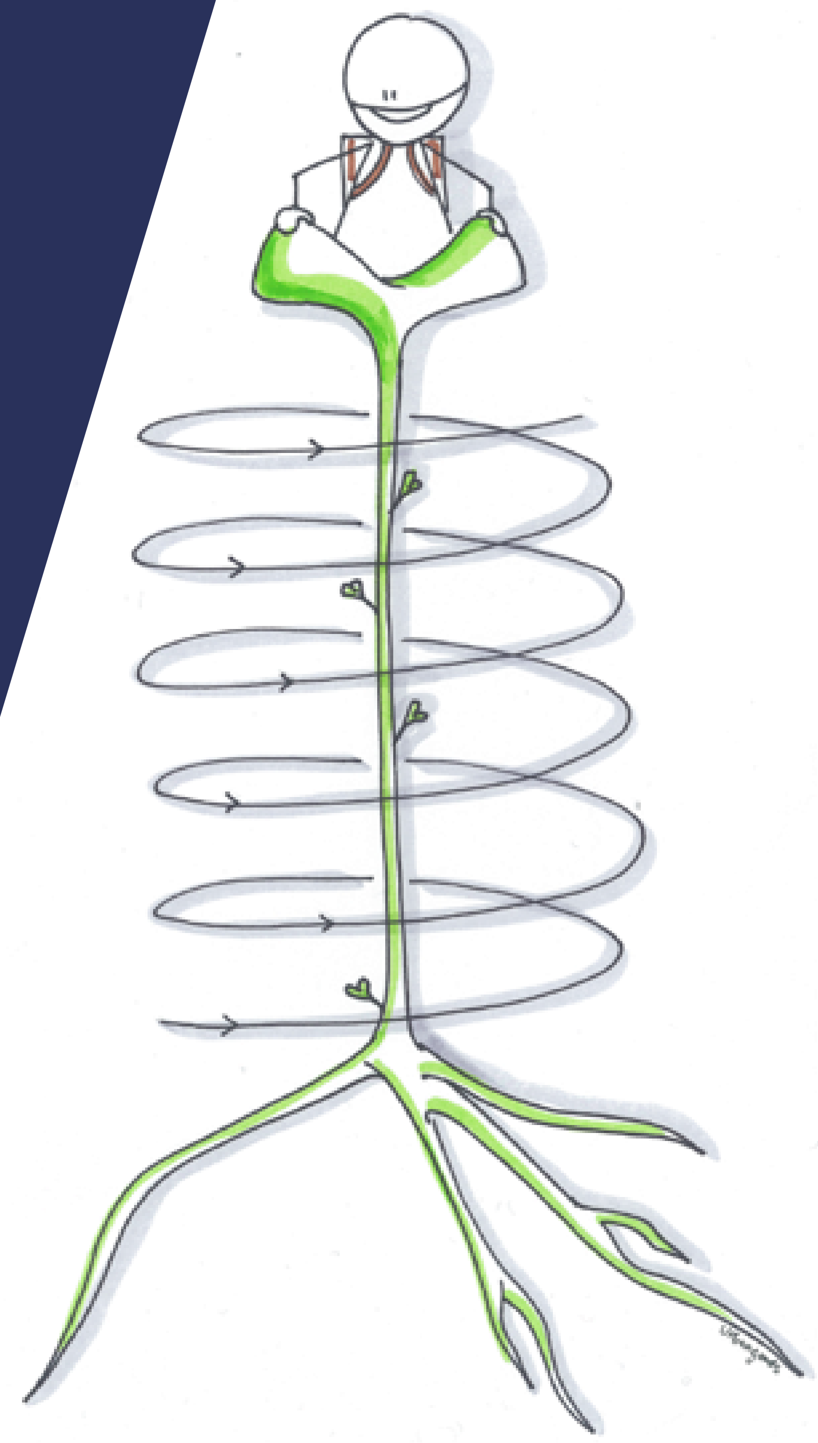
An Entrepreneurship Education Resource

- experiences from the **PACE®** project



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PREFACE

Even though there is broad agreement that it is important to develop entrepreneurial competences and that entrepreneurship education differs from other forms of education in many ways, we still know far to little about how effective entrepreneurship education is and how different approaches to entrepreneurship education influence students' development of entrepreneurial capabilities. The PACE project was initiated to explore how different forms of education may contribute to the development of personal entrepreneurial capital as a meta-competence that can be used not only to start new ventures but also to become more entrepreneurial in a broader sense. On the basis of the research undertaken in the PACE project, we have continuously established evidence that the didactic system can influence the mindset of entrepreneurship students, who learn to perceive themselves as entrepreneurial agents in their own lives.

This educational resource is based on the logic that the authors have used and tested in their teaching at the PACE-Summer Schools. It includes a selection of the interventions developed in the PACE project. It is conceptualized both as a work of reference and an inspiration for entrepreneurship educators. It contains two interventions for every step of the entrepreneurial process that students have been taken through in the PACE-programme.

The target group for the book is primarily educators at institutions of higher education who want inspiration for how they can work with entrepreneurial processes in their teaching, but it can also be used at other levels of education. If you are considering whether you have the capabilities to become an entrepreneur this book may also help enable you in developing your own potential.

The PACE project was initiated to **explore** how different forms of education may contribute to the development of **personal entrepreneurial capital as a meta-competence** that can be used not only to start new ventures but also to become more entrepreneurial in a broader sense.

We operate with **two different forms of interventions**: exercises and assignments. Exercises typically take place in the classroom as a **preparation** for the assignment. Assignments can be used either in the classroom or **completed at home**.

HOW IS THE BOOK STRUCTURED AND HOW DO YOU WORK WITH IT?

Each step commences with a short theoretical description of each intervention. We operate with two different forms of interventions: exercises and assignments. Exercises typically take place in the classroom as a preparation for the assignments. Assignments are more time consuming and can be used either in the classroom or completed at home. This is a choice that depends on the organization and timeframe of the course.

The theoretical introduction is followed by an instruction in how each intervention can be used in the classroom. As one becomes more familiar and competent in using the intervention, it becomes more natural to adapt the intervention and develop one's own variant to suit the particular situation.

For each intervention a resource sheet has been developed. This can be photocopied and distributed to students. There is also a need for colouring pens and lots of post-it notes.

A final feature is the list of the literature on which the interventions are based as well as central publications from the PACE project.

We would like to thank everyone involved in the PACE-project – both present and former participants – for their efforts. They have all contributed in various ways to the success of the project and making this book a reality. We would also like to thank Innovation Fund Denmark for the grant that has enabled the whole project.

Have fun

Helle Neergaard

ENTREPRENEURSHIP IS MORE THAN A PASSION

IT IS ALSO A METHOD

An entrepreneur starts a new venture. An entrepreneur is an individual with the right personality and DNA. An entrepreneur has a good business idea. An entrepreneur can foresee the future. An entrepreneur is not afraid to fail and take a chance. An entrepreneur has access to capital. An entrepreneur identifies with his business and works 24-7. An entrepreneur is passionate about his life's work.

The media is full of heroic stories about entrepreneurs who followed their dream, defied all adversity and just did it. As an outsider, the impression is that the key to entrepreneurship is just a good idea, the right personality and not least passion. However, entrepreneurship is more than merely ideas and passion – it is also a field of research and a method (Sarasvathy & Venkataraman, 2011; Blenker et al., 2014). The theoretical basis for the educational model, on which the interventions presented in this resource build, springs from research in entrepreneurship (Shane & Venkataraman, 2000; Alvarez & Barney, 2007; Korsgaard et al, 2015) and entrepreneurship education (Blenker & Christensen, 2010; Robinson & Blenker, 2014; Blenker et al 2011, 2012, 2015; Warhuus et al., 2016). The following briefly introduces the overall understanding of entrepreneurship and the pedagogy that supports the educational model.

After decades of failure to find empirical support for conceptualizing entrepreneurship and entrepreneurs as a product of personality characteristics, research has changed focus from trying to explain who the entrepreneur is to what an entrepreneur does (Gartner, 1988; Shane & Venkataraman, 2000; Sarasvathy, 2001). Since then much research has found that entrepreneurs act in specific ways, which inspired Sarasvathy and Venkataraman (2011) to describe entrepreneurship as a specific method – a method which can be learnt and thus can also be taught in line with other methods such as scientific methods. Didactically, the present educational model is based on understanding entrepreneurship as a method, which reflects what entrepreneurs do.

In their seminal article from 2000, Shane & Venkataraman presented a theoretical framework for such an entrepreneurial method. They conceptualized entrepreneurship as the nexus between entrepreneurial opportunities and entrepreneurial individuals. It is this meeting (the nexus) between individual and opportunity, which is central in entrepreneurship. Hence, the entrepreneurial method is not exclusively focused on starting new ventures, but also on creating other forms of entrepreneurial value, such as entrepreneurship in existing companies (often referred to as intrapreneurship), social and political activism as well as other forms of change that individuals can initiate.

According to Shane & Venkataraman (2000), the entrepreneurial process starts when a particularly attentive person recognizes a lucrative opportunity, after which the evaluation of its value-creating potential decides if the opportunity will be exploited. This suggests that the individual has a unique access to certain entrepreneurial opportunities, which emanate from the individual's privileged knowledge and networks (Shane, 2000).

Entrepreneurship is conceptualized as the **nexus between entrepreneurial opportunities and entrepreneurial individuals**. It is this meeting (the nexus) between individual and opportunity, which is **central** in entrepreneurship.

The fact that entrepreneurship arises from the resources, competences and network of the individual is also stressed by Sarasvathy's (2001, 2008) studies of entrepreneurial decision processes. According to Sarasvathy, expert entrepreneurs primarily apply effectual thinking in combination with who they are, what they can do, and whom they know.

Our interpretation of the nexus also builds on the co-creation of the entrepreneurial identity and opportunity throughout the entrepreneurial process. The foundation and articulation of the individual in the entrepreneurial process is primarily addressed in the first part of the course under the title 'Identity work', but it actually requires revisiting at every stage of the process.

It is essential to understand that the foundation in the resources and competences of the individual does not lead to specific opportunities. Indeed, Sarasvathy does not identify the source or origin of opportunities; she states only that an opportunity is created in an effectual process depending on who the individual is. According to Spinosa et al. (1997), the formation of entrepreneurial opportunities arises from a special sensitivity to disharmonies in everyday practice. This sensitivity can be trained and nurtured. It is therefore advantageous to work intensely with problems before we attempt to derive innovative solutions. Our educational model therefore takes students through a process in which they learn a variety of methods to reflect on and unfold the disharmonies that they encounter in their own everyday practice followed by an investigation of how these disharmonies can be qualified and quantified into more general anomalies.

When the personal disharmony is sufficiently qualified and a well-documented general anomaly has been defined, the educational model proceeds to the stage of developing innovative solutions and business ideas building on various structured methods. It is advantageous to further develop and test the viability of the innovative solutions by building prototypes, and investigate the financial sustainability through developing business models. The suggested educational model, which forms the basis of the interventions, reflects this special entrepreneurial method.

The **entrepreneurial method** is thus not only focused on creating new businesses but also on creating **other forms** of **entrepreneurial value**.

GROUP OR INDIVIDUAL WORK?

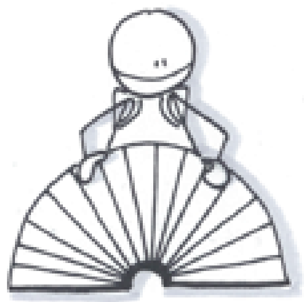
The exercises and assignments described in this educational resource can be carried out both individually and in groups. In the PACE-project, identity work, disclosing disharmonies, and qualifying anomalies have typically been implemented as individual tasks. Following this work, students have then formed groups based on their individual anomalies through an effectual process of creating buy-in. The groups have then proceeded to redefine a shared anomaly for which they have identified solutions, produced prototypes and realized value. We have therefore described all exercises and assignments according to this division. However, in principle, all exercises and interventions can be carried out both individually and in groups.

Users of this educational resource should be aware that there are advantages and disadvantages of both work forms and they have to be contextually adjusted to suit the educator, the course and the student group.

MAIN MODEL

OVERVIEW

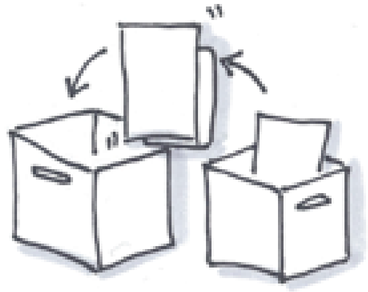
STEP 1
Identity work



STEP 2
Disharmonies

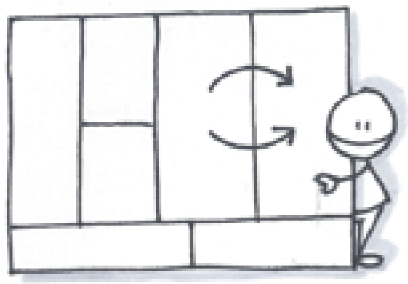
STEP 3
Anomalies

STEP 4
Unfolding solutions

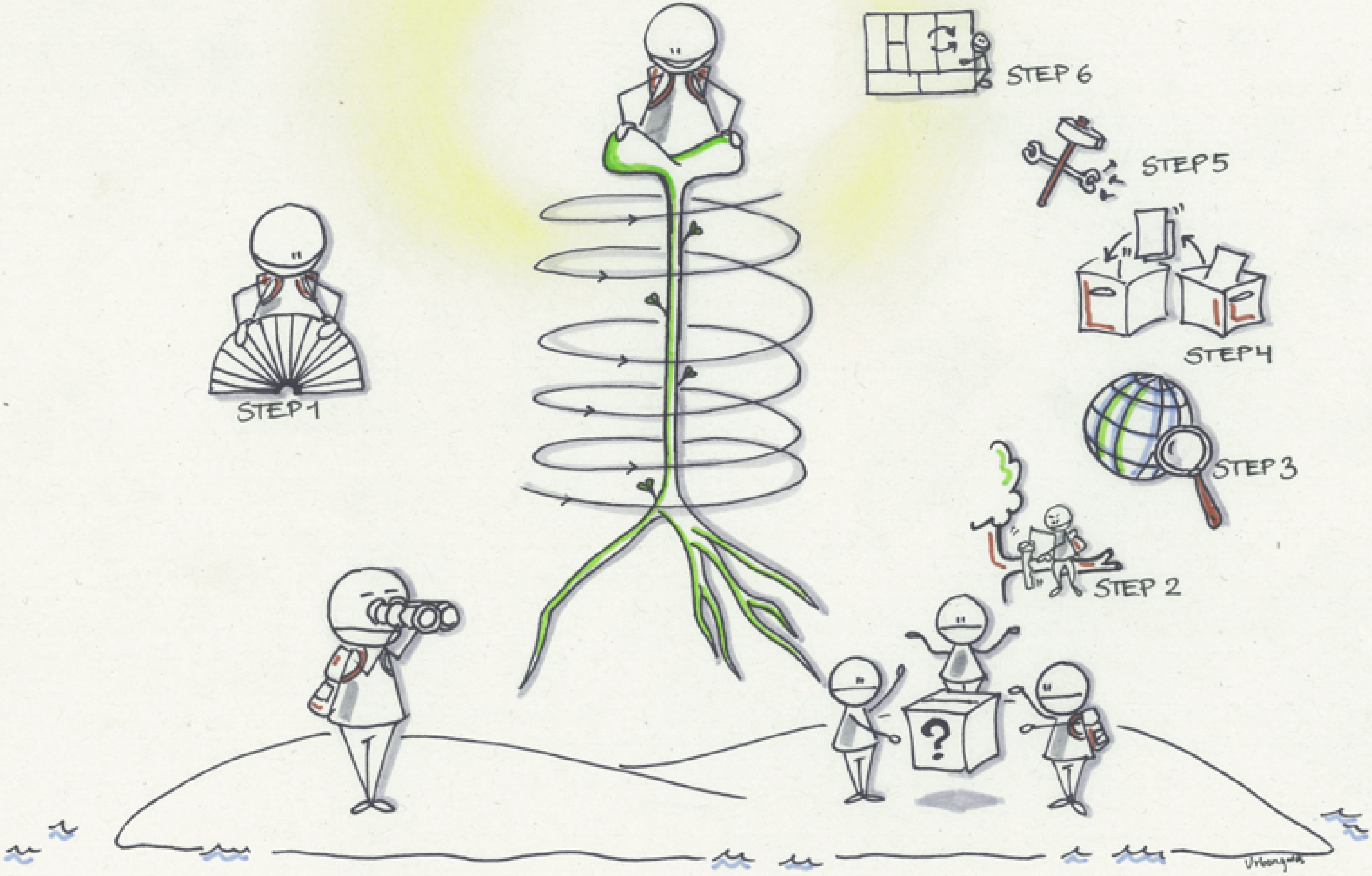


STEP 5
Prototyping

STEP 6
Value creation and realisation



MAIN MODEL



STEP 1A:
IDENTITY WORK

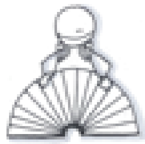
EXERCISE: DRAW AN ENTREPRENEUR

Much of the hype surrounding present day entrepreneurs are based on stereotypical understandings of the successful entrepreneur. If you ask a group of students: 'name an entrepreneur', Richard Branson, Steve Jobs, or Bill Gates will typically be the names you hear. However, if ordinary students compare themselves to these present day images, it can be very difficult to believe that they have what it takes to become an entrepreneur. Indeed, there is a tendency to forget that before they became icons, they were very ordinary people – even drop-outs. Further, the qualities that are associated with the successful entrepreneur are usually developed over decades, and in some cases as far back as childhood and youth. Hence, if we want more students to perceive themselves as potential entrepreneurs, then we have to present this activity as an accessible, acceptable and even natural career choice.

The exercise is used in the early phases of a programme and helps puncture the myth of the iconic entrepreneur and that you have to possess some special superhuman qualities in order to become a real entrepreneur. Instead, the exercise highlights that all individuals have certain entrepreneurial qualities and that most of those that we do not possess at present, we can actually learn. In order to reach this goal, it is important to focus on (i) the entrepreneurial qualities that the students already have and (ii) how they can develop or gain access to those that they do not have but which they perceive as necessary.

The whole exercise takes about half an hour including debriefing. No information is provided up front; only after the exercise is over.

By: Helle Neergaard



PROCESS:

1. Draw an entrepreneur in the space between the clouds on the next page (or on an empty piece of paper). You may use maximum five minutes.

2. Describe your entrepreneur to each other in groups of two: maximum 2,5 minutes each.

   The facilitator can nuance the understanding of the entrepreneurial qualities by asking questions about who/what was drawn, e.g. how many drew a man? How many drew a woman? How many drew a person? Did anyone draw someone they knew? A family member? How many drew something else, e.g. an expression of who an entrepreneur is? Why did they choose one or the other form of expression?

3. List a minimum of 10 qualities that characterize your entrepreneur, one in each cloud or list them on the back of the paper. You may use maximum five minutes.

   Students call out one quality each that the educator lists on the whiteboard. Discuss in plenary if these qualities are traits you are born with, or if they are qualities that you can learn, and if you can learn them, where and how. During this part of the exercise, the facilitator can probe into their interpretations of the qualities that they provide. When the whiteboard is full, and each student has had a chance to provide a minimum of one quality, it is time to ask them if they recognize any of these qualities in themselves. The realization that they already possess many of these qualities, helps them understand that it may not be so farfetched for them to actually be an entrepreneur.

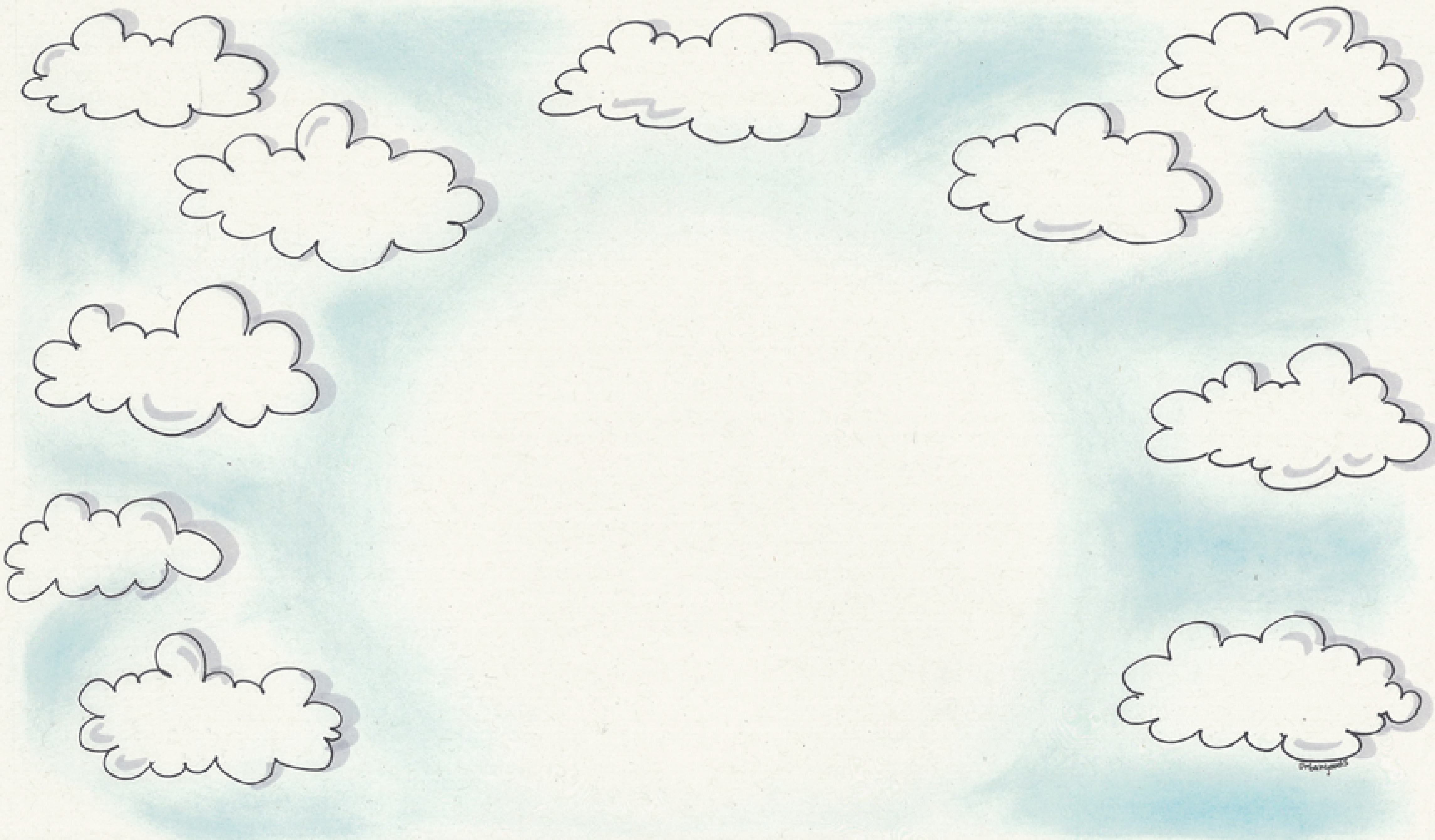
4. Colour the clouds. Use maximum five minutes. The qualities that you already possess should be green. The qualities you wish you had or need to develop or acquire should be yellow. The qualities that you do not want to possess or develop should be red.

5. Developmental option: Choose two qualities that you want to develop during the course and underline these.

Part of the debrief takes place during the exercise but at the end, the facilitator can ask if the students understand why they were supposed to do the exercise. Generally, they have understood that they do not have to be Bill Gates or Steve Jobs to become an entrepreneur.

The exercise can be repeated again at the end of the programme. At this stage many drawings differ from the first one in that they become more processual but of course that depends on the programme content.

STEP 1A: IDENTITY WORK



EXERCISE:
Draw an entrepreneur

STEP 1B:
IDENTITY WORK

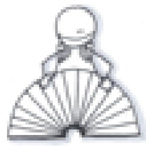
ASSIGNMENT: MAPPING YOUR PERSONAL RESOURCES

Effectuation (Sarasvathy, 2008) has become one of the cornerstones of entrepreneurship teaching. The perspective challenges the dominant causal approach to entrepreneurship in its interpretation of the entrepreneurial process and highlights the role of the individual in this process. Effectuation provides a frame for working entrepreneurially under uncertainty through five central principles: (i) gain an overview of your personal means; (ii) imagine worst-case scenarios to figure out what you are willing to lose or which compromises you are willing to make; (iii) identify and attract potential partners who want to contribute to the development of your project; (iv) perceive surprises as developmental opportunities and not as barriers to growth; (v) control the present and shape your future instead of trying to predict the future.

Some of these principles may seem to lack interpretive detail. Most importantly, the first principle asks: Who am I? What do I know? Whom do I know, without unfolding these in any further detail. Indeed, the uniqueness of an idea often arises in the interface between 'who you are' in terms of family background, education, experience, interests, relations and the challenges you meet in your everyday practice. It is important to clarify how these factors can facilitate or limit one's entrepreneurial activities. The central basis for any entrepreneurial process is therefore awareness of what characterizes and differentiates one person from another. Students have many more personal resources than they believe, and it is not until they start to map these resources that their individual resource wealth becomes apparent.

Culture and traditions	Norms	Beliefs	Faith	Rituals
People and relationships	Family	Friends	Colleagues	Peers
Skills and competences	Education	Experience	Aptitude/talent	Faculties/ abilities
Hobbies and avocations	Sports/ adventures	Arts	Travel/lifestyle	Technology
Drivers and motivations	Control	Independence	Harmony	Respect

By: Helle Neergaard



PROCESS:

The resource fan has five leaves, each with a predefined category: (i) Culture and Traditions, (ii) People and Relationships; (iii) Skills and Competences; (iv) Hobbies and Avocations; and (v) Drivers and Motivations. Each category needs to be filled in with words that tell something about you. In the table in the preceding column is an example of how this may be done. First step is to consider:

1. **What motivates me or drives me?**

   List for example whether you are internally or externally motivated (and by what) and what (support or resources) you need to function optimally in your workplace.

2. **Which skills and competences do I possess?**

   List for example which formal and informal education and experiences have shaped how you perceive your opportunity space and how you use these skills and competences.

3. **Which people and relationships are important in my life?**

   Map your network. Both strong and weak ties constitute potential resources, e.g. a friend of a friend may possess the resources you need to help fulfil your dream.

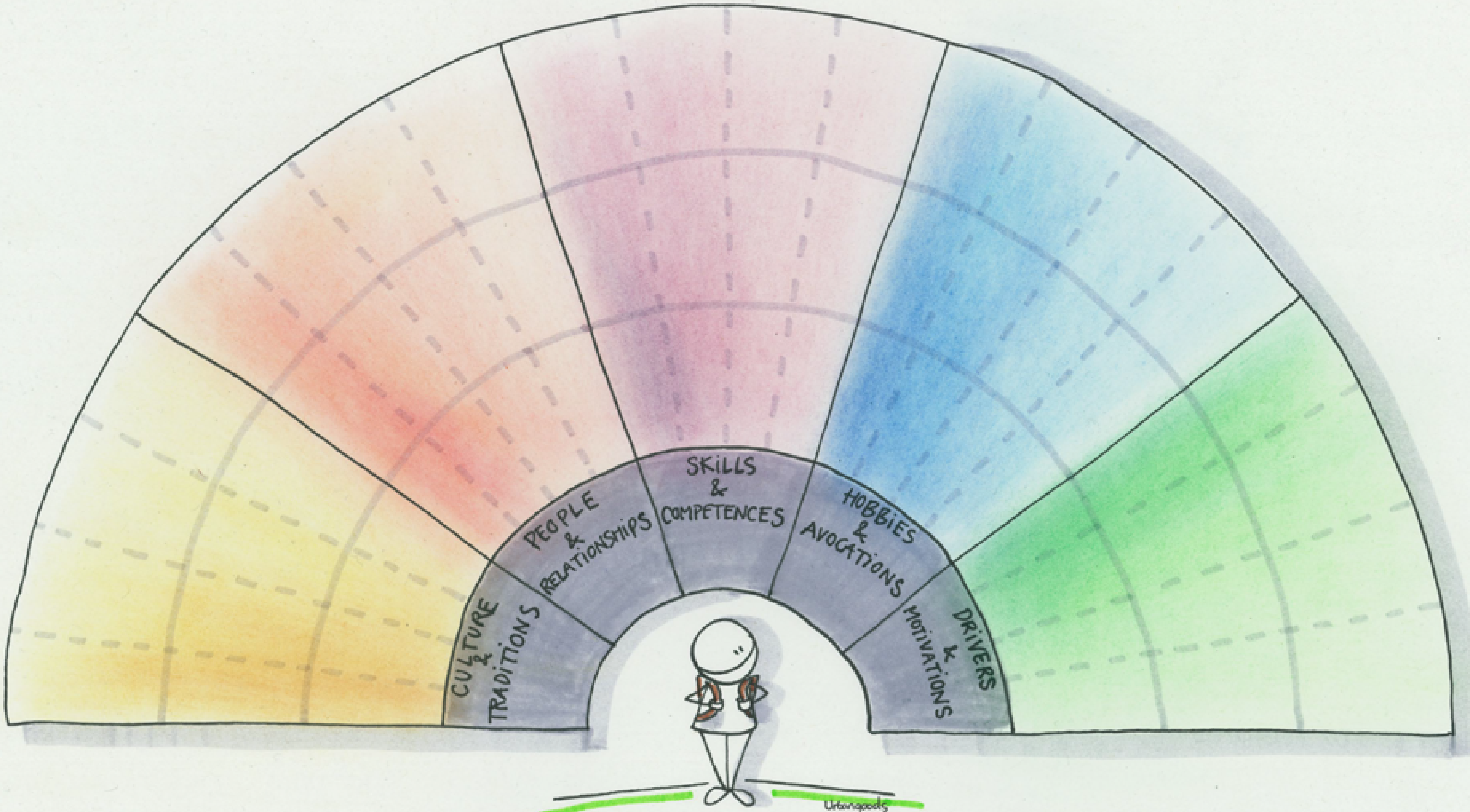
4. **Which hobbies and avocations do I have?**

   Often people do not realize that they gain important qualities from carrying out leisure activities, e.g. fishing typically involves a great deal of patience, and certain sports, much teamwork.

5. **Which culture and traditions are important?**

   Identify which norms, values and convictions are important to you and what role they may play, e.g. how does your perception of personal integrity influence the unfolding of opportunities?

The fan basically visualises your personal qualities. The second step is to nuance the categories. For example, you can list (i) which specific persons have shaped you in particular ways and (ii) if and how they can contribute with specific resources. Or you can use the fan to challenge yourself in terms of how carrying out a particular sport can open up new entrepreneurial opportunities. In other words, you need to consider each of these categories and how they may influence a potential entrepreneurial activity, both positively and negatively.



ASSIGNMENT:
Mapping your personal resources

STEP 2A:

DISHARMONIES

EXERCISE: BACKWARDS UNRAVELLING

In the process of unfolding disharmonies, we depart from the conceptual framework of Spinosa et al. (1997). According to Spinosa et al., entrepreneurial opportunities arise from a particular sensitivity to disharmonies related to our own everyday practices. An everyday practice basically refers to an activity that we undertake in our everyday lives – that is, what we do. These everyday practices are governed by one or several styles that act as the basis of meaning in our everyday practices and the foundation on which existing and new every day practices are conserved and organized (Spinosa et al., 1997). Thus, everyday practices constitute the "how" we behave and styles constitute the "why" we behave.

Disharmonies related to our everyday practices and corresponding styles are not always apparent from an objective, detached perspective; they are closely connected to the individual. Indeed, '*disharmonies are practices in which we engage that common sense leads us to overlook because they are not well coordinated with our other practices*' (Spinosa et al., 1997:23).

It is essential to disclose these disharmonies and investigate the tension that underlies these in terms of everyday practices and styles before starting the search for an innovative solution. The objective is therefore not to identify a standard solution to a standard problem, but to work with the disharmony – to disclose and explore it – until it becomes apparent where and in which way the everyday practice fails.

In order to achieve this special sensitivity to disharmonies, it is necessary that students have a unique access to the space or area of focus in which the disharmony is enacted. Spinosa et al. (1997) articulate this as the disclosive space – constituting a mixture of related everyday practices and styles.

By: Claus Thrane

PROCESS:

The exercise has two main aims: a) to train students in disclosing disharmonies using the concepts of 'everyday practice' and 'style'; and b) to create a basic understanding of the importance of the individual-opportunity nexus and train the individual's unique access to disclosing disharmonies within the various disclosive spaces that arise from the resource fan.

1. Students are divided into groups of three to five.

2. Groups are presented to a picture of a new product or a prototype and a brief description of this product. It is important that the chosen product is one that students can relate to and that the product reflects a solution that could have arisen from a multitude of disharmonies, everyday practices and styles. Finally, it is decisive that students can reach a qualified guess of whom the entrepreneur behind the product is.

3. Based on the product, students discuss:

   a. Who is the entrepreneurial team behind the product?

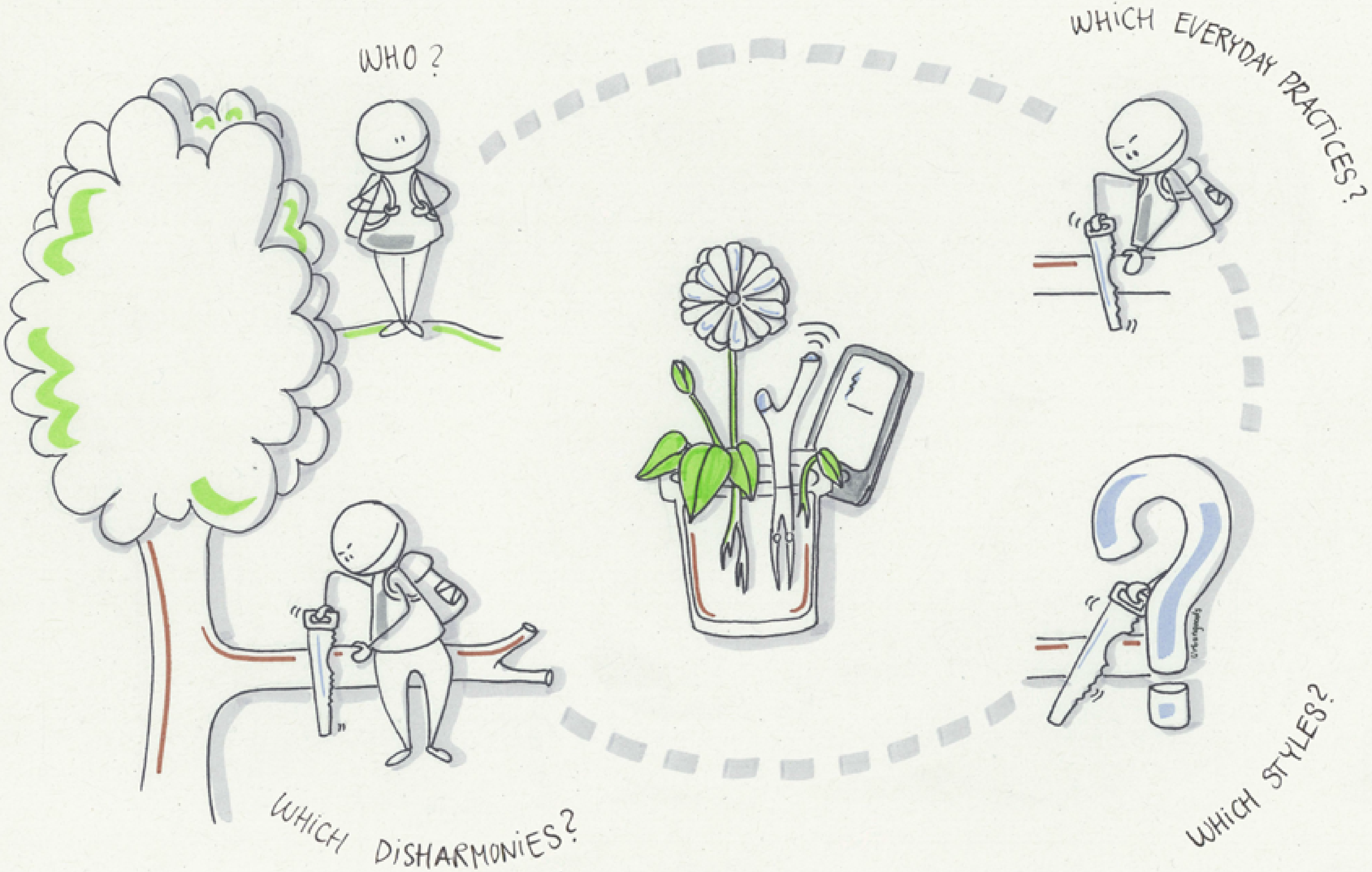
   b. What is the disclosive space (everyday practice and style)?

   c. What is the disharmony that the entrepreneurial team is trying to solve?

   d. For whom is it a disharmony?

4. The facilitator sketches the process from the worksheet on the whiteboard and asks students for input for each step.

STEP 2A: DISHARMONIES



EXERCISE:
Backwards unravelling

STEP 2B:
DISHARMONIES

ASSIGNMENT: DISCLOSING DISHARMONIES

One of the greatest challenges in this part of the entrepreneurial process is that instinctively we will often try to identify a problem in a superficial way and jump to solution mode as quickly as possible. In order to counteract this problem, it is important that students get an opportunity to work with relevant everyday practices and achieve a deep insight into these through the process of disclosing them. It is therefore decisive that students have privileged access to the everyday practice that they want to describe by being deeply involved in it, for example through their professional and academic background, work experience, strong interests, and/or personal experiences (e.g. if a family member is especially challenged).

The assignment falls in two parts: first an in-depth description of an everyday practice to which the student has privileged access and next disclosing a disharmony (or number of disharmonies) in this disclosive space. To describe an everyday practice in-depth is much more difficult than it sounds. In the assignment we suggest a number of dimensions that can be used for both the description of the disharmony but also as a guide for a peer interview (student to student), which can assist students in fleshing out the explorative description.

For the purpose of this assignment, everyday practices are divided into four dimensions:

- Whom? (which persons are involved)
- Where? (in which places does the everyday practice take place)
- How? (which activities, routines and behaviour are associated with the everyday practice)
- What? (what objects, artefacts, symbols and technologies are in play)

Combined, these dimensions provide a fruitful, initial description. Each dimension can serve as a starting point for the description, e.g. the 'where' is as good a starting point as the 'whom'.

By: Steffen Korsgaard

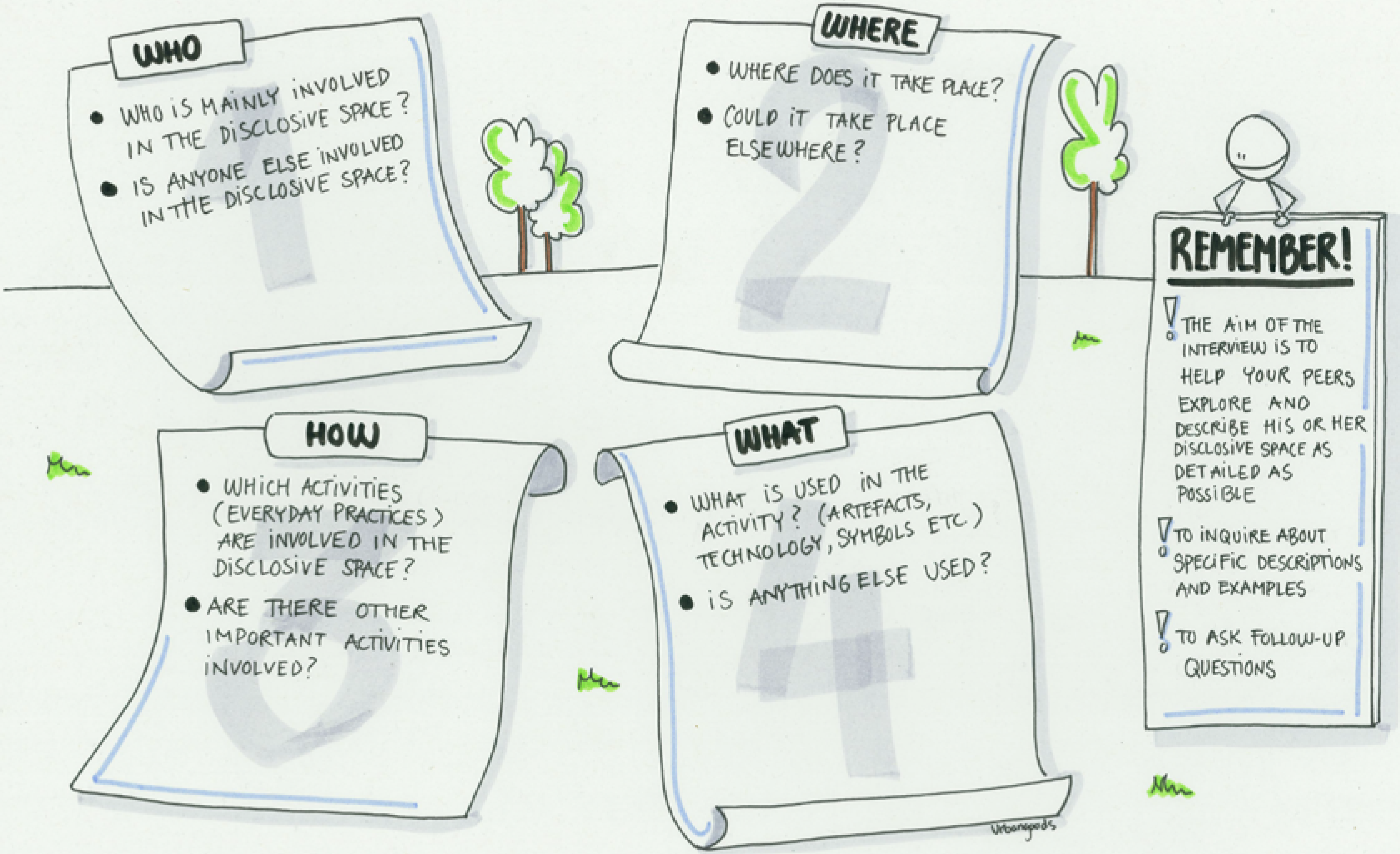
PROCESS:

This assignment should be completed individually, but it does contain peer interviews in which students have to interview each other in pairs of two. The following resource sheet with its four dimensions can be useful both in documenting the explorative description as it unfolds and as interview guide in the peer interview.

1. Initially students describe an everyday practice to which s/he has privileged access. If this is too difficult, the description can start with one of the four dimensions and be disclosed from there.

2. Students interview each other based on the initial description. Using the dimensions as interview guide, the interviewer asks clarifying questions, which assist the interviewee in developing, defining, and specifying the description.

3. With the improved description of the everyday practice as basis, students seek to disclose a disharmony (or small number of disharmonies). It can be a conflict, resistance, irritant or similar, which is embedded in the everyday practice and styles governing the disclosive space. The disharmony should also be documented using the four dimensions in the resource sheet.



ASSIGNMENT:
Disclosing disharmonies

STEP 3A:

ANOMALIES

EXERCISE: METHODOLOGICAL INVESTIGATION

In each of the previous steps of the learning process, exercises can be carried out without the assignment and vice versa. However, in this step, the two parts are intricately connected, so in order to achieve the full benefit it is essential that the exercise be completed prior to the assignment.

The aim of the exercise is to investigate if other people experience the disharmony (differently) (Spinosa et al., 1997) and thus qualify if one's personal and subjective disharmony constitutes a general anomaly. This is the case if other people have the same experience. The investigation contains several elements that resemble traditional academic work, i.e. it is important to consider how we want to investigate the phenomenon – the disharmony – methodologically before we venture out to undertake the analysis.

The whole investigation can be divided into two main elements:

1. A **preparatory, methodological part** in which it is planned, how it can be investigated if the disharmony can be qualified into a general anomaly.

2. An **executing part** in which the disharmony is qualified to a general anomaly in two steps:

   a. A theoretical part (desk work) in which the personal disharmony is analysed theoretically in order to understand how it has arisen and in which ways it can be understood.

   b. An empirical part in which the disharmony is investigated qualitatively and quantitatively: (i) how do others understand/perceive the disharmony and (ii) how many and who share it.

By: Per Blenker

PROCESS:

Before you start investigating if your personal disharmony can be qualified to a general anomaly, it is important to plan the method you intend to use to collect the data.

1. What do you know already? For example in terms of personal experience, theoretical and empirical knowledge?

2. What do you not know? Which knowledge do you still need? Where do you need to collect this data? Which disciplinary knowledge do you need to acquire?

3. How are you going to learn what you do not know? What do you need to reacquaint yourself with? What do you need to study more thoroughly? Who do you need to contact, ask or visit who knows more than you do? Who do you need to ask for help?

4. How can you organise and structure this work? What steps do you need to take and in which sequence? Which theory can you use to synthetize or explain this knowledge?

EXERCISE:
Methodological investigation

STEP 3B:

ANOMALIES

ASSIGNMENT: QUALIFYING ANOMALIES

It is not all personally experienced disharmonies that can form the basis of entrepreneurial opportunities and solutions. It is possible that a personal problem or disharmony is irrelevant to other people or that others experience it in different ways. It is of course important to solve personal problems, but it is only if the disharmony is relevant to others that it can become the basis of an entrepreneurial opportunity. The aim of this assignment is therefore (i) to investigate if the personal and subjective disharmony is an anomaly for other people and (ii) to develop an understanding of how the disharmony might be different to other people (Spinosa et al., 1997).

In part 3a students clarified how they could investigate if the disharmony could be qualified to a general anomaly and which methods they were going to use in the investigation.

In part 3b we move to the analysis. It contains three elements. The two first are identical to the executing part of the exercise completed in preparation but are extended and focused on doing rather than understanding. The third part summarizes the findings of the analysis.

By: Per Blenker

PROCESS:

Theoretical part:

1. Investigate the anomaly historically: why has this anomaly arisen? Which technological, structural, cultural or societal developments have caused the anomaly to arise? Why is it precisely now that it becomes apparent or noticeable?

2. Investigate the anomaly theoretically: which theories can be useful in understanding the anomaly? Select theories that you know, and use them to analyse the anomaly. How can the theories be useful in understanding the anomaly differently to the way you understood your disharmony?

Empirical part:

1. Make a number of empirical tests to assess whether your immediate understanding of the anomaly is the most appropriate, e.g. undertake interviews with potential users or experts. Conduct a focus group, which can challenge your understanding. Make observations in a place identified in the theoretical part as particularly suitable for observing the unfolding of the anomaly. How do these interviews and observations challenge your current understanding of the anomaly?

2. Conduct a series of empirical checks that can uncover the extent of the anomaly. With simple means for collecting primary data such as a Facebook survey or a street vox pop or more extensive analytical forms, you can illustrate the extent of the anomaly. Or you can use secondary data or questionnaires. How do these analyses impact your perception of the anomaly's impact? Who experiences the anomaly and who does not?

Summarizing part:

1. Describe the world as it is currently. How do people behave? What is the dominant behaviour? Which everyday practices exist?

2. Use your empirical knowledge to describe the general anomaly. Who does it involve? Where and under which circumstances is it particularly noticeable? What is influenced by the anomaly? How does it influence everyday practice?

3. Use your theoretical work to explain the anomaly. Why does it exist?

ASSIGNMENT:
Qualifying anomalies

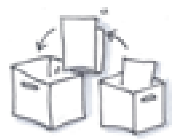
STEP 4A:

UNFOLDING SOLUTIONS

EXERCISE: THREE WORDS

"Who am I" is a focal point of departure in our conceptualisation of entrepreneurship and entrepreneurship education based on the individual-opportunity nexus (Shane & Venkataraman, 2000; Thrane et al., 2016) as well as the theory of effectuation (e.g. Sarasvathy 2001). "Who am I" is related to identity development as a relational construct negotiated with others through past, present, and future possible selves.

Inspired by Mill's (1952/1980) conception of sociological imagination and how this comes most vividly into play at the junction of the personal and the historical, students are supposed to initially write from a personal perspective and then from a socio-political perspective, subsequently integrating the two. Mill's concept of sociological imagination helps us understand what is going on in the world and what is happening within us as tiny points of intersection between biography and history in society (Brinkmann, 2012:18). In order to achieve novel insights of high quality, introspective, auto-ethnographic accounts must only serve as starting points for thematic, reflective inquiry as Delamont (2009) reminds us. However, we are convinced that a practical exercise in creativity and creative writing, illustrating the nexus of person and the social world, helps students localize and explore their own identity ("Who am I") as a temporal, historically anchored construct.



PROCESS:

The exercise explores students' identity construction through a kind of life story in three word sentences. There are four steps in the exercise "Three words". Each step takes about 10 minutes.

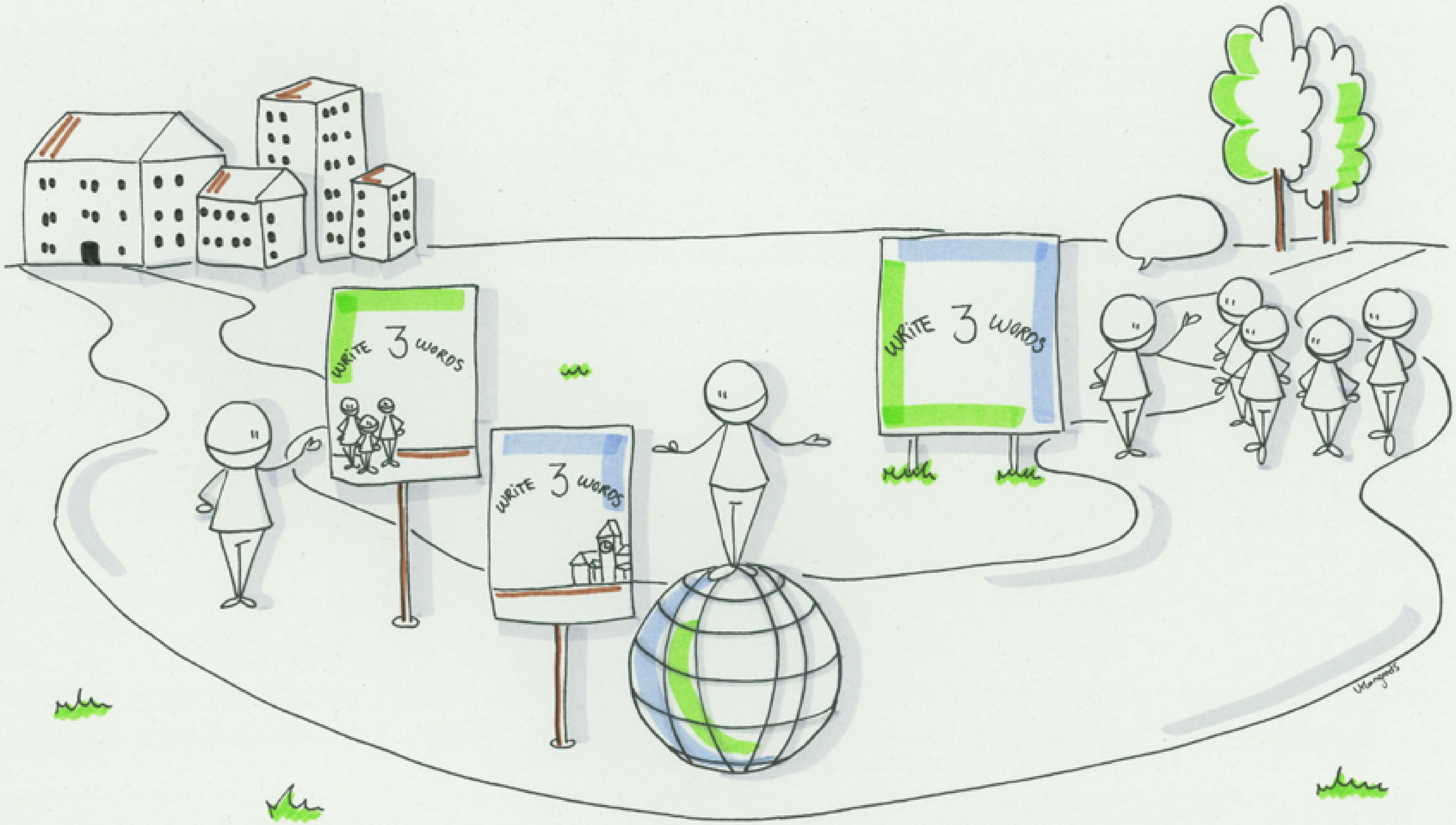
1. Recall a meaningful time in your life. From a personal perspective (focus on auto in auto-ethnographic) write about this time using three word sentences. Do not limit yourself; write what comes to mind. The only limitation is the three words in each sentence. Everybody can write three words.

2. What events took place in society or the world at the same time? Write three word sentences about the social and political context. Again do not limit yourself; write what comes to mind. The only limitation is still just three words in each sentence. Remember everybody can write three words.

3. Take both your texts and all your sentences: mix them together to a meaningful text; if necessary write more sentences of each three words to join the sentences. Combine all sentences to a story precisely as you like. No rules, just combinations.

In plenary, be prepared to read aloud your story and account for your experience of writing. Identify resources in relation to past, present and future.

By: Lene Tanggaard



EXERCISE:
Three words

STEP 4B:

UNFOLDING SOLUTIONS

ASSIGNMENT: UNFOLDING INNOVATIVE SOLUTIONS

In many conceptualisations, entrepreneurship commences with an idea that is then described using a business plan format. In our processual conceptualisation, we commence with the individual and the disharmonies s/he encounters in everyday practices. These disharmonies are then transformed into opportunities and innovative solutions throughout the entrepreneurial process.

The inspiration for this transformation originates in Spinosa et al. (1997), who describes the entrepreneur as one among three types of history makers, the others being the cultural figure and the virtuous citizen. Common to these history makers is a particular sensitivity to important conditions or circumstances (disharmonies) characterizing everyday practices. Whilst the majority of people accept these disharmonies and develop everyday routines that enable them to exist without noticing or being disturbed by these, history makers recognize that their disharmonies are often anomalies that hamper or inconvenience numerous people.

In order to construct entrepreneurial opportunities and lucrative solutions it is important to perceive how our own everyday practices conflict. Everyday practices are typically constituted by a variety of ways in which we deal with objects and activities. Some everyday practices are good; others are poor. Luckily, bad everyday practices have a tendency to become obsolete and be replaced by better practices – but sometimes it happens that good practices are forgotten or supplanted by worse practice. It is also possible that practices become mixed up in ways that result in poor practices blocking good practices.

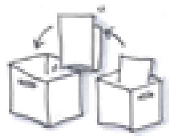
According to Spinosa et al. (1997) history makers use three forms of techniques to identify new solutions:

a. ***Articulation:*** in which they bring back good forms of practice from the past – they rearticulate them in new and better ways.

b. ***Cross appropriation:*** in which they draw on useful practices from other disclosive spaces – and show how these can be used to address anomalies.

c. ***Reconfiguration:*** in which they try to reprioritize good and bad practices – and seek to emphasize marginalized practices. If successful in this activity it is possible to contribute to improving life for others.

By: Per Blenker



PROCESS:

1. **Articulation**
   a. Which alternative theories or concepts can be used to articulate your anomaly and conflicts in a new way?
   b. How can you use these alternative theories and concepts to understand the anomaly in a new way, for example an alternative conceptualisation or theorising?
2. **Cross appropriation**
   a. Provide examples of good forms of practice.
   b. Which forms of practice are useful?
   c. How can these forms of practice be used in other places?
   d. How can these forms of practice be transferred to your disclosive space?
   e. How can an assimilation of these forms of practice change the way (style) in which life plays out in your disclosive space?
3. **Reconfiguration**
   a. Provide examples of both good and poor forms of practice in your disclosive space.
   b. Explain how poor forms of practice have come to dominate good forms of practice in a way that an inferior dominant style has been developed.
   c. Investigate how you can reprioritize good and poor forms of understanding, so that a new and better style can be developed.
4. **Construct an innovative solution to your anomaly through iteratively working with the three steps above.**

ASSIGNMENT:
Unfolding innovative solutions

STEP 5A:
PROTOTYPING

EXERCISE: DIFFERENT FORMS OF PROTOTYPES

Prototyping is a tool that can be used to achieve important learning about the disharmony that we are trying to solve; the people we are attempting to help, and the solution we are developing.
Buchenau and Suri (2000) define a prototype as a representation designed to help understand, explore or communicate how it is possible to interact with the solution.

It is essential that we perceive prototypes as something we can use throughout the process and not just a copy that is similar to the final product. A prototype is therefore a dynamic tool that can be used in all phases of the process. Correspondingly, it is also important not to perceive prototypes as 'THINGS' that require advanced equipment and excellent engineers to produce. Prototypes can take many forms: from advanced 3D-printed representations of the physical features of the solution over role plays that explain how the problem can be solved to simple power-point presentations, which describe the basic elements of the solution.

We therefore often use many different prototypes for a variety of purposes throughout the process. Basically, we use prototypes to:

1. Manifest abstract ideas and concepts
2. Learn about users' actual experience and use of the solution
3. Specify or validate specifications for the solution
4. Demonstrate technical or financial feasibility

The most important issue is that the aim of the prototype is clear and explicit and that the prototype is designed with this aim in mind.

By: Steffen Korsgaard

PROCESS:

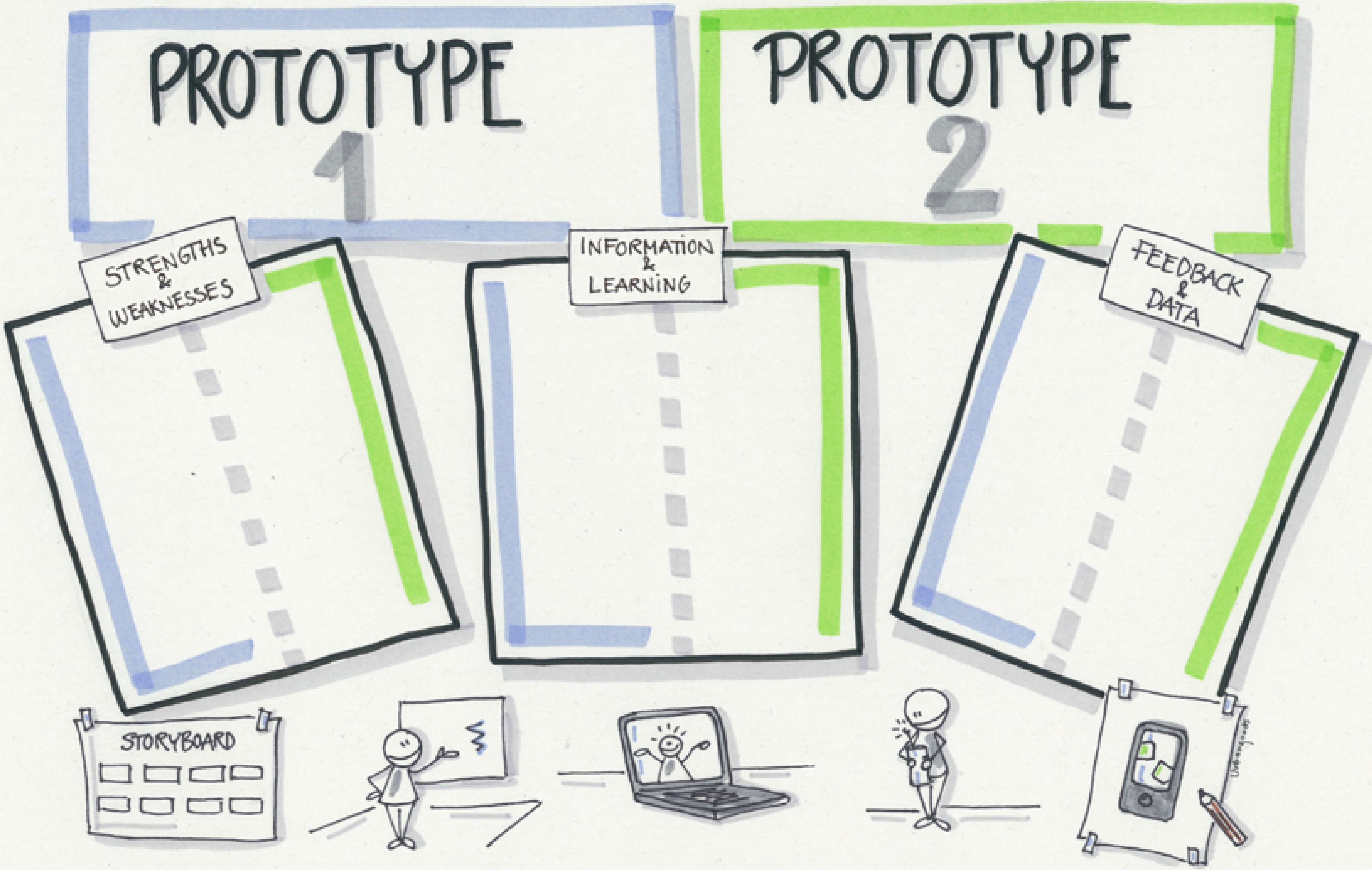
The following exercise is useful to help students start considering prototyping and particularly how different prototypes can be used at the various stages of the entrepreneurial process.

1. Students are presented with two different prototypes developed by other companies, organizations, or individuals. The exercise works best if the two prototypes are very different. We employ (a) a physical prototype (mock-up of a product) to explore the technical aspects of a solution and (b) an immaterial prototype to highlight the basic structure of a problem-solving constellation (a crowd-funding post with a video pitch).
2. Students are divided into groups and asked to complete the following tasks:

   a. What are the strengths and weaknesses of the two prototypes?

   b. Which information and learning can be deduced from the two prototypes?

   c. What kind of feedback and data is required to achieve the necessary information and learning?
3. The groups present and discuss their answers to the questions in plenary.



EXERCISE:
Different forms of prototypes

STEP 5B:
PROTOTYPING

ASSIGNMENT: PROTOTYPING

Having established a basic understanding of what a prototype is and the various forms of prototypes that can be used for different purposes in the entrepreneurial process, it is possible to proceed to gaining a deeper understanding of and concrete experience with prototypes.

On the one hand, it is important that we use prototypes often and widely, on the other, developing prototypes should not occupy more time or money than absolutely necessary. So it is central to be explicit about the learning goal to gain the information and knowledge needed in the quickest and cheapest possible way. Therefore, the first step is to articulate the learning goals before starting to develop the prototype.

Furthermore, only absolutely necessary elements should be included. In other words, it is inefficient and inappropriate to produce a physical prototype if a drawing or a power-point presentation is sufficient. Finally, it is important to clarify how it is possible to evaluate the knowledge derived from testing the prototype. Which data and information do we actually need? Maybe we need to obtain qualitative data from potential users to improve the solution, or we might need more specific numbers in terms of pledges for a crowd-funding campaign.

By: Steffen Korsgaard

PROCESS

In the following, students have to develop and test a prototype.

1. **Articulate learning goals for the prototype.**

   If you cannot articulate learning goals, then it might be difficult to decide the features of the prototype and whether it is a successful prototype.

2. **Decide what needs to be included or excluded from the prototype.**

   It is important not to include functionalities that do not contribute to achieving the learning goals.

3. **Produce the prototype.**

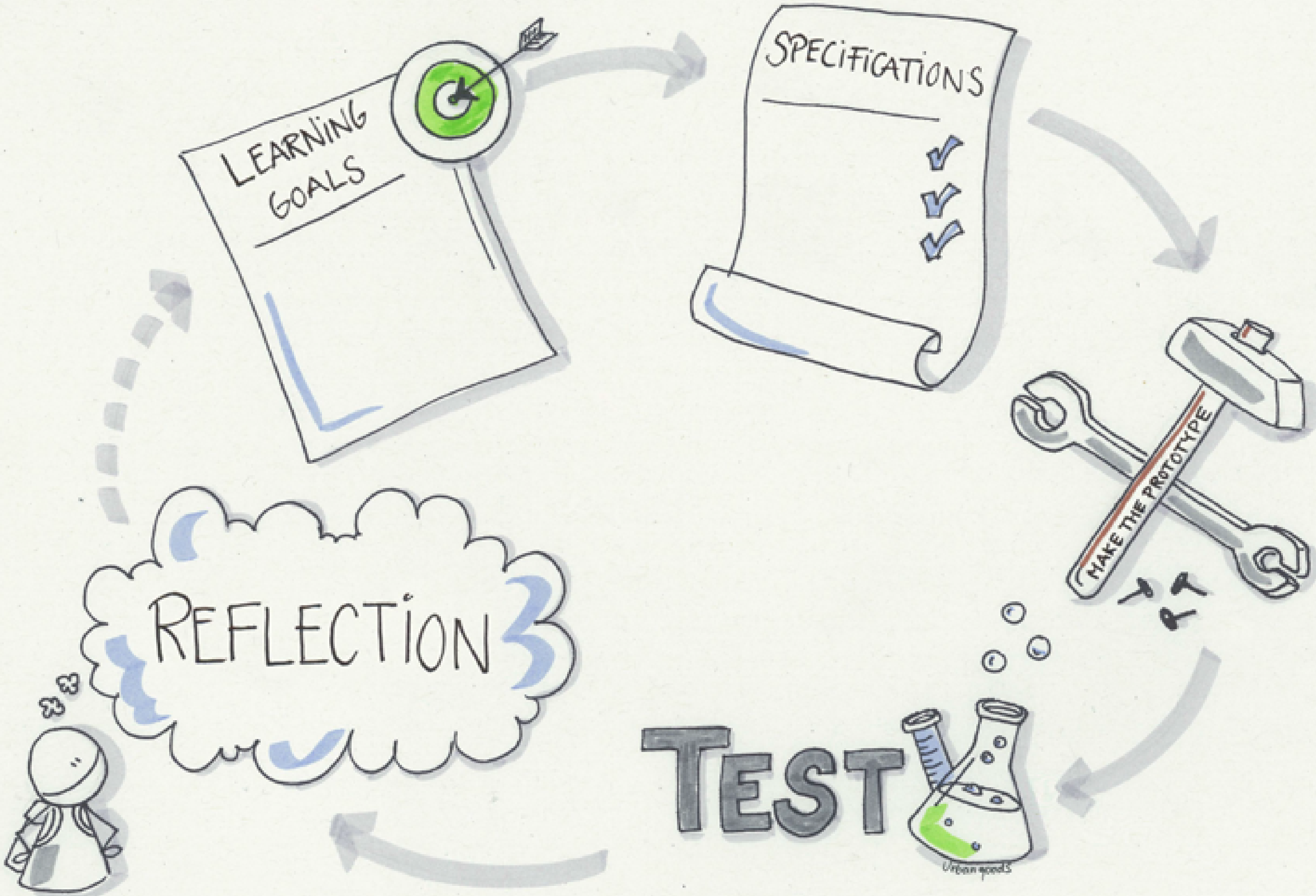
   This is a valuable experience for students and a prerequisite for carrying out the rest of the assignment.

4. **Test the prototype.**

   Testing the prototype enables the students evaluating the quality of the prototype according to the learning goals, and use the information and knowledge collected in the rest of the entrepreneurial process.

5. **Evaluate the work with the prototype.**

   The evaluation contains two elements: (a) what we have learnt from working with the prototype in the project, and (b) what we have learnt from working with prototyping generally.



ASSIGNMENT:
Prototyping

STEP 6A:

VALUE CREATION AND REALISATION

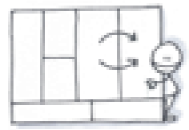
EXERCISE: MINI BUSINESS MODEL

It is insufficient to just develop an innovative solution and a prototype based on a qualified anomaly. It is also necessary to be able to create and deliver value with the innovative solution. Even if the intention of the entrepreneurial opportunity is not profit, but social, cultural or environmental value, it is important to establish a profitable economic foundation to realise sustainable value and limit potential losses.

One of the tools used to assist entrepreneurs in understanding how they can create value in the entrepreneurial process is the business model canvas developed by Osterwalder and Pigneur (2000). The canvas does not only provide a comprehensive, visual overview of the central elements in the value creating process, but also an understanding of the interdependency among the elements of the canvas. The canvas helps explicate the relationship between potential customer segments, resource requirements, activities and potential partners on the left hand side of the canvas, and the value that needs to be realised on the right hand side of the canvas.

It can be difficult to use the tool in a project if you do not have advance knowledge of the individual elements of the canvas and their interdependency. It may therefore be advantageous to introduce an exercise that is based on a simple case. The choice of the case is central to assist the students who have little prior knowledge of the canvas in unfolding the elements of the business model and to help open up for several, possible business models.

By: Claus Thrane



PROCESS:

1. Explain the nine elements of the model.

    a. Which value proposition (VP) are we offering our potential customer (CS)? How do we deliver the value (CH)? And which relations do we need to have with the customers to deliver value (CR)? How do we earn money on our customers (RS)? Which key resources (KR), key activities (KA) and key partners (KP) are necessary to deliver the value to the customers? What is the price of these resources (CS)?

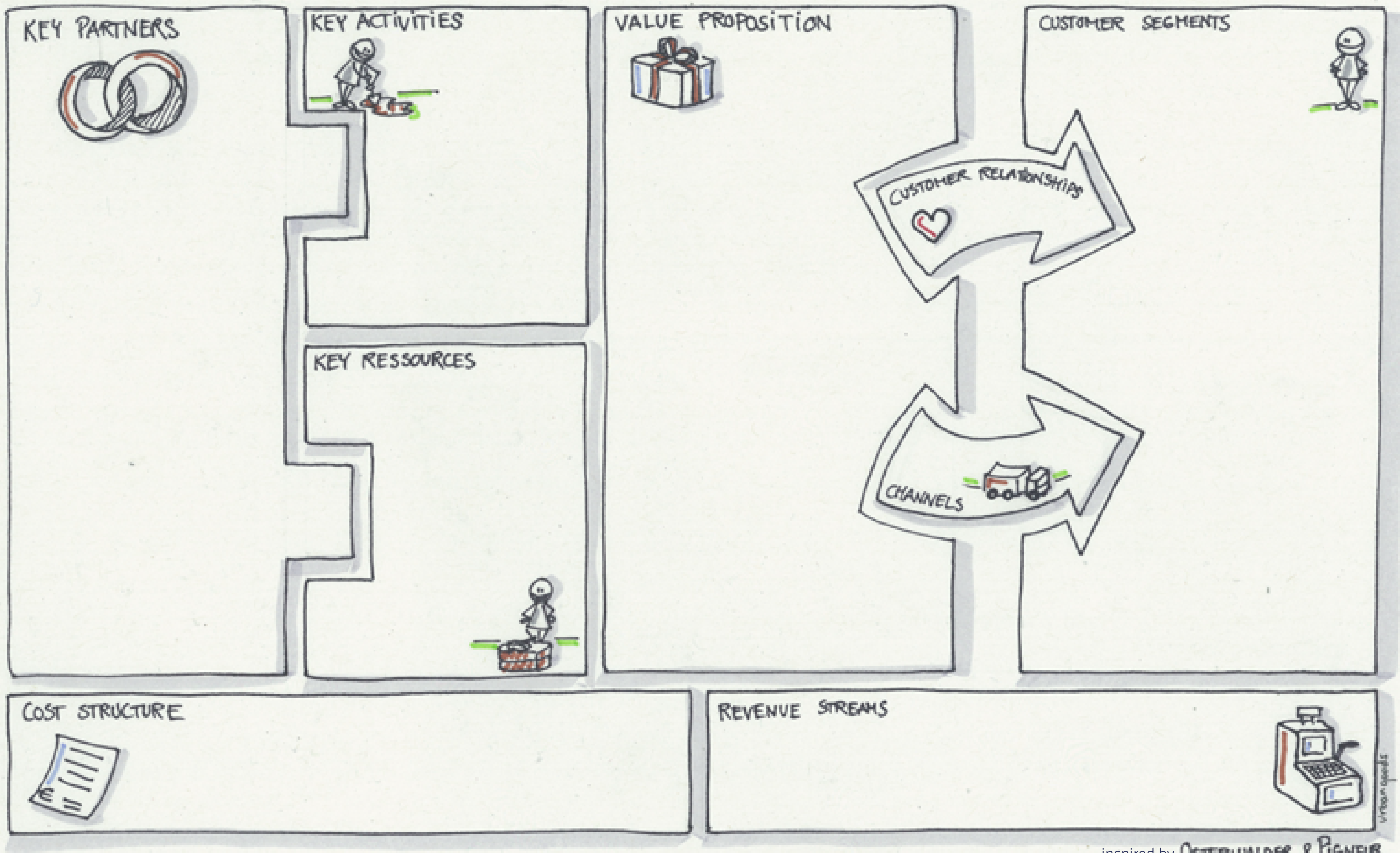
    b. Present the exercise: produce a business model for (a) an internet dating site, or (b) free e-books for students, or (c) other illustrative examples.

2. Provide poster-size copies of the canvas as well as post-its in different colours to help highlight potential customer segments.

3. Divide students into groups of four.

4. Complete the canvas in 30 minutes.

Present in plenary or groups and discuss the interactive and pedagogical features of the canvas.



inspired by OSTERWALDER & PIGNEUR (2000)

EXERCISE:
Mini business model

STEP 6B:

VALUE CREATION AND REALISATION

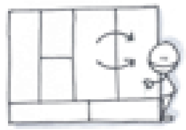
ASSIGNMENT: BUSINESS MODELLING AND HYPOTHESIS TESTING

In this final part of the process it is time to translate the innovative solution and the resources of the group to the nine elements of the business model. The basic work with mapping personal resources constitutes the departure point for the left hand side of the canvas in terms of key resources, activities and partners. Furthermore, the qualification of anomalies and the development of innovative solutions constitute the basis of the value proposition and points to potential customer segments on the right hand side of the canvas.

The first version of a business model forms an appropriate starting point for an evaluation of the potential that the innovation solution possesses to create, deliver and access sufficient value to consider realisation. A further part of this version is an evaluation of the individual-opportunity nexus, which is revealed by the balance between the right and left hand side of the canvas. This balance indicates whether there is a need for adjusting the innovative solution through the value proposition or whether further resources need to be added through partnerships.

Even with a well-documented anomaly and a solid knowledge of the disclosive space, the first version of the business model remains in the best case 'qualified hypotheses', or in the worst case, guesswork based on assumptions about customer needs and willingness to pay. It is therefore central to apply the business model canvas as a tool in a learning process in which the more or less qualified hypotheses are constantly tested and adjusted.

By: Claus Thrane



PROCESS:

1. Give a short lecture on the business model canvas as a tool for testing hypotheses.

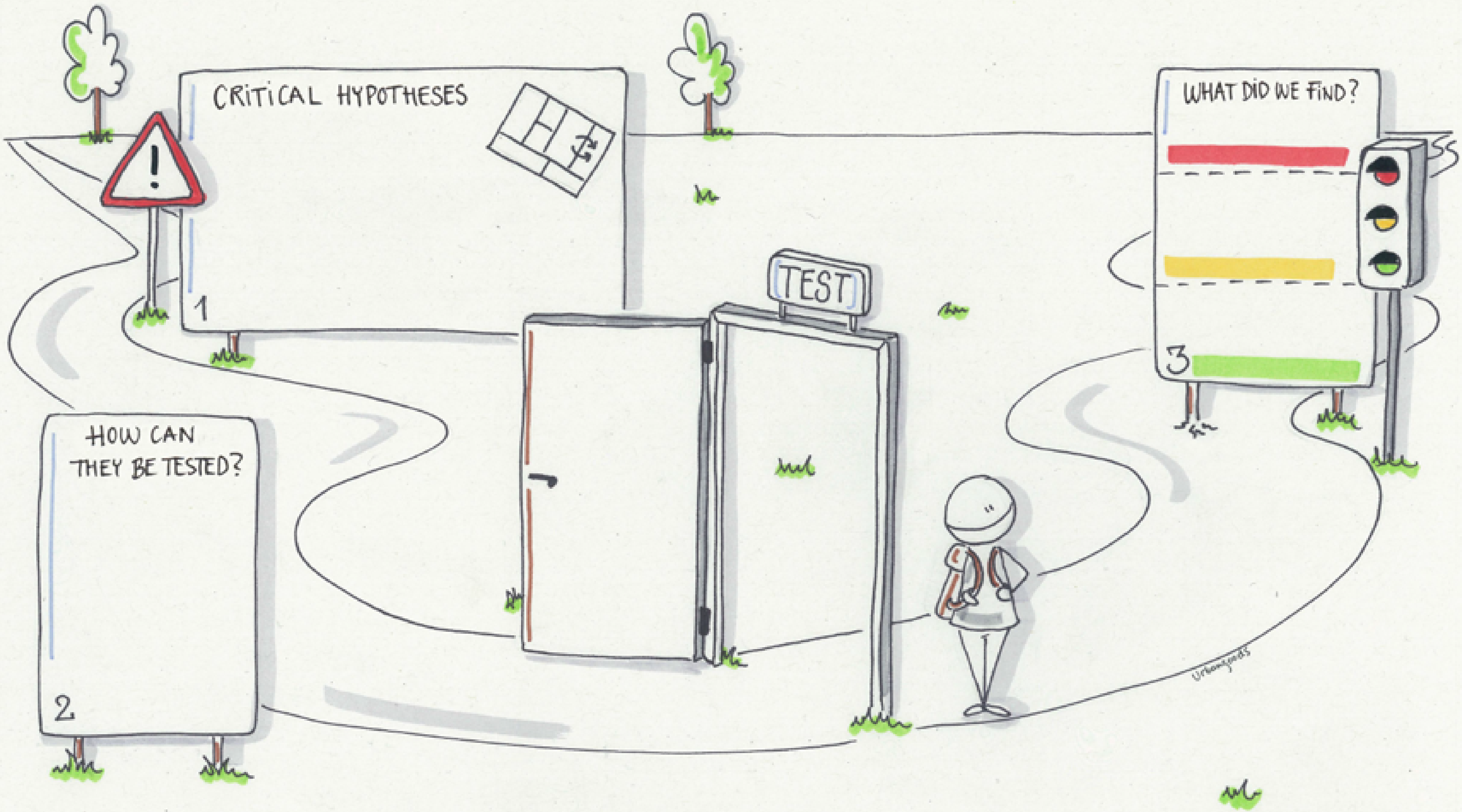
2. Fill out the first version of the canvas based on the qualified anomaly.

3. Short presentation in plenary or groups followed by a discussion of critical hypotheses for the described business model.

4. Review the balance between the right and left hand side of the canvas.

5. Test the critical hypotheses.

6. Adjust the business model based on the above.



ASSIGNMENT:
Business modelling and hypothesis testing

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