TOOLBOX
for creativity, new perspectives and collaboration

Linda Johansson & Max Kleijberg
The Unit for Bioentrepreneurship (UBE) is a unit at the Department of Learning, Informatics, Management and Ethics (LIME), Karolinska Institutet (KI). The mission of UBE is to challenge established ways of thinking and to prepare professionals in the health care industries to manage the unexpected. UBE is the academic unit within the KI Innovation system. UBE develops and delivers education, research and projects focusing on entrepreneurship within academia, industry and society as a whole. As the name suggests, there is a strong connection to life science, where we want to contribute to the development and management of already existing companies. We also encourage new and innovative solutions and activities.

Over the years, UBE has worked extensively with support from and together with Tillväxtverket (the Swedish Agency for Economic and Regional Growth). The KI 2.0 and KI 2.1 projects have been carried out with funding from Tillväxtverket, The Board of Education and the Innovation Office at KI. A government decision in 2007 (S2007/11029/HS) states that entrepreneurship shall be promoted in health care professional education.

More information about the project is provided by project manager Linda Johansson l.johansson@ki.se
Welcome!

Hello and welcome to the toolbox! Our names are Linda and Max. We have created this material for you. We are going to be talking to you as we describe the process that has helped us shape the toolbox and fill it with content. Perhaps you are a teacher or a student, or perhaps someone who is just very interested in learning and how people learn.

No matter who you are, this box is filled with tools that support you as you tackle problems and challenges in a creative way. These tools can also help you to discover new perspectives in your own work and to collaborate with people with other competencies. You are free to use the tools in the way that feels most useful for you. Is there something about a tool that you don’t like? Do you think you can improve a tool in some way? Good! Then change it and use it the way you want to use it. Test it and try again.

We use these tools ourselves in our daily work. Some of them we have developed ourselves, others already exist, for example the brainstorm and the buzz groups. By giving the exercises other names, we connect them to the way we like to use them—in a creative and playful way.

We use these tools in our mission to increase the entrepreneurial awareness with teachers, students and managers at KI. Since we will be talking quite a bit about entrepreneurship in the introduction, we want to point out that you don’t need to work with entrepreneurship to use these tools. Entrepreneurship is “that thing” that makes ideas and inventions become innovations, i.e. solutions that create value for people. Through different projects and processes, we have been able to identify the core of entrepreneurship for the people who work and study at KI. The core of entrepreneurship is about constantly improving health care and creating added/increased value for society. It’s also about creating work opportunities by paying attention to what each individual wants to do with his/her knowledge. We will come back to this further on in the text.

There are a lot of different definitions of entrepreneurship and we are not going to give you another one. We do however want to put the toolbox in a context and share our story with you. Entrepreneurship and the toolbox are a part of that story.

The toolbox is available online. You can download it and the different tools here: ki.se/bioentrepreneurship.

Linda Johansson & Max Kleijberg
How did we end up here?
UBE has been developing and running courses on the topic of entrepreneurship for the past 10 years, on both undergraduate and doctoral/research levels. A number of externally funded projects with the purpose of attracting a wider interest in entrepreneurship among students and teachers at KI have been carried out. The focus of these projects has shifted over the years, but initially focused on the interests and needs of students. Later, the focus shifted towards describing alternative career paths with a specific emphasis on teachers and entrepreneurial learning. Equipped with the knowledge and experience gained from these projects, UBE was provided with an opportunity in 2011 to run a project with a strategic focus.

There are many reasons why entrepreneurship should be enhanced and be included as a part of higher education. A governmental strategy was established in 2009, that states that entrepreneurship should run throughout the educational system (The Government of Sweden, 2009). Another initiative, Strategy 2018 (KI, 2014), also describes the need to integrated innovation into education, and called for the establishment of entrepreneurship as part of the curriculum within study programmes on all levels.

This toolbox has been shaped through many years of work and practice within entrepreneurship and education. It is the product of two projects: KI 2.0 and KI 2.1. Both projects aimed to bring entrepreneurship into the undergraduate programmes of KI. KI 2.0 started in 2011 and finished in 2014, focusing on involving teachers, students and other interested parties from eleven of the undergraduate programmes at KI. The focus in KI 2.1 was to continue with the integration of entrepreneurship by involving KI management, centrally and on a departmental level. This involved a one year project that started in 2014 and finished in 2015.

The KI 2.0 project followed a process inspired by Design Thinking (Brown, 2008). Design Thinking is a method for innovation and entrepreneurship that focuses on the needs of the user. By using this method you work cyclically in four steps: discover, define, develop and deliver. The output from one step is used as input for the next step. These cycles continue until you have reached the desired result.

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The experiences of people with different backgrounds are essential in Design Thinking. As a result, it was important for us to gather people with different range of health care professionals involved in educational programmes at KI. We created work groups with teachers, students, alumni, union representatives and professionals for each of the eleven undergraduate programmes taking part in the KI 2.0 project. The professionals were employed or self-employed. Some of them worked within the county council and others were within the private sector. By combining people with these different experiences and work situations, we included both internal and external perspectives around the concept of entrepreneurship.

The undergraduate programmes and their respective work groups went through a process described in the picture above by participating in four workshops. The output from one exercise was used to contribute to the next step. Finally, a strategic document was developed for each undergraduate programme. On the next page we will talk more about what we focused on in our process.
What is the core?
The question “What is entrepreneurship?” served as the opening question for all work groups. This question initiated many interesting and long discussions about what the concept of entrepreneurship means to us at KI. It was important that we raise awareness about how we understand entrepreneurship for two reasons, 1) in order to continue working with entrepreneurship at KI, and 2) to make the entrepreneurial spirit a part of how we relate to learning and part of our professional future. After extensive discussion in the KI 2.0 process, we found that the core of entrepreneurship at KI is about:

- contributing to better health care
- providing and creating work opportunities
- creating added value for society

We want to be involved and contribute to the development of health care. The health care system and professionals working within the system should be equipped to support the people who need help. We want to contribute to the creation of more work opportunities, including self-employment. We want to create value for our fellow citizens and for ourselves by helping students and teachers to turn their passions into careers. This requires an approach that is open to new ideas, fosters creativity, and illuminates new possibilities.

What are our needs?
In order to be able to work more creatively, there are a number of aspects within our organization that should be developed. We need to market ourselves better; both our knowledge and our contribution to society. If you can clearly explain your skills and competencies to others, you are better equipped to show others how you can create value through your work. We also need to foster a better sense of self-worth within certain professions. A belief in the value of one's work and one's self are tightly linked. All health care professions play an important role in addressing the healthcare challenges and opportunities in society, and should be respected accordingly.

Clinical placement is an area that requires some extra attention. Students at KI often conduct their placement periods in workplaces that offer traditional professional roles. What if we opened our minds and created possibilities for our students to see and experience new areas and workplaces? Imagine a dental hygienist student spending a couple of weeks at a candy company or an occupational therapy student working with an ergonomic project at an architectural agency. The knowledge we have can be used in areas outside of health care, which expands the career opportunities for our students. This need has also been identified within the undergraduate programmes at KI.

To fulfill these needs, we need in-service training and continuous education for our teachers. We need time to be able to discuss, develop, exchange experiences and learn new things. We also need meeting places and spaces where we can meet and work together. Working together within our own organization is extremely important but can be difficult, and for different reasons. The discovery of new and creative ways of working together is much easier to attain if we can meet in person. Unfortunately, we are sometimes separated by geography and also by the different methods and languages used within our professions, which can lead to misunderstandings. Tools are needed in such cases to help us to understand each other.

By creating this toolbox, we want to contribute to the fulfillment of the needs identified in our process. While we have borrowed some tools from other professional areas and used them in our own work, we have also created some tools ourselves. We encourage you to use them in your daily work regardless of whether or not you are a student, teacher, researcher, administrator or manager.

What about the future?
The labor market is constantly changing, and the only thing we know for certain is that we don't know what it will look like in the future. This is why we need to prepare our students, teachers and the educational system to be as flexible as possible. Studying to be a nurse, for example, doesn't mean that you will spend the rest of your life working in a hospital. You also may have completely different thoughts and ideas on how and where you want to apply your knowledge and skills. If we dare to lift our heads to see new possibilities instead of falling back into old routines, we have every chance to develop a sustainable educational system.

New and unexpected challenges in our society demand new and creative solutions. The tools in the toolbox offer simple strategies to support you in dealing with these challenges. Find your creativity and discover how you can contribute to the continuous development of health care, society as a whole and yourself. Create value!

Use the tools as a starting point, and add or remove parts so that the tools best serve your purpose. Use the tools as a starting point, and add or remove parts so that the tools best serve your purpose. You should be able to use the tools with simple props. Get out your crayons, pads and papers! You can find the toolbox online, where you can print the tools and work sheets separately. You will find a link on the UBE website: ki.se/bioentrepreneurship

Does the world need another toolbox? Well, it depends on how you look it. We think that KI needs one, especially because it is a huge and complex organization with a range of different needs determined by where you work in the organization. The KI 2.0 and KI 2.1 projects were carried out with the purpose of implementing elements of entrepreneurship in our undergraduate programmes. Working with these projects made a few things very clear to us: we see a need for meeting spaces, a need to enable us to better learn from each other, and a need for time to reflect on our work. The toolbox provides one way for people to meet these needs. Gather your colleagues, your friends or people preparing to work together in the future, and identify the tools best suited for your task or project.

Reference
How does the toolbox work?

The toolbox contains tools for each phase in the Design Thinking process. We have organized the tools so that you can see the phases in which the different tools are useful (according to us). Some tools can be used in different phases of the process depending on the purpose of your work or project.

- **Discover**
- **Define**
- **Develop**
- **Deliver**

This example shows that the tool can be used in the “Discover” phase.

Some tools demand worksheets. You will find the worksheets at the end of the book. This symbol shows that there is a worksheet connected to the tool.

This symbol shows that the tool can be used individually.

This symbol shows that the tool can be used in a group.

This example shows that the tool can be used both individually and in a group. It works in both the “Discover” and “Deliver” phases of the process. The example also shows that there is a worksheet connected to the tool.
1. Get tangled up
2. Strength lies in differences
3. Circular creativity
4. Analyze this
5. Buzzing bees
6. Make your brain rain
7. Find your dream job
8. Rummage around the room
9. Zoom in, zoom out
10. "What if..."
11. Reverse thinking
12. Many minds, many solutions
13. Get things done

Worksheets and examples
Get tangled up

What?
This is a tool that will help you kick-start a group. It gives group members a chance to get to know each other and to find, sometimes, surprising connections with absolute strangers.

Time?
15-20 minutes.

What is needed?
We recommend groups of 6-8 people. If you are working with a big group and you need to break into a set of smaller groups, it would be good if two people facilitate the exercise of splitting into smaller groups. After groups have been established, give every group a ball of yarn (each group a different color, at least 50 meters long). The yarn will represent the connections that exist between the people in the group. Take away all tables, and make sure that there is enough space for each group to sit or stand in their own circle.

How?
1. Invite the participants to stand or sit in circular groups.
2. Simplify the exercise using an example of a connection. Invite some volunteers and use a ball of yarn to show how the exercise works: “In this exercise we want to find connections between the participants and get to know each other better. One participant begins holding the ball of yarn and starts to talk about him/herself: what his/her work is about, interests or something else that he/she wants to tell. When another participant discovers a connection, he/she raises a hand and asks to take the ball of yarn. The person initially holding the ball of yarn keeps hold of the end of the thread. The ball is passed on and the next participant continues to talk and links to the point of connection. And so on. This continues until there is no yarn left, or when the group feels that they are finished.”
3. As facilitator you go around to the groups and ask how it’s going, clarify things and help out if it’s needed.

Why?
We are all connected to one another in some way. Regardless of how specialized your profession, you will always be able to find connections to the work of those in other specialties or fields. Perhaps you have not realized it yourself yet? To get tangled up (literally) can also build a stronger and more cohesive group because each participant gets a chance to talk about him/herself, find opportunities for collaboration and put their own work in a bigger perspective. The more tangled up the better.

4. Are there groups where participants find it hard to find links? Encourage them by providing examples and suggestions of topics they can use to talk about themselves, and encourage them to be creative when looking for links.

5. Round up the session by bringing the small groups together and let them meet in a general and open group discussion. What kind of connections did they find?

Hints!
When you finish, you can ask how the participants experienced the exercise. Did they find many links in their groups? Are there groups with fewer connections than others? Why might this be? Be open for feedback.

Extroverted participants may take a lot of space and monopolize the ball of yarn. As in every group activity you, the facilitator, need to keep an eye on those in the group who are more introversive. Encourage to participate and share their thoughts. Remind the participants to talk with everyone in the group and allow each participant an opportunity to come forward.

Put on some music in the background if you feel this could help participants to relax and provide a cheerful atmosphere. Take pictures of the different webs that the groups create for a colorful memory.
Strength lies in differences

What?
This is a tool that helps you to see what you can contribute with, i.e. your knowledge, your competencies and your interests. This can also help people in a group to learn from each other and shed light on existing competencies of group members.

Why?
With the help of this tool, you can lay the foundations of good group processes by identifying your and others’ T-shape. The T-shape shows the depth of knowledge you have (the vertical part of the letter T) within a specific area or profession. It also shows what you are curious about, what other interests you have and your capacity to work across professional boundaries (the horizontal part of the letter T). You can do this alone and focus on your own competencies. If you use this tool in a group, it becomes clear which competencies there are among the participants, both on an “expert level” and an “interest level”.

What is needed?
Each participant needs a worksheet and a pen. As facilitator, it is good if you have the example adjacent to the worksheet for your reference.

How?
1. Ask everyone to use the worksheet and write down their own deep knowledge on the vertical part of the letter T. On the horizontal part they write down what they are curious about, what they want to know more about, or what they would like to do.

2. Give the participants enough time and encourage them to interact.

3. When you notice that everyone is finishing up, you can give the participants the opportunity to present their T-shape. Encourage the others to comment and maybe even add things if they know each other. Also try to find connections between people in the group and identify differences. Identify the diversity and bring it to attention.

4. Ask the participants if those things they are curious about match the skills and deeper knowledge that others in the group have. Maybe these people want to work together!

5. If you do this exercise to start a group project, it could be good to ask which skills are available in the group that could help to execute the project. Ask also which skills and what knowledge the group would need. Do you need to complement with some expertise in the form of more group members/project members?

6. Take notes and share them with the group after the discussion.

Hints!
If it’s going a little bit slow you could help by explaining that deeper knowledge (vertical) is about specific knowledge and that the horizontal aspect is about things they may like to do in their spare time, i.e. things that inspire them or maybe a job they dreamt of having when they were children.

If you notice that participants find it difficult to formulate their deep knowledge or those areas they are interested in, get help from the other participants in the group who maybe know them (“But you know a lot about xxx”).

Read more
Circular creativity

What?
This is a tool that opens up a discussion around what creativity entails and how people deal with uncertainty.

Time?
3 minutes, plus time for discussion.

Why?
It's easy to forget that we are all creative beings, but our creative confidence may have been bruised while in transition from childhood, adolescence to adulthood. This tool will help you to rediscover your creativity by starting out with 30 empty circles on a piece of paper. What do you fill the circles with? What ideas are born?

What is needed?
Each participant needs a worksheet and a pen.

How?
1. Instruct the participants that they have three minutes to transform 30 circles into something we can recognize. A few participants may ask for more specific instructions, but encourage them to interpret the short instructions above exactly as they would like.
2. When three minutes have passed the participants will show what they have done with the circles.
3. Discuss the result in the group. What do you see for similarities and/or differences? Did they successfully fill all the circles? Did they find it easy to follow the instructions? How did they interpret the instructions?
4. Use these questions to spark a discussion around creativity. Ask the participants how they understood the instructions. Did they experience the activity as easy or difficult to interpret? This can lead to a discussion about how we are affected by uncertainty.
5. You can choose to repeat the exercise if you notice that participants are inspired after the discussion. Is there a difference? Are the participants borrowing ideas from each other? Was it easier this time around? If yes, why? Do the participants feel more confident about using their imagination?

Hints!
Don't judge the results of the participants or the interpretations of the instructions. To dare to be creative with the instructions is an important part of this tool.

Encourage wild ideas and new interpretations. To steal the ideas of others can be a good thing, they can build on each other and become even better.

Read more
Analyze this

What?
This tool focuses on Strengths, Weaknesses, Opportunities and Threats and is called SWOT analysis. It gives you support for discussion and enables you to discover and define different needs.

Time?
30-60 minutes.

Why?
This tool clarifies what you can influence yourself in the short term (internal) and what you can’t influence yourself (external). Those things that can be affected on the short term are highlighted as strengths and weaknesses. Those things that you can’t influence yourself are exemplified by opportunities and threats or risks. In this way the SWOT analysis helps you to analyze both the internal and the external environment in and around your organization. Maybe you discover things you didn’t see before. You get help to make decisions and to develop strategies for the future. You even get an overview of your organization, your project, or your idea.

What is needed?
Each participant needs a worksheet and a pen. As facilitator it is good if you look at the example adjacent to the worksheet for your reference.

How?
1. Give each participant a SWOT analysis worksheet.
2. If you are working with a bigger group, you can divide participants in smaller working groups.
3. Let the group/groups discuss and decide which strengths and weaknesses they experience internally.
4. Ask them to continue to discuss but to focus on the different opportunities and threats/risks they see externally.
5. Gather everyone and let the groups share their results.
6. Compile on a whiteboard (or a flipchart paper) all the strengths, weaknesses, opportunities and threats/risks so that everything is in one place.
7. Use the results of the groups as support to make decisions, continue with orientation, or develop strategies and solutions.

Hints!
You don’t need a group to do a SWOT analysis. An example of when you can individually make use of the SWOT tool is when you are facing a career change. You can either use your current career or a wishful career as starting point for your analysis.

Read more
Buzzing bees

What?
This tool aims to engage everyone and bring new energy into the group discussion. It can also help participants involved in a discussion, workshop or maybe a lecture to get to know each other. You have surely heard about “buzz groups” or “bee hives”.

Time?
2-5 minutes, depending on the aim.

Why?
Buzz groups work as a warm-up in a bigger group, for example at the start of a group discussion or a case seminar. It is an effective way to get everyone to actively participate in a bigger discussion. Even if not everyone is getting a chance to speak in the bigger group, the buzz group tool makes sure that all participants have a chance to speak with someone. It is a way to get less active participants engaged and, at the same time, those that take a lot of place to listen to others. Through buzz groups the participants will get the possibility to mirror their ideas in a small group before these ideas are raised in a bigger context.

What is needed?
Nothing special is needed—only participants. If you want to include a summary of the discussion in the buzz groups you can use paper, post-its and/or a whiteboard.

How?
1. Ask the participants to make groups of two or three people. Give them a specific question that they will discuss, and inform them that they will do this for a couple of minutes (or the time that you think is needed).
2. Ask them to turn to each other and start the discussion.
3. When time is up, ask them to come back to the big group discussion.
4. Ask them what they talked about in their buzz groups. If you intend to summarize the discussion, you may want to gather material or information and summarize now, or leave it to a later moment in the discussion.

Hints!
Buzz groups can be used several times during a single discussion, especially if you feel that it’s going a little bit slow and the participants aren’t willing to discuss. In this case break the discussion and let them go back to their buzz groups for a while—this can accelerate the discussion. You can also allow participants to make new buzz groups, in this way they get to speak with other participants.

Read more
It’s difficult to find the original source of buzz groups. We suggest that you search independently online.
What is needed?
You will need post-its (if you want), pens, paper, a whiteboard or a wall to put up post-its. If you have access to a camera you can use it to document the results. As facilitator you will also have prepared a well-defined question or a topic that the group will brainstorm around.

How?
1. Begin by introducing the question or the topic. Make sure that the group is on the same page and that everyone has a shared understanding of the topic around which the group will brainstorm.
2. Begin individually. Give every participant time to come up with thoughts and ideas around the topic and to write them down on post-its.
3. Don’t criticize or question during the idea generation phase, and save questions and comments for the discussion.
4. When every individual participant is done, you can start to share what you have come up with by putting the post-its on a whiteboard or wall.
5. Each participant should talk about their thoughts and post-its as she/he puts them up on the board.
6. If there are questions in the group, for example if a participant wants to ask questions about an idea that someone else has, let those come up now. Ideas that are irrelevant, or that the group cannot come to an agreement about can be taken away.
7. When you have gotten this far, you can choose either to continue the discussion by developing the ideas on the board, or to start grouping the ideas that are presented.
8. Look for connections and interpretations. Also look for things that are not on the board. Gaps can be interesting too.
9. Wrap up together with the participants by going through the ideas, the groupings, or the summaries that have been agreed upon.

Hints!
Create a good and creative atmosphere within the group. Be well prepared as facilitator, know your group and do your best to create a safe feeling of trust within the group. The more the group can let go of inhibitions, the more ideas will be generated through the brainstorm. Let the exercise take some time, the participants should have enough opportunity to exhaust their ideas.

Read more
A large amount of literature about brainstorming is available online. Here are some suggested readings, partly about how you can facilitate the exercise, and partly references to Osborn, the father of brainstorming:
Find your dream job

What?
This tool helps you to think creatively around career possibilities, by taking a closer look at your own knowledge, interests and societal challenges. Could you combine these in order to find your dream job?

Why?
It can be a big challenge to find your place in the labor market, especially if you choose to take a different route than what is typical within a profession or field. Maybe you want to change your career path and do something completely different with your knowledge. In this case, the challenge is to find your place within a new area. This tool focuses not just on your knowledge, but also on other things that could influence your decisions. What are you interested in and what is happening in society? You can use this tool individually but also in a group. When you use the tool in a group, you will create a dialog between participants about the future and what opportunities are available.

Time?
30-60 minutes.

What is needed?
Each participant needs a worksheet and a pen.

How?
1. Create groups of about 6-8 people. Try to mix the groups as much as possible, judging from what you know about the participants. Give each participant a worksheet and some pens.

2. Give them time to list the knowledge they have, their interests and future challenges on the worksheet.

3. When the participants are done, ask them to move on to list career possibilities. The idea is to let the participants combine their knowledge, interests and future challenges in order to create possible career paths and possibilities. Ask them to be concrete at this point, maybe they can even come up with a title for a new career path or profession.

4. When everyone is done, you ask each participant or each group to present their ideas and thoughts. How do they think about what they would like to work with in the future? Do you see patterns or trends?

5. Are they getting inspired? Ask what they need help with in order to develop their ideas further.

Hints!
This exercise should of course evoke excitement and inspiration; it shouldn’t feel annoying or difficult. Aim to maintain a high energy level in the room. Encourage the participants to think outside the box and to dream big. Don’t judge the result. Use the result to start a discussion. Do you see some trends in the groups? Do the participants need to complement their education with other courses or something else? How can you help them to reach their goals? Are there people in your network that they could benefit from or contact? See the possibilities!

If the people you are working with are students, it could be interesting to begin to talk early on in their education about how they think about their career possibilities. This could help you and them to visualize the future and what they can do with their knowledge, both during and after their studies.
Rummage around the room

What?
This tool will help you to find new and creative ways of working with the environments and rooms you often use for meetings or teaching/learning. How often do you use your surrounding environment as a resource?

Why?
This is a tool that will help you think in a new way concerning the working and teaching/learning spaces within which you often spend time. Take a few minutes to think about how you could rearrange furniture and equipment to make it easier for your colleagues or students to talk to each other. Let the room support you in achieving your goals by rearranging it to fit the activity in which you are about to engage. The purpose is to actually use the room as a resource.

Time?
30-60 minutes.

What is needed?
You will need pens, papers, post-its, and big papers or a whiteboard. Use a camera to document the different suggestions.

How?
1. Start by expressing what you want to do in the room. What is the purpose of the activity and how can the room help you?
2. Draw a map of the room.
3. Draw pictures or models of tables, chairs, whiteboards, projectors – anything that is in the room today. Also, remember to take the people in the room into consideration in your planning.
4. Make a map of the room, just the way it is set up today. Place the tables where they are standing today, the chairs where they are today, and so on. Take a picture.
5. Now you can get creative and try new solutions. Rearrange! Take a picture for each suggested rearrangement so that you will remember each one.
6. Think about how each suggestion will influence the way you work and interact with others.
7. Reflect, test and evaluate the different suggestions. If you can – rearrange the actual room.

Hints!
Involve students or colleagues by letting them use this tool. Ask them how they would like to design their learning and working environments. What happens in different rooms and how big a role do different objects, furniture and people play?

Are there other environments and rooms where you could teach or have meetings other than the classroom and meeting rooms? Dare to try!

Do you have any good suggestions on how to use a room for different activities? Take pictures and put them on the wall in the room. You might inspire others and give them new ideas on how to rearrange the room.
**What?**
This is a tool that will help you put your task in a bigger perspective by looking at the details as well as the surrounding systems.

**Why?**
Have you ever felt so stuck in your process that you are not moving forward with a task, problem, challenge or question? This tool will make you raise your head and look at your task from different angles. What systems are affecting it and what details matter? This tool will challenge you to zoom out to see how your task is connected to other systems, organizations and people. Further, by zooming in, you will get a better understanding of how your task influences others. You can use this tool in different phases of a process, partly to get multiple perspectives on your task and partly to kick-start creativity.

**What is needed?**
Every participant needs a worksheet and a pen. To prepare for your role as facilitator, we suggest that you look at the example in connection to the worksheet for reference. We also recommend that you watch the movie Powers of Ten.

**How?**
1. Define the task with which you or your group will be working.
2. Tell participants that you will be zooming in and out on your task to discover new perspectives.
3. Use the worksheet. If you want the participants to work together, you can also draw the worksheet structure on a whiteboard.
4. Write down the task on “level 0”.
5. Start by zooming out and taking a step away from the task. What surrounding structures (systems, stakeholders, etc.) are there, and how are they affecting the task? As you change levels you take a step upwards and away from the task.
6. Once you are done zooming out, you switch and start zooming in by looking at how people are affected by the task. For each level you take a step inwards.
7. If there are not enough levels on the worksheet, just add more levels and continue until you have finished.
8. Challenge yourself and the group when it gets difficult to zoom in and out. Give the participants enough time, welcome crazy ideas and be careful with negative feedback. There is no right or wrong!
9. Remember that everyone is different. We see things and perceive systems and details in different ways. This can lead to very interesting discussions.
10. When you finish this exercise you will have a list of different levels on which to approach the task and possible challenges. Use the list to create solutions and ideas.

**Hints!**
This tool is inspired by the short movie Powers of Ten, created by Charles and Ray Eames in 1977. Charles and Ray were designers, and the movie is about the relative size of things in the universe and the effect of zooming in or out by a factor of 10. There is a link to the movie and more information about the work of Charles and Ray Eames below. The movie illustrates how all of us are part of other systems and environments affecting us, even though we might not see it. It is a visualization of science to make it more accessible to the public.

**Read more**
“What if…”

What?
This is a tool that will awaken ideas and fantasies about future possibilities. The unthinkable today might be a part of everyday life tomorrow.

Time?
60 minutes, depending on how much time you want to spend on this exercise.

What is needed?
You will need paper, pens, post-its, and a whiteboard or big papers.

Why?
We need to adapt and prepare for the unknown since we have no idea what society will look like in the future. To ask yourself “What if…” can help you to understand how your work can be affected by future developments. “What if…” questions are meant to provoke and make you want to explore future situations; without limiting your thoughts to the present time.

Hints!
Your own imagination is the only thing limiting you when it comes to drafting/formulating a “What if…” question. There are a few examples in the picture.

How?
1. Write down a couple of different “What if…” questions in the group (or by yourself if you are working alone). You can also brainstorm if needed (look at the “brainstorming” tool). Be creative—in the future anything is possible!

2. When you have decided on which questions to use, ask them to the group. The questions should be used in relation to your work, your research field or the project you are working on at the time. Generate ideas about different consequences that the questions might bring.

3. Is it possible to draw conclusions? Do you realize things that will help develop your work?

4. Document the thoughts or realizations made by the group so that you can use them when you continue working with your project or task.

Read more

Stickdorn, M., & Schneider, J. (2011). This is Service Design Thinking. Hoboken, New Jersey: John Wiley & Sons, Inc.
11 Reverse thinking

What?
Are you stuck in your problem solving or caught in a negative thought spiral? Then this is the tool for you. To be able to use it you need to know how to conduct a brainstorming session (see the tool “Make your brain rain”). You also need to express the problem you will be starting with clearly. The tool is called reverse brainstorming.

Time?
30-60 minutes.

What is needed?
You will need post-its (if you want them), pens, paper, and a whiteboard or a wall to put notes on. Bring a camera to document your results. A problem, question or subject needs to be clearly stated before beginning.

How?
1. Identify the problem, it should be clear what it is. Write it down on a paper or on the board.

2. Reverse the problem by asking the question “How can I make the situation even worse?”

3. Use regular brainstorming to develop different suggestions and solutions to your reversed problem. Allow for different ideas and don’t question the participants’ ideas.

4. When the brainstorming session has finished and you feel satisfied with the number of suggested solutions, you will reverse the suggested solutions and they will become solutions to your initial problem.

5. Look at the suggestions produced by the reverse brainstorming. Ask yourselves if there are any possible solutions to your problem.

Why?
One of the reasons for using reverse brainstorming is to avoid getting caught up in thinking that solutions have to be realistic or feasible. This tool will help you to open up your mind, to think big and not allow yourself to be limited by what is possible. To give an example, let’s say that a teacher is struggling with students who are not showing up to scheduled lectures. By reverse brainstorming this problem you will get the following question: “How will I get even fewer students to attend lectures?”

Hints!
Create a good atmosphere in the group. Crazy ideas and suggestions are okay. Really.

Read more
You can find a lot of information about brainstorming online. Here are a couple of suggestions, both on how to facilitate a workshop and on Alex Osborn, the father of brainstorming:
**What?**
This tool can be used in a group of people who share a common problem or challenge. The tool enables every person to develop solutions to a problem. It gives participants the opportunity to put ideas forward without having to talk in front of everyone in the group. The tool is called brainwriting.

**Time?**
30-60 minutes.

**Why?**
This tool is suitable for quiet and more introverted groups where you might suspect that idea generation may not come easily. This tool can work for groups with a shared problem or in groups where each participant has a problem of their own. Everyone helps to find solutions which often leads to the creation of more ideas.

**What is needed?**
Each participant needs a worksheet and a pen.

**How?**
1. Start by identifying the problem(s). Each person writes down the shared problem, or his/her own problem, at the top of the worksheet.

2. The next step is to write down suggestions to solutions. Each person passes their worksheet to another person who then writes down ideas and suggested solutions to the problem. Each participant could be asked to write down one suggestion, or participants could be free to write down an unlimited number of ideas. These ideas can serve as the foundation for more thoughts and suggestions that will be generated later.

3. Continue to pass the worksheets around the group, who add more solutions and use existing suggestions as a starting point. The worksheets should be passed around until they are filled with solutions. If the group generates many ideas and more space is needed, just keep on adding new worksheets.

**Hints!**
This tool also works well in big groups. There really is no limit to the amount of participants that can join.

**Read more**
Get things done

What?
This tool will help you to get things done. It's time to create an action plan! The action plan is a document that can be used by you and your colleagues, and you can refer to it during your project or during your evaluation phase. It will take you from idea to action and all the way to the finish line.

Why?
It's easy to stop with just an idea and never take it further. An action plan will help you to plan your project strategically and to break down the different parts that need to be done in different phases. You will also get a general view of the project, and be able to distribute responsibility and put up time frames—both short and long term. This general picture will help you to reach your short or long term goals. The action plan can be a part of the project plan, or the business plan, if you are planning on starting a company.

Time?
At least 60 minutes—it depends on how much time you have spent preparing your project or task.

What is needed?
First of all, you need something to start with; perhaps the aim of the project or a challenge you will be working with. Perhaps you want to start with needs or wishes that are connected to your goals. When you create your action plan you can also use other tools like brainstorming as one part of the process.

Each participant needs a worksheet and a pen. If you choose to work in groups, you can use a common worksheet, a whiteboard or a computer.

How?
1. The first step is to start with the aims, needs or challenges you will be working towards/with.
2. The next step is to break the aim apart to find the first thing you need to do to achieve this aim.
3. How should this first thing be done? What actions need to be taken?
4. When should these actions happen? Set fixed time frames, so that you know when these actions should be taken/finished.
5. You will possibly have to divide up responsibility and make one participant responsible for each step. Who is in charge of each step?

Hints!
It is important to point out that you can create an action plan in many different ways, and with different headlines. It depends on the type of project with which you are working. We have made some suggestions on the worksheet, but please remember that these headlines are just suggestions. You are welcome to use other headlines that are better suited for the project goals/aims/needs you started with.

Make sure that the action plan doesn't end up in a drawer somewhere. Put it on the wall of your office or on a common board so that everyone involved can see it and be reminded of what they are supposed to make sure gets done.

Just a word regarding your aims/goals: it can be a good idea to take a closer look at SMART goals (Specific, Measurable, Attractive/Achievable, Realistic/Relevant and Time-bound) and how they are framed. Smart goals can get half the work with the action plan done.

Hints!
We recommend that you search online for project management literature if you're interested in reading more about action plans. There are many examples of suggested structures for action plans. Here is just one example:

Read more
We recommend that you search online for project management literature if you're interested in reading more about action plans. There are many examples of suggested structures for action plans. Here is just one example:
Worksheets and examples

Strength lies in differences
Circular creativity
Analyze this
Find your dream job
Zoom in, zoom out
Many minds, many solutions
Get things done
Worksheet: Strength lies in differences

Interests and curiosities: these are fields that you are interested in and want to know more about.

Deep knowledge: areas or topics that you know a lot about, perhaps you’re even an expert.

Example

- radiation and society
- traveling
- martial art
- security industry

- language

- technique
- everything about radiation
- anatomy
- radiography
- nursing
- physiology
- radiology
Worksheet: Analyze this

<table>
<thead>
<tr>
<th>Example</th>
<th>Worksheet: Analyze this</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Opportunities</strong></td>
<td>opportunities</td>
</tr>
<tr>
<td><strong>Strengths</strong></td>
<td>strengths</td>
</tr>
<tr>
<td><strong>Internal</strong></td>
<td>internal</td>
</tr>
<tr>
<td><strong>Weaknesses</strong></td>
<td>weaknesses</td>
</tr>
<tr>
<td><strong>External</strong></td>
<td>external</td>
</tr>
<tr>
<td><strong>Threats</strong></td>
<td>threats</td>
</tr>
</tbody>
</table>

- **Internal**:
  - Good teachers
  - Lots of experience
  - Plenty of knowledge

- **External**:
  - Small classrooms
  - Overworked teachers
  - Big interest in the subject area
  - Climate change
  - Financial state of the world
  - Political shifts
  - Globalization
Worksheet: Find your dream job

Personal interests

Knowledge

Career opportunities

Future challenges

Example

Personal interests

Knowledge

Career opportunities

Future challenges

well informed patients

yoga/physical activity

traveling

TV series

yoga teacher

biostatistics

genes

IT-medicine

ageing population

TV series

well informed patients

yoga/physical activity

traveling
### Worksheet: Zoom in, zoom out

<table>
<thead>
<tr>
<th>Level 5</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The health care system on a national level</td>
</tr>
<tr>
<td>Level 4</td>
<td>The health care system on a regional level</td>
</tr>
<tr>
<td>Level 3</td>
<td>The entire hospital and staff</td>
</tr>
<tr>
<td>Level 2</td>
<td>Emergency room</td>
</tr>
<tr>
<td>Level 1</td>
<td>Waiting room</td>
</tr>
<tr>
<td>Level 0</td>
<td>Improve the waiting experience for a patient in the emergency ward</td>
</tr>
<tr>
<td>Level -1</td>
<td>The patients in the waiting room and the emergency ward staff</td>
</tr>
<tr>
<td>Level -2</td>
<td>A patient in the emergency room</td>
</tr>
<tr>
<td>Level -3</td>
<td>The patient’s disease</td>
</tr>
<tr>
<td>Level -4</td>
<td>The daily life of the patient, work and family</td>
</tr>
<tr>
<td>Level -5</td>
<td>The feelings and thoughts of the patient while he or she is waiting</td>
</tr>
</tbody>
</table>
Worksheet: Many minds, many solutions

We are going to find solutions for this problem:

Write/draw solutions for this problem!

Example

We are going to find solutions for this problem:

Bad atmosphere in the working team

Write/draw solutions for this problem!

Work out together

Dance together

Discuss the problem with HR

Fewer and shorter meetings

Change work environment more often, have meetings outside

Tell each other when we are feeling irritated or angry

Say hello and goodbye when we’re arriving or leaving

Rearrange the furniture, refresh the work environment
<table>
<thead>
<tr>
<th>Aims, needs or challenges</th>
<th>How should this be done?</th>
<th>When should this happen?</th>
<th>Who carries the responsibility?</th>
</tr>
</thead>
</table>

**Example**

Create a better atmosphere in the working team

1. Fewer and shorter meetings
2. Organize a kick-off
3. Organize a Christmas party

1. Right away
2. After the holidays
3. December

1. The boss
2. The administrator
3. The organizing committee
Thank you George Keel for helping us with the translation of the toolbox. You rock!

There are many more worthy of our appreciation and love. We give thanks to them in the Swedish version of the toolbox.

Max Kleijberg, designer UBE
Max has a background in industrial and experience design. He is passionate about working together with other professionals to improve the experience of health care. His favorite tool is the one that makes him reverse his mind.

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Linda Johansson, project manager UBE
Linda has a lot of experience working with educational and strategic projects in health care professional education. She likes to turn questions and concepts over in her own head (but preferably together with others) to create change. Her favorite tool is the one that requires a ball of yarn.

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Challenges in society demand new perspectives, collaboration and creative solutions. The tools in the toolbox provide you with simple ways of dealing with the challenges. Find your creativity and discover how you can contribute to the development of health care, society and yourself. Create value!