences in The Netherlands nowadays are offering Entrepreneurship programs. While these programs are generally strong on theory (business administration, marketing), they often lack the experiential part of doing business in real-life situations. Because of this crucial gap in the curriculum of Entrepreneurship programs, students are ill prepared and lack self-confidence to start their own project when graduated.

## *2. Urban Mobility and Logistics*

### *The Amazon revolution...*

E-commerce revolutionizes consumer behavior and parcel delivery requirements with regard to speed, mobility, reliability and proximity (Visser & Lanzendorf, 2004; Lierow, 2016). The combined effects of urbanization and globalization of the economy has led to a huge concentration of parcel deliveries in cities and has made urban freight an essential activity for the city's economy (Dablanc, 2009).

### *... aggravates problems of congestion and pollution in inner cities*

Urban goods distribution is blamed by citizens and public authorities for causing congestion, all sorts of environmental pollution and global warming (Dablanc, 2009). Over the past fifteen years, urban logistics has become fully entrenched in the political agenda (Cherrett et al., 2012; Lindholm, 2013a, 2013b). One way or another, social and political pressure will reduce the number of vans and trucks running around in city centers (Maes & Vanellander, 2012).

### *... and urges the need for innovative transport concepts for the last mile*

There are thus strong incentives to stimulate alternative and innovative transport concepts. This includes ideas such as city hubs and depots, the use of inland waterways to deliver in city centers, shifting to night transport, electrically-powered vehicles, and many others (Maes & Vanellander, 2012).

### *Bicycle couriers*

The transport of freight by bike has come up as an old-and-new method to do the last mile and to deliver parcels in a more sustainable way. In some European cities bike courier markets are developing well (Maes & Vanellander, 2012). Initial support by local governments is important, and can be justified as it contributes in varied ways to a more livable urban environment (Hendriks et al, 2010). Doubts remain, however, about professionalization and linkages with the logistical network. It is a typical chicken and egg situation: in order to professionalize, bike couriers need bigger volumes; and to work with bikers logistics, companies ask for a professionalization before handing over the volumes (Maes & Vanellander, 2012).

### *3. Purpose economy*

The common good – our planet, the quality of our society - should be the concern of every company. While it is true that more and more companies assume their Corporate Social Responsibility (CSR), recognizing that they are not there just to make profits, it is equally clear that the pace of change is by far not sufficient to offset the ongoing environmental degradation, increasing social inequality and societal fragmentation and conflict. Too many companies seem to pay only lip-service to change but in practice stick to the old destructive routines. The better ones do their best to limit the social and environmental costs of their operations, but it is obvious that this is enough. The urgent challenge of today is that companies, being crucial societal actors, recognize their responsibility not only to limit the harm but to positively contribute to the common good. Their entire business model should add as much as possible value to environment, persons and society.

This idea is reflected in the concept of public value, i.e. the value that an organization contributes to society and the common good. This corresponds with the idea of the purpose or meaningful economy. According to Aaron Hurst (Hurst, 2014), we are entering a new economic era. There are developments in every industry and city that reveal a pattern when looked at from a distance. Social, political, environmental and business changes are combining at this moment in history to give rise to the purpose economy. They are all connected to the three types of purpose we seek in our lives: our desire for impact, personal growth and community. The purpose economy is an economy where value lies in establishing purpose for employees and customers—through serving needs greater than their own, enabling personal growth and building community.

In a similar vein, Simon Sinek gives the following advice to new entrepreneurs (Sinek, 2009): "People do not buy what you do, they buy why you do it. And what you do simply proves what you believe." Making the world a better place will be the core of all activities. The approach starts with the motives of the entrepreneur as a person, and carries through the inside of the company, branding and marketing activities to a positive impact on society, which in turn is lucrative for the company. The winners are those companies that make a positive difference socially; companies that significantly improve the life world of people.

## **1.5 Problem statement, objective and question**

### **1.5.1 Problem statement**

The concrete challenge for the present project is to develop a business case which embodies an alternative approach, i.e. the proposed 5 E model, optimizing Public Value by integrating Entrepreneurship, Environment, Education and Emotion in an Economically viable business model. The business world can and should contribute much more to the wellbeing of society and the planet than just limit the harm they inflict upon them. The Triple Bottom Line approach has become a



hindrance to developing more creative and substantial approaches to contribute to global challenges such as youth employment, innovative green growth and livable urban areas.

Two problem areas will be addressed in particular, which are youth unemployment and the deficient education of youth entrepreneurship on the one hand, and the reduced accessibility, attractiveness and livability of city centers, related to urban logistics and mobility, on the other.

The business proposition selected initially is the sale and distribution of fresh products, because of its expected higher margins, and then flowers in particular, because of their emotional value and because of the author's previously existing knowledge of this sector.

### 1.5.2 Research objective

The general aim of the project is to bring the notion of Corporate Social Responsibility one step further, from the (defensive) Triple Bottom Line approach to the (more encompassing, constructive and creative) Public Value approach as exemplified by the 5E-model.

The objective of the project is to develop a business case which optimizes Public Value by integrating Entrepreneurship, Environment, Education and Emotion in an Economically viable business model; focusing on two specific problem areas, which are youth unemployment and the deficient education of youth entrepreneurship on the one hand, and the reduced accessibility, attractiveness and livability of city centers, related to urban logistics and mobility, on the other.

### 1.5.3 Research question

The question that guides the present research can thus be formulated as follows:

***How to design a profitable logistical supply chain for distributing fresh products in urban areas, while optimizing the societal values Entrepreneurship, Environment, Education and Emotion?***

*Sub-questions:*

- What is the added value of the 5E – framework?*
- How to design the supply chain, business operations and business finance?*

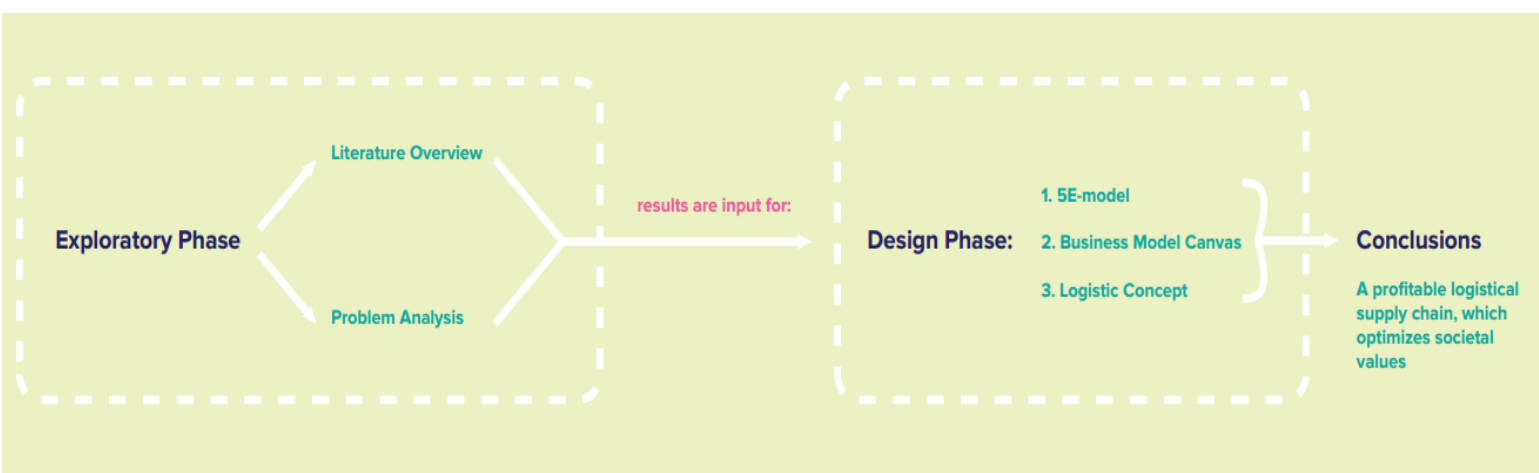
## 1.6 Approach

The approach to come to a scientifically substantiated answer to the research questions involves a number of steps as suggested by the framework developed by Herder & Stikkelman (2004). The first step is a thorough overview of literature concerning the three related subject matters: youth unemployment and entrepreneurship, inner city logistics, and purpose economy. Then, for each subject matter, the most interesting and relevant research outcomes, ideas and insights are recapitulated. The third step involves a series of interviews with top level professionals with expertise in the three subject matters. These interviews are summarized and again, the most relevant outcomes and insights are recapitulated. Next, the outcomes of the literature overview are

compared with the outcomes of the interviews. With, this, the first –exploratory - part of the study is concluded. Its results constitute the building blocks for the second part: the design of the 5E undertaking that is named Flower E-Power. This design itself involves three steps, being the first one the formulation of the companies’ strategy or the companies’ DNA as laid down in the 5E-model. The second step in the design phase is a description of the business model, for which the business model canvas of Osterwalder & Pigneur (2010) is used. The third and last step in the design phase is the description of logistics concept, applying insights from Van Goor & Visser (2013) and Ploos van Amstel (2014). Finally, the resulting design will be subjected to a thorough scenario analysis and finally, conclusions will be drawn and recommendations formulated.

For practical reasons, the area selected for the implementation of the projected company is the city of Amsterdam and more specifically Amsterdam-Zuid. The present research is not just a theoretical exercise; it is in fact and at the same time, a real life pilot project for a real life company to be established by the author, together with two business partners. And this specific area is selected, because we think our customer segment is located here, our office is in Amsterdam and Amsterdam is a city that takes care for her inner city and has a friendly startup environment.

The pilot in Amsterdam-Zuid will be closely monitored for a four months’ period, in order to detect constraints, flaws and opportunities for improvement in quality and efficiency with a view to optimize the processes. The lessons learnt will be incorporated after which the project will be unrolled to the rest of the city of Amsterdam. After the pilot phase, students of both higher and intermediate vocational schools (HBO and MBO) will join the FEP-educational program, which consists of a series of 10 workshops, in service training, visits to and interviews with stakeholders and excursions, over a period of six months. Having finished the program, students graduate and may eventually continue working as an entrepreneur at FEP. On the basis of the results of the experiences in Amsterdam-Zuid, the company’s activities will be extended to other parts of the city of Amsterdam, then eventually to other cities and even to neighbouring countries such as Germany, Belgium and France.



**Figure 4 | Research framework**

## 1.7 Overview of the thesis

In the previous paragraphs, first the need of a transition in the role that business plays in furthering public values as well as the opportunities that this implies for innovative start-ups has been discussed. And second, the twin problems of youth unemployment and inner city transport have been described and elucidated. The design of the research was laid out, starting with a clear problem statement, followed by the formulation of the objective of this research. In the final two paragraphs of this chapter, the approach of this research is described and resumed by way of a graphic overview.

Chapter two and three, together constituting the exploratory phase, are dedicated to the recollection of information via literature research and via conversations and interviews with a great number of professionals from different sectors. The selection of interviewees will be explained. The outcomes and insights generated by the interviews will be contrasted with the results of the literature research and conclusions will be drawn, indicating their relevance for the further design of the enterprise.

Chapter four will describe the design process of the Flower E-Power undertaking. In paragraph one the 5E-model will be described in some detail. The five societal and public values are processed and taken as design criteria for the social enterprise. Next, the business model canvas from Osterwalder & Pigneur (2010) will be applied for the case of the Flower E-Power undertaking. The building block channels will be zoomed in and designed in detail. In paragraph three, the logistics concept of Ploos van Amstel (2014) and Van Goor & Visser (Van Goor & Visser, 2013; Visser & Van Goor, 2004) will be presented and described. The final chapter presents the conclusions and recommendations.

## 2. Literature Overview

In this chapter the selected literature will be analyzed and discussed. The most important outcomes and insights of the literature research will be summarized and conclusions will be drawn. The full extended version of the books/literature overview can be found in appendix 1 and the summary of these overview in appendix 2.

This literature overview is organized in three sections, which together cover the main subjects of this research. These subjects were also used for searching terms on Google Scholar. These categories are the following:

1. Youth unemployment & Entrepreneurship
2. City Logistics
3. Purpose economy.

### 2.1 Analysis of the literature overview

In this paragraph, the most important outcomes and insights of the literature research will be summarized.

#### 2.1.1 Youth unemployment & Entrepreneurship

*Youth unemployment is a serious challenge to sustainable development in the world today*

Youth unemployment is becoming a worldwide problem, with serious economic, social and humanitarian consequences. In the European Union, more than 4.5 million people aged 15-24 years are currently unemployed, resulting in an unemployment rate that is double the overall unemployment rate: 20% versus 9% (European Commission, 2015).

*Entrepreneurship, innovation, employment*

Carree & Thurik (2002) suggest that a different, less traditional instrument for generating growth and employment is to play an important role: policies that generate and promote entrepreneurship (OECD, 1998). Entrepreneurship generates growth because it serves as a vehicle for innovation and change, and therefore as a conduit for knowledge spillovers. Thus, in a regime of increased globalization, where the comparative advantage of modern economies is shifting towards knowledge based economic activity, entrepreneurship is to play an important role.

According to Weiss (Weiss, 2015), market liberalization at a global level and the reduction of the size of the public administration apparatus are a double incentive for people to become more entrepreneurial and eventually start a new business themselves (Weiss, 2015). The explosive wave of new ventures is not only contributing to solving the unemployment problem but is also generating innovative changes in the economy as a whole, in developed as well as rising economies (Morris &

Schindehutte, 2005). These developments have attracted the interest of both scientists and of policymakers, the latter with a practical focus: how to foster entrepreneurship and entrepreneurial innovation (Thurik et al. 2008).

### *Entrepreneurship promotion*

Entrepreneurship promotion and training is increasingly seen as an important means to boost employment and foster the economic independence of young people. In the words of Juan Somavia, the Director General of the International Labour Organization (ILO): “Entrepreneurship and business creation are ... a growing alternative for young people whose age group often faces a labour market with double digit unemployment rates. Traditional career paths and opportunities are disappearing rapidly. A growing number of young people are taking up challenge of starting their own business and much is being learned about how the odds for success can be improved through various types of assistance and through the creation of a supportive environment.” Youth entrepreneurship promotion and training mobilizes the innovative potential of young people, empowering them to contribute to economic growth and national development (Schoof, 2006, p.1). Carree & Thurik (2002) consider it to be an important means and a valuable additional strategy to create jobs and improve livelihoods and economic independence of young people. It is an innovative approach to integrating youth into today’s changing labour markets.

### *Barriers to Entrepreneurship*

According to Hatala (2005), factors which are negatively related to the capacities of young people to establish and run successfully their own business have received limited attention thus far. The major barriers identified in his study were: lack of confidence, personal problems, lack of skills, start-up logistics, financial needs and time constraints. Weiss (2015) makes the distinction between intrinsic barriers, such as personal problems, a lack of confidence and fear of failure, and extrinsic barriers such as lack of skills, start-up logistics, financial needs, time constraints, lack of support and of entrepreneurial opportunities. In a similar vein, Carree & Thurik (2002) identify five factors which have a major influence on youth entrepreneurship:

- Social/cultural attitude towards youth entrepreneurship
- Entrepreneurship education
- Access to finance/start-up financing
- Administrative and regulatory framework
- Business assistance and support.

### *Fostering an entrepreneurial culture through entrepreneurship education and business start-up training*

Youth entrepreneurship must be an essential element of youth employment strategies to help turn job seekers into job creators. Entrepreneurship education should preferably start at an early age and incorporate a series of cognitive and practical elements. Young entrepreneurs-to-be should be supported by a culture of entrepreneurship and an enabling environment to achieve their full



potential. By combining entrepreneurship education, business start-up training and support programs in a broader culture of entrepreneurship, young people may acquire the needed attitudes, knowledge and skills that increase their chances to start their own businesses and run it successfully (Youth Entrenet, 2014).

### *Entrepreneurship education: classroom and real life practice*

The topic of entrepreneurial education has generated a debate among both scholars and policymakers. Apart from acquiring experience and relevant skills by learning the hard way, i.e. by trial and error, the question is whether entrepreneurship can also be learnt in a classroom setting, in the same way as e.g. a language or mathematics. Of course, general business principles and skills can be taught and learned in the classroom, including major topics such as marketing, finance, law, management and logistics. But essential entrepreneurial attributes such as spotting opportunities, taking calculated risks and gaining a commercial edge are elements which have little to do with theory. Of course it is useful to learn about and be aware of those elements, but it seems fair to say that entrepreneurship education cannot do without practice, by making mistakes and learning from experience, preferably in real life situations. For entrepreneurship education to be successful, theory in the classroom setting should be supplemented by real life experience in business, preferably involving a start-up under supervision of a qualified adviser and building up a relevant network.

### *Summary - Youth Unemployment and Entrepreneurship*

Entrepreneurship training is seen as a solution to the twin problem of youth unemployment and of hampered innovation because of lack of start-ups. Many vocational colleges and universities of applied sciences in The Netherlands nowadays are offering Entrepreneurship programs. While these programs are generally strong on theory (business administration, marketing) they often lack the experiential part of doing business in real-life situations. The core of entrepreneurship is calculated risk-taking and the corresponding attitudes and skills can only be obtained through 'learning-by-doing'. Because of this crucial gap in the curriculum of Entrepreneurship programs, students are ill prepared and lack self-confidence to start their own project when graduated. Filling up this gap by complementing the curriculum with a real-life experience in doing business will constitute an essential contribution to creating a start-up friendly ecosystem for young entrepreneurs, which in turn is crucial for innovation and economic growth.

### *Guidelines for startups*

Three books specifically address the practical do's and don'ts when designing a startup. These are Business Model Generation by Osterwalder & Pigneur (2010), Disciplined Entrepreneurship by Aulet (2013) and The Lean Startup by Ries (2016). The three books proved to be useful both for designing the FEP startup and for the theoretical part of the curriculum to be designed for the Entrepreneurship education program with the HBO and MBO vocational schools.

Osterwalder & Pigneur's Business Model Canvas is an inspiring format that both invites the entrepreneur to play with different business models and disciplines him/her to structure the thought process. The nine key items that compose the canvas are indeed the building blocks that need to be considered in any business model. These are: Customer segments - Value proposition - Distribution channels - Customer relations - Revenue streams - Activities - Resources, assets – Partners - Cost structure.

Aulet's Disciplined Entrepreneurship complements this way of thinking with one core message: Focus! Focus on generating a winning product-market fit. This process involves 24 steps which address six key themes: Who is your customer? What can you do for them? How do they acquire your product? How do you make money off your product? How do you design and build your product? And how do you scale?

Ries' The Lean Startup presents another vital complement to the Business Model Canvas. Its core message is: start small, i.e. with a Minimum Viable Product (MVP) and use this as the beginning of a permanent process of experimentation, innovation and growth. Work in small batches, because this optimizes the learning process while minimizing the expenditure of time, money, and effort wasted. And Ries has still another vital message to startups: success is not delivering a feature, but it is learning how to solve the customer's problem. And the crucial test is whether a product or service really delivers value to customers once using it.

### 2.1.2 City Logistics

#### *Sustainable urban logistics*

Clean and sustainable cities are attractive to live, work , enjoy and invest in. Urbanization places new demands on urban mobility: 10 to 15% of vehicle kilometers are from urban freight. Freight transport in cities with vans and trucks leads to congestion, pollution, noise and insecurity. Urban freight in Europe is responsible for 25% of transport-related CO2 emissions and 30 to 50% of other transportation related air pollution. Smart and clean city logistics should contribute to livable and attractive cities, with cleaner vehicles that better fit the size of town, by bundling the flows of goods and the use of water transport to and from the city (Ploos van Amstel, 2014).

The last mile is, due to its very specific delivery needs, considered as the most expensive part of the supply chain. The last stretch of a parcel delivery to the final consignee who has to take reception of the goods at home, at a collection point or at the office, accounts for 13% up to 75% of the total supply chain costs. Related to these high costs are the many time, cost and environmental inefficiencies in the last mile (Gevaers et al., 2009).

Dablanc (2009) gives a very useful overview of a number of issues that confront all cities and freight stakeholders:

1. Urban freight is quite inefficient.
2. Urban freight is done with vans and trucks, but a growing share of new green delivery vehicles are appearing in some European and Japanese cities.
3. “Logistics sprawl”, the locational movement of warehouses and cross-docking terminals from the urban areas to suburban zones, has positive but also negative impact (more vehicle-kilometers).
4. Labor issues are important in urban freight: small operators, with very old trucks and difficult working conditions, lack of training and poor revenues.
5. Environmental issues, negative impacts for local communities.

She formulates four recommendations for cities looking for a more efficient and climate friendly freight system.

- Set up a realistic governance structure for urban freight: assessing needs and opportunities and involving private stakeholders, businesses.
- Provide modern logistics facilities and training programs for freight workers, reintroducing urban logistics spaces and services.
- Make urban freight more sustainable and cities safer and more livable, integrating urban logistics in land use and planning policies (incl. cleaner and more silent modes of transport).
- Enhance working conditions and skills in the urban freight sector.

### *The Amazon revolution*

In the last fifteen years, supply chains and in particular its Courier, Express and Parcel (CEP) sector are facing radically new challenges (Patier-Marque, 2002; Savy & Burnham, 2013). The so-called Amazon revolution, combining e-commerce with same-day delivery logistics is fundamentally altering shopping, distribution and logistics patterns, leading to a growth in deliveries in particular (Esser & Kurte, 2005; Hesse, 2002; Lierow, 2016). E-commerce revolutionizes consumer behaviour and parcel delivery requirements in regard to reliability, speed, mobility and proximity (Visser & Lanzendorf, 2004; Lierow, 2016).

The combined effects of urbanization and globalization of the economy has led to a huge concentration of parcel deliveries in cities. This has made urban freight an essential activity for the city's economy. However, urban goods distribution is also blamed by public authorities and citizens for causing congestion, all sorts of environmental pollution and global warming (Dablanc, 2009). Over the past fifteen years, urban goods distribution has become a shared issue and a concern for cities all over the world and it can now be considered that urban logistics is fully entrenched in the political agenda (Cherrett et al., 2012; Lindholm, 2013a, 2013b).

### *Bicycle messengers in the Logistics chain*

As trucks and vans are polluting urban areas and at the same time losing huge amounts of time and money in traffic congestion, the issue of the last mile is of increasing concern to both private companies and governments, at the national and certainly at the local level. There are thus strong

incentives to stimulate alternative and innovative transport concepts. This includes ideas such as city hubs and depots, the use of inland waterways to deliver in city centers, electrically-powered vehicles, shifting to night transport, and many others. One way or the other, social and political pressure will reduce the number of vans and trucks running around in city centers.

The transport of freight by bike has come up as an old-and-new method to do the last mile and deliver parcels in a more sustainable way. Bike couriers transport and deliver parcels or freight with a low volume or weight. It is a method that has been proven to be fast and reliable in congested urban areas. Though hitherto speed is being presented as its comparative advantage, green might become a more convincing selling argument. In some European cities bike courier markets are developing well. Specific markets seem to exist for transport of freight by bike (Maes & Vanellander, 2012). Maes & Vanellander also give interesting and useful information on the current state of affairs with regard to the sector of bike transport. Most companies are small one or two-person firms. Links with logistics companies are rare. The organization of the market leaves room for optimisation. Bike couriers are hardly connected to the global network. Most products offered are on a same-day delivery principle. The focus is regional or local. Weight and volume restrictions are possible, though some invest in cargo bikes. The usefulness of handhelds, track and trace, routing, etc. might be high if volumes would go up. Some policy initiatives could help stimulate the bike courier market. The implementation of an awareness campaign might be a policy initiative to boost the market volume. A logo stressing sustainability can be an option to convince companies to use non-petrol powered transport for the urban transport. Freight vehicles should stop at the outskirts of the city to unload goods to environmentally less damaging vehicles. In the A-to-B transport market which bike couriers in Belgium mostly do, clients are found in the administrative sphere, legal industry, advertising companies, hospitals and doctors, sandwich bars and flower shops. Market growth is possible if action is taken to increase awareness about the product 'bike delivery'.

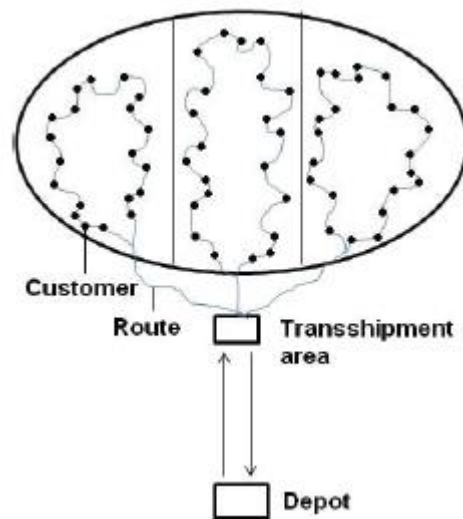
Maes & Vanellander's overall conclusion is that a specific market for bike couriers exists, though some doubts about the professionalization and linkages with the logistical network are correct. The Belgian scale, at which these companies operate, is very small. It is a chicken-or-egg story. To professionalise, bike couriers need bigger volumes. To work with the bikers logistics companies ask for a professionalization before handing over the volumes. A look at examples in other European countries will be necessary to discover opportunities and constraints.

### *City hubs*

Local governments, sometimes in a ppp - public private partnership - with enterprises, might take a step further in urban freight transport policies and invest in city hubs, with depots built at the city outskirts where goods are delivered for further transshipment, eventually adding logistics such as labeling, repacking or cross docking. Reverse logistics is taken into account. By way of example, see Binnenstadsservice.nl, which has developed several branches.

From the city depot, a fully loaded truck can leave to the inner city, limiting the number of moves in the city, as well as the related pollution. But the concept of bike couriers fits in here as well, as graphically shown in Fig. 3. Bike couriers are able to take the smaller packages, meeting the characteristics (small, low weight, time pressure) and distribute them as little ants in the city towards the final destination (Maes & Vanelander, 2012).

This idea might well be supported by local governments as it is lowering vehicle movements and emissions (CO<sub>2</sub>, PM and noise) in the city, thus contributing to a more livable environment. Actually, this support is sometimes materialized in an (initial) investment. When restrictions as delivery time windows apply, exceptions can be given to less polluting vehicles. Bike couriers can play a role in this concept as they are less restricted by limitations, an advantage for the bikers as well as the receivers (B. Hendriks in Maes & Vanelander 2010).



*Figure 5. The logistics chain using a city depot / transshipment area solution (Dell'Amico & Hadjidimitriou, 2012).*

A specific market for bike couriers exists, though doubts remain about professionalization and linkages with the logistical network. It is a typical chicken and egg situation: in order to professionalize, bike couriers need bigger volumes; and to work with bikers logistics, companies ask for a professionalization before handing over the volumes (Maes & Vanelander, 2012).

### *Connect with existing Action Programs*

Both at the European, national and local level, initiatives are taken to make the urban freight system more efficient with less negative impacts on environment and the city's livability. These programs provide interesting information and also practical innovations, such as the sharing data initiative of the Neutral Logistics Information Platform of the Top Sector Logistics, resulting in the Show and Mark interface (digitizing paper bills and interface with the customer) and linking systems and freight flows (bundling).

Also at the national level, interesting initiatives are taken in the context of Green Deal Six, in which many parties cooperate, include the National Government, various municipalities, industry associations, research institutes, vehicle manufacturers, shippers, transport companies and fuel suppliers. A crucial insight here is that the transition to a more efficient and greener city logistics implies a multipronged policy, combining: legislation and regulation, organization, technology, and behavior.

At the European level, this program is matched by the Urban Freight Research Roadmap, that is being developed by ERTRAC, the European Road Transport Advisory Council, and ALICE, the Alliance for Logistics Innovation through Collaboration in Europe. Its goal is to identify research priorities related to urban freight delivery, returns and urban logistics to improve the efficiency, sustainability and security of these activities. Research areas identified aim to:

- Increase energy efficiency, which can be achieved by improving the efficiency of the whole urban logistics system, on top of the expected gains in the energy efficiency of vehicles;
- Improve the urban environment by increasing air quality and reducing noise;
- Increase customer satisfaction by delivering the goods on time and improving the reliability of the systems;
- Increase safety and security, reducing injuries and fatalities as well as cargo loss or damage.

But probably the most interesting and practical initiatives are being developed at the city level. In a complex environment such as an urban territory, where environmental, social and economic issues are competing and difficult trade-offs are involved, local intervention is most opportune. Municipal authorities, businesses and citizens have come to realize that an urban freight system serving the urban economy and its environment is a necessity today. A case in point – one to which the FEP project is being connected – is the Action Plan Air Quality of the Municipality of The Hague. The Hague will spend 6 million euro in a program to clean up the air in the city, focusing on the pollution caused by city traffic. Measures include the taking off the road of dirty cars; reducing the number of gasoline scooters with a new incentive scheme for electric scooters; arrangements with the transport sector to further the use of cleaner vehicles in urban distribution; and the promotion of electric vehicles. It has a special policy focus on taxis, larger employers, courier services and motorcycle couriers.

Also in other ways, cities can set examples: like any large company, a municipality receives all sorts of goods, from letters and documents to office items and furniture. Public procurement procedures can be helpful to achieve a more environmentally-friendly freight supply.

### 2.1.3 Purpose economy

The contributions of Hurst, Sinek, Klomp et al and Pauwels complement each other while pointing all in the same direction. According to Hurst (2014), we are entering a new economic era, the era of the

Purpose Economy: "It's an economy where value lies in establishing purpose for employees and customers—through serving needs greater than their own, enabling personal growth and building community." The drivers are precisely the three types of purpose we seek in our lives: our desire for impact, personal growth and community. The organizations that thrive in the next economic era will embrace purpose in how they work as well as in their products, services and relationships.

The purpose issue was convincingly addressed already a couple of years before by Simon Sinek with his famous Golden Circle (Sinek, 2009). The Golden Circle consists of three concentric circles, with Why in the center, How in the middle and What in the outer circle. Sinek states that most organizations and people think, act and communicate from the outside in. They tell you What they do (function, product) and sometimes How they do, but not Why they do what they do. But inspiring organizations think, act and communicate from the inside out. In his immensely popular TED talk titled How great leaders inspire action he resumes his ideas in two sentences: "People do not buy what you do, they buy why you do it. And what you do simply proves what you believe."-

In essence, the message of Klomp et al (2016) is comparable to the one by Sinek and Hurst. In their Meaningful Economy, they also connect personal values with entrepreneurial activity. The Meaningful organization is aligned with the era of self-realization and self-transcendence, at the top of Maslow's pyramid of needs. Social added value is the main pillar of thriving businesses, making the world a better place will be the core of all activities. Their approach starts with the motives of the entrepreneur as a person, and carries through the inside of the company to a positive impact on society, which in turn is lucrative for the company.

Pauwels (2014) focusses on the relationship between employers and employees in what he calls the Creative Energy Organization or CEO, describing how they can enrich themselves and each other through a deliberate exchange of eight values: transparency, authenticity, commitment, space awareness, responsibility, understanding, trust and candor. For Pauwels, the Creative Energy Organization is a company with a heart. A heart for employees, customers and society, with whom valuable relationships are established, with each of them. Without fear nor assertiveness she presents itself with a growing charisma to the world. With the intention to provide added value for herself and any environment in which she operates.



### 3. Problem analysis

In order to collect further information for this exploration phase, 32 interviews were held with top professionals in different fields of knowledge and expertise, covering a wide range of relevant topics. For practical purposes, these interviews will be categorized in three domains, as follows:

1. The flower business - Social Enterprise - Startups - Entrepreneurship
2. Public administration - Institutions - Education
3. City Logistics

The first category is all about business and (social) entrepreneurship. Questions that are addressed include the following. What is an entrepreneur, what distinguishes social entrepreneurs, what drives them? How do they combine their purpose of furthering social goals with making money to make their business flourish? Where do they get their investment money from? The focus here is on collecting ideas, insights, research data and practical experiences of mainstream and social entrepreneurs with a view to be well prepared to start the Flower E-Power business. In this category, fourteen persons were interviewed.

Social entrepreneurs add public value to society. How does that connect them with governmental institutions that are working in the relevant societal fields, such as the municipal and educational establishments? In the second category, interviewees come from the triangle State-Business-Educational institutions, especially middle and high level vocational schools (MBO and HBO). How do they see social entrepreneurs, how do they interact and coordinate when furthering social goals and adding public value? Which are the opportunities and gains in synergy to be realized for the Flower E-Power social enterprise? In this category, twelve persons were interviewed.

The third category is about city logistics . Professionals and practitioners from local government, the academy and the logistics business are interrogated about new insights in the 'Last Mile Problem' and the green future of city logistics . Six professionals were interviewed on this topic.

Table 1 on the next page will give an overview of the professionals that have been interviewed.

<b>Startups – Entrepreneurship – Social Enterprises</b>	<b>Function</b>	<b>Company</b>
Bart Troost	Co-founder	Bloomon
Henri Potze	Co-founder	Benefit of Nature
Sander Vissers	District manager	The Colourkitchen
Steven Pauwels	Co-founder	Choco Cooperative
Ryan Spencer	Entrepreneur	Multiple companies
Yubin Wang	ICT specialist	Lockheed Martin
Gerben Ravensbergen	Flower grower	Lilies of Life
Chris Houbolt	Entrepreneur/strategic consultant	Multiple companies
Ben Dijkdrent	Director	Wiesmeijer Boeketterie
Silke Tijkotte	Founder	Let it Grow
Mr. Heyl	Director	Heyl BV
Arjan Bosman	Manager	Dillewijn & Zwapak
Mariska Foppen	Director	Waterdrinker Aalsmeer
Joris de longh	Creative Designer	BuroBliksem
Cees Driebergen	Company Strategist	Multiple companies
Julian Busse	Creative producer	Studio Hersenstal
Rudi Tuinman/Pascal Koeleman	Entrepreneur	2Dezign
Simon Mulder	Advisor	Multiple companies
Koos Kesbeke	Director	Kesbeke
Sander van Egmond	Director	Paauw & van Egmond
Ruben van der Does	Marketing specialist	ACE
Evert Moolhuijsen	Director	De-innovator
<b>Public administration - Institutions - Education</b>	<b>Function</b>	<b>Institution</b>
Pierre van Hedel	CEO/ Lecturer	Rabobank Foundation /HAS
Roger Engelberts	Director / Lecturer	Imagro / HAS Den Bosch
Ellen Sjoer	Lecturer	Haagse Hogeschool
Johan Star	Teacher	Haasge Hogeschool
Bart Hermesen	Entrepreneur/ teacher	Avans Hogeschool
Guus Klapper	Head of Department 'Trade'	ROC Mondriaan
Ingrid Wakkee	Head of Department 'Entrepr.'	HvA
N. Molenaar	Teacher	Haagse Hogeschool
Mrs. Kruijswijk	Head of Department 'Entrepr.'	Haagse Hogeschool
Robert Motshagen	Project Leader	Municipality of The Hague
Marc Molenaar	Job hunter	Municipality of Amsterdam
Martin de Bruijn	Sector Manager	Haeghe Groep
Marcel Pruijm	Job coach	Municipality of Amsterdam
Jos Vrancken	Former TU Delft lecturer/advisor	TU Delft/VranckenConsultancy

Gabriel van den Brink	Professor	Tilburg University
Akos Wetters	Founder	Steeep
Martin Kool	Senior Account Manager	Rabobank The Hague
<b>(City) Logistics</b>	<b>Function</b>	<b>Institution / Company</b>
Walther Ploos van Amstel	Lecturer	HvA
Birgit Hendriks	Project Manager	Eco2City
Ilja Bakx	IT specialist	MakeTek
Nanette Wielenga	Project manager	PostNL
Mike Mulder	Director	Mulder Karosserie
Marco Scholten	Director	Bode Scholten
Coen de Lange	Program manager	TKI Dinalog
Folef Hooft Graafland	IT specialist	Picnic
Christian Suurmeijer	Founder / designer	Greenolution
Daan Sistermans	Marketing manager	Pitpoint
Michiel Oey	Assistant professor	TU Delft

**Table 1 . Overview of the professionals**

In what follows, first, the most relevant interviews per category will be resumed. In the second paragraph, the results will be analyzed and then compared and contrasted with insights from the literature presented in the previous chapter.

In the final paragraph, conclusions will be drawn, summarizing process and results of the problem analysis of the exploration. *A full overview of the interviews, including the more extensive texts of the interviews resumed here, is available in Appendix 3.*

### 3.1 Interviews per domain

This paragraph presents a summary of the most relevant insights obtained by the interviews, for each of the three domains:

- The flower business – Social Enterprise – Startups – Entrepreneurship
- Public administration- Institutions – Education
- City Logistics

A summary of all interviews is available in Appendix 3. The interviews provided so many important insights and advices concerning the business startup that a summary can only poorly reflect this richness, so please consult the Appendix 3.

#### 3.1.1 The flower business – Social Enterprise – Startups – Entrepreneurship

Summarizing the highlights of the interviews:

### *About starting up*

A start up should be lean and clean. Your first challenge is to establish a “minimum viable business proposition” with which you can enter the market without too high costs and risks. With this idea of a viable minimum set up, engage partners, bring them to cooperate with you. Involve your stakeholders in the design of improvement policies and plans; co-creation! A healthy relation is based on a shared vision or purpose, be sure that you share vision, not just a commercial interest. Do things together, invest in relationships, info sharing, transparency, trust; all of these are assets that improve profitability particularly in the medium and longer term. It is all about combining vision, relation and smart implementation. Then just start doing, act; it is along the way that your most important insights will be generated and your most promising relationships will be established.

### *About the market and costumers*

Is the market there - or can you create a market? What does the customer want? Distinguish between expressed and latent needs; and between needs, wants and desires. Can you influence people, their preferences, their attitudes and emotions?

Who are you addressing / targeting, how you are you going to connect with them? Learn about these people, watch them closely and try to understand them and read their behavior. Think as a customer, enter into his/her world. How can you make them to switch from their current provider to you?

Make a try, giving samples for free, try to establish a relation based on emotion; who reacts, if people do not react you may be offering the wrong product, switch the offer in one or several aspects. Go on relating and experimenting until you know more and feel confident that you have hit the spot. This will provide you both with solid information and a basis for further constructing. Step by step, each one based on the previous one. Offer variety, give customers a choice!

### *About the business plan and finance*

In order to get your startup financed, approach and engage various sources: pizza- or basket financing. Money meets ideas. The business plan should be clear and convincing, with ample empirical evidence. Funding agencies want to see the numbers.

### *About communicating the brand*

Create a clear and recognizable image so that people know who you are and what you stand for, so that they can connect and engage. People experience, sense and feel authenticity. They want to feel the brand's DNA, its passion, emotion, purpose, power.

What is your story and where to find? How to transfer the message to your potential clients? Have a professional short movie made (infographic).

Modern entrepreneurship is modern communication. Social media, permanent contact, open all lines, involve and engage, maintain networks, benefits.

### *About the internal organization*

Give employees the space and room to act in the way they think they should and is best for the company. Give them a sense of ownership and a sense of opportunity. People want to be meaningful,

and have added value for other people, they want to grow together with other people. Healthy relationships are based on integrity, honesty, transparency. One can only communicate one's DNA to the outside world when it is lived internally. And it is not easy to keep and maintain one's DNA fresh and alive. Human scale is important. Start with a small core group, people sharing the same DNA, and then enlarge the circle, with partners, the customers, stakeholders, community and the broader society. Communicate your DNA and receive and process the feedback back inside. The core remains servant to the whole, its beating heart.

### **3.1.2 Public administration - Institutions – Education**

Summarizing the highlights of the interviews:

#### *About education*

Talent is not a scarce good; everybody has some unique talents and the trick is that you believe in it, believe in yourself, believe in your partner. We rely too much on knowledge and underestimate the importance of attitude. The exclusive focus on IQ has produced unintelligible systems and destroyed community-ship.

#### *About the connection with educational institutions*

The connection with education, entrepreneurship and exclusivity for selected schools is an excellent idea. Local government will join easily because it is this kind of initiatives that they are looking for. Apply functional differentiation: MBO students are to be the frontliners (contact with the customer, delivery and selling) and HBO students are to function as coordinators per hub/city.

#### *About the curriculum*

Focus training of HBO students on entrepreneurial and managerial skills in practice. Focus training of MBO students on practical and attitudinal skills. Sign up as training company (leerbedrijf) at SBB (stichting Beroepsonderwijs Bedrijfsleven). Check accreditation criteria for the design of your workshops.

Employ persons with a distance to the labour market

This is an important feature / asset of your proposition: engage and employ persons with a distance to the labour market, as this is considered a pressing societal and public policy issue.

### **3.1.3 City Logistics**

#### *About the importance of a fully efficient chain*

Logistics is your main challenge. Your business proposition is a winner if you gain a competitive edge in logistics. Precision logistics is the order of the day. Make a business proposition of intelligent IT transport systems. Connecting planning and steering with ICT can be very profitable. There is ample room for smart apps.

#### *About the hardware*

Do not invest in hardware, do not buy vehicles. The trick now is shared economy, shared facilities, shared services.

#### *About E-vehicles*

The transition to new environmentally friendly vehicles is a tough and costly process and most of SME enterprises are difficult to be moved in the right direction. E-vehicles are too expensive and they perform poorly on energy. Direct emissions in the city may be low but then these emissions occur elsewhere in the production and maintenance. Both from an economic and ecologic point of view, green gas is preferable. Of course, biking is the best of all: young, innovative, sustainable, good for your health and for the city.

#### *About the chain*

First advice: bundle your freight with e.g. HelloFresh. Forerunners such as HelloFresh drive through your street five times a day. This is becoming insane, we need to coordinate and then to cooperate. Compose the bouquets as late as possible, reduce transport costs, decouple and recompose. Decoupling points at the city margin. Multifunctional hubs on the city margins. Keep open the possibilities to use the logistical system for distributing other commodities but start with flowers.

### **3.2 Analysis of the results in contrast with the literature**

In the following paragraph, relevant insights drawn from the interviews with the professionals will be compared and contrasted with selected statements from the literature overview presented in chapter two. It is interesting to see where science and practical experience meet and where they diverge. Both instances will be shortly commented upon. Again, this analysis is structured following the three themes of this research:

1. Youth unemployment & Entrepreneurship
2. City Logistics
3. Purpose economy

#### **3.2.1 Youth unemployment & Entrepreneurship**

Youth unemployment is a serious problem and on both sides there is some frustration about the lack of progress in addressing and solving it. Carree & Thurik's (2002) suggestion that the promotion of entrepreneurship might be a helpful strategy is not subscribed by Troost from Bloomon, who thinks that stimulating and promoting entrepreneurship will have little effect, because entrepreneurship is in your blood, or it is not; it cannot really be taught and learned. In contrast, the professionals from

the educational institutions, such as Star, Hermesen, Van Hedel and Engelberts, do think that it is possible and that a project like the FEP-project may substantially contribute to success by enabling students to experience in real life what it is to be an entrepreneur and in this manner exploit and develop their entrepreneurial skills and attitudes. Sjoer agrees and focusses on the potential of the FEP-project to remove barriers to entrepreneurship such as a lack of confidence and other personality problems.

This is in line with Schoof (2009) who says that the promotion and training of youth entrepreneurship effectively helps to mobilize the innovative potential of young people, empowering them to contribute to economic growth and national development.

The Youth Entrenet (2014) program and Engelberts concur in the idea that by combining entrepreneurship education, business start-up training and support programs in a broader culture of entrepreneurship, young people may acquire the needed attitudes, knowledge and skills that increase their chances to start their own businesses and run it successfully. Both Engelberts and Star agree that certain things related to entrepreneurship can be taught in classroom, but that that entrepreneurship education cannot do without practice, making mistakes and learning from experience. When this is missing in the curriculum of entrepreneurship programs, students will be ill prepared and lack the self-confidence to start their own project when graduated. Filling up this gap by complementing the curriculum with a real-life experience in doing business will constitute an essential contribution to creating a start-up friendly ecosystem for young entrepreneurs, which in turn is crucial for innovation and economic growth.

With regard to the startup of a new company, Hendriks, Moolhuijsen, Spencer, Star, Wetters and other professionals all agree that starting with a Minimum Viable Product is of crucial importance for a startup like FEP. Avoid at all costs making excessively high initial investment costs. And, in the words of Hendriks: “Try to bundle and hire as much as possible, before you really purchase something.” This lean way of thinking is concurs with Ries’ book ‘The Lean Startup’ (2016). All these professionals also recommended to work out the business model according to the Business Model Canvas of Osterwalder & Pigneur (2010). The nine key items that compose the canvas are indeed the building blocks that need to be considered in any business model.

### **3.2.2 City Logistics**

Smart and clean city logistics should contribute to livable and attractive cities, with cleaner vehicles that better fit the size of town, by bundling the flows of goods and the use of water transport to and from the city. Just like Dablanc (2009), Ploos van Amstel is convinced that at present, urban freight transport is quite inefficient and innovative and that there is ample room for smart and green delivery vehicles that contribute to the liveability and streetview of city centers.



Dablanç (2009) agrees with Scholten that city hubs and crossdocking stations both have advantages and disadvantages (more vehicle km and more handlings per freight). Scholten pleads for better cooperation with municipalities and a long term policy which enables delivery companies to make their own projections for the longer term. This is in line with the recommendations formulated by Dablanç (2009).

Maes & Vanelslander (2012) further explore the utility of government policy initiatives. The implementation of an awareness campaign might be a policy initiative to boost the market volume. A logo stressing sustainability can be an option to convince companies to use non-petrol powered transport for the urban transport. Freight vehicles should stop at the outskirts of the city to unload goods to environmentally less damaging vehicles. Market growth is possible if action is taken to increase awareness about the product 'bike delivery'. Furthermore, they strongly recommend to integrate urban logistics in land use and planning policies (incl. cleaner and more silent modes of transport).

This is what Hendriks and Ploos van Amstel also are pleading for.

Ploos van Amstel is in favour of the electric cargo bike, saying that it has proven to be fast and reliable in congested urban areas. Maes & Vanelslander (2012) agree with this, but they suggest certain amendments, for instance that bike couriers have to be connected to the global network. The focus should be regional or local. The integration with software, for instance 'track and trace' can be of high value if volumes go up. In the words of Maes & Vanelslander: "Bike couriers are able to take the smaller packages, meeting the characteristics (small, low weight, time pressure) and distribute them as little ants in the city towards the final destination". Hendriks completely agrees with this vision.

The most interesting and practical initiatives are being developed at the city level. In a complex environment such as an urban territory, where environmental, social and economic issues are competing and difficult trade-offs are involved, local intervention is most opportune. Municipal authorities, businesses and citizens have come to realize that an urban freight system serving the urban economy and its environment is a necessity today. This is what all professionals agree upon. A remarkable statement is made by Van Egmond, owner of a major flower export company, in relation to the challenge of the Flower E-Power start up: "Logistics is your main problem. Create a fully efficient chain. Gain a competitive edge. The rest is relatively easy."

### 3.2.3 Purpose economy

The contributions of Hurst, Klomp et al and Pauwels complement each other while pointing all in the same direction. According to Hurst (2014), we are entering a new economic era, the era of the Purpose Economy: "It's an economy where value lies in establishing purpose for employees and customers—through serving needs greater than their own, enabling personal growth and building

community." The drivers are precisely the three types of purpose we seek in our lives: our desire for impact, personal growth and community. The organizations that thrive in the next economic era will embrace purpose in how they work as well as in their products, services and relationships.

In essence, the message of Klomp et al (2016) is comparable to the one by Hurst. In their Meaningful Economy, Klomp et al also connect personal values with entrepreneurial activity. The Meaningful organization corresponds to our era which is the era of self-realization and self-transcendence, at the top of Maslow's pyramid of needs. Social added value is the main pillar of thriving businesses, making the world a better place will be the core of all activities. Their approach starts with the motives of the entrepreneur as a person, and carries through the inside of the company to a positive impact on society, which in turn is lucrative for the company.

Pauwels (2014) focuses on the relationship between employers and employees in what he calls the Creative Energy Organization or CEO, describing how they can enrich themselves and each other through a deliberate exchange of eight values: transparency, authenticity, commitment, space awareness, responsibility, understanding, trust and candor. "The Creative Energy Organization is a company with a heart. A heart for employees, customers and society, with whom valuable relationships are established, with each of them. Without fear nor assertiveness she presents itself with a growing charisma to the world. With the intention to provide added value for herself and any environment in which she operates."

### 3.3 Conclusions of the exploratory phase

In this paragraph, the most important conclusions of the exploratory phase will be drawn. Again, this will be done following the three main themes of this research project.

Probably, the most surprising outcome of this exploratory phase is that the process itself has become a process of co-creation, involving a good part of the professionals that were interviewed. Almost naturally, after having explained the reason of my visit and the contours of the Flower E-Power company, the interviewees connected and engaged, came up with critical comments and new ideas and suggested additional inroads and resource persons. A good number of interviewees expressed their readiness not only to continue the brainstorm and be available for further advice, but also to join the effort and cooperate in a concrete way.

On the other hand, however, this should not surprise us too much neither, as it confirms the hypothesis that we are entering the era of purposeful organizations and that people are looking for purpose and meaning. This refers to the 5<sup>th</sup> E, of Emotion of the 5E-Model, the experience of being part of an effort for a greater purpose, one that transcends the mere me, here and now. It is about engagement, co-creation and cooperation, going beyond narrow selfish motives of money, power and status.

The most important practical result of this exploratory phase is the commitment of a number of interviewees, who in a very real sense are to become key persons in the Flower E-Power company project. While the initial idea of the interviews was to collect information, the interviews quickly turned out to be conversations and brainstorming in a context of mutual commitment, co-creation and cooperation.

This is particularly true for the professionals interviewed on the two problem areas addressed in this study, i.e. youth unemployment/ entrepreneurship and green city logistics. The interviewees from the educational and governmental institutions dealing with these issues showed great interest in the Flower E-Power project and in the way it proposes to tackle the respective problems. This resulted in very interesting conversations, but what is more, also in unexpected opportunities to obtain new assets, such as subsidized employees and even financial resources, for example as remuneration for the entrepreneurship education of vocational school students or as subsidies for contributing in an innovative way to improve the air quality in inner cities.

This again, has led to a reframing of the research question for the present study: “How to design a profitable logistical supply chain for distributing fresh products in urban areas, while optimizing the societal values Entrepreneurship, Environment, Education and Emotion?” When formulating this question, the underlying supposition was that the company would earn money with smart logistics for distributing fresh products in urban areas and that it would do this in such a way that at the same time the twin problems of youth unemployment and unlivable cities would be addressed. But the enthusiastic response and practical commitment of the interviewees imply that the company can be made profitable by accumulating three sources of income: the distribution of fresh products with smart green city logistics, the entrepreneurship education of vocational school students and targeted subsidies for innovative initiatives to improve the livability of cities.

And this, of course, has important implications for the design of the Flower E-Power business model, which is the subject of the second part of this study. The literature review and the interviews, as well as the comparison of the two, also produced valuable data, insights and recommendations on the three subject matters: youth unemployment and entrepreneurship, city logistics, and purpose economy. In the following blocks, these insights are presented for each of the subject matters. As *design requirements* for the Flower E-Power business model, the following items should be highlighted:

#### Youth Unemployment and Entrepreneurship:

- Involve the vocational schools early in the design phase, in order to secure their commitment and procure that the educational proposal fits in and enriches their curriculum
- Compose and procure a portfolio of real life experiences in business where youngsters can obtain experience and develop their talents
- Concerning the startup of the FEP business: start lean with a Minimum Viable Product

- Work out your business proposition applying the Business Model Canvas.

#### City Logistics:

- Electric cargo bikes constitute a viable, attractive and clean transport mode
- Apps are essential for smart and green city logistics and real time deliveries
- The logistics chain should include city hubs at the border of city centers;
- Organizing green city logistics requires close cooperation between business, municipal governments and educational and awareness activities.

#### Purpose Economy:

- Purposeful or meaningful organizing is a way of life which is characterized by a constant drive to look for combinations of viable business models and opportunities to make the world a better place
- Purpose is also involved in the design of the internal organization. A purposeful company is horizontally organized, with a heart for human flourishing, the development of the multiple human talents of all its colleagues.
- A purposeful company should always take care of its moral consistency and social legitimacy, in each and every activity.

### *Youth unemployment & Entrepreneurship*

- Promoting youth entrepreneurship is an effective way to reduce youth unemployment;
- Mobilize the innovative potential of young people, empowering them to contribute to economic growth and national development;
- In entrepreneurship education, give due and balanced weight to knowledge, skills, attitudes and personality (self-confidence);
- Introduce real-life projects where students can experience what it is and how it feels to be an entrepreneur; in order to exploit and develop entrepreneurial skills and attitudes;
- Introduce real-life projects to lower the barriers to become an entrepreneur for real; like a lack of self-confidence, personal problems, lack of skills and how to cope with finance;
- By combining entrepreneurship education, business start-up training and support programs in a broader culture of entrepreneurship, young people acquire the needed attitudes, knowledge and skills that increase their chances to start their own businesses and run it successfully;
- A real-life experience in doing business will constitute an essential contribution to creating a start-up friendly ecosystem for young entrepreneurs, which in turn is crucial for innovation and economic growth;
- Start with a 'Minimum Viable Product' (Ries, 2016) and test this, evaluate and pivot, or go on with this product, to keep the initial costs low - based on the build-measure-learn principle;
- Work out your business model following a structured canvas, like the Business Model Canvas of Osterwalder & Pigneur (2010), to make sure you have included all facets of a business.

### *City Logistics*

- Smart and green delivery vehicles are needed to ensure the liveability and streetview of city centers;
- Close cooperation between municipality and businesses is needed in order to develop long lasting and durable policies to tackle the Last Mile Problem;
- Smart and clean city logistics should contribute to livable and attractive cities, with clean, green vehicles that better fit the size of town, by bundling the flows of goods and by using water transport to and from the city;
- Insert city hubs at the borders of the city centers to avoid flooding the city center with polluting and unsafe traffic;
- Use electric cargo bikes to make city centers attractive, clean and livable;
- Start practical initiatives at the city level: in a complex environment such as an urban territory, where environmental, social and economic issues are competing and difficult trade-offs are involved, local intervention is most opportune.

### *Purpose economy*

- We are entering a new economy, the 'Purpose Economy', where value lies in establishing purpose for employees and customers—through serving needs greater than their own, enabling personal growth and building community;
- The organizations that thrive in the next economic era will embrace purpose in how they work as well as in their products, services and relationships;
- Social added value is the main pillar of thriving businesses, making the world a better place will be the core of all activities;
- Purpose is also involved in the design of the internal organization. A purposeful business organization a company with a heart. A heart for employees, customers and society, with whom valuable relationships are established, with each of them. with the intention to provide added value for herself and any environment in which she operates: 360 degrees profit.
- A purposeful company should always take care of its moral consistency and social legitimacy, in each and every activity. Doing business while optimizing societal value – that is Flower E-Power!

## 4. Design of the Flower E-Power Undertaking

The Flower E-Power undertaking is a social enterprise. Its purpose is to create public value. The three goals of this social enterprise are:

1. To reduce youth unemployment and stimulate youth entrepreneurship;
2. To increase the accessibility, attractiveness and liveability of city centers;
3. To embody these (and eventually other) public values in a viable business proposition.

This way of conceiving a business is embodied in the 5E-concept, which will be described in paragraph one. This concept is applied in the Flower E-Power business model, which is structured by using the business model canvas of Osterwalder (Osterwalder & Pigneur, 2010) . The canvas with its nine building blocks will be described in the second paragraph. In the following chapter, the logistics concept of Ploos van Amstel (Ploos van Amstel, 2012, 2014, 2015) and Van Goor & Visser (Van Goor & Visser, 2013; Visser & Van Goor, 2004) will be presented.

### 4.1 The 5E-Model

This model, which builds on and further develops the Triple Bottom Line of the 3P's, can be seen as Flower E-Power's company's DNA. This implies that all employees and colleagues in the organization should understand this model, feel committed to it and act accordingly, both inside and outside the organization. This DNA should flow through everybody's veins and each colleague should feel that he/she is part of an effort to bring about something that is greater than their selves. This project is to be seen as an innovative pilot in which the 5E's will be tested and analyzed in a concrete setting.

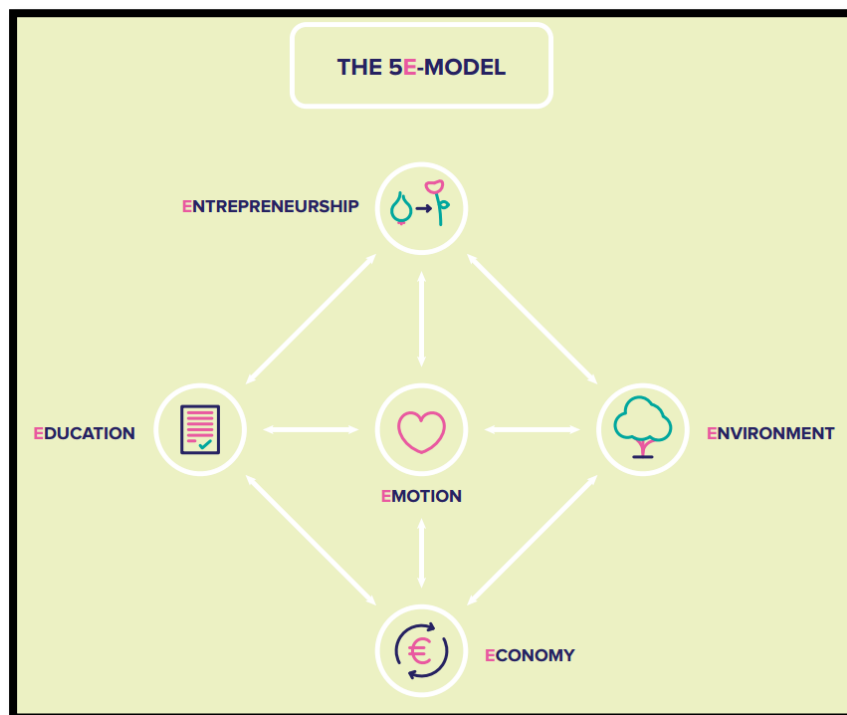


Figure 6 | The 5E-model



The 5E-model, graphically presented in figure 7, now will be described in some detail.

The first two E's can be seen as the most relevant ones in the present case, since they are covering the two main goals of the Flower E-Power undertaking.

### *1. Entrepreneurship*

'Youth unemployment to a zero-level'. This may sound unrealistic, but visions are like dreams and should be overambitious. This objective will be realized by promoting and stimulating youth entrepreneurship. The FEP-project will provide young entrepreneurs with a real-life business start up to let them explore and develop their talents. This 'learning-by-doing' style of education is helpful for developing entrepreneurial attitudes and skills, such as creativity and the courage needed for calculated risk taking, and trains them to deal with relevant stakeholder such as local government, financial institutions and other organizations. This will make the students more self-confident and independent.

### *2. Environment*

The objective is to make cities cleaner, more accessible and attractive and more livable by optimizing green cargo transport. Cities are full with polluting cargo and other transport modes, a problem that is aggravating because of the increasing E-commerce sector. This causes many inconveniences such as traffic congestion, air pollution, unsafe situations and health problems. Polluting diesel trucks and vans should be replaced by greener modes of transport. Besides, the process of delivery is often inefficient. There is a definite need for a precision logistical model, which is supported by ICT in the form of an application. With this application, which will be presented in the last paragraph of this chapter, the consumer can for instance see where his/her delivery agent is at a certain moment and how long it will take before he or she arrives at his/her house. This will make the delivery process far more efficient and environmentally and customer friendly. Air quality will be improved and the carbon footprint of transport will be reduced. A double deal: greening the economy and greening the cities. The products that will be distributed, i.e. flowers, will be sustainably produced, preferably local seasonal produce. Packing material will be eco-friendly as well.

### *3. Economy*

It goes without saying that financial-economical sustainability is a sine qua non for any business. Besides, in the FEP-project, economy also enters into the equation as the project pretends to contribute to and foster local economic development by procuring local produce and generate local employment. Enterprise flourishes in a flourishing context, growing together.

### *4. Education*

This fourth 'E' is threefold:

1. Students at vocational schools (MBO and HBO) will be trained in entrepreneurial skills and attitudes, and get acquainted with the principles of the 5E's as a new way of doing business.

The existing educational curriculae for entrepreneurship at MBO and HBO schools will be complemented and enriched with real-life practice in service training.

2. Consumers will experience and be informed and conscientized about doing business which is focused on societal values, as well as about the products they consume. How, where and when are they produced? How to use your products in the appropriate way? Who profits from this business, which public values are being served?
3. Persons with a distance to the labour market will be employed and trained, increasing both their employability and entrepreneurship.

## 5. Emotion

This last 'E', from emotion, is what gives meaning to the whole 5E-philosophy. It is about the essential human experience of being touched and yearn for the Good, the True and the Beautiful, as Plato stated long ago. It is also about experiencing being part of an effort for a greater purpose, one that transcends the mere me, here and now. It is about engagement, co-creation and cooperation, going beyond narrow selfish motives of money, power and status. Finally, it is about attitudes such as empathy and generosity, and about values such as human dignity, honesty, authenticity, transparency, responsibility and accountability. These attitudes and values are central to 5E enterprises, both internally and in the corporate communication and practices – fresh and fair flowers for people, environment and society.

## 4.2 Business Model Canvas

In this paragraph the business model of the FEP-project will be presented. The format used to this effect is the by now famous Business Model Canvas, a template to dissect business models (Osterwalder & Pigneur, 2010). It presents, with a creative and varied layout (see figure 8), a fresh way of thinking about generating and evaluating new business models and at the same time a format with guidelines for structuring the thought and planning process. The Business Model Canvas is composed of nine key items which serve as the building blocks for all business models. It will be described in more detail here below.

By its very nature, the FEP business model is a complex one, since the FEP-project is both a company that distributes and sells flowers, and an education facility for training students in entrepreneurship, as well as an innovative green urban transport facility.

For FEP, connection is key. Already in this preparatory phase, the FEP-project is raising broad attention for its successful efforts to establish fluid relationships with the municipal government and its different departments as well as with educational institutions and business circles, around the FEP social enterprise.

In the following paragraphs, the FEP business model will be elaborated in some detail, following the steps as laid out by the Business Model Canvas.

# The Business Model Canvas

Designed for:

Designed by:

Date:

Version:

<b>Key Partners</b> Who are our key partners? Which key resources do we acquire from partners? Which key activities do partners perform? Channels and Relationships Distribution and Logistics Suppliers and Partners Suppliers of raw materials Suppliers of finished products and services	<b>Key Activities</b> What key activities do our Value Propositions require? What key resources do we need? Customer Relationships Revenue Streams Channels Distribution Suppliers and Partners Suppliers of raw materials Suppliers of finished products and services	<b>Value Propositions</b> What value do we deliver to the customer? What customer's problems are we solving? What bundles of products and services are we offering to each Customer Segment? Which Customer Segments are we satisfying? Channels Distribution Suppliers and Partners Suppliers of raw materials Suppliers of finished products and services	<b>Customer Relationships</b> What type of relationship does each of our Customer Segments expect us to establish and maintain with them? Which ones have we established? How are they integrated with the rest of our business? How costly are they? Channels Distribution Suppliers and Partners Suppliers of raw materials Suppliers of finished products and services	<b>Customer Segments</b> For whom are we creating value? Who are our most important customers? Mass Segment Niche Segment Segment of Customers Segment of Customers
<b>Key Resources</b> What key resources do our Value Propositions require? Our Distribution Channels? Customer Relationships? Revenue Streams? Channels? Distribution? Suppliers and Partners? Suppliers of raw materials? Suppliers of finished products and services?	<b>Revenue Streams</b> For what value are our customers really willing to pay? For what do they currently pay? How would they prefer to pay? How much does each Revenue Stream contribute to overall revenues? Channels Distribution Suppliers and Partners Suppliers of raw materials Suppliers of finished products and services	<b>Cost Structure</b> What are the most important costs inherent in our business model? Which key resources are most expensive? Which key activities are most expensive? Channels and Relationships Distribution and Logistics Suppliers and Partners Suppliers of raw materials Suppliers of finished products and services	<b>Channels</b> Through which Channels do our Customer Segments expect us to reach them? How are we reaching them now? How are our Channels integrated? Which ones work best? Which ones are most cost-efficient? How are we integrating them with Customer Relationships? Channels Distribution Suppliers and Partners Suppliers of raw materials Suppliers of finished products and services	<b>Revenue Streams</b> For what value are our customers really willing to pay? For what do they currently pay? How would they prefer to pay? How much does each Revenue Stream contribute to overall revenues? Channels Distribution Suppliers and Partners Suppliers of raw materials Suppliers of finished products and services

Figure 7 | The Business Model Canvas by Strategyzer.com, adapted from Osterwalder & Pigneur (2010)

### **1. Value Propositions**

As explained before, the FEP project is essentially a business model that combines three value propositions:

1. The composition, distribution and sale of flower bouquets; here, FEP is a company that buys, processes and sells flowers to consumers
2. The vocational training with real-life entrepreneurial experience of students in their final year at MBO and HBO schools; here, FEP is a training facility that takes care of part of the educational program of MBO and HBO schools and receives a fee per student that successfully finishes the training programme. Additionally, activities that reduce unemployment and stimulate entrepreneurship, especially when they are geared towards youngsters at risk, are supported and subsidized by municipal governments.
3. The greening of city logistics, contributing to governmental programs to clean the air and reduce congestion in city centers.

Ad 1. As a flower company, FEP offers the flower consumers a unique customer experience by combining the following features:

- high quality flowers that are produced eco- and social friendly
- local produce and processing, fostering the local economy
- design bouquets
- personal attention
- direct contact via messenger on application
- precision planning of delivery time
- info-education about the product
- info-education about purpose economy, adding public value
- info-education about youth entrepreneurship and greening the city
- customer loyalty and building customer relationships

Ad 2. The FEP project is also a training facility. Educational institutions such as MBO and HBO schools are interested in entrepreneurship training and in improving their curriculae in this field, complementing theory with real life entrepreneurial practical training. The students are trained, educated and coached during their graduation-period at the FEP-entrepreneurship program. The flower rangers (MBO students) acquire experience in leading their own small flower business on a small scale while the rayon managers (HBO students) are trained during this period to coordinate and coach and assist 'their' flower rangers wherever needed. The schools deliver self-confident students who have experience working as an entrepreneur in a real life situation. This new entrepreneurship curriculum provides the schools with a unique selling point in the competition for students and adds a dynamic profile to the schools, for students, parents, business circles and local authorities.

Of course, the training of youngsters, especially youngsters at risk, and the reduction of youth unemployment as well as the promotion of innovative startups by young entrepreneurs are activities that are highly interesting to municipal and other governmental institutions as well. There are various subsidized programs in these fields to which the FEP project apply for funding.

Ad 3. Finally, FEP is an innovative transport company that contributes to the realization of public policies such as greening the city, improving urban air quality, and reducing congestion in the city center. As such, FEP's city delivery activities qualify for subsidized programs by various governmental institutions, for example the Action Plan Air Quality of the city of The Hague.

## *2. Customer Segments*

With regard to the flower consumers, the initial focus will be on the inhabitants of a number of middle and higher middle class neighbourhoods, both male and female (see appendix 7 for a more detailed description).

Two key partners in the FEP project are also two key customers with which and for whom the FEP-project is creating value: the educational institutions, in particular middle and higher level vocational schools (MBO and HBO) and the municipalities, in particular the departments for urban planning and transport; and for education, youth and social affairs .

## *3. Customer Relationships*

Establishing and fostering personal relationships with the clients is the primary task of the flower rangers. For this task, he/she receives a special training with feedback on practical experiences. Besides, he/she is supported with statistical information on his/her neighbourhood. Periodically he/she is asked to collect information with his/her clients which then is processed and ploughed back in order to adjust and refine his/her approach of the clients.

The relation with the educational institutions is with the management and the concerned lecturers. This relationship is maintained by the program coordinator.

The relation with the municipalities is with the management of the relevant departments and the concerned staff members; eventually also with the aldermen in charge.

## *4. Channels*

Next to and around the product channel of flowers from auction to client, the FEP project involves a series of channels related to the youth unemployment and entrepreneurship goal. This refers to the crucial relationships with and between municipal government, schools and businesses, which needs permanent maintenance in order to effectively function.

## 5. Key partners

In the production and marketing chain, the following partners have been selected on the basis of a careful screening with regard to quality and compatibility with the the FEP 5 E philosophy:

- for the design of the flower bouquets: Dennis Kneepkens DK
- for the procurement of flowers: a number of local flower growers, Waterdrinker Aalsmeer
- for transport, loading and unloading: Greenolution
- for the design and production of the special FEP E cargo bike, and for transport, loading and unloading: Greenolution
- for the development of the FEP app: MakeTek Delft.

As for the partnering educational institutions, relationships have been established with the Haagse Hogeschool and HAS Den Bosch, at HBO level, and with ROC Mondriaan The Hague and Koning Willem I College Den Bosch, at MBO level.

Finally, an intensive partner relationship has been established with the Municipality of Amsterdam. A promising contact has been made with the Municipality of The Hague.

## 6. Key Activities

- The design of flower bouquets - is coordinated with Dennis Kneepkens DK
- The purchase of flowers - will initially be done at Waterdrinker Aalsmeer
- The purchase of packing materials - is at Dillewijn & Zwapak
- The assemblage of flower bouquets in the flower factory - will initially be at the premises of our partner Waterdrinker Aalsmeer.
- Transport from the auction to the flower factory – will initially be taken care of by Waterdrinker Aalsmeer
- The composition of bouquets - will be done by persons with a distance to the labour market, in coordination with selected social enterprises
- Transport to the cityhub in Amsterdam Zuid – will initially be taken care of by Waterdrinker Aalsmeer
- The receipt of flowers at the city hubs – will be a task of the district managers /coaches
- The distribution of the flowers to the costumers. The district managers/coaches coordinate and manage the logistical and distribution process, taking care that the right products are on the right time on the right address. They coach and monitor the flower rangers, recollect the information collected by the flower rangers, organize feedback loops, and process complaints.
- The door to door selling – is the task of the flower rangers; sales, managing the relationship with the client, collect information.
- The design and accreditation of two curriculae, one at MBO and the other one at HBO level. Prepare and execute a six months educational program. The program consists of a series of 10 workshops, in service training, visits to and interviews with stakeholders and excursions. The curriculum will meet the accreditation criteria for students to graduate. One part of the



program is with the groups combined, the other part differentiated. The MBO students will specifically acquire skills in client relationship, sales, administration and planning. In the company, they will act as frontliners (the 'flower rangers'), each responsible for a number of clients in their neighbourhood. They will do the door to door selling, building up relations with the clients, do the delivery, collect and process information. The HBO students have a coordinating role, acting as a rayon manager coaching five flower rangers. They are in charge of planning, infrastructure, procurement and the logistical process.

- Match the company's activities in the cities with the requirements of the municipalities' different subsidy policies in order to get access to the available funds. Here, it is crucial to maintain close contact with cities' authorities and relevant public servants. Both municipalities are welcoming the project in their cities as they have a keen interest in promoting green transport in the urban area and thus support the e-cargo bike initiative with targeted subsidies. Besides:
  - They are in favor of more and closer relations between business, educations and municipality and therefore willing to support the project wherever they can
  - They are interested in promoting innovative startups like FEP and in fostering the local economy.
  - They are interested in initiatives that employ and train youngsters, in particular





those at risk (of unemployment, idleness and crime).

## 7. *Key Resources*

The production and marketing chain for flowers involves four levels of personnel: central level, local rayon managers, neighbourhood flower rangers and bouquet assemblers.

As for the premises, a flower factory is needed for the bouquet assemblage, as well as a number of distribution hubs (#) in the urban areas of Amsterdam (rented).

With regard to the hardware, the following assets are needed: (hybrid) cargo vans for transport from the factory to the city of Amsterdam, electric cargo bikes (#), the flower rangers' app and the clients' app.

The rayon managers together with 'their' rangers are located in a distribution hub in the urban area. Here the electric cargo bikes of the flower rangers are stored. The flower rangers are equipped with an application on GPS to design the most efficient route to the day's clients. Clients are equally equipped with an application which enables them to locate their flower ranger and see how long it will take before their flowers will be delivered at their house.

See for a schematic overview of the logistical process figure X on page 74.

## 8. *Cost Structure*

For the flower chain, cost items include the following: design of bouquets, purchase of flowers, transport; assemblage of bouquets; transport to cities of destiny; distribution hub and storage facility; e-cargo bikes; the development of two applications; marketing; website; company movie.

For the educational program, expenses in time and money will be made for the design and development of the educational program; for the implementation of the educational program; and for maintaining relationship with the educational institutions.

Finally, time and money is needed for the screening of municipal policies, the formulation of the applications for subsidies and for maintaining fruitful relationships with the municipal agents, institutions and local business circles.

## 9. *Revenue Streams*

Preliminary surveys indicate that people of the targeted market segment are indeed interested and willing to buy flowers with a story at a reasonable price. The FEP proposition is indeed a viable one, including features such as personal attention, local produce and service, direct contact via messenger on application, precision planning of delivery time, stylish bouquets, high quality flowers that are produced eco- and social friendly, education about the company and the product, loyalty and building customer relationships.

MBO and HBO schools are effectively interested in a higher profile on entrepreneurship training and in improving their curriculae in this field, complementing theory with real life entrepreneurial practical training.

Municipalities have ample subsidy schemes for the following objectives that can be realized by the FEP program:

- promoting green transport in the urban area
- promoting innovative startups and fostering the local economy
- reduce unemployment and train youngsters, in particular those at risk (of unemployment, idleness and crime).

## 5. Logistics Concept

### 5.1 Introduction

Logistics concerns the management - planning, implementing and controlling - of the flow of material through a network of nodes and links. Basically, logistics is about coordinating resources in an organization, procuring to have the right items in the right conditions in the right quantities at the right times at the right places – and all this, in the most cost effective way.

The resources managed in logistics can include both physical and abstract items, such as information. The logistics of physical items usually involves the integration of purchasing, inventory management, transportation, material handling, warehousing, production or assembling and packaging. Typically, logistics management decisions have to be made under a set of constraints: internal, such as using the available infrastructure, and external, such as complying with given product shelf lives and expiration dates. A logistics network needs constant maintenance or even restructuring due to changing circumstances: changes and opportunities in product, process and demand; changes in government policies, regulations and subsidies; innovations in transportation means and in ICT supporting systems. An overall logistical concept covers both the inbound part, from suppliers to the warehouse or factory including the flows inside of the organization, and the outbound part; and it covers both the forward and reverse flows.

Logistics management is thus quite comprehensive. The example of prize winning Heineken shows that successful logistics require customer focus, a good organization, a well-thought out location of storage points and distribution centres, cooperation with customers, insight into the costs, modern information and communication technology (ICT) and, not in the least, clever employees. Thus an overall and integrated approach for the whole complex of chain processes is needed in order to prevent that changes in a particular part of the chain causes negative effects somewhere else in the chain. Whether a company can meet the expectations of the customers now and in the future depends in large part on the coherence and quality of its logistics concept (Ploos van Amstel, 2014). In the following paragraphs, the logistics concept for the Flower E-Power project will be elaborated.



**Figure 8| Logistics Concept by Visser & Van Goor (2004), adapted by Ploos van Amstel (2012)**

To structure the argument, the approach elaborated by Visser & Van Goor (2004) and adapted by Ploos van Amstel (2012 and 2014) will be applied to the Flower E-Power case. In Visser & Van Goor's approach, the core of the logistics concept is constituted by four basic elements: Network, Planning & Control, ICT and Organisation (marked in yellow, in figure 9 here above). These components will be discussed, one by one, for the Flower E-Power case. The logistics concept itself is an integral part of the company's make up and it should enable the company to reach its strategic objectives. In this sense, the company's overall strategy determines the parameters for the design of its logistical concept. This connection is addressed in the next paragraph 4.3.2. Then, the building blocks of the logistical concept will be dealt with in the following four paragraphs.

## 5.2 Strategy and Logistics targets

Good logistics are a good support for the stated strategy of a company. The strategy determines how the company is to compete in the market and the contribution that logistics have to make to that end (Visser & Van Goor, 2004).

Firstly, a company has to establish its competitive advantage compared to others in that same business sector. What distinguishes your company from other companies? What does your company do, that others can't, or simply does it better? Visser & Van Goor (2004) provide three strategies to establish a competitive advantage. These are: cost leadership, differentiation and focus.

The strategy the FEP-project has is an integration strategy that combines the characteristics of cost leadership and differentiation: *Super high quality products ordered and paid via ICT-software, against the lowest possible costs, GPS-delivered with eco-friendly transport at the clients' doorstep; while all these activities are performed by students who are experiencing in real-life what leading a small business includes and who are trained and focused to establish and maintain healthy relations with the clients.*

Subsequently, this strategy needs to be translated into concrete logistics targets or goals. These logistics goals need to be SMART (Specific, Measurable, Acceptable, Realistic and Time bound). The formulated logistics goals for the internal and for the external efforts within the FEP-project are the following:

External:

- The products should be delivered by means of eco-friendly transport;
- The products should be delivered under perfect conditions, fresh and perfectly styled bouquets;
- The time span of promised delivery: plus or minus fifteen minutes;
- An error in the client application should be solved within two hours;
- The reliability of the delivery: delivering a minimum of 98% of the orders on time;
- Faults in the delivery: maximum of 0.2% faults in order rules;
- Information regarding the delivery: a question or comment of a customer regarding the delivery of products needs to be immediately answered on the telephone or in case of questions via the website by e-mail within two hours;
- The helpdesk: 95% of inbound calls need to be answered within 1 minute;
- The flower ranger should always be super social and polite and deliver customer service any time.

Internal:

- There should always be one extra E-cargo bike in case of damage at another bike (after pilot);
- The repair of this bike has to be done within one day;
- The transformation, stabilization and translation phase of the flow of goods should not take more than 24 hours;
- An error in the flower ranger application should be solved within two hours;
- There should always be a way to get in contact with one of the three management team directors;
- Faults in the transformation process: maximum of 0.2% faults in order rules;
- Availability of products: 98% of the orders the right products on the right place;
- Faults in the packaging and addressing process: 98% of the orders the right address with the right packaging material;
- Delivery process: 98% of the time enough flower rangers together with sufficient E-cargo bikes available;
- Flowers in flower factory maximum 12 hours.

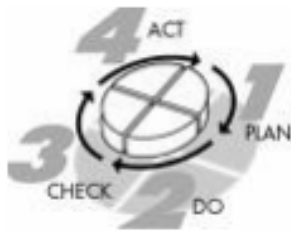
### 5.3 Network

The structure of a flow of goods has three pillars, namely transformation, stabilization and translation. Transformation is a change in goods in terms of matter and functionality. As can be seen in figure 10, the flowers from the growers (or auction) enter the flower factory and there they are

assembled to the ordered bouquets. The second pillar is stabilization and can be seen as a change in time, or storage. Since the orders are received beforehand, and the exact order amount is known in advance, the storage time in the flower factory is minimal. The third pillar is translation, a change of place or transport. The long distances are covered with hybrid vans and the distribution in the city centers with Electric cargo bikes.

## 5.4 Planning and Control

For the selected flow of goods, the question needs to be answered how these goods will eventually end up at the clients' place; while the answer given should always be in line with the goals of the FEP-project. This is the so-called control of the flow of goods. To make sure that the logistics control is effective for example to prevent unnecessary and overlapping activities and that indeed it is in line with the companies' goals, the control circle of Deming is used, see figure 11.



*Figure 9| Control circle of Deming*

**Plan** involves policy and planning. For logistics, a policy is needed that results in a number of basic rules, norms and goals (Visser & Van Goor, 2004). In the case of FEP, this implies a policy based on the following principles:

- 5E-acting and thinking (company DNA), continuously looking for optimization of one of the 5E's;
- Everybody is equal in the organization;
- We are a team and we perform as a team;
- Only positive vibes and if you have a problem, everything is subject for conversation and dialogue;
- 98% of the orders has to be delivered on time and in perfect condition;
- Client is king.

As for Planning, in the FEP case the following statements apply:

- The first year is one of experimentation, testing and optimization;
- At the end of year one the two districts are activated;
- After the pilot phase (year 1), a new district has to be activated every three months;
- Educational institutions should be consulted and engaged six months before activation;
- A network error needs to be repaired within 2 hours after the malfunction is reported;

- An application error needs to be repaired within 2 hours after the malfunction is reported;
- A complain needs to be treated within the hour after the complaint and a suited solution has to come up with and executed.

Based on the planning&control exercise, subsequently the operational activities in the flow of goods are executed. This continuous *do*-phase is where employees are taking decisions about the concrete implementation of the project planning. Perfect preparation prevents poor performance. Check and act are two permanent activities in which the processes are checked in detail while continuously looking for opportunities to optimize these processes.

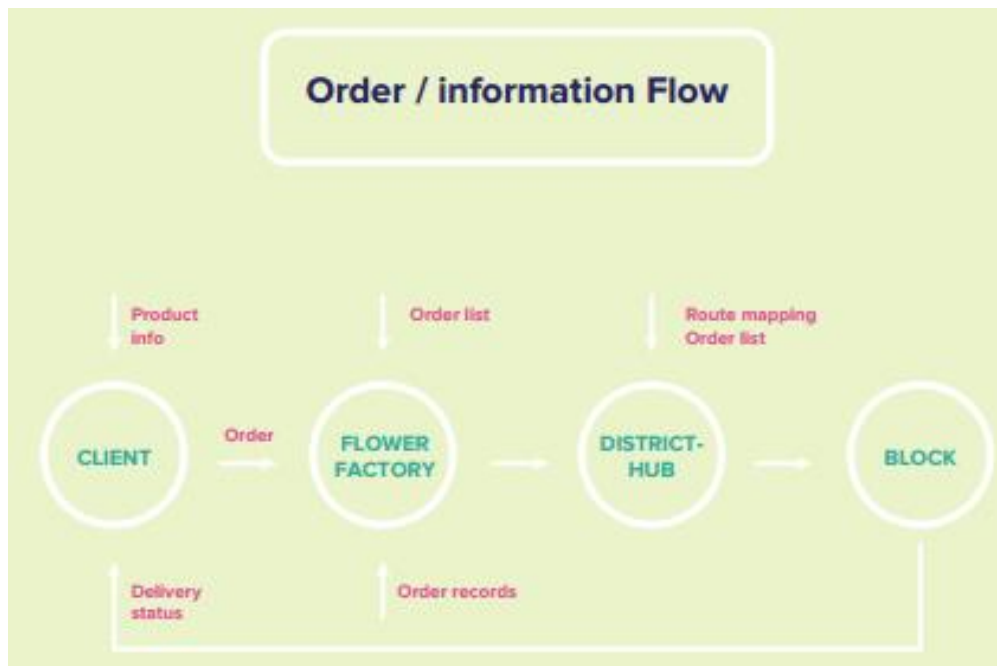
Because the FEP-project will work mainly with products which are ordered in advance, there should not be huge disruptions in the ordering-process at the growers or auction. Whatever is ordered by the clients, will directly be ordered from the flower growers or at the auction. Communication and transparency between the FEP organization and its growers is of great importance. So the inventory of the project can also be negligible. The clients can choose in an one hour time slot from 16.00 – 22.00 o'clock starting on Wednesdays and Thursdays. Via the application they can track and trace their personal flower ranger and so deliveries can be done very precisely as can be seen in figure 13 on page 64.

### *The information flow*

More detailed information can be derived from the description of the business processes; at this stage, the design will be limited to the first primary process: selling and delivering flowers.

Process steps of the first primary process include:

1. Marketing the offerings of FEP
2. Clients ordering flowers
3. Collecting and processing orders
4. Ordering flowers at the suppliers of FEP
5. Transport of flowers to the hubs
6. Last mile planning
7. Actual delivery of the flowers.

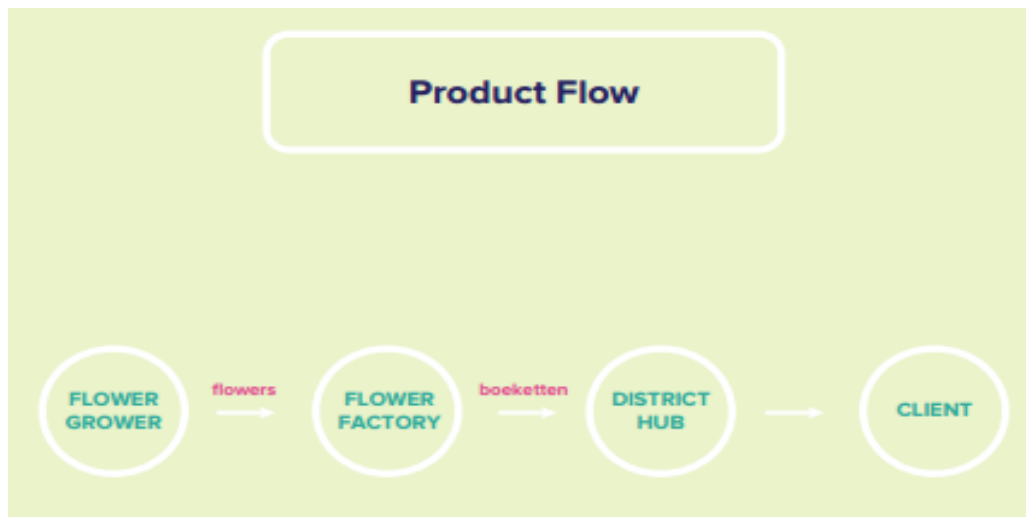


**Figure 10| Network flow**

Information involved:

1. Marketing information. The stories behind our flowers. The logistical information about target groups for the marketing, way of addressing each group, etc.
2. Orders. Information about clients for the customer database. Payment information.
3. Information for categorizing, selecting and bundling orders, sending invoices to clients, determining which flowers and how many have to be ordered at the suppliers. Status information about orders by clients.
4. Ordering information. And information about the delivery by the suppliers: status information about orders to suppliers.
5. Logistical information for the transport process from grower to distribution hub.
6. Logistical information for the last mile, including information about when clients are at home. Route planning. Updating the clients about imminent deliveries.
7. Status information about the delivery process.





**Figure 11| Product flow**

### *Applications and Servers*

A number of stakeholders mentioned earlier are equipped with a device running apps or database servers. This is to be organized as follows:

1. Clients can install an ordering app on their smartphone or desktop PC. Apart from the ordering function, this app also serves as a marketing channel, as a means to tell the "story behind our products" and as a means to collect various kinds of data about customers that may serve the purpose of improving the company's performance.
2. The flower rangers have a device in their vehicle to support route planning and navigation for the last mile planning. The application on this device also serves the purpose of data collection for performance improvement.
3. The hub-managers have an application for the planning processes at the hub. A hub is also equipped with a database server dedicated to the area covered by the hub.
4. Headquarters of the company has applications and servers for management information for the whole company.
5. Suppliers usually have their own application to receive orders. We have to interface with their equipment. This is very well developed stuff for which off-the-shelve solutions are available.

The money flows from the clients of Flower E-Power to Flower E-Power bank account (FEP). Another income stream is the one from investors and sponsors. With this money salaries can be paid, marketing can be done, and other expenses needed in the first pilot project phase, what will be elaborated in the next chapter.

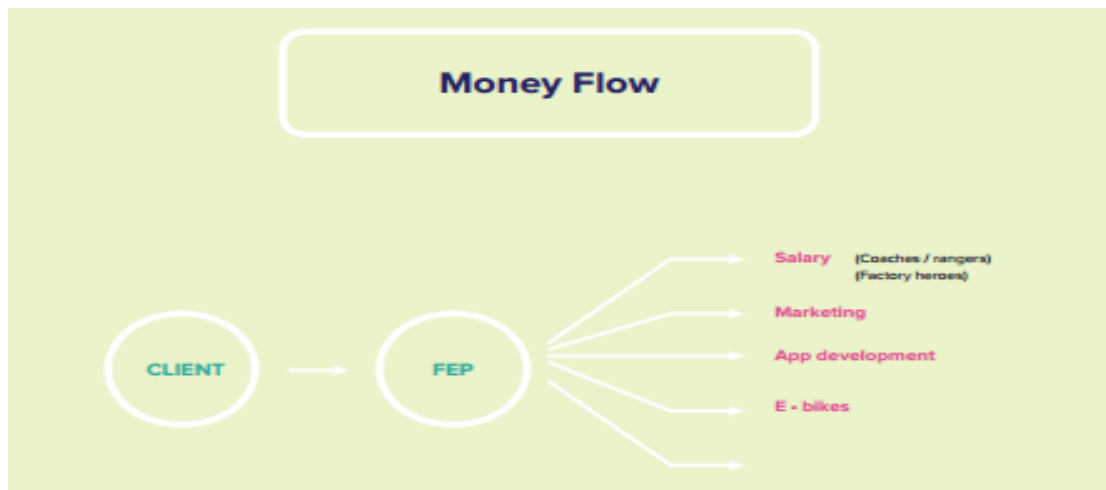


Figure 12| Money flow

## 5.5 ICT

The ICT component in the FEP-project is crucial. The ordering and delivering with respectively the client and flower ranger application (Appendix 3.) has to be designed perfectly and should be very customer and user friendly. These two front-end applications are both connected to a server which is an intelligent entity that receives orders from the client application and sends orders to the flower ranger application. To this server, a database is attached with all stored data, which goes from client track records, to delivery data of the flower rangers and ordering information from the growers. This data is analyzed by analysts in order to optimize processes and to analyze the clients more thoroughly.

The features of these applications are the following (the top features in *italics* are the most important ones and should be included in the first concept of design):

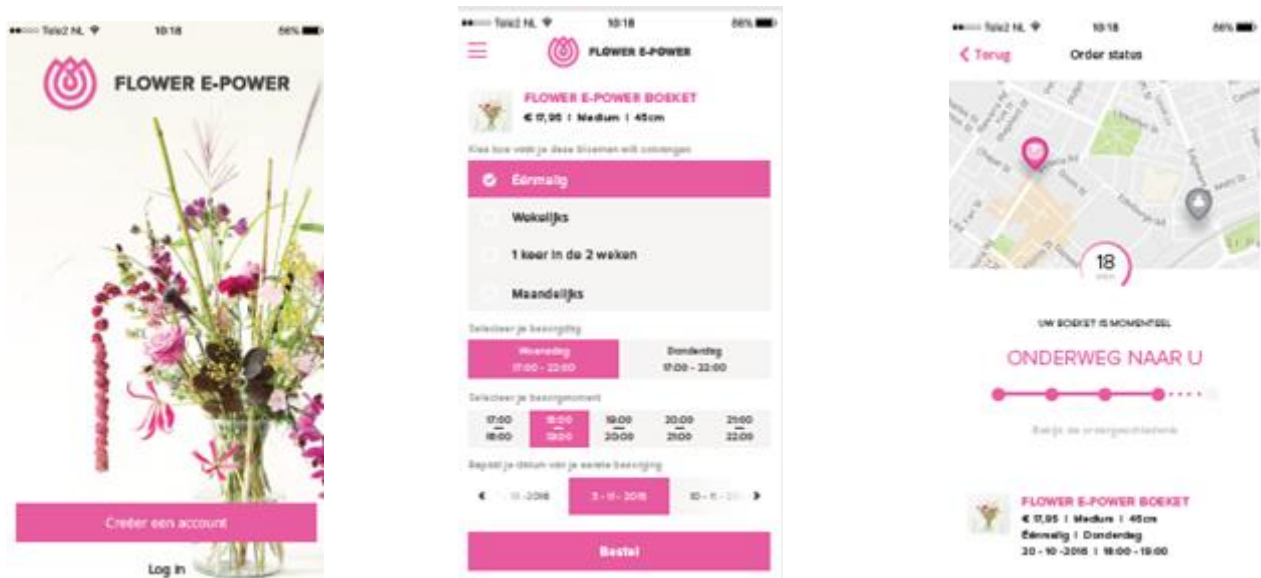
Client application:

- *order products*
- *cancel order*
- *pay via iDeal, PayPal or Mastercard*
- *spot location of their flower ranger and ETA*
- send message to their flower ranger
- upload photo on social media
- educational information of products
- quiz question

Flower Ranger application:

- *GPS route planning on smartphone/tablet*
- *delivery list*
- addresses of clients

- activated houses and potential houses for activation
- quiz question winner



**Figure 13.** Here above some snapshots of the client application, where you see the log in-shot on the left, the ordering schedule and on the right the order status.

With this application, clients can exactly see where their flower ranger is on that moment and know when they will arrive at their house. So the clients do not have to wait a couple of hours not knowing when their product will arrive. This customer friendly and efficient way of delivering will take away lots of irritations of clients. An Enterprise Resource Planning (ERP) system forms the core of the ICT of the organization. This ERP system is business process management software that allows an organization to use a system of integrated applications, like the client and flower ranger application, to manage the business and automate many back office functions related to technology, services and human resources. ERP software integrates all facets of an operation — including product planning, development, manufacturing, sales and marketing — in a single database, application and user interface.

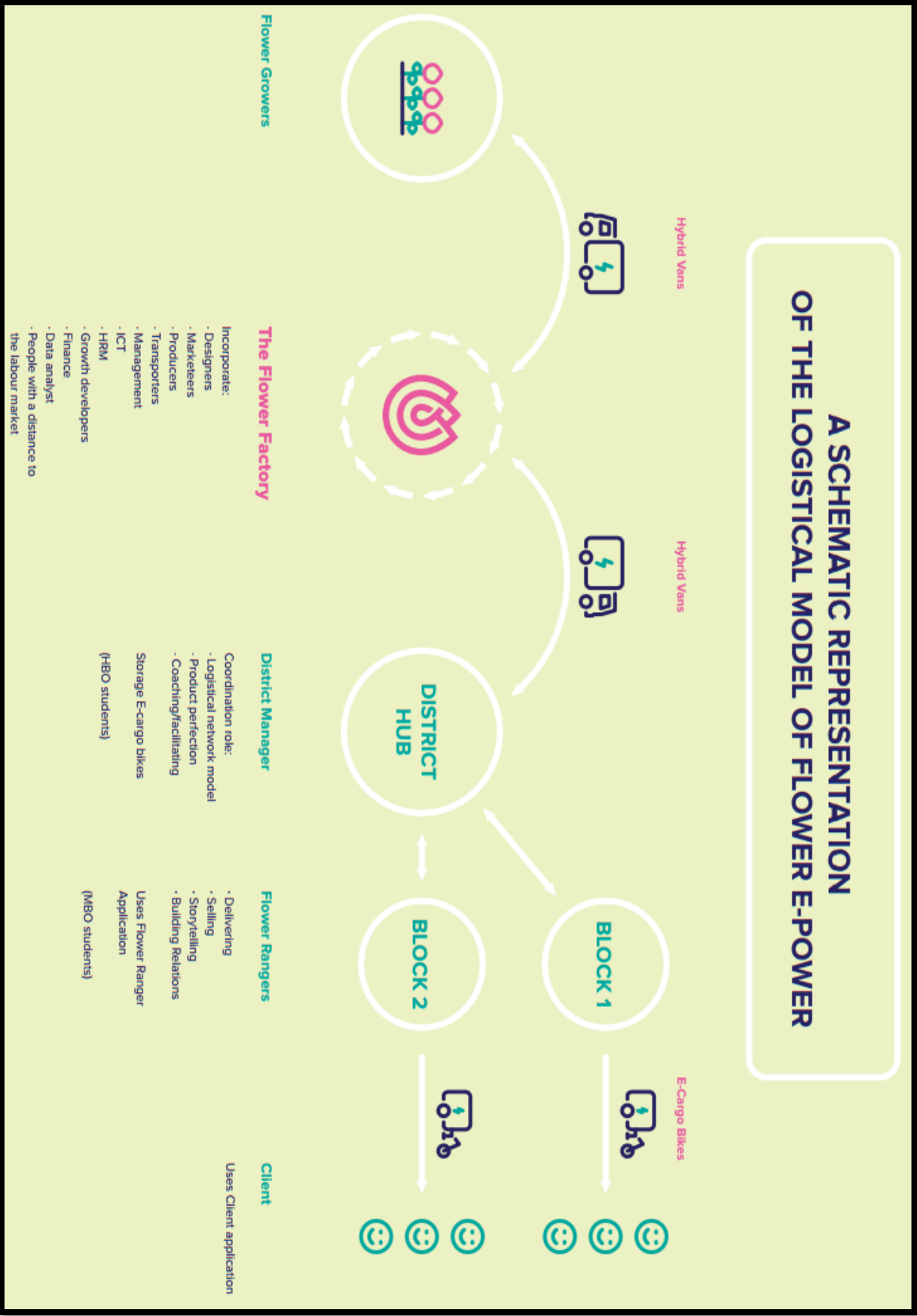


Figure 14 | A schematic representation of the logistical model of Flower E-Power

## 5.6 Organization

Concerning the logistics design, it should be stressed that the successive operations in creating and delivering a product or service follow a logical order and have a natural coherence. All the steps that are drawn in the schematic overview of the flow of goods are necessary to have the flowers assembled, packed to bouquets and delivered to the customer as a final product. It is important that everybody in the organization is aware of this natural coherence and therefore all these decisions for the organization of this logistics process have to be synchronized.

### *Process from order to delivery...*

The flower ranger is in charge of the door-to-door acquisition and delivery, involving the storytelling and the activation of the clients, eventually by using the client application. When a client orders a bouquet via this application or via the website, the order arrives at the flower factory where it is processed. Ordering closes on Tuesday night twelve o'clock; on Wednesday and Thursday all the bouquets will be delivered. Flowers are purchased from different growers in the region, supplemented by our partner Waterdrinker. Both are brought to the flower factory, which initially is located in the building of Waterdrinker, where they are assembled to the ordered products. Next, they are packed and stacked and loaded for transportation to the different district hubs. Transport to these district hubs, which are located just outside city centers, will be done with (hybrid) vans. At the district hubs, the local manager/coach (a HBO-student) receives the cargo. This coach has elaborated a day planning, together with his rangers, including the route planning. The bouquets are loaded into the E-cargo bikes, ready for distribution to the clients. With the help of their flower ranger application, they easily find their way to the clients. In figure 16 on page 71, a schematic overview is given of the process from order to delivery in the form of the swimlane model.

### *From an hierarchal pyramid to a horizontal flowerweb*

With regard to its internal organization, FEP rejects the hierarchical top-down steering model, but instead – and consistent with its philosophy – it applies a horizontal organization model. To succeed, it is crucially important that each sub-team and each colleague assumes the responsibility that goes with his or her task in the company's operations. Their sense of responsibility will increase when they feel that they are given a larger degree of freedom and autonomy to organize their work as they deem best. A sense of ownership, or better: sense of agency, increases both their sense of responsibility, their work satisfaction and their willingness to make that extra mile as well as their drive to explore new opportunities and new markets. This is of course essential for the success of FEP in the medium and long run. The fact that this horizontal model comes with the risk of mistakes does not by far weigh up against these crucial advantages.

This new organizational model has been labelled the flowerweb (see figure below). The center of the model is the so-called heartcore, where ideas, data and information are continuously emitted, received and processed. FEP is a company with a heart.

The next layer is constituted by coaches, one for each department: product design, sales, marketing, ICT, development, hardware, company people. With their colleagues, they are responsible for their department, both for its internal organization and for the relationships with other companies and with the consumers; in short, with society. In their interaction with society, they receive important feedback and information, which is ploughed back to the heartcore and communicated with the other departments, both periodically organized and – most importantly – through day-to-day personal encounters. A strong sense of agency is to be complemented with a strong sense of belonging; this makes for flourishing persons and a flourishing company.

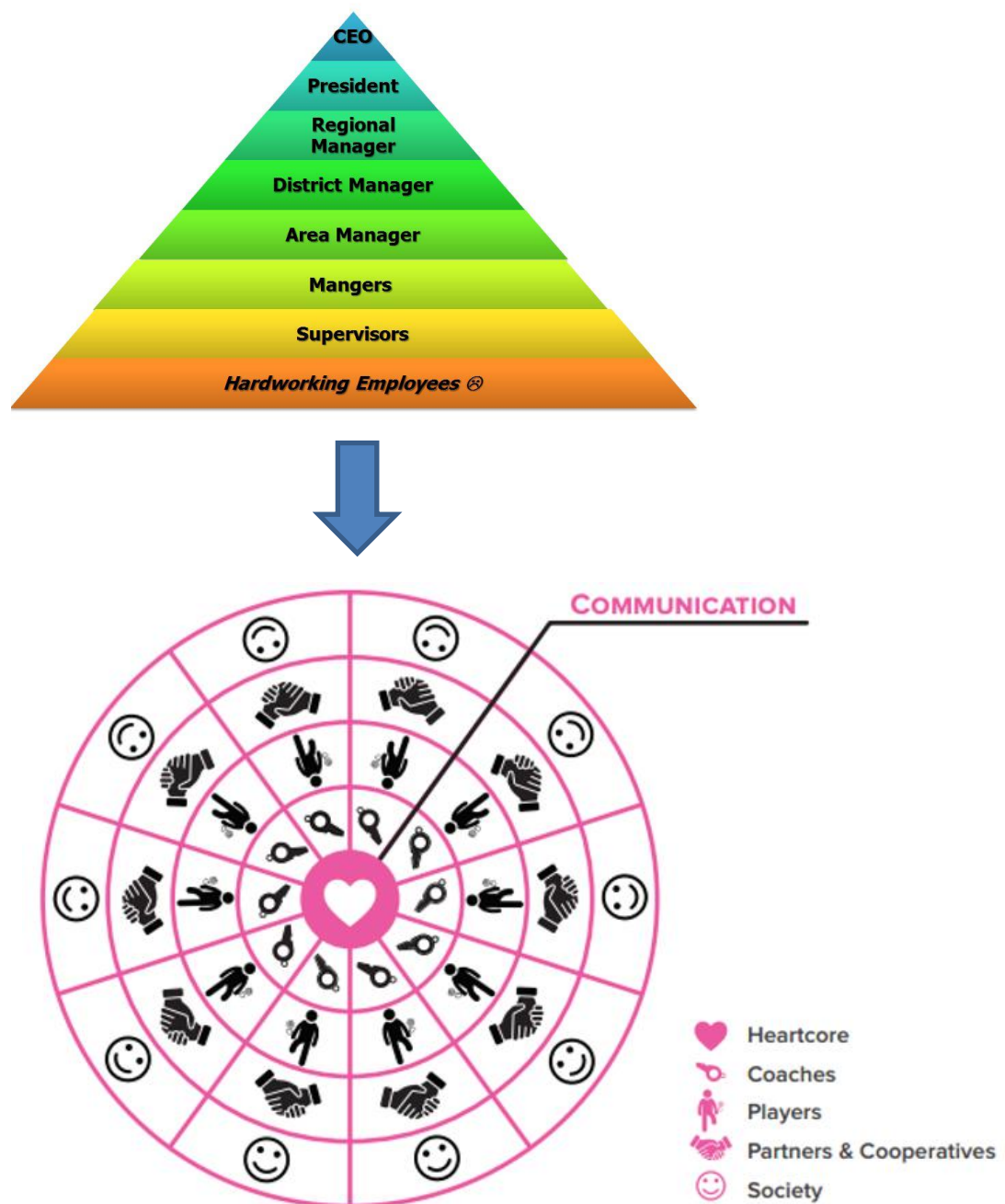


Figure 15 | Organizational model 'The Flowerweb'

**SWIMLANE MODEL**  
process of order & delivery

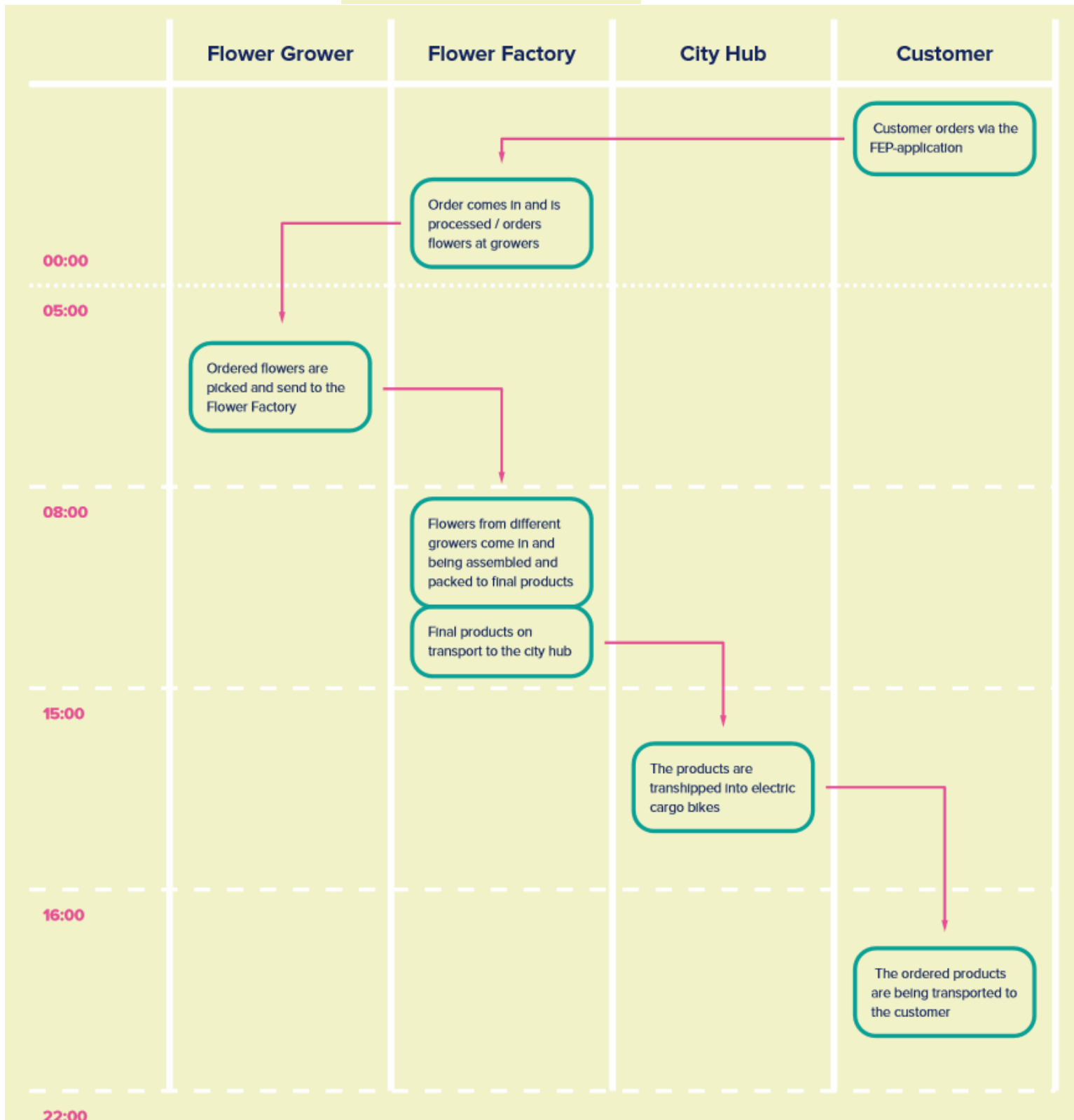


Figure 16 | Swimlane Model – process of order and delivery

## 6. Scenario analysis

To determine the feasibility of this business model as well as to evaluate the impact of possible risks, in this paragraph we will elaborate three scenarios and their corresponding financial performances. In the first scenario, costs and outcomes are as we expect them to be, on the basis of assumptions that we have arrived at in the course of our research. In the second scenario, we presume that our expectations were too optimistic and that we need to adjust them downwards; what then will be the implications for the financial performance? The third scenario takes the opposite direction: business develops in a more prosperous way than expected, and we should be prepared to cope with this new situation as well.

For the sake of clarity and simplicity, in the three scenarios we only focus on the city of Amsterdam i.e. no account is taken of our plans to expand to other cities. The first two scenarios are based on the first phase of the roll-out strategy plan, which is the pilot project, phase 1, focussing on Amsterdam Zuid only. The third scenario, the scale-up plan scenario, is focused on business development in the wider city of Amsterdam.

In all three scenarios different assumptions have been made, on the basis of which the calculations were made. The most relevant are listed here in the table below:

Assumptions	Scenario 1	Scenario 2	Scenario 3
#Km/round/time slot			
# clients per hour			
Average order amount (euros)			
Gross margin (% selling price)			
Marketing budget (euros)			
Depreciation (%)			
Salaries DM & FR			
Price E-cargo bike (euros)			

- Because the Flower E-Power project plan strives to be viable on itself, without the help of subsidies or other financial gifts, we left these financial streams out of the calculations.

### 6.1 Expected Scenario

The first scenario is as we expect business to develop in reality, based on the assumptions that we arrived at in the course of our research. The first block (in Amsterdam-Zuid) has a target number of 180 clients per week, spread out over two delivery days. This target number is expected to be reached within a period of 6 months. The period of delivery is from 16.00 – 22.00 hours, and per hour 15 clients will be services. Both flower rangers and district manager work two days a week, 8 hours, calculating two hours extra for preparation and evaluation. The standard hourly wages of the flower ranger and district manager are respectively 12 euros, with a bonus of respectively 10% and 150% (1.5 times more than our flower rangers), dependent on the revenue flow. We start with a maximum of four blocks per district, considering that this team size and span of control are optimal



for the starting district manager though in time the number of blocks per district manager may increase on the basis of practical experience. Assuming a weekly purchase of flowers with an average purchase amount of [redacted] euros, the gross revenue per month would be [redacted] euro per month. The cost price of the flowers is [redacted] euro, leaving a gross margin of [redacted] euro. We supply each block with an initial local marketing budget [redacted], for free flowers, handouts and flyers for people’s mailboxes. The cost of an electric cargo bike is 10.000 euros and this amount will be depreciated over a 3 years’ period. Other costs will be the rent for the district hubs and the transportation from the flower factory to the district hub.

All these input variables are used to calculate costs and revenue flows, as shown in the financial overview of table 2 on the next page.



Figure 15 / Area of Phase 1 ‘Pilot-project’

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Table 2 / Input variables for scenario 1: expected.

**Table 3 / Output variables for scenario 1; expected.**

### *Short explanation*

The target number of 180 clients in the first block is expected to be reached in a six months' period, i.e. at a pace of 30 new clients per month. 180 clients is the maximum that one flower ranger can service with an electric cargo bike in two days delivery per week. In case that the demand in a block exceeds this number (which means that business is doing better than expected), the blocks will have to be redesigned and extra personnel and equipment has to be recruited. This is all a matter of testing and learning by doing.

The remuneration of the flower rangers and district manager is quite low at the beginning, but after a few months it increases to a relatively acceptable level. Acceptable, taking into account that this is not a regular job that should provide a living wage, but that it primarily is a learning experience to develop their entrepreneurial skills.

It is crucial to try and stick to a number of 15 clients serviced per hour per block. Acquisition and storytelling can be done at other moments than on delivery days. Of course, cost of salaries will increase then as well.

Each block is provided with an initial local marketing budget, enabling the team to distribute free with a flyer attached to it.

The cost of an E-cargo bike is 10.000 euros and the bike is to be depreciated in three years. Insurance and maintenance of the bikes is set on 10% of the purchasing price per year. This means that the costs of one E-bike is to be set at [REDACTED] euros per month.

The remaining cost items are the rental of the district hub space and the transport cost from the flower factory to the hubs.

Finally, the net results per block are shown. In the first three months, these results are negative, but from the fourth month onwards positive results are developing. After six months, the maximum client capacity is reached, showing a positive result of 2.595 euros per month per block.

## **6.2 Minimum Viable Scenario**

It is clear that the expected scenario outlined above is based on a series of assumptions of which the validity remains to be seen in practice. Although they are based on research and insiders' information, in reality they are no more than educated guesses. Surely, a number of these assumptions may turn out to be too optimistic. Is it, for example, not too optimistic to think that a flower ranger indeed will be able to service [REDACTED] in one hour? Particularly in the starting phase, this may prove to be impossible, though he/she may catch up in the later phase.

Besides, the expected scenario does not take into account unexpected drawbacks and negative developments in the environment. What if suddenly a competitor shows up that brutally copies our business proposition and applies it in the same branch and neighbourhoods that we have planned? This may affect the expected number of clients and the profitability of operations, and so on. Thus, it

is wise to be prepared for a more pessimistic scenario and elaborate a business plan for a minimum viable start-up of the Flower E-Power business plan.

Just like the first scenario, this more pessimistic scenario will be elaborated here down below in the table copied from our Excel file with steps and calculations.

-----

**Table 4 / Input variables for scenario 2: Minimum Viable.**

As can be appreciated from this spreadsheet, the figures for a number of input variables have been changed. An important difference is in the number of clients that will be serviced in one hour (down from 15 to 8), allowing more time for the Flower ranger for acquisition and storytelling and/or accounting for stronger competition in the market. Furthermore, the average purchase amount is set at a lower level (down from 12 to 10), assuming that more clients prefer mono-bouquets instead of FEP-bouquets. The cost for a number of items is raised, such as for the flyer (+ 10 cents) and for the electric cargo bike. In fact, in a real life test the bike that we had designed turned out to be too wide for the small bike lanes in Amsterdam and in order to avoid a lot of negative reactions from other cyclists, the design will have to be adapted, generating an additional cost of 2.000 euros. The cost for insurance and maintenance of the bike is increased too, from 10 to 15%. Finally, the cost for the rent of the district hub is increased as well, reflecting a possible shortage of storage capacity in Amsterdam.

All these negative adaptations in the input variables generate substantial changes in our financial revenue- and costs spreadsheet.

-----

**Table 5 / Output variables for scenario 2: Minimum Viable.**

Compared with the first scenario, it now takes a much longer period before the running of the business becomes profitable. Only after nine months of operation the business reaches its break-even point and starts to generate positive results, though still quite minimal: only 73 euros per month per block. This state of affairs might constitute a call to reconsider the marketing plan in the initial phase, dedicating more efforts to a concentrated local marketing plan (local media, word to mouth, storytelling) and acquainting future clients with the client-friendly application that allows for ease of ordering and tracking the order live on a map.

Still, in this pessimistic scenario, the result per block is positive and, of course, this is just one block. As such, it constitutes a MVP – Minimum Viable Proposition with which the business can be launched and the first period of experimenting and learning by doing can safely start. Along the way, lessons will be learned, failures detected and remedied, cost-effectiveness will be increased and new opportunities explored, allowing for a process of gradual and organic growth. Especially when more hubs are being opened and economies of scale appear where costs can be split over more blocks and where costly items like the E-bike can be bought at a lower price. These developments will be laid

down in the next scenario, i.e. the scenario that builds on the expected scenario to scale-up for delivering in the whole city of Amsterdam.

### 6.3 Maximum Capacity Scenario (growth/scale-up plan)

Finally, we must consider the possibility that the Flower E Power has a much more prosperous start than expected. The effective demand develops much quicker and in a more massive way than expected and it is not only possible and feasible but even necessary to expand to other parts of the city of Amsterdam much earlier than foreseen in our plans in order not to lose the momentum. Of course, this rapid expansion should never negatively affect the nature of our business proposition nor the service level nor the quality of the products. Besides, we want to grow in an organic and natural way. But we do need to be prepared for an earlier scaling up to the rest of Amsterdam. This case scenario is based upon the first scenario, but then including the scale-up plan to the rest of Amsterdam inside the ring, which was foreseen for the second semester of the first year.



Here below you see a territorial overview of this roll-out growth plan for the city of Amsterdam.

← Phase 1: Pilot project

district hub: 1

E-bikes: 1

#  
#





#### ← Phase 2: Amsterdam-Zuid

# district hub: 1

# E-bikes: 4

#### ↓ Phase 3: Amsterdam West + half of center

# district hub: 2

# E-bikes: 8



#### ↓ Phase 4: Amsterdam East + rest of center

# district hub: 3

# E-bikes: 12



#### Phase 5: Amsterdam Noord →

# district hub: 4

# E-bikes: 14



Figure 16 / Schematic overview Growth/Scale-up plan

As can be appreciated from the above drawings the growth plan of the first year consists of five consecutive phases, step by step covering the inner city of Amsterdam. Scaling operations up to the level of an entire city, or further in the future even to several cities, would of course increase the profitability of the company overall by realizing *economies of scale*, i.e. cost advantages that occur with increasing scale, as fixed costs are spread out over more units of output and assets will be used in a more cost-effective way. With increasing scale, also the purchase price of inputs may decrease. Such is the case, for example, for the cost of purchase of the electric cargo bikes. The price of one bike is 10.000 euro but buying 20 bikes in one purchase goes with a 20% discount on the overall price. The same economizing effect will be realized, in varying degrees, with the cost prices for the purchase of flowers and other inputs, for the rent of spaces for district hubs, for transport costs and so on.

Furthermore, *learning effects* should be taken into account. Over time, the staff involved in the consecutive steps in the logistics chain will do their assigned jobs in a more efficient way and develop more cost-effective ways of getting the job done.

And finally, over time, as new blocks have spread, marketing efforts materialize and word to mouth propaganda functioning, the activation of new blocks will consume less efforts and costs and the period (number of months) before the block operates at full capacity will be shortened.

Of course, a substantial amount of investment capital is needed for this scale-up plan, but once the pilot / MVP has proven that the business is viable, two mayor investors (one originating from the sector self and one angel investor) seem to be willing to step in.

## 6.4 Discussion and conclusions

In this chapter we set out to determine the feasibility of this business model as well as to evaluate the impact of possible risks. It should be noted that the business model evaluated does not take into account the other two possible sources of income that the FEP project is counting on. Neither the remuneration for the educational activities at the vocational schools nor the subsidies for green city logistics and the promotion of employment for youngsters at risk, by municipalities and other institutions, is being considered here.

Three scenarios have been elaborated with their corresponding financial performances. In the first scenario, costs and outcomes are as we expect them to be, on the basis of assumptions that we arrived at in the course of our research. In the second scenario, we presume that our expectations are too optimistic and that we need to adjust them downwards. The third scenario takes the opposite direction: business develops in a more prosperous way than expected, and we should be prepared to cope with this new situation as well.

We established that the expected scenario, the first one, promises to be a viable and durable business model. It should be remembered, however, that the assumptions used, although they are based on research and insiders' information, in reality are no more than educated guesses. In particular, the number of deliveries per hour, i.e. [REDACTED], might prove to be quite optimistic.

In the second scenario, the performance is reduced by decreasing the number of deliveries per hour from [REDACTED] and the average sale price from [REDACTED] euro, while a number of cost items were inflated. This indeed makes the business model only minimally viable. It takes a period of no less than nine months of operation before the business reaches its break-even point. This urges to reconsider the marketing plan and dedicate more efforts for the launch in the selected areas.

In the third scenario, an accelerated scaling up of the business operations is considered. The business plan includes projections for growth, but in an organic and natural way. But we do need to be prepared for an earlier scaling up to the rest of Amsterdam. Scaling up of course increases the profitability of the company overall by realizing economies of scale, i.e. cost advantages that occur with increasing scale, as fixed costs are spread out over more units of output and assets will be used in a more cost-effective way. A sudden increase of the scale of operations requires, of course, a substantial amount of investment capital, but this would not pose mayor problems since, once the pilot has proven that the business is viable, two investors seem to be willing to step in.

It should be noted that the evaluation of the business model does not take into account the benefits of *learning effects* over time. As they gather experience and remedy initial design faults, the staff involved in the consecutive steps in the logistics chain will raise efficiency and develop more cost-effective routines.

Similarly, no account was taken of the fact that, over time, the activation of new blocks will take less efforts and costs and the period before the block operates at full capacity will be shorter, as the effects of previous marketing efforts and word to mouth propaganda materialize.

## 7. Conclusions and recommendations

### 7.1 Conclusions

The research question that guided the present study was :

- How to design a profitable logistical supply chain for distributing fresh products in urban areas, while optimizing the societal values Entrepreneurship, Environment, Education and Emotion?

Its objective was to develop a business case which optimizes Public Value applying the 5E-model, that is, by integrating Entrepreneurship, Environment, Education and Emotion in an Economically viable business model. The project focused on two specific problem areas, which are youth unemployment and the deficient education of youth entrepreneurship on the one hand, and the reduced accessibility, attractiveness and livability of city centers, related to urban logistics and mobility, on the other. The challenge thus was to design a social enterprise that combines the following three goals: to reduce youth unemployment and stimulate youth entrepreneurship; to increase the accessibility, attractiveness and liveability of city centers; and to embody these (and eventually other) public values in a viable business proposition.

This research question was specified by two sub-questions:

- What is the added value of the 5E – framework?
- How to design the supply chain, business operations and business finance?

Having come at this point of our research – which of course will continue as the FEP company will flourish and expand - the conclusions that we reach at for now can be formulated as follows.

#### General

Both the literature reviewed and the interviews with top professionals in the different domains confirm a broad societal trend towards organizing business in a new way, i.e. one that transcends the narrow profit focus. A new societal consensus is growing, i.e. that if people, society and planet are to flourish, the economy should *not make use* of people and planet, *but add value* to people and planet. We are indeed entering the era of the purpose economy and of purposeful organizations.

The interviews, even those with “traditional” entrepreneurs, confirmed a heightened interest in doing business with social added value, in co-creation and cooperation. Many of the interviewees spontaneously connected and engaged, came up with critical comments and new ideas and suggested additional inroads and resource persons. A good number of interviewees expressed their readiness not only to continue the conversation and be available for further advice, but also to join the effort and cooperate in concrete ways.

The Triple P model is unsuitable to account for, let alone orient this cultural, societal and economic trend. It orients business towards doing no harm - instead of contributing positively - to people and planet. Besides, the concept has been spoilt by old school businesses that have used it as a mere vehicle for window dressing.



The 5E model (entrepreneurship, education, economy, environment, emotion) better accounts for the purpose-turn in economy and society and is better able to engage and orient both policy making and concrete entrepreneurial initiatives in this direction. It focusses - not just on doing no harm but - on adding value to human flourishing and societal and planetary resilience. In particular, it gives due weight to the human factors of emotion, motivation, recognition, trust and connectedness. People value the experience of being part of an effort for a greater purpose, one that transcends the mere me, here and now.

The two core issues addressed in the present research / business proposition, Youth unemployment and Green City Logistics, were confirmed as particularly relevant by local authorities and educational institutions as well as by other entrepreneurs, both social and traditional ones. The interviewees from the educational and governmental institutions dealing with these issues showed particular interest in the way the FEP company proposes to tackle the respective problems. This resulted in unexpected opportunities to obtain new assets, such as subsidized employees and even financial resources, for example as remuneration for the entrepreneurship education of vocational school students or as subsidies for contributing in an innovative way to improve the air quality in inner cities. The key effort of the present research is of course the implementation of the 5E values in a concrete business case, i.e. the Flower E-Power company. Besides being profitable i.e. financially sustainable, it has to contribute to solving the twin problems of Youth unemployment and Green City Logistics. On top of that, the company should be network based and co-create and cooperate with like-minded and other companies, with local governmental and educational institutions and financial institutions. Finance, organization and logistics should be based on sound quantitative analysis. And the resulting proposition should be a replicable and scalable company model.

These requirements are the operationalization of our original research question: “How to design a profitable logistical supply chain for distributing fresh flowers in urban areas, while optimizing the societal values Entrepreneurship, Environment, Education and Emotion?”

The principal outcome of this research is that it shows that indeed it is possible to design a company that meets all the demands implied by the 5E-model and that effectively contributes to solving the twin problem of Youth unemployment and Green City Logistics; that it indicates how this is to be done and how it can function and be scaled up, based on solid quantitative analysis.

Important insights were obtained by quantifying the logistics model and by developing three scenarios, integrating technical, organizational and financial features: the scenario as expected (assumptions based on available information), a more pessimistic scenario and a more optimistic one. Although the first and even the second scenario will eventually deliver positive results, margins are small and indicate that it is wise to have another look at the logistics process. Thus it may be necessary to stick to the norm of 15 clients services per hour on delivery days, and plan and calculate additional time/costs for promotion and acquisition.

Concerning the financial analysis / outcome of the business proposition, it should be noted, first, that its feasibility is shown for a single block and a single district. Scaling it up to the level of an entire city, or even to several cities, would of course increase the profitability of the company overall, by realizing economies of scale (lower fixed and running costs, higher efficiency etc.). Besides, no

account was taken of the fact that the actual cost for a number of items (e.g. marketing, promotion) will decrease over time.

And again, concerning the financial outcomes, it should be noted that the financial analysis is based on the one core business of distributing fresh flowers with smart green city logistics and that it doesn't take into account two other potential sources of income, i.e. subsidies by e.g. local government for contributing to the greening of city centers and/or to solving the youth unemployment problem and the remuneration for assuming part of the entrepreneurship education curriculum by vocational schools. Both sources of income are nevertheless quite feasible, and they would of course increase the profitability of the company overall.

### *Youth unemployment & Entrepreneurship*

Promoting youth entrepreneurship is confirmed as an effective way to reduce youth unemployment both by local governments, educational institutions and by youngsters themselves.

In real-life projects, youngsters can experience what it is and how it feels to be an entrepreneur; they are enabled to exploit and develop entrepreneurial skills and attitudes; and they themselves lower the barriers to become an entrepreneur for real, such as a lack of self-confidence, personal problems, lack of skills and how to cope with finance.

By combining entrepreneurship education, business start-up training and support programs in a broader culture of entrepreneurship, young people acquire the needed attitudes, knowledge and skills that increase their chances to start their own businesses and run it successfully.

Effective links of cooperation and coordination with other businesses and with local governmental, non-governmental, financial and educational institutions are crucial for creating a start-up friendly ecosystem for young entrepreneurs.

### *City Logistics*

A logistics model comprising city hubs at the borders of the city and electric cargo bikes for delivery of fresh products in city centers is feasible from a technical, organizational and financial point of view and it will effectively contribute to livable and attractive cities.

There is a keen interest both from local governments and business and other parties to establish closer cooperation in order to develop long lasting and durable policies to tackle the Last Mile Problem.

## 7.2 Recommendations

Recommendations for further academic research:

- On purposeful companies: how can the different logics of operation involved in such a company be combined in a sustainable way – the commercial, the legal, the managerial, and the altruistic / relational? What could be effective ways to avoid one or some of those logics becoming dominant over time, at the expense of the others?
- On the cooperation between organizations with different logics (next to the purposeful company: government / public administration, educational institutions, commercial companies): what could be effective ways to get such organizations out of their cocoons and have them cooperate for shared public purposes?
- On the launch of the operations of a purposeful startup: what is the most (cost-) effective combination of methods to reach and convince the first targeted clients?
- On the Business Model Canvas: further research is required in order to make this model better suited for purposeful companies.
- On the design of the logistics chain: further discrete simulation modelling is required for an optimal use of the electric cargo bikes.

Lessons learned and recommendations for purposeful entrepreneurs:

- Be relational, always maintain a willingness to co-create and co-operate.
- Involve and engage your partners right from the start and in strategic decision making whenever possible.
- Be alert and listen carefully to other and particularly critical voices in order to avoid getting stuck in a tunnel vision without noticing it.
- At times, it is not easy to maintain - yourself and in your team - a purposeful mind set, in particular when business is low or, on the contrary, when huge financial opportunities present itself; be prepared for work to maintain and renew the purposeful spirit.
- Work out your business model following a structured canvas, like the Business Model Canvas of Osterwalder & Pigneur (2010), to make sure you have included all facets of a business.
- Start with a 'Minimum Viable Product' and test this, evaluate and pivot, or go on with this product, to keep the initial investments as low as possible - based on the build-measure-learn principle.
- Be sharp and fit – sport, good food and sufficient sleep.

Recommendations for the municipal government / public administration:

- Be prepared to engage with social enterprises and other types of hybrid organizations that combine commercial with public value.
- Foster and facilitate other / diverse organizations to assume responsibilities for public values.
- Be open for novel ways to tackle problems such as youth-at-risk and youth unemployment, and city centre inaccessibility and pollution; in particular for innovative ways that address such different problems combined in one program
- Be flexible and do not stick to internal departmental divisions and subsidy regulations but go for outcome, impact and sustainability.

#### Lessons learned and general recommendations:

- Never underestimate the importance of a solid logistics design in its technical, organizational and financial complexity.
- In logistics design, do account for the permanent tension between short term necessities / solutions and long term strategy.
- There is a bright future for practical initiatives at the city level: in a complex environment such as an urban territory, where environmental, social and economic issues are competing and difficult trade-offs are involved, local trust and coordination is the sole way out.
- Never forget: *relatie gaat voor prestatie*, i.e. relationship trumps and precedes performance. Public value creation as well as starting up a 5E company are fundamentally about meaningful relationships.
- In the 5E- philosophy, engaging and cooperating with other companies and governmental and educational institutions is and should be primarily added-value driven, i.e. by cooperating towards shared purposes such as youth entrepreneurship and green cities.
- Of course, social enterprises always have to balance their motivation and drive to contribute to the common good with sound business success and financial sustainability. But the entrepreneur that adopts public value as her/his leading business principle just for selfish reasons (profits, personal status etc) will ultimately run into existential legitimization problems. The desire to do something useful for society, to contribute to solving the pressing problems of this world and making this planet a better place should be recognized as genuine by the public, if it is to work and the entrepreneur is to be successful.
- A positive public perception of the company has a lasting positive impact on the business' customer loyalty. Loyalty is something that is decided in the minds and hearts of concrete persons, i.e. at the emotional and affective level. Loyalty built up over a long period can be spoilt by just one selfish act.

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## Appendices

### Appendix 1: Literature overview extended

#### *Business Model Generation (Alexander Osterwalder & Yves Pigneur)*

The subtitle of this highly successful book is: A Handbook for visionaries, game changers, and challengers. Since its publication in 2010, it is widely used both in mainstream companies and by startups. It presents, with a creative and varied layout, a fresh way of thinking about generating and evaluating new business models and at the same time a format with guidelines for structuring the thought process. This format is the by now famous Business Model Canvas, a template to dissect business models. The Business Model Canvas - BMC is composed of nine key items which serve as the building blocks for all business models. These are: Customer segments - Value proposition - Distribution channels - Customer relations - Revenue streams - Activities - Resources, assets – Partners - Cost structure.

#### *Disciplined Entrepreneurship – 24 steps to a successful startup (Bill Aulet)*

The core message of this book on the business planning process is: Focus! It presents in a clear and logical step-by-step way the process of generating a product-market fit. The 24 steps address six key themes: Who is your customer? What can you do your customers? How do they acquire your product? How do you make money off your product? How do you design and build your product? And how do you scale? The book stresses the importance of market segmentation and of selecting a so-called beachhead market. Ideally, a beachhead market is composed of customers that buy similar products for similar reasons, and that talk to each other (for word of mouth), further narrowed down to a specific demographic, including things like age, location, income, habits, backstory, and motivations.

#### *The Lean Startup – How constant innovation creates radically successful businesses (Eric Ries)*

The Lean Startup is a quite readable and convincing book that presents a very useful approach for starting a business or to develop and launch a new product or service. Its core message is: start small, i.e. with a Minimum Viable Product (MVP) and use this as the beginning of a permanent process of experimentation, innovation and growth. Basically, this is a reiterative process applying the feedback loop: idea > build > product > measure > data > learn > idea, and so on. An MVP is the first product and at the same time is the first step on a journey of learning. Experimenting with and innovating on an MVP is the fastest way to test fundamental business hypotheses, going through the build-measure-learn feedback loop with the minimum amount of effort. The first challenge then for an entrepreneur is to build an organization that can test these assumptions systematically. The second challenge, as in all entrepreneurial situations, is to perform that rigorous testing without losing sight of the company's overall vision.

The book presents several other important insights:

- Success is not delivering a feature; success is learning how to solve the customer's problem. When developing a new product or service, answer 4 questions:
  1. Do consumers recognize that they have the problem you are trying to solve?
  2. If there was a solution, would they buy it?
  3. Would they buy it from us?
  4. Can we build a solution for that problem?
 The crucial test is whether a product or service really delivers value to customers once using it.
- Work in small batches. Small batches let people discover the truth faster. Quality problems can be identified much sooner. Working in small batches ensures that a startup can minimize the expenditure of time, money, and effort that ultimately turns out to have been wasted.
- Sustainable growth is characterized by one simple rule: new customers come from the actions of past customers, especially through word of mouth, caused by satisfied customer's enthusiasm for the products and by fashion or status effects.

#### Articles/reports/websites

##### *Weiss, 2015*

Weiss identifies a number of barriers to entrepreneurship, of both an intrinsic and an extrinsic nature. Intrinsic barriers are for example personal problems, a lack of confidence and fear of failure, while extrinsic barriers are lack of skills, start-up logistics, financial needs, time constraints, lack of support and of entrepreneurial opportunities. The weight of each of these barriers is culturally and situationally influenced. In a cross cultural study, lack of confidence, start-up logistics and time constraints came out as the most important barriers to entrepreneurship for the Indonesian sample; while for the Dutch sample, perceived opportunities, start-up logistics and financial needs turned out to be the most relevant barriers.

##### *Morris & Schindehutte, 2005*

Business models have to date unjustifiably received limited attention in industrial marketing scholarship. Future synthesis between the value co-creation and business model literature is called for. The paper proposes that the focus for such synthesis may lie in the concept of open business models. There is potential for industrial marketeers to make contributions to the interdisciplinary study of business models.

Morris & Schindehutte present a framework which pretends to enable the user to design, describe, categorize, critique, and analyze a business model for any type of company. It provides a useful backdrop for strategically adapting fundamental elements of a business.

##### *Carree & Thurik, 2002*

One of the central goals of public policy common among all modern economies is the generation of growth and the creation of employment. Much of the policy debate to generate growth and jobs has

relied on a macro-economic framework and focused on the traditional macro-economic policy instruments. Carree & Thurik suggest that a different, less traditional instrument for generating growth and employment is to play an important role: policies that generate and promote entrepreneurship (OECD, 1998). Empirical evidence indicates that those countries that have experienced an increase in entrepreneurial activity have also enjoyed higher rates of growth. Entrepreneurship generates growth because it serves as a vehicle for innovation and change, and therefore as a conduit for knowledge spillovers. In a regime of increased globalization, where the comparative advantage of modern economies is shifting towards knowledge based economic activity, entrepreneurship is to play a more important role. This has led You to argue that “any policy recommendation on economic development should be based on an analysis that incorporates entrepreneurship, the engine of economic growth” (You, 1998, p.906).

### *Schoof, 2006*

Within the framework of potential efforts and strategies to boost employment and job creation for young people, entrepreneurship is increasingly accepted as an important means and a valuable additional strategy to create jobs and improve livelihoods and economic independence of young people. It is an innovative approach to integrating youth into today’s changing labour markets. This study provides a clear picture of youth entrepreneurship in general and of the concrete barriers and incentives to youth enterprise start-ups in particular. A range of key constraints is identified for young people in different countries to start and maintain a successful business. At the same time, incentives, initiatives and measures that could improve this situation are discussed.

Five factors in particular are identified that have a major influence on youth entrepreneurship:

- Social/cultural attitude towards youth entrepreneurship
- Entrepreneurship education
- Access to finance/start-up financing
- Administrative and regulatory framework
- Business assistance and support.

Finally, some general guidelines for the development of youth entrepreneurship are presented:

- Every country has to develop an individual, tailor-made policy approach. An individual policy mix of (integrated) initiatives that responds to different economic, social and cultural situations as well as to particular entrepreneurial framework conditions is required.
- Investment in research, benchmarking, testing and evaluation is particularly crucial in this area.
- Youth entrepreneurship interventions need to balance speed with scale of impact and cost of implementation. Interventions and tools to promote youth entrepreneurship differ highly in terms of their cost-benefit ratio and their potential impact.

- The promotion of enterprise education has to be at the heart of any youth entrepreneurship policy. Identifying and addressing deficiencies in this area should be a key task for every government and country.
- The mobilization and engagement of all major stakeholders is highly recommended. This includes:
  - The public sector (governments at national, regional or local/municipal level);
  - The private sector (entrepreneurs, banks, investors, small and large companies, trade associations and unions);
  - The non-profit sector (NGOs, IOs, youth associations, youth entrepreneurship-clubs and networks, universities, private foundations and think tanks);
  - Other stakeholders (public/private media, donor agencies, etc.). The promotion of youth entrepreneurship offers strong possibilities for public-private partnerships and collaboration.
- International organizations should continue to focus on innovative pilot projects, programs and schemes, establishing and expanding international partnerships, networks and linkages between key stakeholders, research and benchmark activities to identify best practices.

#### *SEED report, 2009*

Youth entrepreneurship promotion and training mobilizes the innovative potential of young people, empowering them to contribute to economic growth and national development. Since its launch in 2004 at the World Economic Forum in Davos and the World Social Forum in Mumbai, the SEED Initiative of the United Nations:

- supports outstanding and innovative start-up entrepreneurs working in partnership in developing countries to improve livelihoods and manage natural resources sustainably;
- develop practical tools to help social and environmental entrepreneurs to scale up;
- influence policy-makers to create enabling environments for sustainable development businesses;
- inspire new entrepreneurial ventures to deliver social and environmental benefits.

According to Stephen Contius, chairman of the SEED board: "Social entrepreneurs, communities, companies and others, working together in multi-stakeholder partnerships at the local level, can have a tremendously positive impact, delivering outcomes that no single actor could achieve alone".

#### *Hatala, 2005*

The study of Hatala seeks to add knowledge about forces that negatively affect an individual's decision to start a business by identifying barriers they encounter. By identifying barriers to business development and providing customized interventions for overcoming them, self-employment may become possible for a great number of people. The major barriers identified in this study were: lack of confidence, personal problems, lack of skills, start-up logistics, financial needs and time constraints. By identifying barriers to starting a business, we stand to learn much about how an

individual identifies, confronts, and responds to decisions which may seem to be beyond their control.

#### *Youth Entrenet, 2014*

Youth Entrenet is a global knowledge sharing and resource platform created by the International Labour Organization (ILO) through a partnership with the Swiss Agency for Development and Cooperation (SDC) under the project “Creating Youth Employment through improved Youth Entrepreneurship”.

The goal of this project is to create an improved understanding of how youth entrepreneurship education and entrepreneurship start-up programs contribute to creating more and better employment for youth. This understanding will then contribute to the design of more efficient and effective youth entrepreneurship strategies by making the findings available to national policy makers and youth entrepreneurship promoters.

Key messages:

- Youth unemployment is a significant and serious challenge to sustainable development in the World today
- Decent work and productive employment must be at the heart of tackling the global youth unemployment challenge
- Youth entrepreneurship must be an essential element of youth employment strategies to help turn job seekers into job creators
- Fostering an entrepreneurial culture through entrepreneurship education and access to enterprise start up training empower youth.

## Books

### *Logistics / Logistiek (Walther Ploos van Amstel)*

Companies that manage well their logistics are a step ahead of their competitors in the battle for market leadership. They have lower logistics costs and are more profitable. Ploos van Amstel explains how a company can organize the logistics as efficiently as possible, so it does not end with crowded warehouses, unnecessary markdowns of products, increasing transportation costs and angry customers running away. This book contains a step-by-step implementation plan of the integrated logistics concept (which is also used for designing the logistics process of the FEP project).

### *Citylogistiek – op weg naar een duurzame stadslogistiek voor aantrekkelijke steden / City logistics – on the way to sustainable city logistics for attractive cities (Walther Ploos van Amstel)*

Clean and sustainable cities are attractive to live, work and enjoy and, not least, to invest in. Urbanization places new demands on urban mobility: 10 to 15% of vehicle kilometers are from urban freight. Freight transport in cities with lorries and vans leads to congestion, a reduced air quality, noise and insecurity. City logistics in Europe is responsible for 25% of transport-related CO<sub>2</sub> emissions and 30 to 50% of other transportation related air pollution (PM, NO<sub>x</sub>, etc.) Smart and clean city logistics should contribute to livable and attractive cities, with cleaner vehicles that better fit the size of town, by bundling the flows of goods and the use of water transport to and from the city. The full inclusion of all aspects in the design of city logistics solutions makes that those solutions stand a better chance to be applied in practice. An integrated approach to city logistics means that due consideration is to be given to a viable business model. Because grant- or subsidy based solutions do not have future. The Business Model Canvas is a powerful tool for mapping the business model in a transparent and clear manner.

### *Freight Transport and the Modern Economy (Savy & Burnham)*

Freight Transport and the Modern Economy deals not only with the technical aspects of transport, logistics and supply chain management, but also with the interactions between transport professionals and the public authorities in the present social, political, economic and environmental context. In contrast to existing transport literature focused on individual aspects, such as transportation planning (usually for cars or passengers), logistics (essentially management issues), or individual transport modes, this book presents freight transports as a system, showing how transport itself functions and how it influences the modern economy, with a growing volume of production, turnover and employment. The nature of freight transport is analyzed in depth, explaining the main characteristics of the transport operation, its market and the regulatory context. The behaviour and interactions of the professional actors (carriers, shippers and other agents), the public authorities and citizens are described and analyzed. It provides insights that are helpful for decision makers to tackle long range issues such as the 'decoupling' of production and transport recommended by some experts, and the capacity of the freight transport industry to reduce its contribution to pollution and climate change.

*Esser & Kurte, 2005*

Esser & Kurte examine the impact of B2C e-commerce on transport in urban areas for the base year 2003. The impact analysis is based on empirical data which was derived from consumer surveys. In addition, information about delivery traffic was acquired by B2C merchants and logistics providers. The results show that B2C e-commerce leads to a reduction of private shopping traffic and an increase in delivery traffic. The future effects of B2C e-commerce on transport depends primarily on the development of internet shopping and the adoption of delivery concepts. An understanding of the issues entailed in pick-up and delivery traffic can enable municipal traffic policies to counter the negative effects of B2C e-commerce on traffic.

*Hesse, 2002*

The paper considers the significance of e-commerce for freight transport, logistics and physical distribution, regarding both B2B and B2C commerce. The possible implications of e-commerce are analyzed in the broader context of structural change. The main argument of the paper is threefold: first, most recent analyses of freight transport and logistics implications of e-commerce are overstating the current relevance of e-commerce applications on the one hand, and neglecting the influence of the underlying structural change in the entire logistics system on the other. Second, conventional analyses of certain efficiency benefits of e-commerce are probably too optimistic, whereas its negative effects are underestimated at the same time.

E-commerce is likely to support longer transport distances and often higher delivery frequencies, increasing demand for land, due to the establishment of new transshipment points (distribution centers) and, to a certain extent, a shift towards truck and air freight transport modes. Third, e-commerce and IT are interrelated components of the structural change in distribution. They affect the environment in terms of vehicle miles, related emissions and energy consumption, by speeding up the time and increasing the geographic area of transport operations. Whether e-commerce contributes to a more efficient distribution system or not very much depends on particular regional circumstances, such as consumer habits, delivery modes and population density.

Overall, there is some evidence that e-commerce is likely to reinforce longstanding trends of transport growth, rather than breaking with them. Future research should investigate e-commerce more comprehensively, in relation to the entire distribution system and to its application in firms and households.



### *Visser & Lanzendorf, 2004*

This paper offers an extensive review of research on the implications of B2C e-commerce on mobility and freight transport. Transport related effects of e-commerce have been studied from various angles, ranging from private mobility to freight mobility, commodities purchased, spatial scale and population involved. The main conclusions of this paper may be summarized as follows:

First, reaching a single conclusion regarding the impact of e-commerce on travel is impossible; which mobility effect(s) dominate(s) heavily depends on the definitions, assumptions and research methodology. Most studies involving only respondents with affinity for internet indicate that e-shopping is likely to lead to some shift from personal travel to FT. Nevertheless, the comprehensive picture is much more complicated. The conclusions regarding the hypotheses tend to be mixed for studies involving samples that are not exclusively defined by their affinity to technology.

Second, most quantitative studies investigate the implications of B2C e-commerce on either personal travel or FT. With the exception of some scenario studies on e-grocery shopping, research that simultaneously takes into account both types of transport hardly exists. It is crucial that research which has explored only one aspect of mobility consequences, should emphasize that without combining conclusions with complementary features, the conclusions are partial and as such, little can be concluded on the net mobility impact of e-shopping.

With respect to assessing the impacts on personal travel, the following key issues were addressed: the nature of the sample, definitions of e-shopping and e-shopper, definition of transportation impact, hypotheses tested and product class. Disparities in the definitions of e-shopping and e-shopper may affect the results in assessing mobility implications. Two important dimensions of the literature are discussed: the activities attributed to e-shopping (i.e., searching activities, purchasing, and delivery) and the frequency of carrying out the e-shopping activity. The more restrictive the definition is, the smaller the resulting mobility implication is.

Analyzing the literature according to the hypotheses tested is a complex task. Almost all hypotheses are valid to a certain extent; differences in outcomes sometimes lie in which hypothesis is being highlighted. Emphasizing the more “attractive” conclusion hides an actually dual conclusion. In the case of the B2C mobility effect of e-commerce, substitution and complementary can both be concluded, with differences in magnitude. More recent research tends to emphasize the complementary effect. These studies view shopping as a holistic process which includes both information search and purchasing a product, as well as assessing the sum of the effect.

### *Dablanc, 2009*

A number of major issues shared by all cities and freight stakeholders are identified:

1. Urban freight is quite inefficient; the total number of vehicle-kilometers travelled to supply cities could be reduced and the quality of the service enhanced.
2. Urban freight is characterized by the “motor transition,” where non-motorized modes of transport are losing ground to vans and trucks. A marginal but growing share of new green delivery vehicles are

appearing in some European and Japanese cities.

3. “Logistics sprawl” is a locational movement of warehouses and cross-docking terminals from the urban areas to suburban zones with some positive impacts (more modern terminals replace old ones) but also negative ones (more vehicle-kilometers are generated).

4. Labor issues are important in urban freight: many small operators provide urban deliveries with very old trucks and face difficult working conditions, lack of training and poor revenues.

5. Many large cities in the world are port cities and gateways to international flows of goods, generating both opportunities and negative impacts for local communities.

6. Road transport remains dominant, and to supply cities with rail and waterway infrastructure requires heavy investments and faces strong opposition from residents.

Four recommendations are formulated for cities looking for a more efficient and climate friendly freight system:

- Cities have to set up a realistic governance structure for urban freight: assessing the needs (by carrying out surveys), setting up a Freight Forum to negotiate with private stakeholders, and organizing a Freight Portal on the web to provide basic information to truck drivers. These may turn out to be low cost actions with great benefits to businesses.
- Serving urban growth by enhancing the quality and added value of goods’ distribution is a very important objective for policy-makers. Providing modern logistics facilities and training programs for freight workers, reintroducing urban logistics spaces and services are key priorities.
- Making urban freight more sustainable and cities safer and more livable. This means that land use and planning policies have to integrate logistics activities. Cleaner and more silent modes of transport must be (re) introduced in city streets. Environmental standards for truck access contribute to reducing emissions of particulates, nitrogen oxides and ozone that are so detrimental to the health of urban residents.
- Local and national governments can take decisive actions to enhance working conditions and skills in the urban freight sector, often the least regarded in the trucking industry. Guarantees must be required from all freight companies on their financial and professional capabilities. On-street delivery areas with ergonomic design must be provided to make urban deliveries easier and faster. Cities themselves can set examples: like any large company, a municipality receives all sorts of goods, from letters and documents to office items and furniture. Public procurement procedures can be efficient tools to achieve a more environmentally-friendly freight supply.

*Cherret et al., 2012*

This paper provides planners with an understanding of road-based urban retail freight transport activity. The findings suggest that the average High Street business could expect up to 10 core goods and 7.6 service visits per week, in non-peak trading periods with 25% additional activity during the build up to Christmas. Vans were the dominant mode, responsible for 42% of delivery activity with a mean dwell time of 10 min. Where possible, load consolidation should be encouraged by methods

such as Delivery and Servicing Plans and using out-of-town freight consolidation centers to bring in goods over the last mile in shared vehicles. Where this is not possible, loading bay monitoring and control, and preferred lorry routes can help manage the movement of vehicles in and out of dense urban areas.

Service vehicle activity is a significant contributor to urban freight movements and often requires vehicles to be parked close to the premises being served. Centrally coordinating elements of service provision (e.g. for cleaning, equipment maintenance, recyclate collection), or providing improved, more flexible parking provision for service vehicles could be as or more beneficial in reducing overall freight impacts than focusing on core goods deliveries. In the case of the latter, 'pay-as-you-leave' car park charging systems could encourage short-stay service vehicles to park off-street.

#### *Lindholm, 2013a*

On the path towards sustainability for the urban area, local authorities make decisions that affect freight transport. However, local authorities might not always be aware of the effect their decisions and policy making have on freight and its stakeholders – in many ways, urban freight transport is a neglected field. The purpose of this thesis is to contribute to the enabling of local authorities to include freight in urban transport planning for sustainable development. Its main conclusion is that in order for local authorities to include freight transport in the overall transport planning, there is a need for planning resources and information; and then, it is always necessary to include relevant stakeholders in the process.

Contributions from this thesis consist of four main areas: the development of a framework identifying and separating actors and stakeholders; the enhancement of mechanisms that influence the urban freight transport situation; the development of an assessment framework for the involvement of stakeholders through urban freight partnerships as a step towards the inclusion of freight transport in the overall transport planning; and, finally, the development of a transport planning process model in order to help local authorities to work with freight transport, highlighting the importance of defining the problem and taking into consideration the urban context and stakeholder requirements, evaluation and good dissemination.

#### *Lindholm, 2013b*

This paper focuses on the local authority perspective on urban freight transport, presenting a literature review of the last 15 years of research within the field. Urban freight transport is most of the times not considered in the local authority transport planning, which mainly focuses on public transport; but there is a big difference between freight and passenger journeys. Four main areas are identified in order to work in a more structured way with urban freight transport for local authorities: measures; evaluation; transferability; and stakeholder involvement. Single measures are not enough to reach sustainability and there are few measures that have a good business case. Urban freight

transport solutions are not being investigated on a wider scale to cope with the long-term unsustainable trends.

In addition, few of the project evaluations explain what aspects have gone wrong with actions concerning urban freight transport. Evaluation becomes important in order to understand the effect of the measures implemented. Monitoring and evaluation (ex-ante and ex-post) based on performance indicators (accessibility, environmental, costs, life quality and delivery characteristics) should play an important role in the development of actions regarding urban freight transport.

Evaluation is in turn important for the dissemination and transfer of knowledge between different cities/local authorities. Finally, it is concluded that stakeholder involvement increases the possibilities for long-term successful results.

#### *Gevaers et al., 2009 and 2011*

When optimizing the last part of a supply chain, one has to focus on the following features: service levels, security & type of delivery, geographical area & market penetration, fleet & technology and environment. Close scrutiny of the aforementioned features does increase the possible success of implementing a new concept.

#### *Dell' Amico & Hadjidimitriou, 2012*

The logistical models here proposed consist of two innovative concepts developed in the context of the CityLog project the Modular Bento Box System (M-BBX) and the introduction of two vehicles and the transshipment area. The comparison of the standard distribution model with the distribution using the M-BBX showed a reduction of delivery time and unsuccessful deliveries, thus improving global pollution and congestion. The comparison of the traditional delivery with the use of the transshipment area showed the impact in terms of travel time, km travelled, environmental emissions and costs for transport. The choice of the position of the transshipment area is crucial, but overall benefits can be obtained.

#### *Maes & Vanellander, 2012*

The paper deals with the use of bicycle messengers, also called bike couriers, in the modern logistics chain. In an era where almost every actor - from policy makers to senior managers - is thinking about the environment and sustainability, new innovative concepts are developed worldwide. By now, an abundance of solutions to improve efficiency and overall sustainability of logistics and other related business activities is already available in the market. One of the methods to deliver parcels in a more sustainable way, is the transport of freight by bike. People on bike deliver and transport post, parcels or freight with a low volume or weight. Bike couriers are proven to be fast and reliable within congested urban areas. Speed and also sustainability are their selling arguments. In Europe some bike courier markets are reasonably well developed.

The research question of this paper concerning bicycle messengers is whether these companies can be an economic viable alternative for fossil fuel powered transport, and if so, in what markets these opportunities can be found. First, the advantages and weaknesses of bicycle couriers are listed. The

companies can deliver reliable and fast services at a reasonable price. These can play a role in urban transport, although being limited to a certain region or city. Bicycle messengers can help countries to meet the CO2 emission requirements, albeit not being a miraculous solution. A Dutch study estimated the possible fuel savings for the Netherlands to 8,500,000 litres, meaning 21,000 tonnes of CO2.

Secondly, it turns out that the employment possibilities, at least in the short run, seem to be limited. Most companies are small one or two-person firms. Links with logistics companies are rare. The organization of the market leaves room for optimisation. Companies highlighted that bike couriers are hardly connected to the global network. Most products offered are on a same-day delivery principle. The focus is regional or local. Weight and volume restrictions are possible, though some invest in cargo bikes. The usefulness of handhelds, track and trace, routing, etc. was mentioned to be high if volumes would go up. Some policy initiatives could help stimulate the bike courier market. The implementation of an awareness campaign might be a policy initiative to boost the market volume. A logo stressing sustainability can be an option to convince companies to use non-petrol powered transport for the urban transport.

As cities and freight transport need to live together, different policies to increase viability of cities are imposed on freight transport. Cities among others can try to increase bundling of freight flows. By combining smaller freight flows, optimization takes place. Governments try to organize concepts where freight vehicles stop at the outskirts of the city to unload goods to environmentally less damaging vehicles. In the A-to-B transport market which bike couriers in Belgium mostly do, clients are found in the administrative sphere, legal industry, advertising companies, hospitals and doctors. Furthermore, sandwich bars and flower shops are also interested. Market growth should be possible if action is taken to increase awareness about the product 'bike delivery'.

The overall conclusion is that a specific market for bike couriers exists, though some doubts about the professionalization and linkages with the logistical network are correct. The Belgian scale, at which these companies operate, is very small. It is a chicken-or-egg story. To professionalise, bike couriers need bigger volumes. To work with the bikers logistics companies ask for a professionalization before handing over the volumes. A look at examples in other European countries will be necessary to discover opportunities and constraints.

### *Green Deal Six, 2011*

In order to facilitate and accelerate the transition to a low carbon economy, the Dutch government started in 2011 with the Green Deal approach. With this interactive process, the government wants to make room for innovative, sustainable initiatives from society. It does so by removing bottlenecks in the legislation, by creating new markets, by providing adequate information and by fostering optimal cooperation. Clear mutual agreements should allow participants to work together on concrete results, while each involved party has its own responsibility. One of the most interesting

Deals is Green Deal Six – Zero Emission City Logistics . Parties in this Deal include the National Government, various municipalities, industry associations, research institutes, vehicle manufacturers, shippers, transport companies and fuel suppliers. They strive to reduce to zero the emission rate of the supply to city centers in 2025. This requires a new approach to urban logistics . Innovations are needed, combining: legislation and regulation, e.g. custom made solutions, parking policies, window times; organization, e.g. new logistics concepts, cargo bundling and other working methods; technology, e.g. vehicles with lower emissions, specially designed for the city; and behavior, e.g. the question whether direct delivery of the parcel is always necessary?

### *Top Sector Logistics – symphony NR. 2 Results of the Topsector Logistics in 2015*

In the Dutch Top Sector Logistics many parties work together, including shippers, logistics service providers, port authorities, shipping companies, shipping companies, knowledge institutes and government. Its aim is to contribute maximally to strengthening the international competitiveness of the Netherlands. Under the banner Neutral Logistics Information Platform a group of stakeholders joins hands to make the logistics sector in the Netherlands more efficient by means of sharing data, aiming to:

- prevent any re-entry of data;
- facilitate the optimization of supply chains;
- secure the maximum availability of data.

First results include:

- Show and Mark interface (digitizing paper bills and interface with the customer)
- Linking systems and freight flows (bundling)

### *Urban Freight Research Roadmap (ALICE/ERTRAC) 2015*

ERTRAC, the European Road Transport Advisory Council, and ALICE, the Alliance for Logistics Innovation through Collaboration in Europe, want to pool resources and jointly develop a research roadmap on urban freight and logistics . The goal of the roadmap is to identify research priorities related to urban freight delivery, returns and urban logistics to improve the efficiency, sustainability and security of these activities. Urban freight transport is defined as all movements of goods into, out of, through or within the urban area, including:

- Delivery of goods (business and home);
- Service transport and demolition traffic;
- Shopping trips made by private households;
- Reverse logistics for waste removal and for returns management;
- Service vans for maintenance, supply and removal of parts.

The vision is to achieve a full integration of freight flows in cities' operations and activities that allow citizens to access the goods they require and the goods to reach the citizens, while at the same time supporting sustainable development. Research areas identified aim to:

- Increase energy efficiency, which can be achieved by improving the efficiency of the whole urban logistics system, on top of the expected gains in the energy efficiency of vehicles;
- Improve the urban environment by increasing air quality and reducing noise;
- Increase customer satisfaction by delivering the goods on time and improving the reliability of the systems;
- Increase safety and security, reducing injuries and fatalities as well as cargo loss or damage.

When preparing the roadmap, the following issues were taken into account:

- Concentration of population in cities (72% of EU population lives in cities, towns and suburbs; this will increase to 80% in 2020);
- Urban freight as an important traffic component in cities (10 to 15% of vehicle equivalent miles);
- Very low load factors for delivery vehicles in cities (e.g. 38% for vans in London);
- Urban freight is responsible for 25% of urban transport-related CO<sub>2</sub> emissions and 30 to 50% of other transport-related pollutants (particulate matters (PM), Nitrogen Oxide (NO<sub>x</sub>);
- Urban freight service companies are generally very small (85% of short distance truck companies have fewer than five employees);
- Urban freight accounts for a significant part of ambient noise;
- Changing urban freight patterns due to teleworking, ageing population, more densely populated urban areas, growth of e-commerce;
- European policy for zero CO<sub>2</sub> emissions in cities by 2030.

#### *Action plan Air Quality, Municipality of The Hague, 2016*

The Municipality of The Hague will spend 6 million euro in a program to clean up the air in the city. Measures to be taken are summed up in the Air Quality Action Plan 2015 – 2018 and focus on the pollution caused by city traffic. They include the taking off the road of dirty cars; reducing the number of gasoline scooters with a new incentive scheme for electric scooters; arrangements with the transport sector to further the use of cleaner vehicles in urban distribution; and the promotion of electric vehicles. It has a special policy focus on taxis, larger employers, courier services and motorcycle couriers.

### *The Purpose Economy – how your desire for impact, personal growth and community is changing the world (Aaron Hurst)*

According to Hurst, we are entering a new economic era. There are developments in every industry and city that reveal a pattern when looked at from a distance. They are all connected to the three types of purpose we seek in our lives: our desire for impact, personal growth and community. “It’s an economy where value lies in establishing purpose for employees and customers—through serving needs greater than their own, enabling personal growth and building community.” Social, political, environmental and business changes are combining at this moment in history to give rise to the Purpose Economy. The drivers explain the new economy but also provide insight into how it will take shape.

When it comes to happiness and well-being, what matters most is purpose. And given the amount of time we spend at work, it is in our careers that we should primarily focus our pursuit of purpose. The purpose worker is replacing the knowledge worker and in the process changing how we need to approach hiring, engaging and retaining talent. The organizations that thrive in the next economic era will embrace purpose in how they work as well as in their products, services and relationships. The Purpose Economy is radically disrupting massive markets. These changes in fields like healthcare, retail and education are creating exciting opportunities to do well and do good on unprecedented scales. In the Purpose Economy we should aspire to not only build successful organizations but to shape and build markets. We are in a moment of transition and those with the creativity and ambition can truly change the world.

### *The power of connectedness (Stichting CSC)*

More than ever before, people are aware of the interdependence of global problems. As concerned persons, they do not want to be addressed as myopic consumer, selfish citizen or environmental polluter. They are not just a problem to be managed by governments, businesses and institutions, but they want to be part of the solution because they know that people need each other to flourish. The Power of Connectedness shows the opportunities and challenges of our time: by showing the connectedness in our actions, in the way we organize and shape society. This relational approach makes it possible from the outset to look small and think big. When policy assumes that the world consists of warring selfish individuals who can only be motivated by rewards and punishments, we create an oppressive world. But when we look closely at what happens between people, than it shows that they are in fact considerably more collaborative, cooperative and committed to the good cause. It is crucial to support this relational power and not to discourage it systematically.



### *Morality in action (Van den Brink et al.)*

Social pioneers are entrepreneurs with a social heart. They work effectively to strengthen the community and do not let themselves be discouraged by the system. They break routines, driven by the belief that it can and will be better. In addition, they know how to tap into the existing forces in a neighbourhood. Social pioneers speak up:

Rob van Pagée: "We have to get out of institution thinking. The system usually does things for people, or to people, but not with people. The consequence of this is that a lot of human power remains untapped and unused".

Ramon Schleijsen: "I remember very well that we had to prepare that evening and we said to the officials: let the plans that you now have in the drawer. Just go talk to people and listen, instead of you asking them: Can you be in agreement with what we have planned?"

Barend Rombout: "The important thing is that we are a decent governance. Sometimes following the rules gives an outcome that is just not acceptable. The reasonableness and the human factor should come back. I call it basic decency."

Jos de Blok: "Neighbourhood care (Buurtzorg) is better care. It is essential that we go back to the relationship, to make contact with the people in the neighbourhood and build something out of a relation of trust."

Research on and with social pioneers provides the following insights for organizational theory:

A preliminary understanding concerns the relationship between top and base (or management and staff) in the implementing organization. It says: make sure that all know and share the purpose of the organization, and leave ample unregulated space to the professionals so that they can act according to circumstances. Do not treat professionals as instruments that you fill up with targets and instructions, but make sure that they are well-equipped; and give them the space - the freedom and the responsibility - to act according to circumstances and to do good in concrete situations in an infinitely diverse and dynamic reality.

The second insight adds: organize professionals in self-managing teams on a human scale. The team is a place of encounter and development, where people encourage one another and engage in shared responsibility; then people will flourish and develop themselves and the organization.

The third insight concerns the relationship of the (top of) the organization with the broader system in which it is embedded. The importance of the work of social pioneers is that they are able to stretch and change the systemic patterns and routines and thus create space for the organization and its professionals to relate with people and their particular needs, wishes and initiatives.

The fourth insight: be alert to the wounded along the way and help them on their feet so they can join back into the local community. The wounded along the way are the signal par excellence of dehumanizing systems and a lack of vitality of society.

The fifth insight: realize that a problem, i.e. what needs to be done in a given situation, constitutes motive and material for the encounter and growth of people and their relationships. Do not solve problems for the people but enable them to solve it themselves and thus increase their problem-

solving capacities. The things to be done are the raw material for the promotion of micro-social processes in which people meet and work together, for flourishing persons and vital communities.

#### *People economy - a new relationship between companies and their employees (Krist Pauwels)*

In "The people economy" Krist Pauwels discusses the new relationship between companies and their employees. On the basis of his CEO model - the Creative Energy Organization - he describes how employers and employees can enrich themselves and each other through a deliberate exchange of eight values. Eight key values that together constitute a culture that can be promoted and in which each employee uses the personal energy to strengthen her/himself and the whole.

These eight values are: transparency, authenticity, commitment, space awareness, responsibility, understanding, trust and candor. These are the drivers who unwittingly steer any interpersonal relationship, as if it were the relational DNA of each human being. By sharing this insight, the personal and community awareness will be broadened. "The Creative Energy Organization is a company with a heart. A heart for employees, customers and society, with whom valuable relationships are established, with each of them. Without fear nor assertiveness she presents itself with a growing charisma to the world. With the intention to provide added value for herself and any environment in which she operates."

#### *Manual Meaningful Entrepreneurship (Klomp et al.)*

Social added value is the main pillar of thriving businesses. Sustainability and CSR are merely the beginning. We are talking about real and demonstrable value - for the life of customers, employees and other stakeholders; in short on society at large. Welcome to the Meaningful Economy! We have made the transitions from an agricultural to an industrial to a knowledge economy, and we have now arrived at the stage of the Meaningful Economy, in the penthouse of Maslow's pyramid. We are in the era of self-realization and self-transcendence. In the Meaningful Economy social meaning or significance is the primary form of value exchange. Making the world a better place will be the core of all activities. The approach starts with the motives of the entrepreneur as a person, and carries through the inside of the company, branding and marketing activities to a positive impact on society, which in turn is lucrative for the company. Success is determined by the degree to which companies create social value and progress. The winners are those companies that make a positive difference socially; companies that significantly improve the life world of people. They can count on a steadily growing enthusiasm. The losers are the companies that just take from the world and destroy it for personal gain. Because people no longer accept that their environment is abused and destroyed.

#### *Ask 4 Co-creation! – develop a new ecosystem with growpower for entrepreneurship (Roger Engelberts)*

Between 17 and 24 years of age youngsters discover their true passions based on their own talents. Talent is not rare. You have talent if you believe in yourself, it is passion for your profession, your occupation or vocation. In communication we have the triad knowledge-attitude-behavior. In our

education we focus on knowledge; but attitude is the most underrated factor in our education. Nil volentibus arduum, for those who really want nothing is impossible. Mindset is everything. Remember the quote of Pippi Langkous: "I've never done this before, but I'm sure I can." The bias for cognitive skills, ratio and economy ultimately generates a community which eventually will sideline itself. The film Alphabet explains this flawlessly for the cases of China and Japan: "Winners at the start of their career, losers at the end." By the unilateral formation and parochialism people end up depressed. Precisely diversity, pluralism and multidisciplinary work provides a more inclusive and comprehensive perspective on the burning issues of the current Zeitgeist. Besides IQ, this requires EQ, feel with your heart; PQ, the quotient which represents your lineage, your values from home; and SO, your Soul Quotient, your soul or intuition. An organization without a soul starves its people.

### *Why, How, What*

Ask 4 Co-creation applies Simon Sinek's Golden Circle; Why, How, What. Why: we need to renew and innovate faster and firmer to remain above the international benchmark of innovative agrifood regions and thus to guarantee well-being and prosperity. How: by learning and applying new alliance skills, dismantling existing systems and structures, and create a new culture for entrepreneurship and co-creation. This requires skills for new alliances; the ability to let go of system and structure thinking; and foster a culture of a breeding ground for new entrepreneurship. As for the What question, the 10 innovation laws of Pippi Langkous apply:

- We are enthusiastic, curious, energetic and passionate;
- We do not tell you how to do it, but we get together and do it with you;
- We want to discover what we can and what we can learn;
- We are always looking for unique solutions to problems;
- We take the opportunity to make thoughtful decisions;
- We learn from our mistakes;
- We always see new opportunities;
- We take care of our friends and the people around us;
- We use and share the knowledge and experience of our environment and our network;
- We always work together in a (multidisciplinary) team.

### *The New Cooperation. Melting Pot or Powder Keg? - Working together on new cooperative capital (Pierre van Hedel)*

Success factors of a co-operative: 1. Mission of the cooperative; 2. Market orientation; 3. Durable and sustainable; 4. Knowledge; 5. Members commitment; 6. Financial capability; 7. Governance; 8. Political and legal environment.

## Appendix2: Summary Literature overview

### *Youth unemployment & Entrepreneurship*

#### Books

##### *Business Model Generation (Osterwalder & Pigneur, 2010)*

The Business Model Canvas presents, with a creative and varied layout, a fresh way of thinking about generating and evaluating new business models and at the same time a format with guidelines for structuring the thought process.

##### *Disciplined Entrepreneurship – 24 steps to a successful startup (Aulet, 2013)*

Stresses the importance of market segmentation and of selecting a so-called beachhead market. Ideally, a beachhead market is composed of customers that buy similar products for similar reasons, and that talk to each other (for word of mouth), further narrowed down to a specific demographic, including things like age, location, income, habits, backstory, and motivations.

##### *The Lean Startup – How constant innovation creates radically successful businesses (Ries, 2016)*

Its core message is: start small, i.e. with a Minimum Viable Product (MVP) and use this as the beginning of a permanent process of experimentation, innovation and growth. Basically, this is a reiterative process applying the feedback loop: idea > build > product > measure > data > learn > idea, and so on.

#### *Articles/reports/websites*

##### *Weiss, 2015*

Intrinsic barriers to youth entrepreneurship are for example personal problems, a lack of confidence and fear of failure, while extrinsic barriers are lack of skills, start-up logistics, financial needs, time constraints, lack of support and of entrepreneurial opportunities.

##### *Morris & Schindehutte, 2005*

Presents a framework which pretends to enable the user to design, describe, categorize, critique, and analyze a business model for any type of company. It provides a useful backdrop for strategically adapting fundamental elements of a business.

##### *Carree & Thurik, 2002*

Entrepreneurship generates growth because it serves as a vehicle for innovation and change, and therefore as a conduit for knowledge spillovers. In a regime of increased globalization, where the comparative advantage of modern economies is shifting towards knowledge based economic activity, entrepreneurship is to play a more important role.

##### *Schoof, 2006*

Provides a clear picture of youth entrepreneurship in general and of the concrete barriers and incentives to youth enterprise start-ups in particular. A range of key constraints is identified for

young people in different countries to start and maintain a successful business. At the same time, incentives, initiatives and measures that could improve this situation are discussed.

Five factors in particular are identified that have a major influence on youth entrepreneurship:

- Social/cultural attitude towards youth entrepreneurship
- Entrepreneurship education
- Access to finance/start-up financing
- Administrative and regulatory framework
- Business assistance and support.

Some general guidelines for the development of youth entrepreneurship are presented:

- Every country has to develop an individual, tailor-made policy approach. An individual policy mix of (integrated) initiatives that responds to different economic, social and cultural situations as well as to particular entrepreneurial framework conditions is required.
- Investment in research, benchmarking, testing and evaluation is particularly crucial in this area.
- Youth entrepreneurship interventions need to balance speed with scale of impact and cost of implementation. Interventions and tools to promote youth entrepreneurship differ highly in terms of their cost-benefit ratio and their potential impact.
- The promotion of enterprise education has to be at the heart of any youth entrepreneurship policy. Identifying and addressing deficiencies in this area should be a key task for every government and country.
- The mobilization and engagement of all major stakeholders is highly recommended. This includes:
  - The public sector (governments at national, regional or local/municipal level);
  - The private sector (entrepreneurs, banks, investors, small and large companies, trade associations and unions);
  - The non-profit sector (NGOs, IOs, youth associations, youth entrepreneurship-clubs and networks, universities, private foundations and think tanks);
  - Other stakeholders (public/private media, donor agencies, etc.). The promotion of youth entrepreneurship offers strong possibilities for public-private partnerships and collaboration.
- International organizations should continue to focus on innovative pilot projects, programs and schemes, establishing and expanding international partnerships, networks and linkages between key stakeholders, research and benchmark activities to identify best practices.

### *SEED report, 2009*

Youth entrepreneurship promotion and training mobilizes the innovative potential of young people, empowering them to contribute to economic growth and national development. According to Stephen Contius, chairman of the SEED board, " Social entrepreneurs, communities, companies and

others, working together in multi-stakeholder partnerships at the local level, can have a tremendously positive impact, delivering outcomes that no single actor could achieve alone.”

#### *Hatala, 2005*

The major barriers to youth entrepreneurship identified in this study were: lack of confidence, personal problems, lack of skills, start-up logistics, financial needs and time constraints. By identifying barriers to starting a business, we stand to learn much about how an individual identifies, confronts, and responds to decisions which may seem to be beyond their control.

#### *Youth Entrenet, 2014*

Youth Entrenet is the global knowledge sharing and resource platform on youth employment and entrepreneurship, created by the International Labour Organization (ILO). It promotes youth entrepreneurship as an essential element of youth employment strategies; “help turn job seekers into job creators”. It helps fostering an entrepreneurial culture through entrepreneurship education and access to enterprise start up training empower youth.

### **Summary City Logistics**

#### *Books*

#### *Logistics / Logistiek (Walther Ploos van Amstel, 2014)*

Companies that manage well their logistics are a step ahead of their competitors in the battle for market leadership. They have lower logistics costs and are more profitable.

#### *Citylogistiek – op weg naar een duurzame stadslogistiek voor aantrekkelijke steden / City logistics – on the way to sustainable city logistics for attractive cities (Walther Ploos van Amstel, 2015)*

The full inclusion of all aspects in the design of city logistics solutions makes that those solutions stand a better chance to be applied in practice. An integrated approach to city logistics means that due consideration is to be given to a viable business model.

#### *Freight Transport and the Modern Economy (Savy & Burnham, 2013)*

Freight Transport and the Modern Economy deals not only with the technical aspects of transport, logistics and supply chain management, but also with the interactions between transport professionals and the public authorities in the present social, political, economic and environmental context.

#### *Articles and policy documents*

#### *Esser & Kurte, 2005*

The results show that B2C e-commerce leads to a reduction of private shopping traffic and an increase in delivery traffic. The future effects of B2C e-commerce on transport depends primarily on the development of internet shopping and the adoption of delivery concepts. An understanding of

the issues entailed in pick-up and delivery traffic can enable municipal traffic policies to counter the negative effects of B2C e-commerce on traffic.

#### *Hesse, 2002*

Overall, there is some evidence that e-commerce is likely to reinforce longstanding trends of transport growth, rather than breaking with them. Future research should investigate e-commerce more comprehensively, in relation to the entire distribution system and to its application in firms and households.

#### *Visser & Lanzendorf, 2004*

The main conclusions may be summarized as follows:

First, reaching a single conclusion regarding the impact of e-commerce on travel is impossible; which mobility effect(s) dominate(s) heavily depends on the definitions, assumptions and research methodology. Second, most quantitative studies investigate the implications of B2C e-commerce on either personal travel or FT. It is crucial that research which has explored only one aspect of mobility consequences, should emphasize that without combining conclusions with complementary features, the conclusions are partial and as such, little can be concluded on the net mobility impact of e-shopping.

#### *Dablanc, 2009*

A number of major issues shared by all cities and freight stakeholders are identified:

1. Urban freight is quite inefficient; the total number of vehicle-kilometers travelled to supply cities could be reduced and the quality of the service enhanced.
2. Urban freight is still characterized by the “motor transition,” where non-motorized modes of transport are losing ground to vans and trucks. However, a marginal but growing share of new green delivery vehicles is appearing in some European and Japanese cities.
3. “Logistics sprawl” is a locational movement of warehouses and cross-docking terminals from the urban areas to suburban zones with some positive impacts (more modern terminals replace old ones) but also negative ones (more vehicle-kilometers are generated).

Four recommendations are formulated for cities looking for a more efficient and climate friendly freight system:

- Cities have to set up a realistic governance structure for urban freight
- Serving urban growth by enhancing the quality and added value of goods’ distribution is a very important objective for policy-makers.
- Making urban freight more sustainable and cities safer and more livable
- Local and national governments can take decisive actions to enhance working conditions and skills in the urban freight sector, often the least regarded in the trucking industry.

#### *Cherret et al., 2012*



Where possible, load consolidation should be encouraged by methods such as Delivery and Servicing Plans and using out-of-town freight consolidation centers to bring in goods over the last mile in shared vehicles. Where this is not possible, loading bay monitoring and control, and preferred lorry routes can help manage the movement of vehicles in and out of dense urban areas.

*Lindholm, 2013a*

In order for local authorities to include freight transport in the overall transport planning, there is a need for planning resources and information; and then, it is always necessary to include relevant stakeholders in the process.

*Lindholm, 2013b*

Four main areas are identified in order to work in a more structured way with urban freight transport for local authorities: measures; evaluation; transferability; and stakeholder involvement.

*Gevaers et al., 2009 and 2011*

When optimizing the last part of a supply chain, one has to focus on the following features: service levels, security & type of delivery, geographical area & market penetration, fleet & technology and environment. Close scrutiny of the aforementioned features does increase the possible success of implementing a new concept.

*Dell' Amico & Hadjidimitriou, 2012*

The comparison of the standard distribution model with the distribution using the M-BBX showed a reduction of delivery time and unsuccessful deliveries, thus improving global pollution and congestion. The comparison of the traditional delivery with the use of the transshipment area showed the impact in terms of travel time, km travelled, environmental emissions and costs for transport. The choice of the position of the transshipment area is crucial, but overall benefits can be obtained.

*Maes & Vanellander, 2012*

One of the methods to deliver parcels in a more sustainable way, is the transport of freight by bike. The companies can deliver reliable and fast services at a reasonable price. These can play a role in urban transport, although being limited to a certain region or city. Bicycle messengers can help countries to meet the CO<sub>2</sub> emission requirements, albeit not being a miraculous solution. A Dutch study estimated the possible fuel savings for the Netherlands to 8,500,000 litres, meaning 21,000 tonnes of CO<sub>2</sub>.

The usefulness of handhelds, track and trace, routing, etc. was mentioned to be high if volumes would go up. Some policy initiatives could help stimulate the bike courier market. The implementation of an awareness campaign might be a policy initiative to boost the market volume. Governments try to organize concepts where freight vehicles stop at the outskirts of the city to unload goods to environmentally less damaging vehicles.

### *Green Deal Six, 2011*

One of the most interesting Deals is Green Deal Six – Zero Emission City Logistics . Parties in this Deal include the National Government, various municipalities, industry associations, research institutes, vehicle manufacturers, shippers, transport companies and fuel suppliers. They strive to reduce to zero the emission rate of the supply to city centers in 2025. This requires a new approach to urban logistics . Innovations are needed, combining: legislation and regulation, e.g. custom made solutions, parking policies, window times; organization, e.g. new logistics concepts, cargo bundling and other working methods; technology, e.g. vehicles with lower emissions, specially designed for the city; and behavior.

### **Summary Purpose economy**

#### Books

### *The Purpose Economy – how your desire for impact, personal growth and community is changing the world (Aaron Hurst, 2014)*

According to Hurst, we are entering a new economic era. There are developments in every industry and city that reveal a pattern when looked at from a distance. They are all connected to the three types of purpose we seek in our lives: our desire for impact, personal growth and community. “It’s an economy where value lies in establishing purpose for employees and customers—through serving needs greater than their own, enabling personal growth and building community.” Social, political, environmental and business changes are combining at this moment in history to give rise to the Purpose Economy.

### *Start with Why: How great leaders inspire everyone to take action (Simon Sinek, 2009)*

The purpose issue was convincingly addressed by Simon Sinek with his famous Golden Circle (Sinek, 2009). The Golden Circle consists of three concentric circles, with Why in the center, How in the middle and What in the outer circle. Sinek states that most organizations and people think, act and communicate from the outside in. They tell you What they do (function, product) and sometimes How they do, but not Why they do what they do. But inspiring organizations think, act and communicate from the inside out. In his immensely popular TED talk titled How great leaders inspire action he resumes his ideas in two sentences: "People do not buy what you do, they buy why you do it. And what you do simply proves what you believe"

### *The power of connectedness (Stichting CSC, 2016)*

More than ever before, people are aware of the interdependence of global problems. As concerned persons, they do not want to be addressed as myopic consumer, selfish citizen or environmental polluter. They are not just a problem to be managed by governments, businesses and institutions, but they want to be part of the solution because they know that people need each other to flourish.

The Power of Connectedness shows the opportunities and challenges of our time: by showing the connectedness in our actions, in the way we organize and shape society.

*Morality in action (Van den Brink et al., 2016)*

Research on and with social pioneers provides the following insights for organizational theory: A preliminary understanding concerns the relationship between top and base (or management and staff) in the implementing organization. It says: make sure that all know and share the purpose of the organization, and leave ample unregulated space to the professionals so that they can act according to circumstances. The second insight adds: organize professionals in self-managing teams on a human scale. The third insight concerns the relationship of the (top of) the organization with the broader system in which it is embedded. The fourth insight: be alert to the wounded along the way and help them on their feet so they can join back into the local community. The fifth insight: realize that a problem, i.e. what needs to be done in a given situation, constitutes motive and material for the encounter and growth of people and their relationships.

*Menseneconomie / People economy - a new relationship between companies and their employees (Krist Pauwels, 2014)*

Discusses the new relationship between companies and their employees. On the basis of his CEO model - the Creative Energy Organization - is a company with a heart. A heart for employees, customers and society, with whom valuable relationships are established, with each of them. Without fear nor assertiveness she presents itself with a growing charisma to the world. With the intention to provide added value for herself and any environment in which she operates.

*Handboek Betekenisvol Ondernemen / Manual Meaningful Entrepreneurship (Klomp et al., 2016)*

In the Meaningful Economy social meaning or significance is the primary form of value exchange. Making the world a better place will be the core of all activities. The approach starts with the motives of the entrepreneur as a person, and carries through the inside of the company, branding and marketing activities to a positive impact on society, which in turn is lucrative for the company. Success is determined by the degree to which companies create social value and progress. The winners are those companies that make a positive difference socially; companies that significantly improve the life world of people. They can count on a steadily growing enthusiasm.

## Appendix 3: Interviewees and interviews

### The flower business- Social Enterprise – Startups – Entrepreneurship

**Bart Troost** is co-founder of a very successful innovative startup named *Bloomon*, which is a company in the flower industry that delivers fresh and stylish bouquets of flowers immediately from the producer to the consumer in the form of a subscription. His responsibilities within the company are styling and design of the bouquets, purchase of the flowers, production of the bouquets, logistics, customer service, community management mainly via Facebook and customer relations. The purpose for this conversation was mainly to hear from an innovative entrepreneur in the flower business his experiences starting up a business like this, about the main barriers and the most important lessons learnt so far.

Mr. Troost's first advise was not to fear risks too much. One should always be confident in the things one does with dedication and passion.

Important lessons learned from previous working experience:

1. *Work data driven.* Act on the basis of facts and not on the basis of opinions. When you can't prove something will work, then you have to do experiments and tests first.
2. *Start with the end in mind.* What is my final goal and how do I get there in the most efficient and logical way?
3. *Think as a customer.* What bothers them and what do they really want?
4. Give your *employees the space and room to act* in the way they think they should and is best for the company. Give them a sense of ownership and a sense of opportunity.

Some hurdles, barriers or dilemmas we have encountered along the way:

1. *Finance.* To grow as fast as we want to and immediately deliver through the whole of the Netherlands and even in the UK, Belgium, Germany and Denmark, finance is an important, but also difficult to organize. Via venture capital and companies where you pitch your idea, we first got 6.5 ton euro and last summer 3.5 million euros. Those companies or private investors all have a share in the company, they are co-owners.
2. Find *the right people for the right task.* Find talented and motivated people was difficult and it still is. But now that we are growing fast and become renown, lots of people want to work here and also more talented people are applying.
3. Find *the right and balanced management style* - not with power, but by coaching, individual and group evaluation, review, good communication and giving the right example.
4. It took quite a long time to find *the right producers of the flowers*, because we want to have many different flowers in our bouquets and thus we need many different producers, since

each producer produces maximum three different species. This was a challenge and it took quite some time and effort to arrange this.

5. *The logistical model* we didn't really experience as a hurdle, because we use a classic and proven model, hub and spoke.

*Henri Potze* is co-founder of *Benefits of Nature*, which is a foundation that explores the possibilities and applications of a quantification of sustainability. They cooperate with the TU Delft, Wageningen University and TNO. Almost all processes in an organization cost money or produce CO2. Benefits of Nature can quantify this amount of Euro's and/or CO2 and can advise an organization where they can and should optimize certain processes. Their working method, their social background and obtaining practical advice were the main goals of the visit at the Royal Flora Holland in Naaldwijk.

- Using money for the right things is no sin, money is not a curse.
- Work together with universities for scientific expertise.
- Quantify your processes in the form of a sustainability score to provide you with useful insights to identify room for optimization in the various steps. You will find out that there is really ample space here for quick and easy wins, for cost reduction and business performance, as well as for better green imago, reputation. Consumers increasingly appreciate these assets and data.
- Involve your stakeholders in the design of improvement policies and plans; co-creation! New insights and new engagements and new partners in society. Take them seriously. Do things together, invest in relationships, info sharing, transparency, trust; all of these are assets that improve profitability particularly in the medium and longer term.
- The concept of storytelling is about making relationships personal and humane.
- Make your plan clearer, give it more focus and make it more bankable.
- Describe the old and the new logistics model, point to the advantages of your model. Quantify benefits, in terms of business proposition and social (future generations) and environmental criteria.
- Focus on what really matters, stick to what is really distinctive and different. That is the only sustainable competitive edge.
- Then: just start doing, acting; it is along the way that your most important insights will be generated and your most promising relationships will be established. Life and success is really about trial, error and go on.

*Sander Vissers* is district manager at the social enterprise *The Colourkitchen*, which offers to people with a disadvantage on the labor market a new job opportunity and training in their own catering company and restaurants in four different cities in the Netherlands. How did they conceive their business model? How did they collect their startup money? What are their core values? What role can municipalities and other (social) institutions play, offering for instance subsidies and other advantages? Those were some of the questions that were addressed.

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- What is your aim? Stick to your aim and be creative in reaching your goals.
- Social enterprising is not yet accepted, you will encounter resistance and rejection, from other businesses but also and especially from local government, the municipality. There are no set policies yet, so you have to generate a network of your own, formulate proposals yourself and show that it works.
- There are however many different policies and arrangements for helping or pushing young people to get a job, and that is where major opportunities appear. We are now entering these new fields. The trick is to be on top of all those new developments, be alert, enter the game and take risks.
- A well-known tricky problem with a social enterprise is the trade-off between quality of your product or service and the desired social impact. Take for example situations in which one or more trainees have an off day and are not motivated - but the customers of course are expecting the same quality of service. How to deal with this? And it is not just about an off day. Trainees need to have certain basic attitudes, a willingness to advance and a positive mind set. Besides of course they need to have a certain basic knowledge such as arithmetic's and speech – write and basic skills, such as time keeping or say hello sir - madam and look the other person in the face. In part, this should be secured by the ROC vocational school, but a lot still remains to be done. Trainees need a lot of intensive attention, almost personalized coaching.
- Don't try to do everything at once, keep it manageable at the start, create a clear and recognizable image so that people know who you are and what you stand for, so that they can connect and engage.
- A social enterprise in logistics and distribution, quite innovative and interesting. Please keep us posted! See the people of Transport en Logistiek Nederland, they will be interested and may provide support and assistance. Please have a look at [Socialenterprise.nl](http://Socialenterprise.nl) and become a member.

*Steven Pauwels* is co-founder and member of the management team of the social cooperative *Choco*. This cooperative is specialized in corporate communication, both within the organization and with the outside world. It is a renowned company with a number of important corporations amongst their clients. This visit to their office in Antwerp was mainly to find out how they connect the two sides: getting your company DNA or philosophy into the brains and veins of the people inside, and then again in their communication with society.

- We are a communication business and we say we are relation designers. For us, communication is about healthy relationships between persons, and between persons and a brand, a company. We believe that people want to be meaningful, strive for meaning, want to have added value for other people, want to grow together with other people. Healthy relationships are based on integrity, honesty, transparency.
- We start from the person's self and try to connect persons with brands, in a relationship that indeed adds value. This can only be real, authentic, humane; it is about emotion.

- Top down routines do not work anymore, they are experienced as oppressive bullshit.
- Who can I trust? Simple - I trust my gut feeling. I feel – and then I check my feelings with my peers, family, friends, Facebook etc. to verify or falsify. This becomes MY truth. This entails a revolution, the truth-and-consciousness revolution. Emotion occupies central stage and becomes the anchor point for my decisions and acts. This also embodies itself in civil society initiatives, bottom up; this is ours, not from those above. 78% of the people believes and trusts the experience and judgments of their peers, both offline and online.
- Now, which brands will function in such a network society? Self-conscious brands that communicate from their own strength, express integrity and truthfulness, authenticity, the ones that are able to really connect at the gut feeling or emotional level. Thus the brand is invited or obliged to rethink itself and its real essence: why do I do what I do, what is my real purpose, what is the value that I add?
- People experience and feel authenticity. Then they want to feel the brand's DNA, its passion, emotion, purpose, power. We call these relation values. This DNA thing cannot be faked. You can polish the leaves but when the tree is sick, it will show anyhow. Then you have to go back to the roots, for new energy, new life, only then the leaves may become healthy and green for real, giving plenty of sweet fruits.
- This is the real challenge – the struggle for what we call 360 degrees of profit. i.e. profit for everybody (360 degrees of profit maximizing). Take Choco itself as an example:
  - Profit for each person, for all persons working in Choco, growing in their work and flourishing as a person.
  - Profit for us as a team, the bonds and synergy, the quality of our relations.
  - Profit for our neighbors, for the local community, the football club, the park, the school, the environment.
  - Profit for the city and the wider society.
  - Financial profit for the company itself and its employees.
  - All this is profit and all this is about relationships, the way we relate.
- All this stuff about DNA and roots and values is not real on paper or on your website; it becomes real when it is lived. Here our tools for communication come in; at three levels: relations between employees, within the management team and the relations between MT and employees. At all levels this DNA should be inhaled and transpired, from within the system. And of course the team should be self-steering and self-responsible - read Frederic Laloux' book on this.
- One can only communicate one's DNA to the outside world when it is lived internally. That is why people distrust banks, they feel their communication is not real and lived, the external communication does not correspond with the internal organization and what you experience when you are inside.
- Then, it is not easy to keep and maintain ones DNA fresh and alive. Especially in bigger entities. Human scale is important. DNA coaching, reconnecting with the roots, with the experience, the feeling, the purpose; in different teams and settings; all teams. The DNA, the



shared purpose should be refreshed and maintained; while of course everybody has the freedom to live and express and implement it according to character and own will.

- We developed tools for emotional and purposeful assessment, based on notions derived from systems thinking. Relation building is about emotions but it is also quite practical. They appear to be soft issues but they have hard consequences. It involves your personality and it requires the courage to show fragility searching for the real unique power of yourself. Truthful, transparent, generous. It is all about communication and personal relationships.
- Of course you start with a small core group, people sharing the same DNA, and then enlarge the circle, partners, the customers, stakeholders, community and the broader society. Communicate your DNA and receive and process the feedback back inside. The core remains servant to the whole, its beating heart. Commination, inside, outside, horizontal and vertical. When something goes wrong in the core, its effects are immediately felt, as if we have lost the pedals of our bike. Then, do not point to somebody, but get back together in the core and reflect, talk, reconstruct. It is like magic: while doing this, the system starts working again, as if by itself.

*Ryan Spencer* is a born entrepreneur and director of several companies. He likes to work on new projects and then transform them into viable businesses, like *2inspire!* and *2Connect-us*. His life story, his entrepreneurial skills and attitudes as well as his critical comments on the Flower E-Power project were the main focus points in this pleasant conversation.

- The two keywords in my work are cooperation and inspiration. See the names of my companies. All this is very much in line with your project Flower E-Power. I indeed think that is the future. Not keep your ideas for yourself but co-create and co-operate with others. The whole is greater than the sum of its parts.
- If you want to be successful, you have to find something that drives you and brings you energy and pleasure in life. Only then you can feel that you are happy and successful. To have some money is nice as well, but that is a result and not something you should strive for in the first place. You have to believe in something that is good, something that is greater than just making money. Dream Big!
- Entrepreneurship is good for you! Being an entrepreneur means that you have to be responsible for your actions and that you don't give up when things don't go the way you wanted them to go. It's a form of personal growth, of maturity. These entrepreneurial skills you have to learn along the way and they can't be learned in the classroom, but only by learning-by-doing. You may fail sometimes, but you have to stand up again and believe in yourself.
- It is important to formulate your key performance indicators. Set yourself some goals and analyze your progress and try to reach those goals within time. Work out your business model and make clear for yourself what customers really need and why you are different and therefore better than your competitors. Calculate and make prognoses and show your potential investors what the return on investment is.

*Chris Houbolt* is organization advisor and strategy developer/consultant, interim manager and former flower exporter. He is also owner of a bed and breakfast at his beautiful house located at the main canal in Leiden. Here, two very interesting and helpful meetings were held. To specify and clearly formulate Flower E-Power's vision and mission Mr. Houbolt can be of great support and help. Being a former flower exporter he also knows this specific market quite well and can play an advisory role in this aspect as well.

- Your strength: full of fresh ideas and able to articulate and combine them. That is your main asset.
- Two keywords: VISION and COMMUNICATION; get your vision crystal clear: what do you really want to achieve?
- Consumers loyalty is not anymore a given. Changes are so fast, and consumers receive so much information, he has so many options, societal changes go along with the erosion of all traditional institutions e.g. church, banks, politics etc. from trust to distrust. The new retailing has to process all those changes. Do not focus on one goal. Change is a constant, as it has always been, but surely the pace is quicker. The new retailing is, as I said before, omni-channel. Selling is one thing, but decisive is the step before: influencing the information and selection process that takes place before the purchase. So combine online with offline. 80% of the purchases is influenced online, just 6% is actually purchased online, the vast majority thus offline.
- The retail sector is very dynamic. Of the top 100 formulas, 70 are younger than 30 years. Just a few dinos survive. The trick is to be flexible and brave and be in tune with the dynamics; be prepared for permanent change. And permanently check what is going on with the consumer, what is happening, what is new.
- Just have a good product x 100.000 will not work anymore. Much more is needed in order to be able to follow and attract the customers nowadays and for the time to come So look around. What is happening, why new kids such as Ikea, Samsung, Apple, H&M succeed? Try to find the emotions deep down, driving these success stories. Isn't it all about inspiration, passion, emotion, impulse, nature, experiencing beauty?
- Consumers obtain and receive a lot of information. Enter into this process, orient and influence it. Can you provide answers, convincing stories, reliable new insights? This is the real challenge. And here are the opportunities for the new retailing.

*Sander van Egmond* is one of the owners of the flower export company *Paauw en Van Egmond* located at the flower auction Flora Holland in Rijnsburg. Paauw en Van Egmond is one of the world's largest flower export companies and is still growing every year. This is a very successful and experienced businessman who knows the flower sector better than anyone and is aware of current way of doing business in this sector. Very helpful for now, and for the future of Flower E-Power.

- Logistics is your main problem, to create a fully efficient chain. Gain a competitive edge, like the application indeed for instance on logistics efficiency. The rest is relatively easy.

- Start with just one delivery day, e.g. Thursday or Friday and then expand to Monday or Tuesday.
- Volumes are small in the beginning, but flowers come in fixed quantities (tulips and freesias by 50, e.g.); take this into account.
- Guarantee one day freshness only when you are really able to comply.
- Securing season flowers that are preferably produced by local growers is definitely not an easy business. But it surely gives you a marketing advantage. Good challenge.
- Stylish bouquets, that is crucial. Engage professional designers such as 2Dezign.
- Offer variety, give customers a choice! E.g. low-, middle- and high priced.
- Make clear agreements with your business companion and put them on paper. That gives peace of mind and it will save you from a lot of trouble later on.
- Please keep me informed, I am ready to cooperate.

*Evert Moolhuijsen* is owner of *de-innovator* and is a professional in the field of business model canvas developing and everything that is related to it. The main purpose for this visit to Drenthe was to have a thorough conversation on the whole Flower E-Power project, the core ideas as well as the steps to be taken.

- What is your product / service and for whom? Who are you addressing / targeting, how you are you going to connect with them? Learn about these people, watch them closely and try to understand them and read their behavior.
- Look closely at each box in the canvas and reflect: in what I am really excelling, and in which aspects other people or organizations are really excelling? Only in this way, you will succeed in creating a really excellent system.
- One way to enter into analysis is focus on the switching costs. How can you bring people to switch - by lowering the costs and raising the attractiveness of your proposal. How do you get the client sufficiently enthusiastic for your offer? E.g. app for home delivery at moments that I am at home, connected to my personal agenda or to the HUI-leds of my Philips. Watch the geometric frontier / limits of the app, the boarder is able to signal the app and verify that I am at home. At present, I have to procure to be at home waiting for service delivery to knock at my door; now, that is quite annoying. Here is where you can make a big difference.
- Do not organize everything yourself but design a good business model and you start constructing, engaging and involving partners along the way. Your start up should be lean and clean. Then your first question is: what is your minimum set up, what is your 'minimum viable product' with which you can enter the market without too high costs and risks?
- About this idea of market. Is the market there? Or can you generate, can you create a market? Can you influence people, their preferences, their choices and attitudes, their emotions? Make a try, giving flowers or samples for free, who reacts, if people do not react you may be offering the wrong product, switch the offer in one or several aspects. Go on experimenting until you know more and feel confident that you have hit the spot. This will provide you with solid info and a basis to start constructing. Step by step, each one based on the previous one.

*Yubin Wang* is a graduated PhD student at the Technical University of Delft and is supporting the FEP-project by designing the concept of the application. We discussed the concept of design of the front end applications: flower ranger application and client application.

- Two front end applications are connected with a super intelligent server whose itself is connected to a database.
- Client application's features: order products, cancel order, pay (iDeal, Mastercard, PayPal), communicate with flower ranger, GPS map-tracking of flower ranger, quiz question, education.
- Flower Ranger application's features: Route planning on device, order list, address lists, communication with client, sending message to client 5 min before arrival. Include cameras in every part of the chain (product route).

*Arjan Bosman* is working at *Dillewijn en Zwapak*, a company specialized in packaging solutions for professional players in Horticulture. Mr. Bosman showed his products and explained their pros and cons and offered me help whenever we needed. He has a working experience in the flower sector for over 30 years.

*Rudi Tuinman & Pascal Koeleman* run a by now famous company in the flower design business called *2Dezign*. For fresh, new and perfectly styled bouquets the Flower E-Power project needs the expertise and creativity of these two gentlemen.

- Innovation is needed in the flower industry. We like the way you guys are thinking and love to cooperate.
- No delivery of products, but delivering a whole new experience for the clients.
- We want that 'Wow-effect!'
- Let's meet up another time when you are graduated and let's take over the flowering world.

*Cees Driebergen* is a business advisor and company strategist. Before, he was managing director of ADO Den Haag and Rijnsburgse Boys and founder-director of Driebergen Accountants company. The purpose of this meeting was to receive sharp and relentless feedback on the project as well as tap into his extensive networks.

- The importance of your legal status as a company or a foundation.
- Lots of network connections with whole flower sector and investors.
- We keep in touch!

*Ruben van der Does* is working at *ACE* marketing company and is assisting the Flower E-Power project by setting up an online marketing plan. Mr. Van der Does explained me everything about online marketing and he is ready to assist the FEP-project when setting up a marketing plan.

**Public administration - Institutions – Education**

*Pierre van Hedel* is CEO of the Rabobank Foundation Utrecht and is head of lecturers at the HAS agricultural HBO in Den Bosch. Mr. Van Hedel is also co-author of the book 'ASK 4 Co-creatie' which he wrote together with Mr. Roger Engelberts. This visit at the HAS in Den Bosch had several reasons. The first reason is that the Flower E-Power project is looking for ambitious HBO students who are willing to join the entrepreneurship-program of Flower E-Power. The second reason is that the project needs money and the Rabobank Foundation is supporting social enterprise initiatives like the Flower E-Power project.

- Functional differentiation: MBO students are to be the frontliners (contact with the customer, delivery and selling) and HBO students as coordinators per hub/city.
- You are invited to present your plan, once it is ready and complete, for a pitch at the HAS Board and lecturers. About a possible loan: make it more concrete and elaborated in technical, organizational and financial terms and then we will make another appointment.
- Engage and employ persons with a distance to the labour market.
- Training of HBO students in entrepreneurial and managerial skills in practice. Involve also the horticultural sector of the school. Training of MBO students in practical and attitudinal skills.
- The franchise concept is quite interesting and to the point.
- Start with one or two cities / HBO -MBO schools, try out the concept then scale up to ten.
- Helpful, pleasant and interesting, Mr. Van Hedel brought me in further contact with many people from his personal network.

*Roger Engelberts* is director of *Imagro*, co-author 'ASK 4 Co-creatie' and lecturer at the HAS in Den Bosch. Imagro is a strategic and creative agency for agro, food and rural areas. They use their drive to build up relationships with people, organizations and companies in order to create renewal, change and progress. Storytelling and co-creation&co-operation are concepts that are highly important in Mr. Engelberts' approach and that of the Flower E-Power project as well.

- Co-creation is about new alliances, generating new visions on enterprise and entrepreneurship, with a broader view on the societal context. It is about breaking away from established structures, systems and procedures. It crosses boundaries between sectors. Entrepreneurship is a multidisciplinary business by definition. Co-creation is about relationships, personal encounter, engagement and passion. Participants all have a say, contribute, cooperate, establish goals in dialogue and create common ground, a shared purpose. Co-creation is a 'way of life': feel and experience synergy, share and create together. The importance of co-creation is increasing because of the changing features of the customer: more independent, self-conscious and critical. The new customer wants to be informed and consulted, he demands a personal approach; again, personal relationships are essential.
- ASK 4 Co-creation is a method to bring about the needed shift of mind set. The A stands for skills to enter into Alliances, the S for the courage to break away from established Structures and Systems, and the K for the new Culture and Climate for innovative entrepreneurship.
- Talent is not a scarce good; everybody has some unique talents and the trick is that you believe in it, believe in yourself. We rely too much on knowledge and underestimate the

importance of attitude. The exclusive focus on IQ has produced unintelligible systems and destroyed community-ship. For success, EQ i.e. emotional intelligence; SQ i.e. soul and gut feeling; and PQ i.e. parental intelligence that comes with the environment in which you grow up are at least equally decisive.

*Ellen Sjoer* is lecturer at the *Haagse Hogeschool* in The Hague. A first meeting with the school and introduction of the Flower E-Power project was the main purpose of this first visit.

*Johan Star* is part-time teacher at the *Haagse Hogeschool* and also specialist in the field of business model canvas developer and a business strategy consultant.

- We are interested in your plan, and to work together, as it very much coincides with our programs and intentions at our school. Please contact us again when you feel ready for it and we will mobilize and involve the right persons in the school. We will organize a meeting with the board where you can present your proposal.
- The connection with education, entrepreneurship and exclusivity for selected schools is an excellent idea. Local government will join easily because it is this kind of initiatives that they are looking for.
- Advice 1: experience yourself how it is, selling flowers at the doorstep. Talk with customers at their doorstep. What do they want, what works, how does it feel?
- Advice 2: start lean, do not rely on heavy investments but connect to ongoing initiatives, then scale up.

*Guus Klapper* is head of the department 'trade' of the MBO school *ROC Mondriaan* in The Hague. For our frontliners, the Flower E-Power project needs students who are delivering the flowers with the E-bikes and who are selling the flowers door to door. They are connecting us with society.

- Important to connect the business life with educational institutions.
- Sign up as training company (leerbedrijf) at SBB (stichting Beroepsonderwijs Bedrijfsleven)
- Check accreditation criteria for the design of your workshops.

*Bart Hermesen* is working at the *MBO school Koning Willem 1 College* in Den Bosch at the department 'trade and commerce'. He is also working in *Ondernemerslift+*, a foundation in which several HBO and MBO schools cooperate to train students in entrepreneurship. He is developing excellence programs for students who on top of the regular curriculum want to develop entrepreneurial skills. For our frontliners, the Flower E-Power project needs students who are delivering the flowers with the E-bikes and who are selling the flowers door to door.

- Helicon can be a good cooperation partner.
- Check accreditation criteria for the design of your workshops.
- I will help you with the design of these workshops.
- I am organizing a HAS Expert week and we would be happy to use the Flower E-Power project plan as the business case during that week – super cool!

*Robert Motshagen* is working part-time at the Municipality of The Hague and entrepreneur as well. He is project leader 'sustainability and environment' for the Municipality of The Hague and has several other projects related to the same subject – greening the city. He is currently engaged in the project 'Actieplan Luchtkwaliteit' (on urban air quality), where he is responsible for the 'Electric Vehicles' in the city and 'Urban Distribution'. Mr. Motshagen knows lots of people in and around the city of The Hague and has accepted an advisory role in the Flower E-Power project.

- The transition to new environmentally friendly vehicles is a tough and costly process and most of SME enterprises are difficult to be moved in the right direction. Often they are very conservative, because the current processes are profitable and they still not feel the need to care for the environment. So they don't really see a reason to change and to engage into new and environmentally friendly vehicles.
- Of course, there are problems, objectively speaking, that hinder this transition. In general, the radius of an electric vehicle is less than the producer claims and it only gets worse when the vehicles get older. Thereby, electric vehicles are expensive and these high investments can only be repaid with lots of kilometers driven. Furthermore the production of the vehicles is not eco-friendly neither. You can understand that E-transport is the future but we are not there yet, not even close.
- Nevertheless we want to promote and stimulate the use of electric vehicles in the city center and therefore we have to make deals with the delivery companies. Currently, we have 500 electric load stations and in two years this amount will be doubled.
- I would focus on your core competences and not make it too broad. Although, you have to be ambitious and dream big. Let us keep in touch!
- Mr. Motshagen also brought me in contact with other people from the municipality of The Hague.

*Martin de Bruijn* is sector manager at Haeghe Services at the Haeghe Groep in the city of The Hague. To optimize the societal value of the Flower E-Power project, it is our aim to involve also people who have a distance to the labour market. For the production of the bouquets and other processes and jobs in the FEP organization, the aim is to engage and train them. Our first meeting was mainly to present the idea and to get to know each other.

- Addressing youth unemployment especially for difficult groups is a very relevant theme. There are already a lot of initiatives, not all of them successful or promising. So there is room for a good idea.
- Please contact my former colleague Lesley Green , who is in charge of the program with the Municipality of The Hague.
- And if you really think about starting in The Hague, I have a huge network that I will put at your disposal.
- Then we will also find out how we can best match the various specialists form The Haeghe Group with the components of the project.



- One remark on content. Maximize the engagement of persons with greater distance to the labour market. E.g. involve them in the distribution of flowers and other products, eventually.

*Akos Wetters* is not only the second supervisor in the FEP-project thesis; he is also an entrepreneur and founder of *Steeep*, which has the aim to empower entrepreneurial potential. He is also coach and lecturer at the Technical University in Delft and lecturer at the European Institute of Innovation and Technology. The meetings with Mr. Wetters were mainly focused on the set up of the thesis and for specialist's advice on how to start up a business.

- Bring more structure into the set up. Prioritize the 4E's. Design the work process.
- What does the customer want? Distinguish between expressed and latent needs; and between needs, wants and desires. A solid market analysis is key. Lacunae, niches? Follow the money, to start with.
- Experimenting, what works and what doesn't work?, tests, pilots.
- Do not think in terms of problems and solutions but serve the customer. The only relevant dialogue is with the market.
- Make clear and simple graphs of the processes involving all steps, stakeholders and actions.
- Make the ideas and plans concrete; convert them into money and make the relevant calculations using the Osterwalder business canvas.
- Keep open the possibilities to use the logistical system for distributing other commodities but start with flowers.

*Jos Vrancken* has been a lecturer at the Technical University in Delft for 13 years and is currently supporting the FEP-project as an external advisor. He is the main advisor on how to structure work for the thesis in a correct and effective manner.

*Gabriel van den Brink* is professor at Tilburg University and director of the Ethos think tank at the Vrije Universiteit van Amsterdam. He is one of the leading thinkers on social and cultural change in The Netherlands. His recent focus is on entrepreneurship and the role this attitude is to play in the ongoing process towards a do-democracy.

- Citizens are emancipated, self-conscious and able to take initiatives. They do not expect any more that politics will decide for them and solve their problems. The welfare society is drawing to an end, already since the eighties of last century. It is increasingly becoming difficult to connect the world of systems and politics, with the world of these citizens and with the participative or do-democracy that comes bottom up through myriads of initiatives and proposals. This disconnection between State and society is becoming more and more grotesque every day.
- Let us focus on these citizens initiatives. Looking more closely, we see that social pioneers or best persons play an important role in these initiatives, when it comes to address concrete problems in a concrete context. Those pioneers are not primarily driven by narrow self-



interest but they strive to improve the situation for other people as well, working for the common good. They are morally driven they constitute morality in action.

- Morality in action is about:
  1. personal / human relationship; it is the lifeworld – against the system world
  2. start with trust, giving trust
  3. embrace the good and the creative, involve people for defining problem and solution
  4. treat all people, especially the less educated, in a fair way.
  
- Compared with regular professionals, social pioneers are characterized by the following features:
  1. local embeddedness, addressing issues from below
  2. show empathy, emotion, the personal self, relate
  3. give shape to moral content, compassion etc. next to rules and forms
  4. not power but authority, personal wisdom and leadership
  5. human scale, local
  6. investing in relationships, results on both short and long term.
  
- Their message to the government, the system, the local government:
  1. work with us – and not against us.
  2. persons and people matter!
  3. be realistic (lessons in social realism), dialogue and take responsibility.

*Martin Kool* is working at the Rabobank in The Hague as a Senior Account manager. He supports Public institutions, Non-Profit organizations and family companies in all their finance, insurance and other banking activities, so that they can focus on their main tasks. The main purpose of this meeting was to learn about the financial aspects of a startup, in the very first beginning and further on.

- Main advice: in order to get your startup financed, approach and engage various sources: pizza- or basket financing. E.g. funds like Fonds 1818: Money meets ideas.
- The business plan should be clear and convincing, with ample empirical evidence. Funding agencies want to see the numbers.
- Contact our Startesdesk for help with the further elaboration of the plan. As soon as the plan is finished please contact me again. I am ready to serve as your contact person in Rabobank and also willing to use my network in The Hague Polytechnics.

## City Logistics

*Walther Ploos van Amstel* is lecturer City Logistics at the Hogeschool van Amsterdam. Furthermore, Mr. Ploos van Amstel has an advisory role on many logistical process innovations. He is also lecturer on many other universities in the Netherlands but also in Belgium. He is an expert in the field of City

Logistics and that's why a meeting was arranged in his beautiful house in the center of Amsterdam to present the project and to listen to his expert's opinion and advise.

- Current research on urban logistics combines liveability and attractiveness of cities with their economic efficiency. Research and reflect on more efficient and faster traffic flows in the urban center. Connect to spatial urban planning. Urban mobility is about sharing space and make the optimal use of a scarce public resource taking into account air quality.
- There is an explosive increase of freight traffic. Freight mobility is 15% of traffic but accounts for 60% of air pollution. Lung diseases constitute a serious wake up call. E-commerce generates 12-15% of traffic but accounts for 50-60 % of traffic in urban residential areas. Failed deliveries are about 25-30%. This can and should be improved. Precision logistics is the order of the day.
- Make a business proposition of intelligent IT transport systems. Connecting planning and steering with ICT can be very profitable. There is ample room for smart apps.
- The logistics chain; in the end, it is the customer who decides, so start thinking from there.
- Urban space is contested. Who makes the profits. Government is required for policies and planning, laws and regulations, subsidies and sanctions.
- From (central) government to (local) governance.
- Five minutes' notice: "Your delivery guy is almost (5 minutes) at his destination..."
- Never fail on a promise to a customer.
- Logistics is crawling back into the cities. This should be facilitated. Ample opportunities for new and innovative business propositions. Welfare and social employment is less productive and requires constant in service training, and continuity is problematic. In the end, it might not be cheaper.
- Educate, inform and increase knowledge and consciousness of the customers in a amenable fashion. Change habits and win their engagement.
- The Dutch are spoilt customers of flowers – may be the opportunities are better in other countries; dare to think big.

*Birgit Hendriks* is project manager at *Eco2City* and former project manager at *Binnenstadservice Nederland*. Eco2city was established in June 2008 with the aim of improving the environment by reducing vehicle movements in urban areas. Eco2city has developed the concept (BS) in the Netherlands. BS organizes collective warehouses at the edge of inner cities. Retailers in the inner city use these warehouses as their delivery address. Mrs. Hendriks is an expert in this field and after the presentation of the FEP-project, she surely could give me advise and provide me with tips and tricks.

- Flowers are a luxury item so you address higher level target groups. What do these customer really want? Market analysis is key.
- Do not invest in hardware, do not buy vehicles. The trick now is shared economy, shared facilities, shared services. E.g. Fietsexpress in The Hague.
- E-vehicles perform poorly on energy. Direct emissions in the city may be low but then these emissions occur elsewhere in the production and maintenance. Besides they are expensive.

Both from an economic and ecologic point of view, green gas is preferable. Of course, biking is the best of all. Young, innovative, good for your health and for the city. And always: share, use existing systems and infrastructure.

- For the chain: compose the bouquets as late as possible, reduce transport costs, decouple and recompose. Decoupling points at the city margin.
- Modern entrepreneurship implies modern communication. Social media, permanent contact, open all lines, involve and engage, maintain networks, benefits.
- Please keep me informed about the progress you make with the FEP-project.

*Marco Scholten* is director of the logistics company *Bode Scholten* which is a partner in *TransMission*. TransMission is the largest cooperation of independent transport and distribution companies in the Netherlands and Belgium. Seventeen partners collectively handle a total of 14,000 shipments every day with 1200 employees and 500 lorries. TransMission specializes in high density network distribution. Advice and knowledge of Mr. Scholten on how to deal with the Last Mile problem is of great importance for the FEP-project.

- E-commerce brings many changes in logistics . Be on top and ahead of those developments.
- Forerunners such as HelloFresh drive through your street five times a day. This is becoming insane, we need to coordinate and then to cooperate. Combine this with the last mile discussion and hubs on the city margins.
- But electric vehicles are too expensive, even when subsidized. Only companies with lots of capital and high margins can afford them.
- Window times must be increased. What counts to local government is the number of vehicles, much less so the kind of vehicle. Leave the city before 12. Local government should consult and cooperate with the transport business. So your idea is relevant and pertinent. First advice: bundle your freight with e.g. HelloFresh.

*Christiaan Suurmeijer* is industrial designer and entrepreneur. His company *Greenolution* is currently focused on the development of an electric cargo bikes that can carry 500 kilograms and 5 cubic meters of products. This project is called the Cargo Bike XL. At this moment, a student working in Greenolution, Thimo Veldkamp, is developing a smaller electric cargo bike for his final thesis, in cooperation with the Flower E-Power project. Please state clearly what is your Program of Demands and we will design the corresponding solution. We are in for close cooperation with you from the start, in the testing period of pilots, in the expansion of your business. We are ready to co-operate with the FEP initiative.

*Michel Oey* is assistant professor at the Technical University in Delft at the Faculty Technology, Policy and Management. In our conversation, he raised the following issues:

- What is your story and where to find? How to transfer the message to your potential clients?
- Have a professional short movie made (infographic)
- What are your products? (flowers + other articles)

- Make different use-cases and draw these out
- Prioritize all different features with timeline
- Make front end as stupid as possible and the super intelligent server receiving orders from the clients and sending orders to the flower ranger application
- Flower calendar (what, frequency and when?)

*Coen de Lange* is the national coordinator SME Topsector Logistics and program manager TKI DIALOG, Dutch Institute for Advanced Logistics . Dinalog supports innovative business ideas in the industry logistics and supply chain management, but also concrete operations.

- Is your plan viable? Scenarios. Start small and lean!
- Diversification of your products (vegetables, fruits, meals etc.).

Subsidies are available for new logistics models (e.g. an E-bike with apps), do not hesitate to apply!

## Appendix 3.1: Conferences attended

### 1. Amsterdam Economic Board – Catch Up- Urban Mobility 10-december-2015

De meerderheid van de wereldbevolking leeft tegenwoordig in de stad. Deze verstedelijking brengt op het gebied van mobiliteit grote uitdagingen voor de Metropoolregio Amsterdam met zich mee. Dagelijks rijden er zo'n 3.000 vrachtwagens en 25.000 bestelbusjes Amsterdam in en uit, en dat aantal blijft groeien. Met alle drukte en vervuiling tot gevolg. Daarom wil de Board samen met jou inzetten op slimme logistieke hubs buiten de stad, slimmere verkeersstromen en schoner verkeer in de hele regio.

#### Programma

- Inloop 16.00 uur, 16.30 uur start programma
- Wethouder Economie gemeente Amsterdam en Boardlid Kajsa Ollongren, over de laatste (Board)ontwikkelingen, waaronder de focus op 5 maatschappelijke uitdagingen.
- Welkom namens de RAI door Marlies Steinebach, commercieel manager RAI Amsterdam
- Paneldiscussie 'Maatschappelijke uitdagingen in de praktijk' met:  
Henk Markerink, algemeen directeur Amsterdam ArenA, Marlies Steinebach, commercieel manager RAI Amsterdam en Lucas Vos, algemeen directeur FloraHolland.
- Pieter Litjens, wethouder Verkeer en Vervoer gemeente Amsterdam, over Urban Mobility.
- Innovatieve oplossingen voor stedelijke distributie door Raimond Zegveld, sales development Nederland Bubble Post en Peter Tjalma, managing director TransMission.
- Walther Ploos van Amstel, lector City Logistics Hogeschool van Amsterdam, over de stad van de toekomst.
- 18.00 uur netwerkborrel

### 2. Conference 'Big Data, Small World' 22-april-2016

[..] We hebben dit jaar gekozen voor het thema 'Big Data Small World' omdat het gebruiken en combineren van data steeds belangrijker wordt voor bedrijven. Ook in de logistiek. Het slim koppelen van data maakt de mogelijkheden eindeloos. Denk aan het voorspellen van de vraag naar pakketdiensten, het opsporen van bottlenecks in de logistieke keten, het verbeteren van de 'last mile' en 'crowd based' afhandelen van pakketjes. Crowd based wil zeggen dat forensen, taxi-chauffeurs of studenten tegen betaling pakketten ophalen of afleveren langs de route die ze toch al afleggen. Tijdens het congres komen al deze kansen rondom Big Data aan bod!

We hebben het programma onderverdeeld in vijf tracks ofwel 'routes' waarmee u een keuze kunt maken uit het programma. Een track bestaat uit een aantal sessies in subzalen en innovaties op het Experienceplein. U kunt sessies kiezen uit de volgende tracks:

- Big Data

- Best practice
- Disruptive
- International
- Scientific

Tijdens de eerste en de tweede helft kunt u kiezen voor een sessie of een bezoek aan het Experienceplein. Op het Experienceplein kunt u verschillende innovaties in de logistiek zelf ervaren. In de Disruptive Dome is een doorlopend programma over ideeën en innovaties die de logistiek volledig zullen veranderen.

### **Programma**

09.00 uur Ontvangst  
 09.45 uur De aftrap door Aad Veenman (dagvoorzitter)  
 09.55 uur Mark Frequin  
 10.10 uur Sander Duivestijn, futuroloog  
 10.40 uur Eric van Heck, Erasmus Universiteit  
 11.00 uur Amazon (to be confirmed)  
 11.30 uur De eerste helft: sessies  
 13.00 uur Rust en netwerklunch  
 14.30 uur De tweede helft: sessies  
 16.15 uur De verlenging onder leiding van Aad Veenman  
 16.45 uur De derde helft: borrel

### **3. Conference 'Ethics & Finance' 09-june-2016**

[..] De uitdaging is om manieren van organiseren te bedenken of te signaleren, te ontwikkelen en te oefenen, waarop de activiteiten in het economisch domein - zoals het sturen van een onderneming, het stellen van doelen en het plannen van processen, het organiseren van werkzaamheden in de onderneming; investeren, financieren; en het voortbrengen en leveren van goederen en diensten - zoveel mogelijk ook materie en motieven zijn voor intermenselijke relaties.

Op de drie niveaus:

- In de onderneming: overleg in platte organisaties, common purpose en zelfsturende teams, verantwoordelijkheid laag in de organisatie leggen naar teams van professionals met veel discretionaire ruimte.
- Rond de onderneming: financiering personaliseren, joint venture, crowd funding; social enterprises in de lokale omgeving.
- In de markt: wederkerigheid, coöperatie, duurzame kwaliteit.

### **Programma**

13.30u Ontvangst, koffie en broodjes

14.00u Welkom door dagvoorzitter mr. Jos van Gennip  
14.15u Keynote speech van prof. dr. Johan Graafland  
14.45u Q&A, gesprek met de zaal  
15.05u Drie pitches van elk vijf minuten over Relationeel Organiseren; Risco Balkenende, Albert Weishaupt en Ted van den Bergh  
15.20u *Pauze*  
15.50u Workshops met Risco Balkenende, Albert Weishaupt en Ted van den Bergh  
16.50u Plenair: aanbieding Visiedocument De Kracht van Verbondenheid door mr. Jos van Gennip aan mevrouw Josine Westerbeek-Huitink  
16.55u Afsluiting door mevrouw Josine Westerbeek-Huitink  
17.00u Einde en file-mijdende borrel

#### Sprekers

Prof. dr. Johan Graafland is hoogleraar 'Economie, Onderneming en Ethiek' aan de Universiteit van Tilburg.

<https://www.tilburguniversity.edu/nl/webwijs/show/j.j.graafland.nl.htm>

Dr. Albert Weishaupt is bestuurder van het Roelof van Echtencollege in Hogeveen en lector op de Stenden Hogeschool in Leeuwarden.

<http://www.voion.nl/downloads/fd3e70ec-ceaf-4348-a809-dc0d9aeeb042>

De heer Risco Balkenende is algemeen manager van de Breman Installatiegroep.

<http://www.breman.nl/nieuwsitem.html&nid=128>

Drs. Ted van den Bergh is directeur van Triodos Foundation en sinds 1987 betrokken bij de ontwikkeling van de Triodosbank.

<http://yourlab.nu/longreads/interviews/ted-van-den-bergh/>

Mevrouw Josine Westerbeek-Huitink is voorzitter van de Stichting Christelijk-Sociaal Congres

Mr. Jos van Gennip is voorzitter van de Stichting Socires en voorzitter van de Visiecommissie voor de Jubileumconferentie 125 jaar Christelijk-Sociaal Congres.

#### 4. Conference 'Vital local Societies' 10-june-2016

[...] Aanstaande vrijdag vindt het event *de Lokale Participatiesamenleving: van Kramp naar Kracht* plaats in het Natlab te Eindhoven. Fantastisch dat u erbij bent om samen met ons aan *de Lokale Participatiesamenleving: van Kramp naar Kracht* te werken. Met deze mail willen we het programma en de praktische informatie over deze dag met u delen.

#### Programma

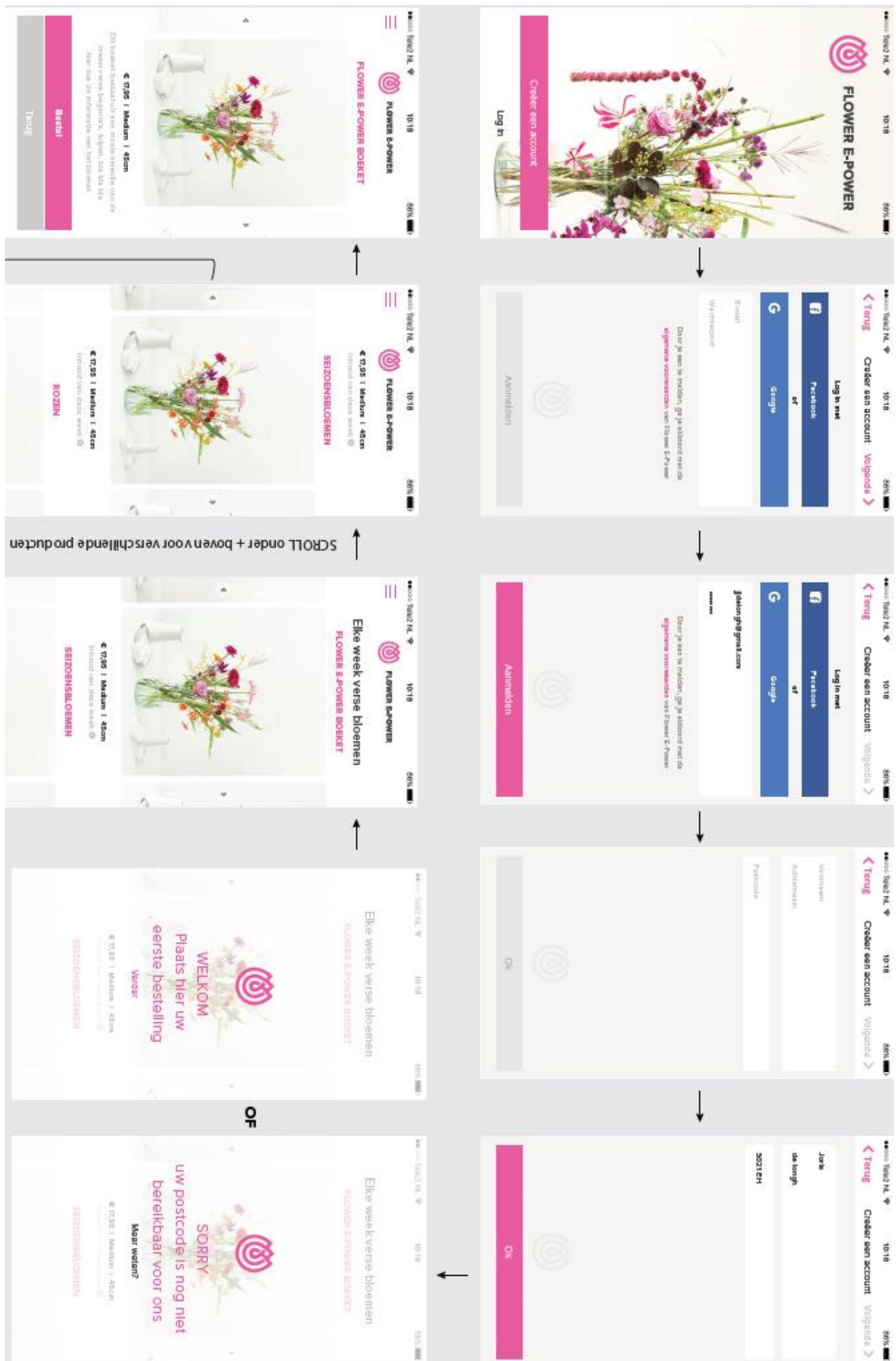
In de bijlage is het programma voor de dag te vinden. Een geprinte versie van het programmaboekje ontvangt u op de dag zelf. De inloop is vanaf 10.00 uur en het programma begint om 10.30 uur met de Inleiding door Rob van Gijzel, Burgemeester van Eindhoven.

In de ochtend wordt onder andere de bundel *Moraliteit in actie* gepresenteerd. Na afloop van deze presentatie ontvangt u een gratis exemplaar van de bundel.

's Middags vinden er masterclasses plaats in twee rondes. Per ronde kunt u deelnemen aan één masterclass. Bij binnenkomst kunt u zich inschrijven voor de masterclasses. Houdt u er rekening mee dat elke masterclass ruimte heeft voor een beperkt aantal deelnemers. In het programmaboekje vindt u een inhoudelijke beschrijving per masterclass. We willen de organisatie van de inschrijvingen van de masterclasses graag zo soepel mogelijk laten verlopen. We vragen u daarom om u op voorhand te oriënteren op welke masterclasses u bij zou willen wonen.



## Appendix 4: Design of the consumer application





10-18  
08-15

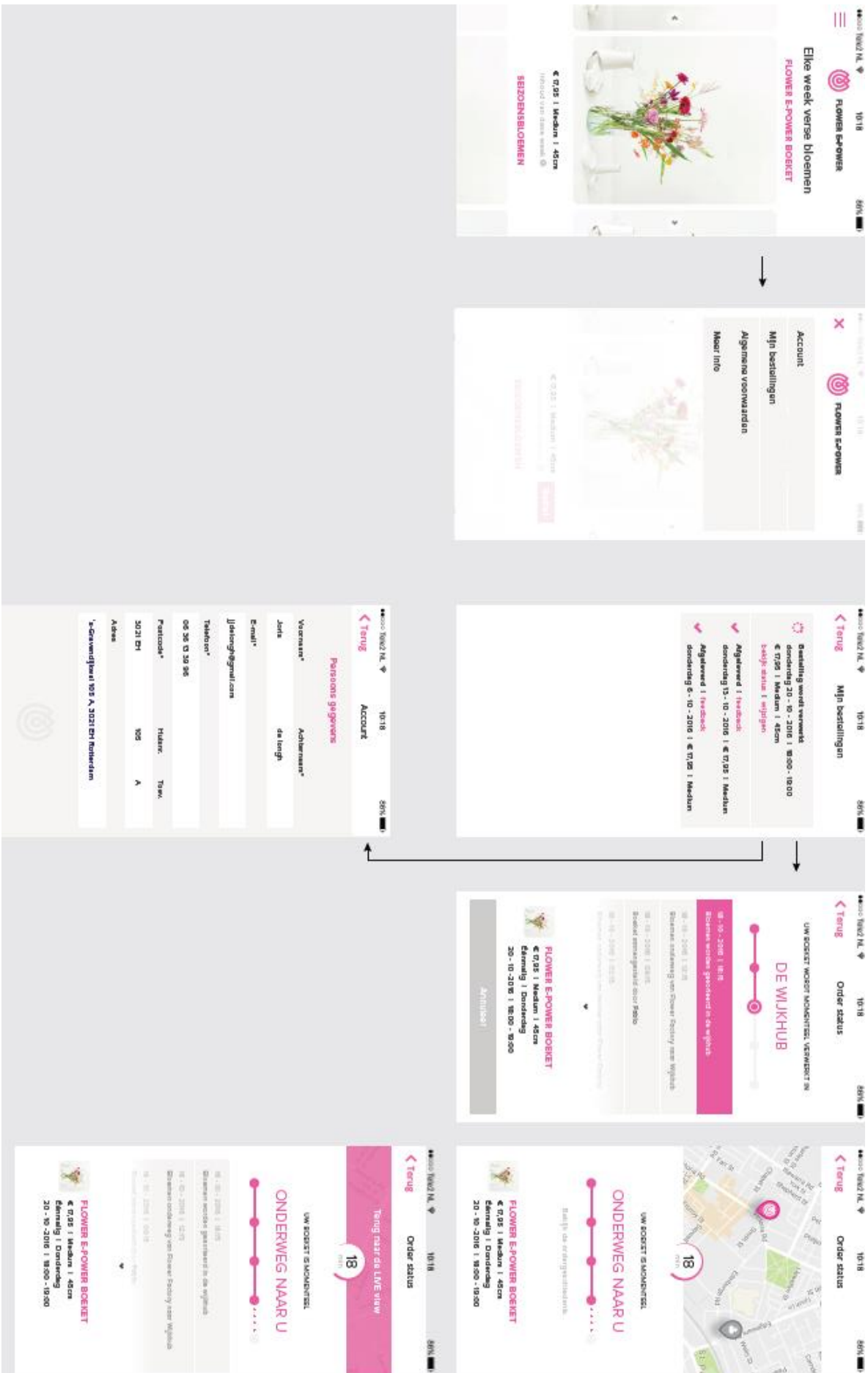
**GEFLEUCHEerd MET UW BESTELLING**

Donderdag 12-10-2016  
Dinsdag 11-10-2016

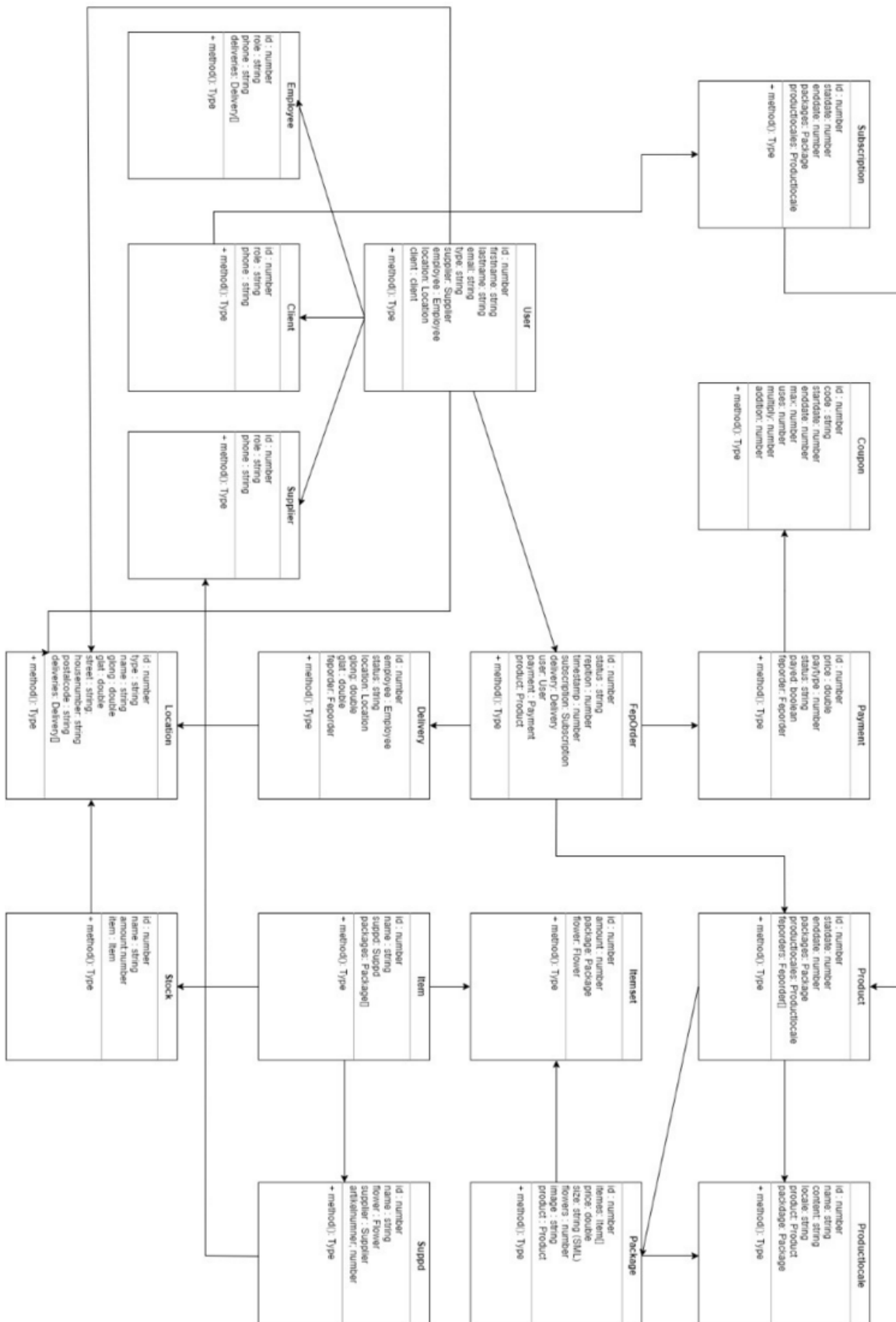
Wat is mijn boekje?

Terug naar hoofdmenu





## Appendix 5: UML – Class diagram



## Appendix 6: Products and Pricing

### Pricing

Product	costprice	Selling price	share %	# EUR Purchase	# EUR selling	Margin
FEP bouquet Large	9,00	25,00	10%	0,90	2,50	36%
FEP bouquet Medium	7,00	20,00	10%	0,70	2,00	35%
FEP bouquet Small	5,00	15,00	10%	0,50	1,50	33%
Seasonal flowers Large	5,00	12,00	10%	0,50	1,20	42%
Seasonal flowers Medium	4,00	10,00	10%	0,40	1,00	40%
Seasonal flowers Small	3,00	8,00	10%	0,30	0,80	38%
Roses Large	3,50	11,00	10%	0,35	1,10	32%
Roses Medium	3,00	9,00	10%	0,30	0,90	33%
Roses Small	2,50	7,00	10%	0,25	0,70	36%
<b>Average weight</b>			<b>90%</b>	<b>4,20</b>	<b>11,70</b>	<b>36%</b>



Flower E-Power bouquet small, medium and large.

## Appendix 7: Customer segment detailed description

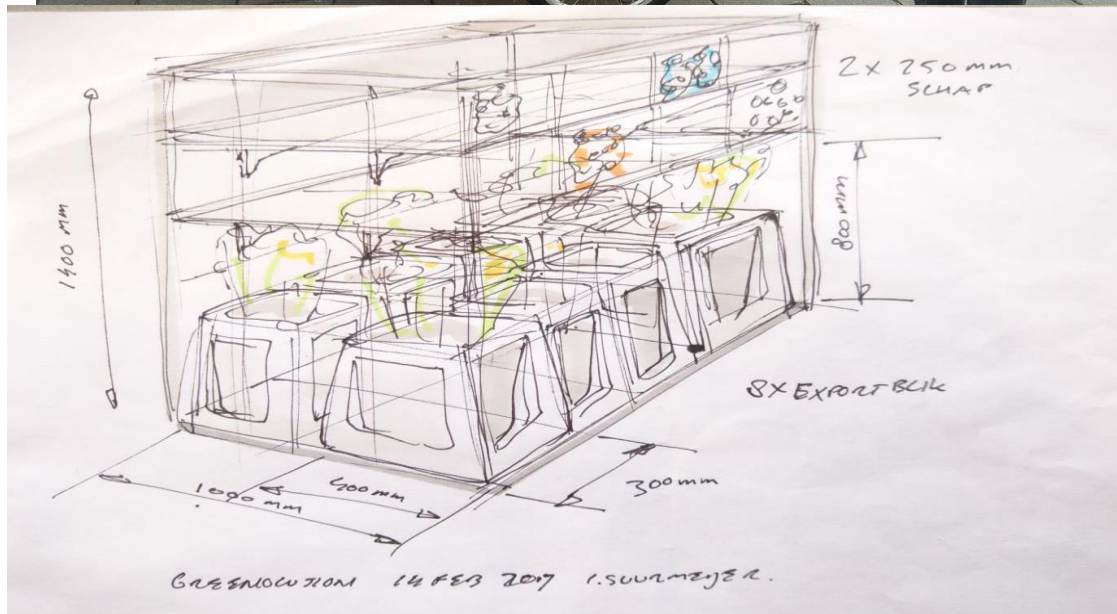
De Flower E-Power doelgroep (25-45) (FEP) is onvermoeibaar positief en ontspannen in de ambitie om het maximale uit het leven te halen. Een succesvolle carrière, goed gestylede huis en leuk gezin worden gecombineerd met goed eten, een sportieve levenshouding en exotische reizen. Dit ogenschijnlijk, volmaakte plaatje is geen perfectie; het is het realistisch hoogst bereikbare. Dat is misschien wel het meest opvallende aan de FEP, de drang om het maximale te doen maar tegelijkertijd de berusting hebben dat maximaal vaak minder is dan een Utopie.

De gecombineerd gedreven en toch relaxte houding van de FEP uit zich ook in het consumeren. Het maken van een exotische reis is een luxe, de keuze voor backpacken maakt het financieel mogelijk. Het gaat wederom om een gevoel van haalbaarheid. Bedrijven als Marqt, Apple en Loods 5 worden gecombineerd met Albert Heijn, Samsung en Ikea. De FEP zoekt naar manieren om de wereld te helpen zonder het eigen leven te moeten opgeven en ziet hierin mogelijkheid door het bewust consumeren. Hierdoor staat deze doelgroep dicht bij het goede doel; de FEP omringt zich er letterlijk mee. Zo is er een nieuwe manier van wereld-verbeteren ontstaan; het doneren van geld maakt plaats voor het investeren in verantwoorde producten.

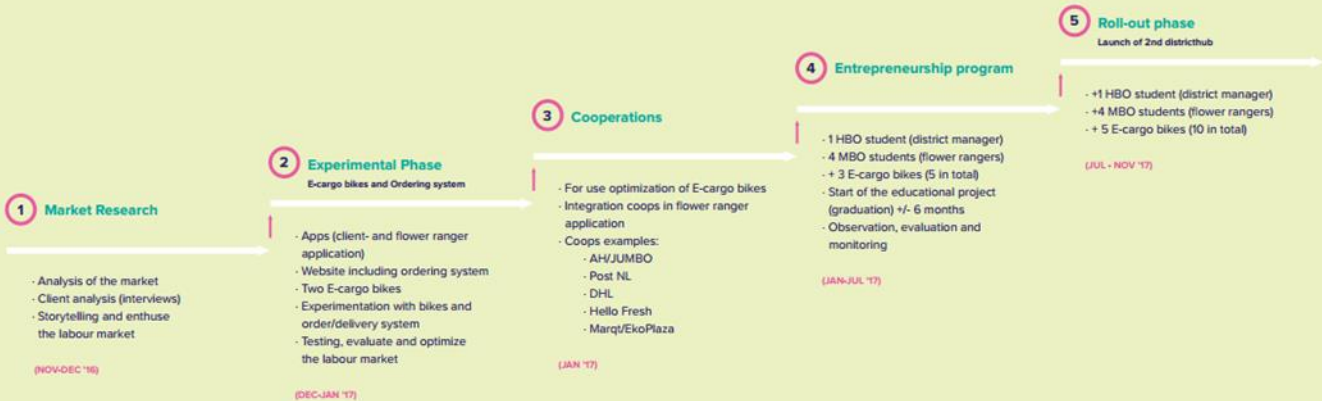
De FEP zoekt constant naar de beste combinatie van het goede van vroeger en de mogelijkheden in de moderne tijd. Hierdoor ontstaan merken als Hello Fresh en Netflix. Zij combineren de snelheid en het gemak van de huidige tijdsgeest met de kwaliteit en de principes van vroeger; gemakkelijk eten dat gezond is, zelfbediening en gebruiksgemak op een eerlijke manier. Het is een onverwachte combinatie van uitersten die samen een logische realistische mix vormen. De FEP is te herkennen aan deze spontane verrassende combinaties: een biologisch speltbroodje met een ordinaire hamburger, een fitte partner zonder wasbordje en een pak dragen met daaronder sneakers. Het hogere doel bereiken door het combineren van het hemelse met het aardse.



## Appendix 8: Electric Cargo Bike



## PHASE GATE APPROACH ROLL-OUT STRATEGY PLAN YEAR 1



## A SCHEMATIC REPRESENTATION OF THE FLOW OF GOODS, MONEY AND INFORMATION

