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# Entrepreneurial Momentum for Sustainable Growth

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## Abstract

Public and private sectors view entrepreneurship as a movement of active, creative people who exploit opportunities under uncertainty, create new products, jobs, contribute to economic development of region. Entrepreneurs with their ‘fresh’ vision and agility play an important role in creating the sustainable future for all by overcoming social and environmental challenges. Based on real cases, we illustrate the path travelled by entrepreneurs from identifying the problem and creating the platform for communication with stakeholders to building solution and scaleup. We demonstrate our ‘4A engine’ approach to maintain the momentum for startup consisting of 4 phases: Attention, Actualisation, Attraction, and Action. Even if the start is successful, statistics show that many startups fail between 18 and 24 months. Therefore, we ask startup founders about their practice and biggest surprise they came across, essential choices and important decisions they made. Readers who find this practice useful will reflect by writing a Letter from the Future.

**Keywords:** entrepreneurship, entrepreneuring, entrepreneurial mindset, startup, sustainable development, best practices

## 1. Introduction

*“...the private sector contributes to the achievement of sustainable development and poverty eradication, and <...> partnerships with the private sector play an important role in promoting entrepreneurship, generating employment and investment, increasing revenue potential, developing new technologies and innovative business models and enabling high, sustained, inclusive and equitable economic growth while protecting workers’ rights.”*

*Entrepreneurship for sustainable development. - Resolution 73/225 adopted by the UN General Assembly on 20 December 2018: <https://undocs.org/pdf?symbol=en/A/RES/73/225>*

In today’s society there is a great demand for entrepreneurial behaviour. Public and private sectors view entrepreneurship as a movement of active, creative people who exploit opportunities under uncertainty, create new products, jobs, contribute to economic development of the region. Entrepreneurs, with their ‘fresh’ perspective and agility, are able to play an important role in creating sustainable future for all by addressing social and environmental challenges. So currently, entrepreneurship is viewed as a catalyst for sustainable development [1].

The public sector applies entrepreneurial approaches to efficiently develop new types of services for citizens; in particular, social entrepreneurship is developing. Platforms for Communities of Practice are being created (for instance, DESPRO's Community of Practice for Sustainable Development [2]), which promote the culture of management by projects for sustainable development.

Besides, in order to overcome poverty, the public sector is deeply involved in supporting and promoting entrepreneurship ecosystems, the mission of which includes creating favourable conditions for starting business ventures and creating jobs as a return on public investment [3]. But they should understand the entrepreneurial style of thinking and the nature of innovation processes in order to develop ecosystem-building policies for startups (also called '*business incubators*', '*accelerators*' or '*hubs*').

Today it is no longer enough for companies seeking sustainable development to be effective in operation (e.g., reducing waste streams) and successful in the market by constantly improving their products. We also need to make the most efficient use of resources (including energy and materials) to eliminate any harmful effects on the environment, health of a person and a whole community, vitality of future generations throughout the life cycle of products [4]. Therefore, we can define the following criteria for viable innovation: ZERO WASTE, ZERO EMISSION, ZERO TOXIC, ZERO NONRENEWABLE RESOURCES, and ZERO DISCRIMINATION.

In order to compete and scale up, startups equip themselves not only with some technological or product innovations, but also with completely different ways or models of doing business. Investors today look for both solutions (technologies or products) they need and business models that work. From an investor's perspective, it is no longer possible to wait until startups have scaled up, and then invest in the ones that seem to work well. Due to a highly competitive environment in the capital market, investors are forced to invest in a much earlier phase in order to '*qualify*' for later stages.

The recent analytical studies point out the necessity to focus on the early stages of the development of enterprises (ventures), new activities, operational models and practice, in order to determine the factors of sustainable development for entrepreneurial initiatives [5, 6].

Thus, investors have to be able to understand, evaluate and support an enterprise at its early stage, when not only a new product is created, but also certain promising ways of development and the systematic role of the enterprise in the market are determined.

But even if the start of a venture is successful, practice shows that more than half of all startups fail in the first 5 years, and this failure peak occurs during the first 18–24 months after their onset [7].

In this chapter, we first give the definition of who entrepreneurs are, how this definition has acquired different meanings over the last century. We also define the main characteristics of the entrepreneurial '*mindset*' and describe the model that helps an entrepreneur to start his/her own venture. Since entrepreneurship is, first of all, a practice, we talk to the founders of startups and learn where the initiative to start their venture came from, what the main reason for creating the startup was, what big surprise they came across in the first 18 months, and what essential choices and important decisions they made.

## **2. Who are entrepreneurs, and how do they change the world?**

The first term we need to define is an "*entrepreneur*". This word comes from a French word '*entreprendre*', which has been used since the 12th century. It literally means: "*go-between*", by finding out the way to provide a product or service to

the customers; or “*undertake*”, take on certain functions, obligations or complete responsibility for a new venture.

In the middle of the 20th century, entrepreneurs were seen as innovators implementing “*new combinations*” (innovations) to initiate the process of economic development by introducing new quality into the product, new products, finding new demand and new markets, conquering a new source of raw materials and creating a new field of activity. Thanks to Joseph Alois Schumpeter [8], the term ‘*entrepreneur*’ has become widely recognised, and today entrepreneurship is often presented as a *force of ‘creative disruption’* [9].

In this regard, Peter Drucker wrote: “*Innovation is the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or a different service*” [10].

Opportunities and innovation are integral parts of entrepreneurship and, in particular, the act of implementing something new in the face of uncertainty is one of the most difficult tasks of the entrepreneur as it requires determination and perseverance, readiness to manoeuvre. The entrepreneur has to be able not only to create new value and conceptualise new products but also to offer a completely different business model that will demonstrate the potential to scale up. These innovative business models are often the basis of competitiveness for startups, while traditional technological innovations (like transistors or lasers, computers or smartphones) are usually associated with large corporations.

In an effort to fulfil their mission, entrepreneurs must think in a systemic way, move with acceleration and be ready to quickly change both tactics and strategy, perhaps even very dramatically, in response to new environmental challenges.

Thus, entrepreneurship is the accelerated movement of entrepreneurs driven by needs through uncertainty and ambiguity, ‘*burdened*’ with intent and seeking to fulfil their mission as soon as possible: to conquer the market by generating innovations and validating products, to open up new opportunities for localisation of capital, to earn a profit and to ‘*warm up*’ the market itself.

According to G. Onuoha, entrepreneurship is “*the practice of starting new organisations or revitalising mature organisations, particularly new businesses generally in response to identified opportunities*” [11]. Moreover, such creation of an organisation or simply a product occurs in the conditions of uncertainty and ambiguity. Entrepreneurs have to become not only practitioners but also experimenters to minimise the product development cycle and to enter the market as soon as possible with a validated (tested) product. Eric Ries introduces the notion of the Lean Startup [12] as an effective approach for creating and implementing new initiatives, examining customer needs and testing one’s vision, adjusting it as quickly as possible by continuously receiving customer feedback [13].

The more modern definition of entrepreneurship is also about people who change (transform) the world by solving urgent problems, creating and presenting innovative products or new systemic solutions.

Thus, an entrepreneur:

- pays attention to the challenges facing humanity, sees critical situations and imagines how everything could ideally be with the same resources used and with minimal impact on nature made;
- selects target groups, determines needs, sees opportunities, and generates ideas;
- perpetuates his/her talent to meet the needs and desires of people in goods, services, experience/impressions, and develops solutions giving preference to systemic transformations;

- accepts the uncertainty on the market, defines the goals for movement in the space of three coordinates: technical feasibility, 'executability', and market perceptibility;
- makes his/her mission attractive to him/herself and to others, by validating both products and business models;
- acts, undertakes (=entreprendre) responsibility, demonstrates determination and push, ingenuity and resourcefulness for passing obstacles;
- generates innovations in the market, 'warms up' the market and creates a place to localise capital and profit;
- creates ventures that both provide the market with products and services, and are also responsible for reducing waste and using resources efficiently.

As stated in this chapter, the leading role played by entrepreneurs in society has historically emerged: they are one of the most important resources and segments of economic growth. But entrepreneurs play the same leading role in the development of social innovation. Therefore, the end result of their actions is associated with a business venture in the private sector, and it is also a driving force for social, public and cultural progress that ensures community health: zero waste, zero emission, zero toxic, zero non-renewable resources, and zero discrimination.

In our understanding, entrepreneurship is about: **people** who transform a problem into an opportunity, success in a dream, construct their future, and accept responsibility for their own choice and destiny; and **freedom** – constructing your life on your own terms, with no bosses, no restricting schedules and no one holding you back.

Entrepreneurs are able to take the first step into uncertainty in order to make the world a better place. Hence, we view *entrepreneurship* as an act of disobedience. Humans are rebels from the first moments of their birth, rebels against what they think is 'wrong'; and some people can see peace only in storms. This is exactly what entrepreneurs are doing as the most powerful transformers in the world.

And today a new term has been coined – Entrepreneuring, which means acting as an Entrepreneur. We define *entrepreneuring* as the art of making practical application of marketing principles and human-centred design thinking, research and innovation, requirements and limitations to solve problems, create new values and design innovative & sustainable business models, and as the process of creating a venture and its scaleup.

Great engineer Theodore von Karman once said, "*Scientists study the world as it is, engineers create the world that never has been*". And today we can continue his thought and say that science studies the world as it is; engineering creates the world that has never been; and entrepreneuring changes the world for the better.

### **3. How can I maintain momentum for startup?**

This section focuses on the issue of how we understand the concept of '*mindset*'. Usually, it can be understood as a way of thinking; that is, a set of beliefs, opinions and thoughts that determine our attitude to the challenges we have received, to our mistakes or our successes, our personal interpretation and our response to events, circumstances and situations; they enable us to create a space for knowledge, for new ideas, for unleashing our talent; they make us thirsty for freedom, cognition and success.

Typical characteristics of individuals with an entrepreneurial mindset include:

- love for freedom and willingness to change the world,
- openness to see opportunities where others see only annoyance and problems,
- courage in actions that correspond to one's values,
- effectiveness, focus on results,
- willingness to learn and not be afraid to experiment,
- take full responsibility for progress, fulfilling one's mission.

The freedom and need for achievement, creativity and innovation, internal locus of control, hard work and reasonable risk taking with possible benefits – all these are integral parts of an entrepreneur's profile. Entrepreneurs can best use available opportunities to solve problems, meet needs even with limited or uncontrolled resources through innovation.

### **3.1 Attention = everything is possible**

If we do not like something, when something annoys us, we can use this situation as an our opportunity to abandon the status quo and change the world around us.

Attention is our level of irritation; and this irritation actually stems from the fact that a person strongly believes that something needs to be done very differently, not the way it is going on now, when excessive resources are wasted and a negative impact is made on nature, health of an individual person or even communities. And this is seen both from the standpoint of those who live in this situation and the entrepreneur who seeks to change it. This requires understanding other people, knowing their values, habits, their problem(s), their 'pain', and searching for alternatives to solve their problem(s).

We might be too self-confident, but our confidence is based on our strengths and beliefs, and we are also directed by intuition which suggests that there should always be another way to do something, in a more effective, interesting, even 'cool' way.

We cannot act like everyone else, which requires us to think differently (expand the horizons of the situation, see new opportunities and set goals), reflect, communicate, generate ideas, put everything into a nice concept (idea) and act decisively (quickly make and timely implement managerial decisions, see their role in overcoming obstacles or through the prism of the expected result), persistently pave our way to the goal, or to get out of it on time in order to start a new venture.

We need to be open to the world; if there are any weaknesses, we should not be ashamed to ask for help, find a common interest and establish a partnership, capture others' interest in our plan (a new approach to meeting needs or a new model for running a business), and it will make us 'smart'. By 'smart' we mean being productive, efficient, interesting and competitive.

Now that the opportunities are open, we need to be confident in our actions: that is, always know exactly what we are doing and why we are doing it. For this purpose, we recommend, instead of analysing an idea (or new approach) and focusing on how good it is, turning back to the problem we are going to solve. And it is important to make sure that there is a certain group of people who need an urgent

solution to this problem (or 'pain'): i.e., it is necessary to determine the price they pay for living with this problem or even 'pain'; it is necessary to find out whether they are ready to continue to suffer this 'pain', and how often they suffer from its 'attacks'. It is equally important to know what benefits they expect if this problem is solved. Are there any economic, social and emotional benefits that might surprise them? However, if we start not with a problem, but with an idea/new approach, we can end up with the fact that there will be no interest in it. However, when starting with the problem that our potential customers face, there is a better chance to understand the existing contradiction and to create exactly what is in demand; and then we will be able to create an effective business model.

So, on the one hand, we consider current needs, and on the other hand, we may know which technologies should be used, but now we need to focus on the goals we can achieve if we get enough customers and through partnering with them. It should be noted that customers need to be available to us, and they can be sought from potential competitors. If we are able to change the habits of competitors' customers and attract them to us, then this is the most effective way to get 'warmed up' customers who are willing to pay if we meet their expectations and provide them with what they sacrificed when buying products from our competitor.

### **3.2 Actualisation = passion**

Actualisation is when we focus on an innovative solution to the problem (how to meet the need of potential customers) and our capability of conceptualising, creating and providing a new value onto the market (developing a business model), our vision of systemic transformations.

When we already know what to do and why we need to act, two groups of questions arise:

1. Why Me, and why do I need it? How does this activity, its result correspond to my dreams, my self-realisation? What team do I need to assemble, with what set of necessary skills, competencies and way of thinking?
2. What will I be like when this initiative comes to an end, how will we celebrate our success? That is, we must know not only how to 'commence', but more importantly – how to complete this mission in a sustainable manner.

And thus we come to the conclusion that our goals have actualised our desire to 'immerse' in entrepreneurship. Now we need to be balanced, paying attention to every detail. Each action must be passed through a 'sieve' of its purpose and expected result. And when you have some activity in the plan, ask yourself: "*What's the point of doing this?*" That is, we have to be sure that we do these actions thoughtfully and for the right reason.

The vision of achieved result and the intention to work hard in conditions of uncertainty stimulate creativity, experimentation, obtaining quick results and learning. Work becomes a passion, admiration and joy. Entrepreneurs do not know exactly what to expect at every turn of their path, however, their worldview is energy, their creativity is a well-chosen route, their product is a means of movement, and their business model is a prospect for scaling up. Constant generation of ideas is a weapon against turbulence and a means of overcoming all kinds of obstacles, while focused attention and active processing of information give the entrepreneur the opportunity to manoeuvre. Entrepreneurs strive to reach the finish line, because this finish is a created value that changes the market, adds value to the company, and makes them successful. But such a huge desire to come to the

finish line first can sometimes replace the realisation that sometimes it might be worth getting off the track (route) in time. And it is also an entrepreneurial move: you want to pay the lowest price if your mission fails. Do entrepreneurs like taking risks? In my opinion, they do not. The risk must be calculated and compared with the benefits we want to get.

### **3.3 Attraction = we are interconnected**

We are characterised by valence, we create connections, work hard to build a team and expand our network, build our ecosystem for a startup where we are consulted, motivated, united and stimulated. But in order to remain free, we must refine ourselves, learn, study and improve, never stop to become better or reach high standards. Such benchmarks are a kind of energy level that we have to achieve to leave the comfort (valence) zone and move on.

We are not learning for the future, we are learning for the present, because it is not known what knowledge and skills will be needed in five to ten years, but it is well known what is required today. Besides, skills and experience are placed above knowledge when there is a need for new professionals for your team. We have no choice but to constantly learn and practice, applying knowledge and mastering new skills to support changes in our way of thinking and behaviour.

Now we in the team are *'burdened'* with the idea of how to meet existing needs, what will be the benefit to those who use our offer. And this is not some ingenious idea stuck in our heads: we have created a prototype or even a minimum viable product (MVP) to communicate with potential customers. We need to show the *'traction'* – that is, the monetisation of our offer.

If we are planning to raise capital, we need to have a clear answer to investors' questions: *"How will you make money for us?"*, And the answer can only be given when we have a clear, understandable, efficient and even innovative business model, taking into account trends in the industry where we are going to do business, the value created for a specific target group (its size and availability), competitive prices and distribution channels, prospects for expanding our customer base, available resources for organising production, and partners, clear milestones (stages) that allow proving the sustainability of our development, the comparison of cost and revenues – our ability to scale up. Successful entrepreneurs are those who make their customers and partners successful in meeting their needs and achieving their goals.

And of course, we need to be a good salesperson: knowing how to promote ourselves, our ideas, products, our team and our company. Those who will listen to us should not only hear and understand what we say to them, but also resonate with what we strive for and tell others about our initiative.

### **3.4 Action = the time has come**

Once we have started the business, it becomes 100% our commitment, and from now on it depends

1. on how much we have:

- ambition and passion; whether we trust ourselves and believe in ourselves, whether we believe in the ability of our team and the importance of the mission we perform;
- confidence in needs; whether we know how to hear our customers and partners, whether we understand their problems and interests;

- willingness to adapt to the situation and make a choice in favour of the best options;
- flexibility – to see multiple opportunities;
- persistence – to reach the finish line;
- positive thinking, drive, striving for the best and change perception of challenges as opportunities to learn, improve;
- determination coupled with a high tolerance for uncertainty and ambiguity, as well as the ability to make quick decisions to save time;
- devotion to victory over competitors or just a desire to do our job well;
- courage, ability to assess risk and reward, willingness to accept well-calculated risk;
- strong desire to learn as soon as possible about the ability to scale up; or fail as soon as possible to give up our passion, ‘idée fixe’, and pay as little as possible for it; and

2. on how quickly we can accelerate and gain velocity that will create the momentum for take-off of our startup.

In all actions and situations it is necessary to look for lessons to learn from and factors to increase productivity and efficiency, keeping in mind the possible impact on environmental sustainability. Each mistake is a higher level of mobilisation, a new option in the product, adjustments to the business model, or a corrected course of further progress. We need to be smart, insightful, curious and inquisitive. Do not perceive everything as it is; try to look further beyond the horizon. For example, just because you need some light to read a book in the evening does not mean you need a simple light bulb; you probably need a well-thought-out and designed lighting at home. That is, we must learn to look beyond the horizon and anticipate trends, develop competitive advantages under certain constraints, before others can at least begin to understand them.

Thus, the objectives of the *Entrepreneurship Development* is to celebrate such values as freedom and self-confidence, to cultivate a deep awareness of the situation and balance in action, to encourage self-actualisation in life, creativity and the implementation of the most essential first steps. The entrepreneur’s task is to learn how to be successful and create an appropriate ecosystem around him/herself where he/she is able to implement own endeavours.

**Table 1** presents the 4A approach [14], which we call ‘4A engine’, to maintain the momentum for startup. It consists of 4 phases.

The speed at which your startup develops (scales up) depends, on the one hand, on the type of the market, and on the other hand, on establishing strategic partnerships with customers, suppliers or on entering the network.

Especially in the initial phase of a startup, it is important to prove the viability of the startup’s business model – which investors call ‘*traction*’ (or ‘*grip force*’). Founders demonstrate that their business hypothesis is based on reality, and they seek not just to survive in competition but to influence the market and build a great company. They know their clients very well, and they are constantly experimenting with product features to maximise the profitability from each new group of

<i>Phase / Competences</i>	<i>Process components</i>	<i>Segments</i>
<p><i>Attention:</i>                      Demonstrate the ability to determine a problem /'pain' and its cause (core).                      Demonstrate the ability to see the ideal situation and existing functional contradiction.</p>	<p>high level of irritation – something a needs to be done very differently                      a problem of a specific target group(s)                      the target group is accessible for the entrepreneur                      industry analysis</p>	<p><i>Opportunity</i> for entrepreneurs</p>
<p><i>Actualisation:</i>                      Demonstrate the ability to identify a <u>need</u> that will affect a prospect customer's behaviour.                      Find a system (innovative and comprehensive) solution.                      Demonstrate the ability to present a solution in a creative way (make a pitch).                      Make sure that the development of this solution is within our capabilities.</p>	<p>the impact of the need on customer behaviour                      focus on an innovative solution to the problem                      benefits for the target group                      our intention and professional team who believes in the success of your mission                      competitive advantage, customisation of product</p>	<p><i>Capability</i> of conceptualising and creating something new and in demand</p>
<p><i>Attraction:</i>                      Demonstrate the ability to develop a business model (for driving a solution onto the market) as our innovation and competitive advantage.</p>	<p>value for a specific target group                      customer and delivery price, types of revenue                      resources, partners and action plan                      risks; cost and expenses</p>	<p><i>Feasibility</i> of a business model</p>
<p><i>Action:</i>                      Demonstrate the ability to discuss business model with potential customers, suppliers, investors, form a partnership.                      Demonstrate the ability to sell vision.                      Demonstrate agility and creative approach to business scaleup.</p>	<p>making a compelling offer for our customer                      planning effective ways of delivering products/ services and getting revenue                      getting first customers who demonstrate 'traction'                      developing a loyalty program</p>	<p><i>Validity</i> –working model and <i>velocity</i> to take off</p>

**Table 1.**  
*Four phases of maintaining the momentum for startup.*

customers they attract. They are able to getting sales in those market segments that they are targeting. Most importantly, they have a lot of data on the direct income and expenses of their startup related to a specific business model and calculated per unit. That is, they know how much it costs to attract one client, and how much they can earn on each of them. Considering the data they receive from these first customers, they can estimate how big the market for their product exists. And now, with all this knowledge, an entrepreneur is in a very good shape to attract venture capital investments and achieve extremely rapid growth.

#### 4. Practicing startup operation and scale-up

In this section, we are going to explore the practice of entrepreneurs seeking to change the world. One of them, Max (29), created a company, which was developing a tool – a 'Smart Glove' – with the mission of ZERO DISCRIMINATION,

to enhance communication of people with hearing impairments who experience communication problems with outer world, using the sign language. Here are his remarks about its purpose:

*We wanted to give people who are hard-of-hearing a way to better break out of their communities and to lower their communication barrier, because unfortunately not a lot of people know the sign language. So, for example, if I cannot talk, it's difficult for me to go and do like day-to-day simple functions. For example, if I go to the store, how do I ask a person about the properties of some product? How do I ask for an accommodation I want to get? If I go to a doctor, how do I explain my problems, what's my issue, how it hurts? For instance, in this doctors' situation, usually people need to take someone with them who understands sign language, who can describe their problems to the doctor, which obviously is not optimal for privacy reasons. I do not need other people to know what's wrong with me, medically speaking. So our purpose was to give better tools to people who experience these problems and help them communicate with people around them on a different level.*

Our other interlocutor is Mark (35), CTO in a big outsourcing IT company. His passion is making creative ideas come true. He is the core developer and CEO of DigiSCity energy management platform. DigiSCity is the intelligent smart city system, which aims at optimising energy resources and consumption. It can be used by business enterprises and official government municipalities. Using this system, managers can quickly gather the consumption data and deeply analyse energy effectiveness of the buildings as well as respond to the detected anomalies and provide behavioural pattern analysis.

We have conducted interviews with the startup founders approaching them with the following questions:

1. How did you perform in the first 18 months from product, customer, team, brand, partners' perspective and what were the biggest surprises you faced in this period?

*Max: - It was basically a students' project, and at that time me and co-founders did not have much experience in coding and development, none of us had started a startup before. So the biggest surprise was how well-received our project was from the very beginning. Because within 6 months from the start of the development we won Startups competition here in Ukraine, and then within 9 months we went on to head the list in the global software development competition sponsored by large IT corporations. After that, within a year we received a 50 thousand dollar-grant from one of these corporations, which was a tremendous help to us in continuing this project development. So this winning streak and media attention as well as the interest of the community were really surprising and encouraging to us.*

*The other surprising thing was that a lot of the investors were really unwilling to look into this project and entertain investing such a technology, because it was not like a 'billion-dollar' market there. So they did not see it as a great business opportunity, more as a social project. This is why they were unwilling to risk investing significant sums of money, as they did not see sky-high rates of return and huge profitability. Obviously, it would never be like another Facebook, or Google, or something like that.*

*Mark: - The project was launched in August 2014 at the Smart Energy hackathon – a great choice for starting one's ECO-project. Every city resident might have the feeling that some things in the city could be done better.*

*Provision of the energy management systems in Lviv-city was launched in 2005–2006. But the authorities and existing system had already reached the technological threshold, and it was necessary to have some new tools to convert them into a real SmartTech. So the idea of DigiSCity project deals with a smart grid level energy*

management system. It helps us to collect and organise energy consumption data and other related things: processes in buildings, replacement of appliances, resident behaviour which can be anonymously implicitly extracted and analysed in order to understand energy consumption.

The very first steps were completed with the core team. Specialists experienced in data science, machine learning and full-stack development quickly created the prototype and platform ready for demos. We were working for ourselves just being excited about the idea. After completing that stage, I hired several developers and QA's to support the DigiSCity. Actually, that was a starting point of a commercial project.

## 2. What were the most important decisions and essential choices you have made since you launched your startup, and which choices and decisions do you regret?

Max: - I spent more than a month in California, in Silicon Valley, looking for investments, and also looking for advisors and support from the community. That was one of the most important decisions for us as a team, because first of all, I got to visit a school for deaf children in the US, I saw the kind of care and education they were getting, and I received a really good feedback on our product, on how we expand the opportunities for people suffering from those conditions. But there were some negative decisions. For example, due to disagreement between co-founders, we declined to cooperate with one of the defence contractors, which saw a potential military application for our project. It was not the goal that we had in mind when we started the project, though it could have been a good source of financing for it, which could also help develop civilian applications for that. But due to our internal disagreements, we failed to follow that offer. And I think in a long term it impacted our project very negatively, unfortunately.

Mark: - We managed to engage in the city municipal industry without considerable efforts. The success story cannot be written without people. The most important decisions were to involve the right people to play the right roles. It is not as easy as it may seem to be. Nevertheless, things cannot be perfect. Sometimes communication breakdown happens, and you cannot influence some decisions.

## 3. Which decisions influenced your company expansion?

Max: - Unfortunately, we had to close down the project because we failed to secure any additional investment for further development, and our prototype was not ready to go to market. The main factor why that happened is that, first of all, we failed to get the recognition rate to a sufficient level. There was lots of confusion between the gestures, and some of them were not easy to tell apart, like a classic example that we would give is the gesture for a farther and a gesture for a grandfather. They are basically the same gesture as far as the hand itself goes, and we only have the glove, right? But we needed a way to tell apart – which part of the body that gesture was being applied to, which was not possible with the existing sensory instrumentation. And also the sensors that we used on the glove did not have enough precision and were getting worse over time. For example, after three months, the sensors would become less responsive and would give many false positives. So those were some issues, and as a result, we failed to improve the recognition rate, which was definitely a problem for us. But also we received a lot of feedback that the technologies we were using would become obsolete really quickly. A lot of people, especially in the investment community, had the opinion that video recognition would become much better, much faster, and we would not need any gloves or other sensors. We could have, for example, a video camera on the necklace, and that camera would capture the gestures and basically recognise them in real time. This has failed to happen so far, after seven years, so obviously some people were really wrong about that. But since we were

*new to this, and it was our first project, it was hard for us to ignore this feedback from the investors' community. And after basically everyone told us this was going to happen, it was hard to say "no, we are right, this is going to work much better, much faster and we are going to do it". So those were, I would say, the main issues that affected our operations in the first two years. And after two years we failed to secure investment and had to close down the project.*

*Mark: - The right people on the right places. Here is the explanation of creating the team: always look for guys with creative imagination. Frankly speaking, choice of the team is the fundamental goal. Let us not forget about public presentations and participation in different IT meetings. You never know where you can meet the inspiration and business partners. And of course, international relationships: for us the only way to be really successful is to launch sales of our product abroad. But your business side and presentation quality must be ready for that.*

#### 4. Could you say any words of support to young entrepreneurs?

*Max: - From our experience, I would say: you have to start thinking about raising money early on. Because when you start running out of money, it is too late to start raising it. You have to have at least 6-month worth of your expenses before you start raising another round. This is not a fast process, it is unlikely that you will meet someone who will like your presentation tomorrow and give you money in two weeks. It does take time to set up meetings with investors to give them your presentation, to hear and agree to some conditions. For example, the process of receiving the grant took us 8 months. So you have to think about money early on and plan for that, otherwise you will not have enough resources to sustain in your product development. Also you have to start working with your users as soon as possible. We tried to do this as much as it was feasible, we engaged our local community – the Ukrainian Association of the Deaf, and we tried to recruit users to use our devices and give us feedback. But unfortunately in our local conditions it was somewhat difficult because not a lot of people were technologically adapted, and that was back in 2012 when even smartphones were not as wide-spread. It also required some capital investment on our part.*

*So, planning for raising money, and working with the users – these are the most important issues that we overlooked, and I wish you would not.*

*Mark: - Soft skills, first of all communication skills, are playing a huge role. People are different by their nature, and you should understand it and take it into account. Work for a big company helps me a lot, because project management along with technical skills taught me to find a balance in communication. I prefer to connect this topic with emotional intelligence and business motivation. And, of course, never be afraid to lose a game, this is quite important.*

*Personal development and openness to others is very important. After all, when you create a product that you do not have yet, you will hear: "There is no such thing because no one needs it" or "It already exists, so why are you doing it?" So you need to understand why you are doing this, and use this as the main direction: move on and never stop!*

## 5. Conclusion

In this chapter, entrepreneurs are presented as a driving force for economic, social, public and cultural progress and as those who:

- pay **attention** to the challenges facing humanity, see critical situations and imagine how everything could ideally be, given the same resources are used and the minimal impact on nature is made;

- identify (**actualisation**) the need of a selected target group and find a systemic (innovative and comprehensive) solution, which provides benefits that this target group has not yet received;
- develop a business model (for driving a solution onto the market) as an innovation and competitive advantage and makes their mission **attractive** to themselves and to clients, partners, and investors;
- create ventures (**action**) that provide the market with products, services, jobs, capital and profit, enabling high, sustained, inclusive and equitable economic growth.

A new concept of *Entrepreneurship* is introduced (which means acting as an entrepreneur) and defined as the art of making practical application of marketing principles and human-centred design thinking, research and innovation, requirements and limitations to solve problems, create new values and design innovative & sustainable business models, and as the process of creating a venture and its sustainable growth. We offer entrepreneurs the **4A** approach (**attention, actualisation, attraction** and **action**), which serves to some extent an algorithm for transform a problem into an opportunity, success in a dream, construct their future, and create the momentum for take-off. This approach has been successfully utilised by start-up founders who share their experiences in this chapter of how they performed during their first 18 months. Factors ensuring sustainable growth are:

- young people, even when they lack enough experience but have a strong desire to change the world for the better, have more chances to succeed in their initiatives, since they are not afraid to “lose a game”;
- it is necessary to explore the problems our potential customers face, the pain they live with, the needs they have, get feedback on our initiative and understand the benefits they can have from the product we are going to introduce to the market;
- it is necessary to create a prototype or a platform for demonstration and to establish communication with both potential clients and investors as soon as possible;
- one of the key success factors is trust among the founders who share common values, have a vision and understanding of why they are in this business; another success factor is involving the right people to play the right roles in the team, since the choice of the team is the fundamental objective;
- when developing a value proposition, it is necessary to use various creative methods, involve in the team specialists with a good imagination, systematic and human-centred design thinking;
- in technology-based business, it is important to determine the technological feasibility and take into account all the technology trends that are evolving rapidly and may affect our business;
- active communications, public product presentations and participation in various events – this is a chance to get partners and customers who cannot be ignored, so we must always be ready for a high-quality pitch;

- the fundraising process should be divided into several steps, instead of concentrating all our efforts to raise big amounts of investment in one step. At the same time, each fundraising step should be made at least six months before the time we need to spend these funds in order to ensure sustainable development.

You have reached the end of this chapter, and we offer to reflect on what you have read. Now you know more about who entrepreneurs are, which approaches they use to create their ventures for sustainable growth, and what practice of such startups in the early stage exists. So now we encourage you to stop for a while and imagine your future. *Write your letter from the future you have created, starting with: “Today I am a successful entrepreneur. How have I achieved it? Why am I proud of it? Why is the next generation thankful for my effort? Here is my exciting story: ...”.*

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## References

- [1] Filser M., Kraus S., Roig-Tierno N., Kailer N., Fischer U., (2019) Entrepreneurship as Catalyst for Sustainable Development: Opening the Black Box, *Sustainability*, 11 (16), 4503, 1-18.
- [2] Katernyak I., Loboda V., Kulya M., (2018) eLearning within the community of practice for sustainable development, *Higher Education, Skills and Work-based Learning*, 8 (3), 312-322.
- [3] Bruton, Garry D., Ketchen, David J., Ireland, R. Duane, (2013) Entrepreneurship as a solution to poverty, *Journal of Business Venturing*, Elsevier, 28 (6), 683-689.
- [4] Larson A. L., (2011) Sustainability, Innovation, and Entrepreneurship, Flat World Knowledge, Inc., 312.
- [5] Wiklund J., Davidsson P., Audretsch D. B., Karlsson C., (2010) The Future of Entrepreneurship Research, Baylor University, 1-9.
- [6] Greco A., Jong G. de, (2017) Sustainable entrepreneurship: definitions, themes and research gaps, Working Paper Series, Centre for Sustainable Entrepreneurship, Entrepreneurial University of Groningen/Campus Fryslan.
- [7] Katre, Salipante Jr P. F., (2012) Start-Up Social Ventures: Blending Fine-Grained Behaviors: From Two Institutions for Entrepreneurial Success, *Entrepreneurship: Theory and Practice*, 36 (5).
- [8] Schumpeter J. A., (1934) The Theory of Economic Development, Harvard University Press, Cambridge, MA.
- [9] Whitelaw L., Garcia-Lorenzo L., (2017) Creative Disruption: The Everyday Innovation Practices of Intrapreneurs at a Technology Company, *Academy of Management Annual Meeting Proceedings*.
- [10] Drucker P., (1985) *Innovation and Entrepreneurship*, Harper.
- [11] Onuoha G., (2007) Entrepreneurship, *AIST International Journal* 10, 20-32.
- [12] Ries E., (2011) *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses*, Crown Publishing, 103.
- [13] Blank S., (2013) *Why the Lean Start-Up Changes Everything*, Harvard business review.
- [14] Katernyak I., Ekman S., Ekman A., Sheremet M., Loboda V., (2009) eLearning: from Social Presence to Co-creation in Virtual Education Community, *Interactive Technology and Smart Education*, 6 (4), 215-222.