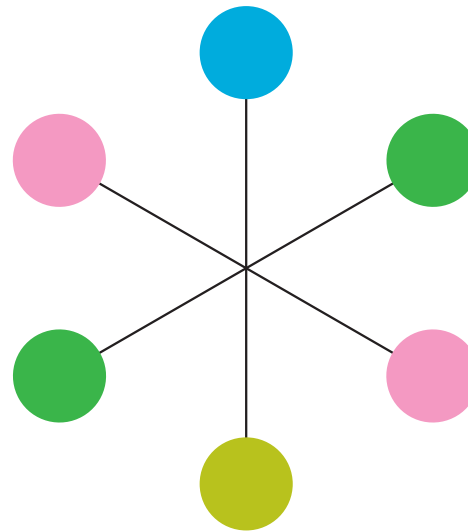




THE SKOLKOVO INNOVATION ECOSYSTEM IN 2035

A joint future vision on and mission for Skolkovo

On the creation of an attractive, efficient and effective innovation ecosystem

December 5th, 2011

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PROLOGUE

In the second half of 2011 our consultancy KVD Reframing (in cooperation with MVAVD) was asked to help the Skolkovo Foundation with the development of a profound and thorough shared vision for the Skolkovo innovation ecosystem in 2035. In the past four months we have worked together with a large number of stakeholders and the Skolkovo Foundation to develop this vision, which we are proud to unfold in the report laying before you.

Together with all contributors we have revealed eight innovation goals that will drive the main actors to engage with and contribute to the 'Skolkovo innovation ecosystem in 2035'. And together we concluded that for Skolkovo to be an attractive, efficient and effective innovation ecosystem, these eight goals should be reflected in the design of the future innovation ecosystem: in its tangible assets like buildings and infrastructure (hardware), in its intangible assets like informal networks, social capital, values and norms reflected in social behavior and in its attitudes towards entrepreneurship (software) and in its organization, strategies and policies (orgware).

At the time of our writing the development of the Skolkovo hardware and orgware is well on its way. Urban planning and area programming for the first building phase in 2014 have been unfolded and a number of world renowned architects and city-planners have presented their designs for parts of the city. Furthermore, a larger number of multinational companies as well as start-ups have expressed their wish to participate in Skolkovo and legislation like tax laws and policies on admissions is in the making.

It is at this moment, with development in full force, that we present the vision for the Skolkovo Innovation Ecosystem in 2035, which focuses primarily on the conditions (hard-, soft-, orgware) and the coherence between these conditions which an ecosystem should possess to be an attractive and effective environment for innovators. And it is at precisely this moment that the stakeholders involved in the development of the Skolkovo innovation ecosystem must begin to take action on it. We have started out with defining a desirable future in 2035, now we must work backwards to identify the hardware, orgware and perhaps most importantly the software that will connect the future to the present. We have only roughly outlined what the implementation of the vision encompasses, and need to start matching these directions to the work in progress. As Richard Buckminster Fuller said 'The best way to predict the future is to design it'. The real work is really only just beginning.

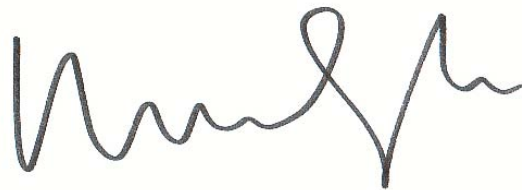
On a final note I would like to add a thank you. We started this project as 'outsiders'. This enabled us to map parts of the context that insiders simply don't see anymore. But none of this was possible without the valuable contribution to the vision of the many 'insiders'. Thank you for this. We hope you experience the vision and ideas in this report as being yours. We have enjoyed working with you in the many workshops during the past months and we are grateful for the way you have welcomed us to join in your work to make Skolkovo a thriving international innovation hotspot. We hope to join you more as 'insiders' in the work that lies ahead of us regarding the implementation of the vision.

On behalf of the KVD/MVAVD team:

Maria Privalova MSc.

Marcel Vroom MSc.

Roald Hoope MSc.

A handwritten signature in dark ink, appearing to read 'Matthijs van Dijk', with a stylized, flowing script.

Prof. Matthijs van Dijk MSc.

December 5th 2011, Amsterdam, the Netherlands

1 GENERAL INTRODUCTION

INTRODUCTION

This report describes the joint future vision on and mission for Skolkovo as developed over the past four months using a methodology called Reframing. It is a way of working developed by Prof. P. Hekkert and Prof. M. van Dijk at the Delft University. KVD Reframing, a Dutch consulting firm owned by Prof. M. van Dijk, has extensive experience in using Reframing for the development of shared visions involving large numbers of stakeholders, both on a national and international scale, and in public and commercial settings. In paragraph 1.1 the Reframing method will be introduced and an overview will be given on why it is a specifically suitable approach for this project. In paragraph 1.2 the project will be described in more detail to give an idea of the activities that have taken place in the past months to produce these outcomes.

ABOUT REFRAMING

The Reframing approach has been described in depth in the book called “Vision in Design, a Handbook for Innovators” which was published this summer by BIS Publishers (figure 1.3). In this paragraph the Reframing method will be introduced and three aspects will be highlighted that make it a specifically suitable approach for the development of a joint future vision on and mission for Skolkovo.

ALIGNMENT WHILST RETAINING SPEED THROUGH BACKCASTING

Reframing is long-term future oriented. It starts with defining a desirable future and then works backwards to identify policies and programs that will connect the future to the present. This is illustrated in figure 1.2. Usually the scope is set one or two decades into the future. A vision is developed for this long-term future (phase 1) and the vision is illustrated with ideas for the long-term future (phase 2). Steps are then defined to attain those long-term desirable ideas and form a strategic roadmap to guide future development within a given domain (phase 3).



fig-1.1: Vision in Design book

Why is this important in case of the Skolkovo Innovation Ecosystem in 2035? Because development of Skolkovo is taking place in full force and care must be taken not to impede on these developments. The best way to do this is by setting the scope to 2035 and working backwards from there. This gives the Skolkovo Foundation an opportunity to steer and align development according to a unifying and unique vision without slowing down the running operation.

A CONTEXT-SPECIFIC APPROACH WITH A FOCUS ON UNIQUENESS AND THE EFFECT ON PEOPLE

Reframing is a context-driven methodology. The future context makes clear what is of meaning for people in the future and therefore reduces the uncertainties concerning doing innovation itself and increases the possibilities for (economical) success. A vision is built using context factors that apply specifically to the domain of choice (in this case to the Skolkovo innovation ecosystem in the long term future). This automatically puts an emphasis on 1) uniqueness of the context (the ‘situation’) and hence uniqueness of the resulting vision and on 2) the ‘soft’

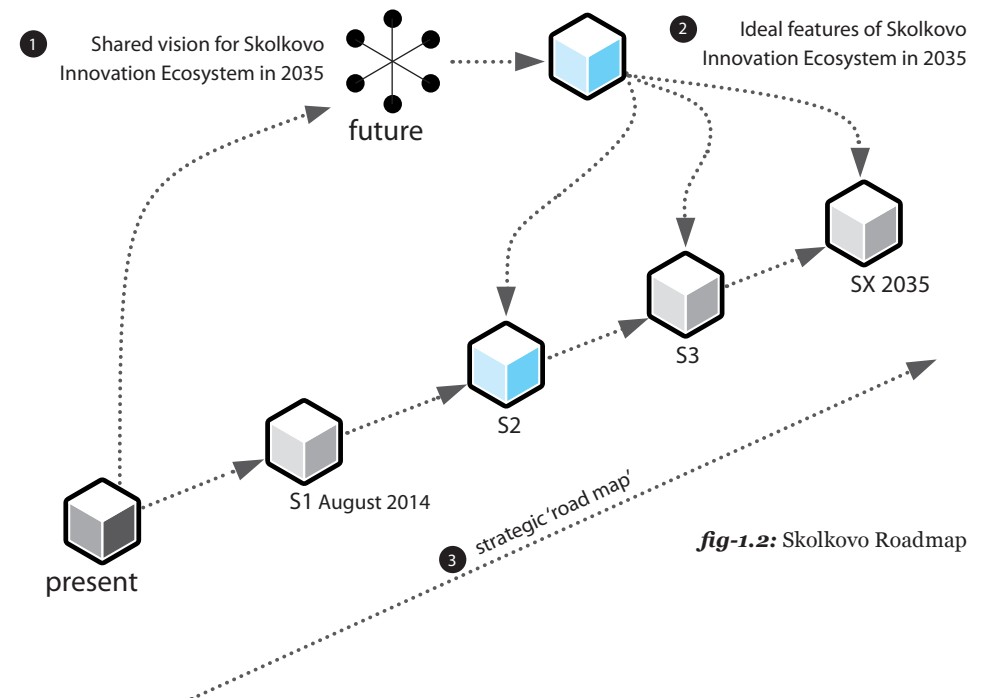


fig-1.2: Skolkovo Roadmap

side of the context, namely factors about people's thinking, feelings or behavior (psychological factors), about people's dealings with others (social factors) and about deeply rooted, often implicit societal norms, habits and values (cultural factors). These factors usually make up the larger part of any given context.

This is of specific importance when developing an innovation hub like Skolkovo. Looking at similar 'knowledge hotspots' and copying the best practices from around the world would seem like a logical thing to do. One could for example look at Silicon Valley and ask "How could we make something like that happen here?". However, as stated above, since such a large part of the context pertains to 'soft' factors, this copying of best practices can be an extremely difficult and risky thing to start out with. In the case of Silicon Valley we must understand that the large part of its success as a knowledge hotspot is the result of an interplay of culturally ingrained 'soft factors' such as attitudes toward ambition (it's ok to be overtly ambitious), an abundance of successful entrepreneurs to look up to as role models, the fact that work is less identified with employment and that both failure and success in business are highly respected, etc.

So having said this it makes sense to first develop a context specific vision on the Skolkovo 'situation', looking at culturally ingrained norms and habits in Russia (Moscow); to develop Skolkovo as a place with a unique credible personality so people can understand what the Skolkovo innovation ecosystem is about and why it could be beneficial to them. At the same time this context-specific personality will be a unique selling point, which will be hard to copy by other innovation hubs in the international competition for the most talented people.

BUILDING A JOINT, VALUE-FREE FRAME OF REFERENCE

Reframing starts with gaining an understanding of how the future domain will develop as a whole. This is called mapping the future context and it is done by identifying and gathering "building blocks" which are referred to as "context factors". Context factors are observations, thoughts, theories, laws, considerations or scientific insights that will apply to the Skolkovo innovation ecosystem in the long term future (2035). They can be obtained through various ways such as interviews, workshops or literature research. For examples of context factors please find an overview of the context factors which were identified in this project (supplement A). A broad and balanced collection of context factors is not yet a vision. The context factors are first clustered, and the coherence is revealed to serve a workable frame of reference for future actions.

In the case of Skolkovo Innovation Ecosystem in 2035 building a vision on context factors is specifically interesting because it makes it possible to involve a broad number of stakeholders and experts. All will contribute to a joint frame of reference; a joint language by which future actions can be discussed and decided upon. Each individual is able to contribute the context factors they feel are important as input for the joint vision. Context factors are phenomena that are either generally agreed upon by the group or based on indisputable facts. They are basically value-free descriptions of the future world and contributors are not asked to express their opinions, share their values or take a moral position (yet). In a similar way structuring the factors can be seen as a value-free, logical form of higher statistics. The clustering of factors follows a procedure like one used in statistics that looks for a limited number of dimensions on which sets of items co-vary.

PROJECT DESCRIPTION

The core of the project was formed around four workshops held in Moscow with key stakeholders and employees of the Skolkovo Foundation. Each workshop corresponds to specific steps in the Reframing process (see figure 1.3). The project was divided into three phases which are 1) gathering context factors, 2) structuring the context and formulating a mission statement and 3) defining qualitative specifications and generating ideas for the long- and short-term future. The first workshop was held twice to involve as many people as possible and get a broad and well-balanced selection of context factors. Below the three project phases are explained in more detail.

I. GATHERING CONTEXT FACTORS

Context factors were obtained in two ways. First in two workshops held on the 19th and 20th of September 2011, where a broad selection of over 20 stakeholders generated context factors. These stakeholders include representatives of resident companies, students, experts from the Skolkovo Foundation and external experts. Special cards (figure 1.4) were developed to capture these context factors, and a matrix was developed to check the diversity of factors in fields and types (trends, developments, principles and states). Please refer to supplement E for more information on context factors. Over 200 factors were generated during these two workshops. Secondly KVD did literature research, adding over 60 factors. Please refer to supplement D for an overview of used sources.

II. STRUCTURING THE CONTEXT AND FORMULATING A MISSION STATEMENT

All factors are interrelated, making the context a complex web of interdependent factors. On the basis of the collected factors, their importance, and their interrelations, the collection of factors was turned into a unified whole, a

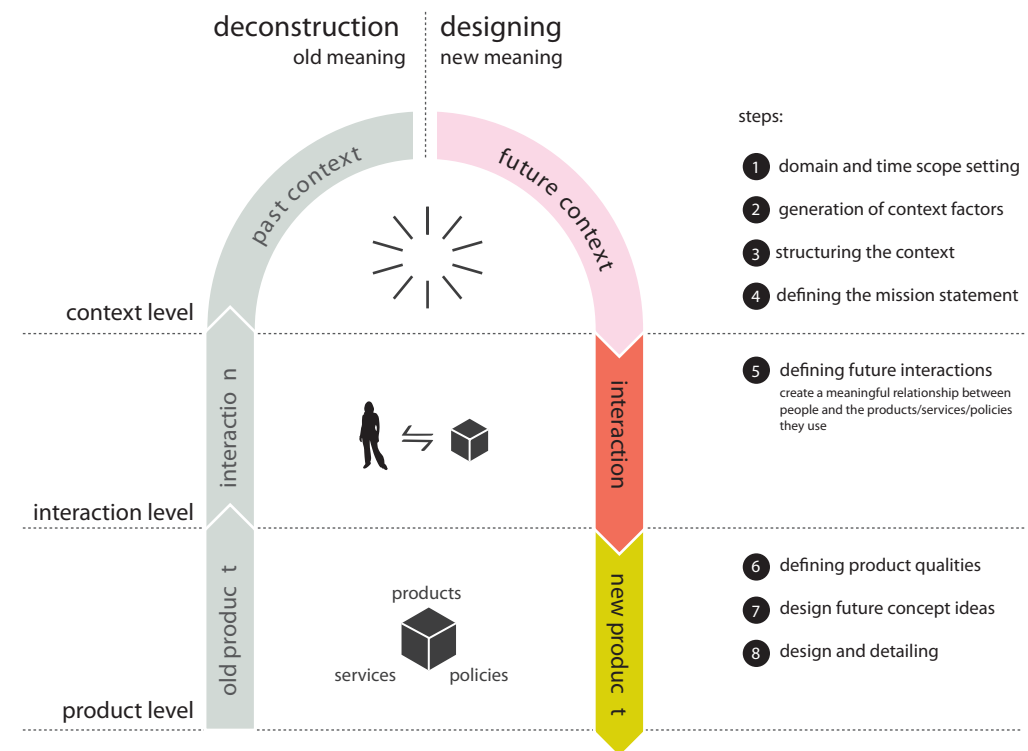


fig-1.3: Steps in the Reframing process

coherent structure that explains how the separate elements are connected. This vision revealed eight innovation goals that will drive the main actors to engage with and contribute to the 'Skolkovo innovation ecosystem in 2035'. This was done in-house in Amsterdam by KVD and the result was presented in a day-long workshop on the 13th of October 2011 with stakeholders from participating companies, students and employees of the Skolkovo Foundation. The participants discussed the newly revealed frame of reference and jointly agreed upon the presented framework as a coherent and workable result of all previous input. The appropriate response to this framework was discussed (the positioning) and participants formulated a joint 'statement' regarding the development of the Skolkovo innovation ecosystem. Participants also explored what the eight 'human driven' innovation goals meant for the long-term development; the kind of ideas this would lead to.

III. DEFINING QUALITATIVE SPECIFICATIONS AND GENERATING IDEAS FOR THE LONG- AND SHORT-TERM FUTURE. The third step was focused on long- and short-term idea generation. Prior to the workshop KVD studied the eight innovation goals in-depth, describing the underlying concerns, needs and desires and of the appropriate future relationship between the user who is pursuing the specific goal and the Skolkovo innovation ecosystem. The results of this study was presented on the 8th of November. In a day-long workshop participants worked in eight teams to develop the first idea directions for the hardware, software and orgware that address the eight innovation goals and embody the Skolkovo innovation ecosystem in the long- and short term future. On the basis of this research KVD drew up recommendations and next steps for the further implementation of the vision which were presented in a final presentation on the 7th of December to key stakeholders and employees of the Skolkovo Foundation.

The figure shows three overlapping 'Context Factor Cards' from Skolkovo. Each card has a header with a Skolkovo logo and a title. The cards are designed for participants to fill out during a workshop.

- Top Card (Green):** Titled 'future context | state'. It includes fields for 'your name:', 'group nr.', and 'factor nr.'.
- Middle Card (Pink):** Titled 'future context | trend'. It includes fields for 'your name:', 'group nr.', 'factor nr.', and 'trend:'. Below these fields is a section for 'field:' with a grid of radio button options: cultural, technological, biological, philosophical, psychological, economic, political, legislative, sociological, demographic, evolutionary, and an empty circle.
- Bottom Card (Yellow):** Titled 'context | principle'. It includes fields for 'group nr.' and 'factor nr.'. Below these fields is a section for 'field:' with a grid of radio button options: technological, biological, philosophical, economic, political, legislative, sociological, demographic, evolutionary, and an empty circle.
- Bottom Card (Blue):** Titled 'future context | development'. It includes a section for 'describe your development in more detail:' with several lines of text input. Below this is a section for 'source (if known):' with a line of text input.

Vertical text on the right side of the middle and bottom cards reads '© KVD reframing'.

fig-1.4: Context Factor Cards

2 VISION SK INNOVATION ECOSYSTEM

*Mapping the future context of the Skolkovo Innovation
Ecosystem 2035*

INTRODUCTION

Vision Skolkovo Innovation Ecosystem 2035; Mapping the future context of the Skolkovo Innovation Ecosystem 2035

GENERAL INTRODUCTION

In reframing the process of forecast development begins with mapping the future context. This is done by identifying and gathering “building blocks” which are referred to as “context factors”. The process of collecting context factors, involving a broad number of stakeholders and experts is discussed in more detail in the second part of this introduction.

A broad and balanced collection of context factors is not yet a forecast. The context factors must be clustered to serve a workable frame of reference for future actions. This clustering is the subject of paragraph 2.2. The result of the clustering, in the form of a three dimensional framework, is presented in paragraph 2.3. The framework reveals that people will be attracted to the future Skolkovo innovation ecosystem to pursue eight specific innovation goals. It describes what motivates and binds the people that are inclined to gravitate to the Skolkovo innovation ecosystem.

Paragraph 2.4 will elaborate on what may be an appropriate response to the framework. The conclusion of this paragraph is that for Skolkovo to become most effective and efficient as an innovation ecosystem, it should build on the naturally occurring innovation goals of people. Each innovation goal should be addressed in the future society. For Skolkovo to become a successful ecosystem each goal should be reflected in the design of the future city; in its tangible assets like buildings and infrastructure, in its intangible assets like social capital and informal networks, and perhaps most importantly in its organization and policies.

ON CONTEXT FACTORS

Context factors are observations, thoughts, theories, laws, considerations or scientific insights that will apply to the Skolkovo innovation ecosystem in the long term future (2035). They are value free descriptions of world phenomena as they appear; phenomena that are either generally agreed upon by a group or based on indisputable facts. The future context is typically influenced by factors from a broad scope of fields; factors about people’s thinking, feelings or behavior (psychological factors) or about people’s dealings with others (social or cultural factors); factors that have to do with the economy, technology, biology, philosophy, theology or any other field of study (science). More information on context factors is included in supplement E.

Context factors were obtained in two ways:

1. Workshops - A broad selection of over 20 stakeholders generated context factors in two day-long workshops. These stakeholders include representatives of resident companies, students, experts from the Skolkovo Foundation and external experts. Please refer to the first page of this report for an overview of all contributors to the project.
2. Literature research – A number of sources were scanned for relevant factors pertaining to innovation ecosystems and the local Russian/Moscow context. Some 60 factors were added from literature research. Please refer to supplement D for a overview of used sources.

Please refer to supplement A for an overview of the over 300 context factors that were generated.

DRIVING FORCES IN FUTURE CONTEXT

The collection of context factors which were gathered in the first workshop is not yet a forecast. With over 300 factors it is not possible to understand what the effect of each factor will be on the future society. All factors are interrelated, making the context a complex web of interdependent factors. The context must be structured to serve as a workable frame of reference for future actions.

The first step in structuring the context is about making clusters of factors based on common qualities. Factors are grouped in such a way that they are mutually exclusive i.e. no single cluster represents any other cluster (“no overlaps”) and no factor is clustered twice.

Eight clusters were revealed when clustering the context factors. These clusters represent the mayor driving forces in the context. Each cluster will be discussed in detail on the following pages. These clusters in turn form a three dimensional framework, which reveal eight specific innovation goals which will attract people to the Skolkovo innovation ecosystem in the future. This framework will be discussed in paragraph 2.3.

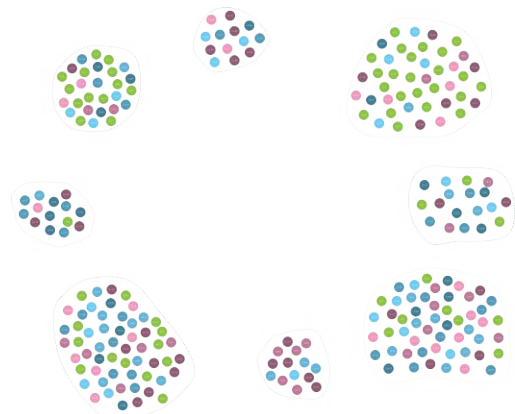


fig-2.1: Factors clustered

The number of clusters, dimensions or variables can never be predicted beforehand. The number of eight clusters and eight types of behavior is coincidental. The eight clusters should therefore not be confused with the eight innovation goals. The clusters are an intermediate step in the process (a means). The eight innovation goals can be seen as a main result of the reframing process (an end).

It is important to note that the eight clusters were not invented by KVD. They are an outcome of the first workshops, interviews, literature research and cross checking. There is also no moral right or wrong in these clusters. They can simply be seen as observations into the future without moral judgment. Future forces that have been brought to light and that influence the way the Skolkovo innovation ecosystem will develop. Awareness of these forces is of the upmost importance.

		FIELDS →											
TYPES →		cultural	psychological	sociological	technological	economic	demographic	biological	political	evolutionary	philosophical	legislative	...
	developments	13	3	8	12	5	4	4	6	1	2	5	
	trends	17	5	9	13	7	5	7	4	8	7	4	
	states	26	2	8	1	8	1	2	8	3	1	7	
	principles	19	8	9	0	3	1	4	1	0	2	3	

fig-2.2: Factor type / field matrix

DRIVING FORCE A

“Ikigai”, success and productivity

This cluster describes the factors that play a part in determining a person's productivity in work and life and it describes how similar factors on a meta-level determine business success and the success of scientific research. The American philosopher Daniel Dennett will claim that people are inherently lazy and risk avoiding. This cluster is about a person's capability to understand that before coming into action you sometimes need to overcome a resisting force. And it is about the realization that overcoming this force, and coming into action, will in the end bring a sense accomplishment and relief. So people that find their reason for getting out of bed each morning (or “Ikigai” in Japanese*), their reason for dealing with the stresses of day-to-day working life, are at a definite advantage.

The same applies on a meta-level to businesses in today's uncertain and ruthless global market place. An entrepreneur or company with a heartfelt purpose, a ‘raison d'être’ is more likely able to deal with tough competition and economic hardship and more likely to continue to take risks and truly innovate to stay ahead of the game. And will more likely be able to withstand the tendency to play it safe and stop taking risks, the route to failure in the long run.

And similarly for scientific research where increasing commercialization conflicts with the unhindered curiosity out of which the greatest discoveries are born.



fig-2.3: The Baron Munchausen lifting himself and his horse out of a swamp by his own hair (a pigtail).

Ikigai - ‘something important one lives for’, ‘a reason for being’

“The Russian Academy of Sciences has been wary of foreign companies and Russian entrepreneurial business diverting its best young students and faculty away from the pursuit of basic science and thus has not appeared to facilitate commercialization.”

Source: Yaroslavl Roadmap 10-15-20

CONTEXT FACTORS

- [P] People will be increasingly focused on economic development and business start ups
- [S] ‘Time is money; driven by the entrepreneurial and venture capital state’
- [P] People need stress to be more productive
- [P] young environment conducive to values of ventureness, risk taking and out of the box thinking.
- [P] Competitiveness /selfishness in human genes
- [P] Risk taking and entrepreneurial attitude
- [P] Historically scientists have been left to their own devices to choose what they were interested in, how they work on it and what they would do with their results.
- [D] Growing commercialization of scientific endeavors. An increasing share of scientific research and development is funded by corporations.
- [P] Most good startup ideas seem a little crazy; if they were obviously good ideas, someone would have done them already.
- [P] Startups are the kind of thing people don't plan, so you're more likely to get them in a society where it's ok to make career decisions on the fly.



DRIVING FORCE B

Entitlement

The factors in this cluster describe the feeling of pride and dignity amongst the people of Russia; the people of Russia like to compare themselves to the best and take great pride in historical and future achievements, such as the establishment of Skolkovo as a leading technological innovation hub in the world.

A psychotherapist will probably tell you that pride supplies the ego with a sense of entitlement; “I am entitled to have my expectations met.”

And that a rigidly held sense of entitlement will cause one to become overly critical of others in order to keep feeling their sense of importance, merit and superiority; their sense of pride.

This critical state of mind is one of the great roadblocks caused by pride and entitlement. It will usually give rise to extreme cautiousness, risk avoidance and inaction. Whilst trying out new things, taking risks and innovating requires a readiness to forgive failure, patience and ultimately humbleness; a sense of earning the right.

A culturally embedded feeling of entitlement is a big pitfall for societies. Lasting success has to continually be created from scratch. The most effective societies and cultures are the ones that are capable of constantly starting from the bottom, demonstrating resilience and adaptation. In the same sense creating an innovation hub also means being able to start from the bottom without taking success for granted.

Definition of Entitlement: belief that one is deserving of or entitled to certain privileges

“Despite a prolonged period of economic growth after the crisis of 1998, the total output of the Russian economy is still only 85% of the output in 1987.”

Source: Yaroslavl Roadmap 10-15-20

CONTEXT FACTORS

[S] Russians are proud of their country’s achievements, especially in technology or science (Aerospace technologies, Military technologies)

[D] Change from traditional Russian scepticism towards government initiatives to the feeling of pride and ownership

[P] National identity / The Sk project is a Russian project (to be the part of leading processes) → International competition

[S] ‘Russians’ vs. the rest of the world. Culturally ingrained ‘us’ versus ‘them’. ‘Better’/ ‘Worse’

[T] Sk is a prototype of a gateway to the world: a window opening Russia to the world (like Peter the Great)

[T] Sk could be an example of innovation development for other Russian cities. In the society there is an expectation for Sk as an example

[S] Face control everywhere (people looking you up and down, do you belong here?)

[P] Low level of personal responsibility in Russia

[P] Russian people will help you to behave right or explain to you how you should behave (eagerness to give normative instructions)



DRIVING FORCE C

The laws of attraction

This clusters describes the different “actors” that play a role in an innovation hub like Skolkovo and how they are attracted to this hub. Amongst the main actors are professors, students, young people who start start-ups (“nerds”*) and startup investors (business angels or venture capitalist).

These actors are primarily attracted by one another in a way that is reminiscent of the food chain, an almost linear sequence of links in a food web. Smart people will go wherever other smart people go and in particular to great universities; A great university is made by great professors and what attracts professors are good colleagues; smart young people start startups, startups beget startups and startups attract startup investors etc.

This people driven ecosystem needs time to grow. It needs to attract a critical mass of the above actors, and it needs to attract them in the right relative amounts (proportions). On this point the cluster describes how entrepreneurship as a social force is gaining momentum in Russian society. However the Russian middle class, the main source of entrepreneurs, will remain underdeveloped for the decades to come. Entrepreneurs and especially business angels (usually retired entrepreneurs) will remain under-represented in Russian society. In this way the cluster also describes a missing link in a people driven ecosystem like Skolkovo. Like in the food web, the demise of a single species can have a profound effect on the whole food chain, even causing the break down of a whole ecosystem.

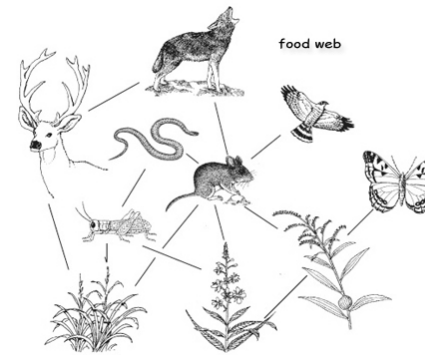


fig-2.4: Food web/food chain

I think you only need two kinds of people to create a technology hub: rich people and nerds. They're the limiting reagents in the reaction that produces startups

Source “How to be Silicon Valley” by Paul Graham

As a society, Russia has many talented entrepreneurial people, but it does not have an established culture of entrepreneurship to support them and to promote entrepreneurship as an important societal function.

Source: Yaroslavl Roadmap 10-15-20

CONTEXT FACTORS

- [S] ‘Middle Class’ is not big enough in Russia
- [T] “Society around and in ”Sk” will be very picky. Use of online resources (such as social networking, specialized sites) to pick the best.”
- [P] Best people attract best people (critical mass of best people)
- [T] More competition for brains and smart people among cities and countries
- [D] The population become more entrepreneurial. More entrepreneurs between young people.
- [P] Scientists want to solve particular problems. And they want to be recognized, to earn the attention of their contemporaries, to transform the way other scientists think. The coin of the realm, for most scientists, is not the cash but rather recognition.
- [P] Russians engaged in innovation refer to their profession as a “calling”. That is, they enjoy what they do, and not too sensitive to monetary incentives.
- [P] Wherever the startup is when it gets funded, it will stay.
- [P] Both nerds and investors are highly mobile. They’ll go where life is good.
- [P] What nerds like is other nerds. Smart people will go wherever other smart people are. And in particular, to great universities.
- [P] What attracts professors is good colleagues. Professors when they’re deciding where they’d like to work, consider one thing above all: the quality of the other faculty.
- [P] “You don’t build a silicon valley; you let one grow.”
- [S] Compared to other nations there are relatively few successful serial entrepreneurs or mentors for innovative entrepreneurs.
- [P] successful start-ups will invest in other start-ups



DRIVING FORCE D

Open collaboration

This cluster describes how people or organizations will increasingly work together to realize shared goals in business and science.

Technology enables people from all over the world to efficiently communicate and share ideas without any geographical barriers. The future will increasingly see people collaborating globally with a deep, collective, determination to reach an identical objective. And the objectives will increasingly be to solve intriguing global issues that will improve the lives of many by sharing knowledge, learning and building consensus.

Sharing knowledge, openness of information and open-source development are important practices that underlie international collaboration.

While open-source principles have always been part of the scientific community, like the tradition of publishing research results to the scientific community, businesses tend to keep knowledge to themselves (IP).

It can be argued that protecting discoveries and inventions with intellectual property rights goes against the fundamentals of the open-source philosophy. There will be conflicting interest on the subject of open collaboration in the international business environment of the future.

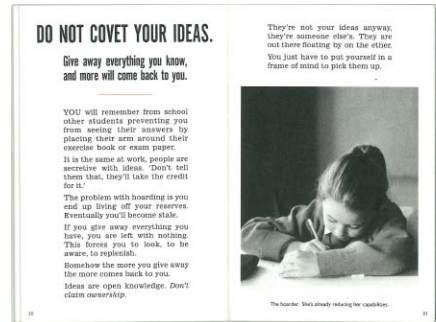


fig-2.5: Extract from the book "It's not how good you are, it's how good you want to be" by Paul Arden

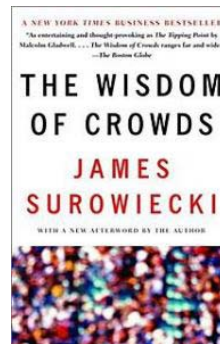


fig-2.6: The conditions that characterize wise crowds according to James Surowiecki: diversity of opinion, independent thought, decentralization and aggregation.

CONTEXT FACTORS

[T] in 2035 scientists will not work/live in just one location but will work and travel among several innovation centres around the world. Thus, virtual services and new level of services are required. Global mobility requires mobile services.

[T] Development of partnership among different groups, collaboration

[D] Cooperation abilities (collaboration skills)

[T] Increased collaboration and remote services in health care.

[T] There will be increasing levels of international collaboration

[T] More use of technology for community and information collaboration

[T] open-source business, networking/cluster, new markets BRICS

[P] People should have some common goal or task to achieve

[D] Growing specialization in scientific research; increasing 'division of cognitive labor'

[D] Although most of the collaboration in scientific research takes place in a scientist's immediate vicinity, the rate of global cooperation is increasing.

[P] Corporations have an economic interest in protecting information



DRIVING FORCE E

Melting pot, salad bowl and stew

This cluster describes the way culture is learned and the influence of diversity on culture and vice versa. An international innovation hub such as Skolkovo will bring together people from a wide range of cultures, ethnic backgrounds, languages, personal tastes, values and opinions. The cluster describes three concepts that can result from this meeting of minds and their potential practical pitfalls.

First there is the “melting pot” concept, which refers to the pot in which metals are melted at great heat, forming a new compound, with greater strength and other combined advantages. All groups become reflected in one common culture. In practice this is generally the culture of the dominant group or a bland, non-descript universal common denominator.

Secondly there is the “salad bowl” concept (or cultural mosaic) where groups are combined like salad ingredients. Each group exists separately and keeps its own distinct qualities. People feel at home amongst people of with similar backgrounds. In practice a lack of commonality, or salad dressing, will limit interaction between groups.

Thirdly there is the “stew” concept which can be seen as an intermediate concept. Groups are mixed and combined into a single stew. Ingredients remain distinguishable while the stew is an entity in its own right. The common culture is easily accessible for all groups and forms a shared “language”.

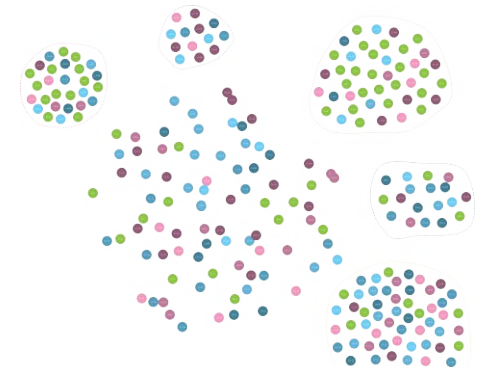
The cluster also describes culturally ingrained Russian preferences for “salad bowl” way of dealing with diversity; each keeping to their own. And a potential (over)reactive tendency for Skolkovo to prefer the melting pot concept, creating a common culture which is potentially bland and universal and could become dominated by Russian culture.

Entire systems of behavior, made up of hundreds of thousands of details, are passed from generation to generation, and nobody can give the rules for what is happening. Only when these rules are broken do we realize they exist.

Source: “The silent language” by Edward T. Hall

CONTEXT FACTORS

- [T] The association between the inhabitants become low → decrease in in-person social intercourse and civic engagement in Russia as well as other parts of the world
- [T] Segregation and social separation reaction
- [D] Diversification and separation in society
- [P] Multicultural (tolerance)
- [P] Globalization (immigration process) Huge metropolises become international (it's not just a Russian town at all) → multiculturalism
- [S] A community of common thinkers: scientists to scientists: same lifestyle, habitats etc...
- [T] Sk populations (researchers, entrepreneurs etc.) will live more separately/zoning (mingle together)
- [P] Social diversity produces understanding of value of different approaches, communication/ importance etc.
- [P] People need to be accepted by others, to be in a group, to work collaboratively, get support from others.
- [P] Losing your language is like losing your culture
- [T] More immigrants
- [S] The Russian population is made up of a very diverse set of cultures, ethnic groups and languages.
- [P] People like to stay within their ethnic or cultural group, this does not automatically mean they do not tolerate other groups.



DRIVING FORCE F

Self-improvement and transhumanism

This cluster describes the ever-growing popularity of the philosophy of self-improvement; of not accepting limitations and life and striving to enhance life in any way possible. It assumes human beings have the right and responsibility to give meaning and shape to their own lives.

The cluster describes how coupled with technology the future will bring the rise of the “transhumanism”; the philosophy which supports the idea that mankind should proactively enhance itself with technology and should steer the course of its own evolution. Constant break-throughs in bio-, neuro- and nano-technology will make it possible for mankind to prolong the human life span, improve health, stamina, memory and mental state (feeling happier). With these seemingly endless possibilities come the ethics of the possible.



fig-2.7: MTV's MADE is a self-improvement reality television series broadcast on MTV. The series follows teens who have a goal and want to be “made” into things like singers, athletes, dancers, skateboarders, etc.

“You can be anything you want to be. Just turn yourself into anything you think that you could ever be”

Source: lyrics to Innuendo by Queen

After the publication of Darwin's Origin of Species (1859), it became increasingly plausible to view the current version of humanity not as the endpoint of evolution but rather as a possibly quite early phase.

CONTEXT FACTORS

[D] “Improvement of demographic situation; increase of birth rate, development of science and medicine leads to prolongation of productive life.”

[T] Consumer-close technology

[D] Tech is turning into a religion/ideology

[D] New tech expanding capabilities of a humans (neuro, bio/ageing, nano/augmentations, IT / enhancements, E.T./outreach to space) → produces a different outlook and responsibility

[D] 4P medicine: personalized, predicted, participation, prevention. Medicine is changing from classic to another step. People will not treat the disease they can predict it and prevent

[T] Fenotyping / genome sequencing → synthetic biology

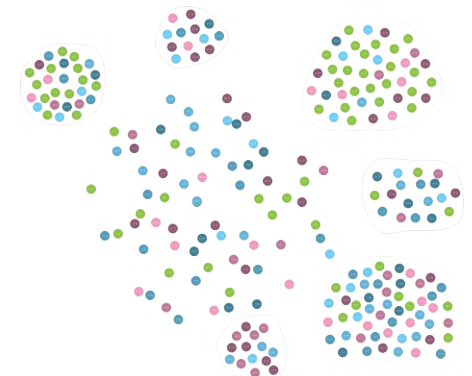
[D] Increasing longevity

[T] People have fewer kids and have them at an elder age

[D] People live in changing environment and change identity many times in life (one person live in different times, epochs).

[T] More people tend to care about their physical health (fitness)

[D] Devices and gadgets will become a part of our life and even our bodies.



DRIVING FORCE G

Adaptation to survival mode

This cluster describes the great challenges that Russia, and in particular the city of Moscow faces in the future. They are problems of urban life such as housing, crime, health, education and poverty; all are complex problems that require the coordination of collective action. Although the levels of trust in Russian government are rising, they will continue to be extremely low compared to other countries in the world. There is a persistent lack of faith in the ability of the government to solve the great collective problems of the coming decades.

The political and governmental climate will most likely remain unstable and unpredictable in the years to come because the cause is reflected in the everyday life of the Russian population. A disregard for rules, laws and regulations is widely spread and deeply ingrained in Russian society. Bribery has become accepted practice in schools, hospitals and elsewhere.

The effect on the population can best be described by Hofstede's "cultural dimension theory". Compared to other nations the Russian people experience a high power distance index (the extent to which people accept and expect that power is distributed unequally), a high uncertainty avoidance index and an extremely low long-term orientation index. This leads to a life "in the moment", under highly uncertain conditions with people you know can be trusted; a life reminiscent of life in survival conditions.

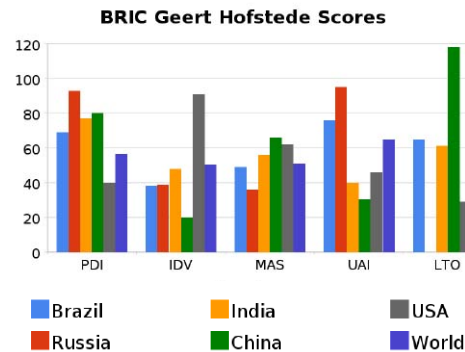
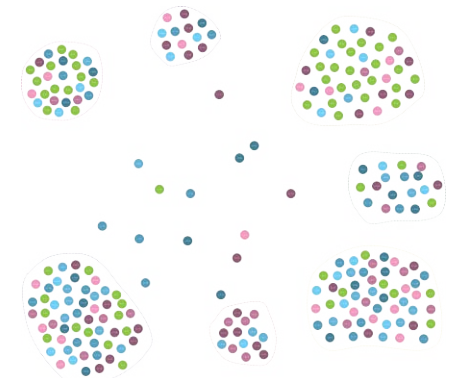


fig-2.8: Geert Hofstede's cultural dimensions for the BRICs

CONTEXT FACTORS

- [S] Russians tend to know about rules, laws and regulations, but not always obey or observe them
- [T] The reaction of life to mega cities. The influence of conditions of mega cities like traffic/ air quality/loneliness on life.
- [S] Negative perception (attitude) of government (power)
- [S] Heavy gap between law and its application
- [S] State domination on social processes
- [S] Dependence on the state to fund the existence, the operation (vs. 'independence') (what if the next leader decides to stop allocating resources to 'Sk'. Can the city be self funding?)
- [S] Russians have a fear of getting fired as they will lose all privileges connected to their job
- [P] People (will) live to minimize stress and fear and to increase their comfort
- [S] Bur-cy is a political force with huge economical/business interests
- [S] If you are rich you are bad, don't stimulate entrepreneurship (cultural norm)
- [S] Legislative factors depend on political factors
- [S] The innovators of Russia cannot think strategically, relying on short-term breaks and jobs involving "all hands on deck".
- [S] The innovators of Russia are characterized by disregard for procedures, technologies and standards.



DRIVING FORCE H

Place and belongingness

The cluster describes “anthropological place”; a place that evolves through its relation to its residents and users, as an organic result of the cultural context that surrounds a particular place. Anthropological place does not wipe out the footprints of its residents, rather it captures and conserves them.

It describes public place as a place of identity, relations and history. A place which people feel ownership for, which they bind with and can contribute to. A place where they feel they belong.

This can be public space in the usual sense of the word, but also a public transport system. And online social networks and meeting places. The difference between them will lose relevance in the future as off-line and online will continue to melt together.

The relationship people have with “anthropological place” is a long term one. Contributing to it is like investing time and effort in a collective possession, a shared heritage as well as a shared ideal for the future.



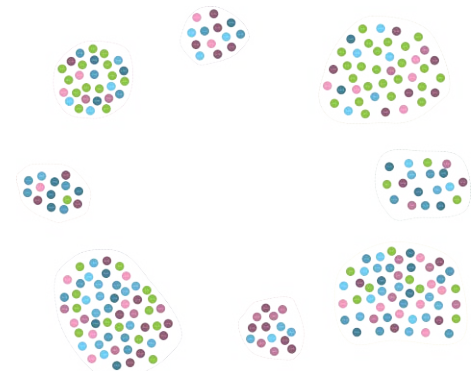
fig-2.9: Olive trees are traditionally planted with a long term view that includes successive generations. During the first 50 years of tree growth they will produce some crop, but the olives produced are significantly better for the second and third generations of people tending the trees.

“To be born, is to be born in a place, to be ‘assigned to residence’. In this sense the actual place of birth is a constituent of individual identity”

source: “Non-places; introduction to an anthropology of supermodernity” by Marc Augé

CONTEXT FACTORS

- [T] Move to nature (return)
- [T] Back to the nature (natural products, face to face communications)
- [T] Sk is a community; a village, to engage people as individuals
- [T] Virtualization of life (transfer to online)
- [T] People will use more technology infrastructure
- [T] People will use more public transit
- [T] “Virtual vs. live presence. With more time spent in ‘facebook’ like interactions, what will bring people together physically at Sk. Or is that even something to worry about.”
- [D] Networking society. People will become much more connected to each other. Not only through internet, but through social networks. People will organize on the basis of like-mindedness, as opposed to proximity (neighbours). Dispersion in space.
- [D] Less physical infrastructure for public use (like shops, libraries etc.) is needed, everything is ordered via internet.
- [P] Public familiarity: knowing the people around you by face, places to meet each other



FRAMEWORK

revealing eight innovation goals and behaviour

INTRODUCTION

The variety and complexity of the initial set of over 300 context factors has been reduced to eight clusters of factors. These clusters were presented in the previous paragraph. The final step in structuring the context is developing an understanding of what the clusters mean in relation to each other. The eight clusters must be turned into a unified whole, a complete and coherent picture of the context of the Skolkovo innovation ecosystem in 2035.

Three dimensions have been identified from studying the relationships between the eight clusters (see figures 2.10). The future of the Skolkovo innovation ecosystem is steered by these three dimensions, each with their specific extremities. The first is a psychological dimension, about intrinsic motivation underlying behavior of people. The second is a economical dimension related to the economic objective of behavior. The third is a time-related dimension, dealing with the temporal connection to society. Each dimension is discussed in more detail below.

DIMENSION 1: INTRINSIC MOTIVATION

The first dimension is about the intrinsic motivation of people living and working in Skolkovo in the future. The dimension has two extremities; on the one hand there is clusters 2 about entitlement and cluster 6 about the idea of immortality, which is basically an expression of entitlement. This extremity is about self-centeredness and claiming the right to live, without looking for a reason for being. On the other extreme is cluster 1 about self-responsibility, overcoming the resistance within yourself and pulling yourself into action to make something happen.

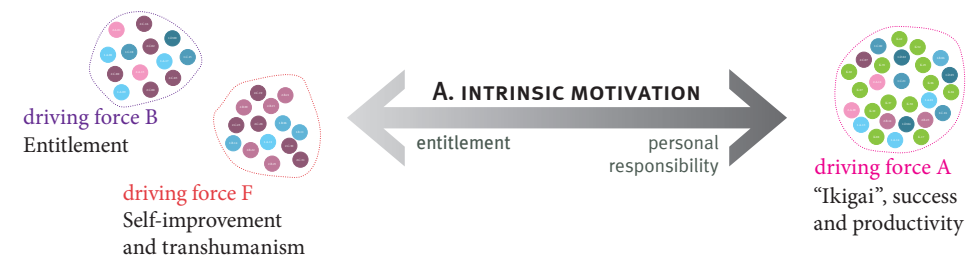


fig-2.10.a: Dimension 1

DIMENSION 2: ECONOMIC OBJECTIVE

The second dimension deals with the economic objective of people. One side of this dimension is about seeing ‘economy’ as a result of putting conditions into place. It is formed by three clusters dealing with the people-driven economy which describe the conditions favorable to innovation; an ecosystem of people (cluster 3), open collaboration (cluster 4) and a policy for dealing with (or fostering) diversity. The other extremity is about focusing on the output; about market thinking. This extremity was notably not reflected in the clusters of context factors. While Russia has a historical backlog in the area of market-based thinking, and a domestic market with little demand for Russian products, this does not justify turning a blind eye to what is essentially the ‘Achilles’ heel of innovation in Russia. In the end the only way Skolkovo will become a success is if it makes products or services that ‘fit’ the demands of the local, national and/or global marketplace seamlessly.

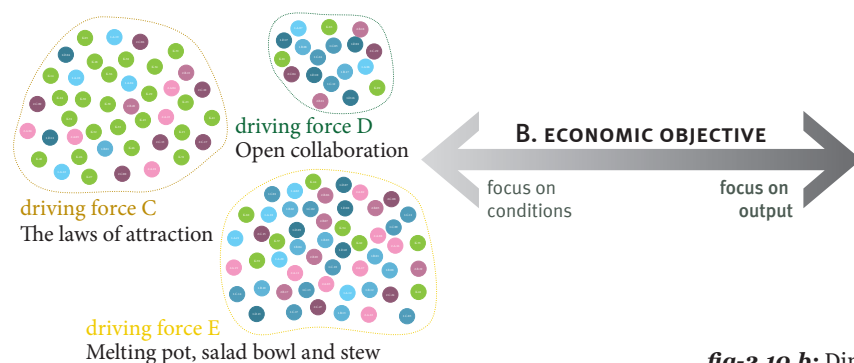


fig-2.10.b: Dimension 2

DIMENSION 3: TEMPORAL ORIENTATION

The third dimension deals with time; with having a long term versus a short term orientation. One extremity of this dimension is formed by cluster 7 about survival. It is about living life “in the moment” due to highly uncertain conditions. It is characterized by short-term ad-hoc thinking and acting out of economic necessity. For example making money from a rapid turnover of existing goods. On the other hand there is cluster 8 about place and belongingness. This extreme is about a long-term orientation: investing in the social coherence for the long-term future; investing in sustainability and caring for the environment. It is about developing long-term relationships and feelings of ownership.

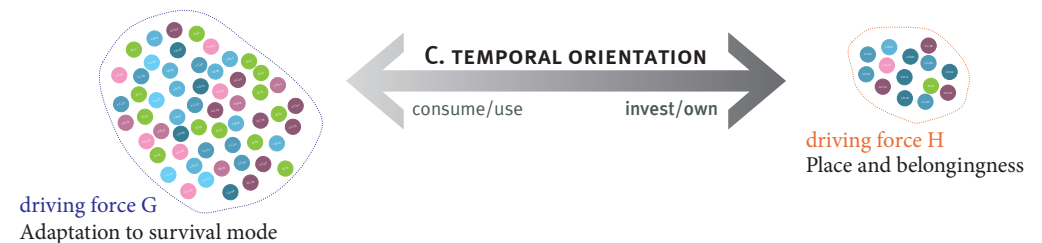


fig-2.10.c: Dimension 3

Together these three dimensions reveal eight innovation goals (fig. 2.11) that will attract people to the Skolkovo innovation ecosystem in the future (the eight innovation goals should not be confused with the eight clusters which were an intermediate step in revealing the coherence in the context). These goals describe what motivates and binds the future inhabitants/dwellers/sojourners/passers-by who are inclined to gravitate to the Skolkovo innovation ecosystem. These are the naturally occurring innovation goals of people that steer the development of the Skolkovo innovation ecosystem and should be seen as the vision for the Skolkovo innovation ecosystem in 2035; the Forecast. The appropriate response to this framework will be discussed in the next paragraph.

The eight innovation goals will be discussed in detail in paragraph 3.2. Below a short synopsis is included on basis of which a mission statement will be formulated.

THREE DIMENSIONS THAT LEAD TO EIGHT INNOVATION GOALS

1. Influencing Public Policy
Leading a group that makes new policies for Skolkovo
2. Claiming Longevity
Creating conditions in Skolkovo that prolong life and/or give a feeling of immortality
3. Exploiting Valuable Commodities
Quick wins; consuming the low hanging fruit of the Skolkovo environment
4. Occupying your place of living
Creating your own long-term living environment (territory)
5. Mending the social cohesion
Decreasing tensions in Skolkovo Innovation Ecosystem and ensuring social coherence
6. Inspiring to strive for ideals
Inspiring people in Skolkovo to build an ideal society (role models)
7. Improving your surroundings
Making your current living environment a better place
8. Long-lived social entrepreneuring
Entrepreneurship with a focus on long-term social coherence of Skolkovo

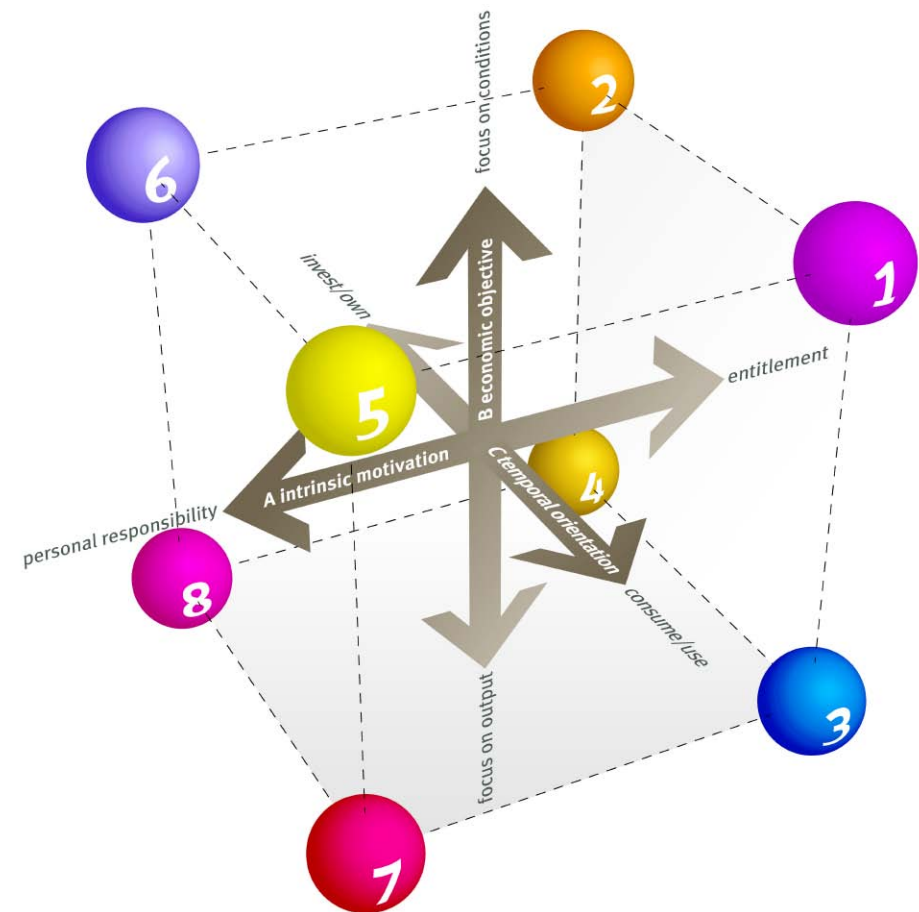


fig-2.11: visualization of three dimensions and eight behaviours for innovation

POSITIONING & MISSION STATEMENT

In the previous paragraph a framework was presented revealing eight innovation goals. These are the goals that will drive the main actors to engage with the Skolkovo innovation ecosystem. It gives insight into the reasons people in the future are motivated to come to Skolkovo and to contribute to it. In this paragraph we discuss what this means for the development of the Skolkovo innovation ecosystem. How does the insight relate to the development of the 'software', 'hardware' and 'orgware' that facilitate the future innovation ecosystem? The following positioning in the relation to the framework is a reflection of a day-long workshop with stakeholders from participating companies, students and employees of the Skolkovo Foundation.

As the framework shows the naturally occurring innovation goals of people in the future, a decision still has to be made whether to go along with these goals and accept them or whether to try to counter them. This brings us to the point of efficiency of the Skolkovo innovation ecosystem. The innovation ecosystem will function efficiently if it applies the least amount of effort while creating the maximum amount of output (innovations accepted by the market). The most logical positioning was chosen by the participants in this respect; to 'play the cards you are dealt' and build the Skolkovo innovation ecosystem on the naturally occurring innovation goals of people, instead of 'wasting' effort by going against the grain.

If the Skolkovo innovation ecosystem is to be built on the naturally occurring innovation goals of people, the next decision to be made is about completeness; do all goals need to be addressed in the development of the city? Will the innovation ecosystem be capable of producing relevant innovations if some innovation goals are left unaddressed?

On the matter of completeness a position was taken that reflects the ecosystem perspective on Skolkovo. In an ecosystem, biodiversity contributes to a greater resilience of an ecosystem, because there are more species present at a location to respond to change and thus "absorb" or reduce its effects. Therefore, if Skolkovo is to become a resilient ecosystem (durable/robust/sustainable) each goal should be reflected in the design of the future city.

This brings us to the 'statement' regarding the development of the Skolkovo innovation ecosystem. In the reframing process a shared statement typically defines what one wants to offer people, within the established context. The statement steers the future development in one joint direction. Based on the given positioning it has been formulated as follows:

"We, the stakeholders and initiators in the development of Skolkovo, want to attract people with diverse innovation goals to the Skolkovo innovation ecosystem. We want people to feel they matter as an individual, and we want to recognize their presence and affirm their contribution to the system. We want all the different specific reasons for coming to Skolkovo, for engaging and contributing to it, to be reflected in the design of the future city; in its tangible assets like buildings and infrastructure, in its intangible assets like social capital and informal networks, and in its organization and policies"

As formulated by participants on the 13th of October

Based on this statement the qualitative specifications for the development of the Skolkovo innovation ecosystem in 2035 have been formulated. These will be presented in detail in the next chapter. Qualitative specifications have been formulated for each of the eight specific goals as well as for Skolkovo as a whole.

3 EMBODYING THE VISION

*Directions for long and short term development
of Skolkovo Innovation Ecosystem*

INTRODUCTION

In the previous chapter eight innovation goals related to innovation in Skolkovo were presented. On basis of the eight innovation goals a joint mission statement was formulated describing that each type of innovation goal should be addressed in the Skolkovo innovation ecosystem in 2035.

It is important to keep in mind that in this report the term ‘innovation goals’ refers to the personal goal of a single actor, and not to an organizational innovation goal. It refers to a goal which will drive the specific actor to engage with and contribute to the ‘Skolkovo innovation ecosystem in 2035’.

In paragraph 3.2 the eight innovation goals are discussed in more detail, describing the underlying concerns, needs and desires of the user who is pursuing the specific goal. For each innovation goal the character (the qualitative specifications) of the hard-, soft-, and orgware policies, that address the innovation goal are specified. These serve as qualitative references for the future development of these directions.

The final page of the paragraph discusses the qualitative specifications of the Skolkovo innovation ecosystem as a whole.

For each innovation goal ideas were developed for hard-, soft, and orgware with which the innovation goals can be addressed (paragraph 3.3). These first ideas for the long-term future and the short-term future are not exhaustive but serve as an illustration of design directions and as inspiration for the further development of the Skolkovo innovation ecosystem.

EIGHT INNOVATION GOALS IN DETAIL

The eight innovation goals in more detail and qualitative specs

As stated in the introduction it is important to keep in mind that in this report the term ‘innovation goals’ refers to the personal goal of a single actor, and not to an organizational innovation goal. It refers to a goal which will drive the specific actor to engage with and contribute to the ‘Skolkovo innovation ecosystem in 2035’. These goals are tightly related to organizational innovation goals, because as discussed in the mission statement, for Skolkovo to be an attractive, efficient and effective innovation ecosystem, these eight goals should be reflected in the design of the future innovation ecosystem: in its tangible assets like buildings and infrastructure (hardware), in its intangible assets like informal networks, social capital, values and norms reflected in social behavior and in its attitudes towards entrepreneurship (software) and in its organization, strategies and policies (orgware). So a personal innovation goal of a single actor can be translated to an organizational goal by adding the words “facilitating actors” or “enabling actors” to the innovation goal (for example “Enabling actors to influence public policy”).

On the following pages each type of innovation goal is broken down into four types of content:

1. A description of the innovation goal
2. A description of the relation of the specific goal to innovation in Skolkovo
3. A description of the underlying concerns; the concern that drives the specific innovation goal. For this description KVD has used the “Taxonomy of Human Goals” by Ford & Nichols (1987), a comprehensive classification of the purposes, desires and concerns that motivate human behavior.
4. The character of the policies, services and products that address the innovation goal. These are the qualitative specifications which will serve as qualitative references for the development of the hardware, software and orgware that will embody Skolkovo innovation ecosystem in the long- and short-term future.

The final page of this paragraph discusses the qualitative specifications of the Skolkovo innovation ecosystem as a whole. It deals with the qualities of the complete innovation ecosystem which were already touched upon in the mission statement (see mission statement below).

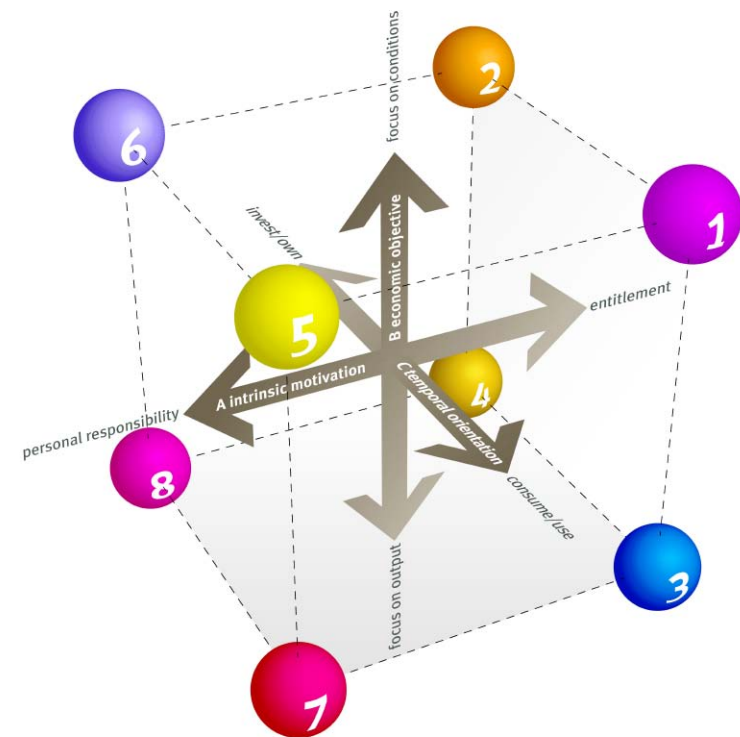
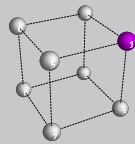


fig-3.1: visualization of three dimensions and eight behaviours for innovation

1. INFLUENCING PUBLIC POLICY

Leading a group that makes new policies for Skolkovo

A1 entitlement
B1 conditions
C1 consume/use



BEHAVIOR

This specific type of behavior is about ‘trying to get right on your side’. It is aimed at influencing decisions made by officials in the (local) government such as legislators or members of regulatory agencies in favor of one’s own self-interests. This is done either by directly attempting to influence decision makers, for example through lobbying, or it is done by engaging the masses in one’s cause; gathering people together for attention to a personal issue or project. It is about seizing an opportunity to argue for favorable changes to regulatory regimes. The behavior can be characterized as tactical, agile and opportunistic. Although the behavior can have a positive win-win effect for individual and society, care must be taken to prevent excesses with negative effects on society at large.

RELATION TO INNOVATION

The behavior can play a vital role in creating and maintaining conditions favorable for innovation. Despite Russia’s government clearly stated intention to modernize its economy and promote innovation, regulation administered for other purposes by other ministries or local governments often hinders innovation. An environment where innovation thrives must provide plenty of room for experimenting. Innovation thrives on personal responsibility, flexibility and speed, not on red tape. For example, start-ups are known for breaking most laws regulating businesses in their early starting phase.

UNDERLYING CONCERNS

The behavior is born out of a drive to find loopholes in the system, circumvent or avoid regulation, gain access or closeness to power, and to use this position for achieving personal goals (which may or may not work for betterment of an organization). Underlying concerns are also related to task creativity; engaging in activities involving intelligent use of social skills in intricate and complex social settings. Mastery of these skills can be very satisfying.

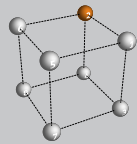
CHARACTER OF POLICIES, SERVICES AND PRODUCTS

Provoking
Approachable
Comprehensible

2. CLAIMING LONGEVITY

Creating conditions in Skolkovo that prolong life and/or give a feeling of immortality

A1 entitlement
B1 conditions
C2 invest/onw



BEHAVIOR

Immortality is the concept of existing without end. A feeling of immortality can be obtained in various ways. A feeling of immortality can be obtained through feeling in charge of your health, keeping your body and mind healthy, staying fit, eating well and routinely getting health check-ups. A feeling of immortality can also be obtained through 'reproduction'; having children and/or investing in children (education), who in turn carry on some semblance of your being in their behavior, personality, outlook on life and/or genetic makeup. And another way is by being 'immortalized' through investment in your life's work, through making a lasting impact and being remembered for your accomplishments and ideals.

RELATION TO INNOVATION

Most scientists want to earn the recognition of their contemporaries, to transform the way other scientists think, to make a lasting impression on the scientific community. In the same way most teachers want to make a difference in the world by impacting their students' views and understandings. If professors, researchers and teaching staff all act out this behavior the implications for innovation are self-evident.

Another relation to innovation is about seeing Skolkovo as an internal market where a deeper understanding of the end-user can be developed. Especially insights in unarticulated needs in the domain of biotechnology and life-sciences and translating these insights into products and services. Finally on a small note; the natural curiosity in children can be inspirational and hence contribute to innovation.

UNDERLYING CONCERNS

The behavior is born out of self-assertive social relationship goals (Ford & Nichols, 1987). People exhibit this behavior out of a need to feel important, a need for approval and validation from others, to feel valued and adored. While the search for self-importance, for self-worth, can be extremely destructive when sought through artificial means, this ardent search is unavoidable. It is the main reason for getting married, having careers and having children.

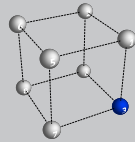
CHARACTER OF POLICIES, SERVICES AND PRODUCTS

Promising
Sound
Revealing

3. EXPLOITING VALUABLE COMMODITIES

Quick wins, consuming the low hanging fruit of the Skolkovo environment

A1 entitlement
B2 output
C1 consume/use



BEHAVIOR

This behavior is aimed at commercializing any and all marketable items, goods or services, in and around Skolkovo. People who exhibit this behavior have a keen eye for business opportunities; for the wants and needs of the people in and around Skolkovo. And they exhibit the courage and perseverance to start up a business and to ‘make it happen’. The behavior is about facing ruthless competition head on, about staking a claim. It is also about respecting those who have found their niche, because only the fittest will survive.

RELATION TO INNOVATION

Let’s say innovation is about the creation of new and appropriate products, processes, technologies, or ideas that are meaningful and hence valuable for end-users. Innovation, being either incremental or revolutionary, is proven by its success in market conditions. For this success it is crucial to gain intimate knowledge of the wants, needs and concerns of the end-user. People in Skolkovo will quickly develop a feel for the market in an openly commercial environment; an environment that is integrated into the Russian and world market, is market oriented and focused on market capitalization.

UNDERLYING CONCERNS

The behavior is born out of “task goals” related to material gain, increasing the amount of money or tangible goods one has; avoiding the loss of money or material possessions.

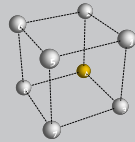
CHARACTER OF POLICIES, SERVICES AND PRODUCTS

Effective
Generous
Alluring
Alert

4. OCCUPYING YOUR PLACE OF LIVING

Creating your own long-term living environment (territory)

A1 entitlement
B2 output
C2 invest/own



BEHAVIOR

This behavior is about “throwing out anchors” in Skolkovo; about taking up residence for what feels like a long time to come. It is about committing to a place like Skolkovo, developing feelings of ownership for it, and contributing and binding to it. As time goes by one starts to feel a true local. And those with the longest residency feel entitled to special privileges and rights.

RELATION TO INNOVATION

Smart young scientists, researchers, designers and entrepreneurs, the creative class, want to live somewhere with personality. A place they feel they can bond with, develop a relationship with. Most towns with personality are old, but they don't have to be. For Skolkovo, being built from scratch, attracting the “creative class” will take conscious effort. Providing opportunities for Skolkovo to develop as a place of identity and history. A place that does not wipe out the footprints of its residents, rather captures and conserves them. A place connected to its surrounding natural environment and landscapes.

UNDERLYING CONCERNS

Belongingness. Comparing favorably to others in terms of earned rights, respect, or success. Setting new standards for achievement, avoiding decrements in performance. Having a positive outlook with regard to living situations; new goals to reach. Anticipating future prosperity.

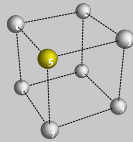
CHARACTER OF POLICIES, SERVICES AND PRODUCTS

Promising,
Enduring
Unique

5. MENDING THE SOCIAL COHESION

Decreasing tensions in Skolkovo Innovation Ecosystem and ensuring social coherence

A2 personal responsibility
B1 conditions
C1 consume/use



BEHAVIOR

This specific type of behavior in relation to innovation is aimed at resolving conflicts and reducing tension in society. It concerns monitoring the social cohesion in Skolkovo Innovation Ecosystem, and making adjustments when tensions or conflicts arise. It is about associating or empathizing with a situation, looking at it 'from the inside' and weighing the situation to achieve, on balance, the greatest harmony, consensus and fit, considering the needs of the people involved.

RELATION TO INNOVATION

While social cohesion refers to the extent of connectedness and solidarity among groups in the society, a cohesive society is also one that is richly endowed with stocks of social capital. And this social capital (with emphasis on “loose ties” as opposed to “strong ties” (described extensively by Richard Florida in the “Rise of the Creative Class”) is critical to the creative environment of a city such as Skolkovo because they allow for rapid entry of new people and rapid absorption of new ideas and are thus critical to the creative process.

UNDERLYING CONCERNS

The behavior is born out of integrative social relationship goals (Ford & Nichols, 1987) related to belongingness, building a sense of community and avoiding feelings of separateness. Basically people who display this behavior cannot bear seeing conflict and are naturally inclined to do something about it.

CHARACTER OF POLICIES, SERVICES AND PRODUCTS

Reflective

Honest

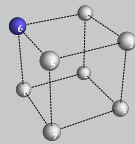
Confronting

Open-minded

6. INSPIRING TO STRIVE FOR IDEALS

Inspiring people in Skolkovo to build an ideal society

A2 personal responsibility
B1 conditions
C2 invest/own



BEHAVIOR

This specific behavior is about working to move society forward, about questioning the status quo and inspiring people to break new ground.

It is about being passionate, visionary, imaginative, curious, explorative, rebellious, courageous, persevering; about thinking you change the world and inspiring the people around you to think the same.

RELATION TO INNOVATION

The people who exhibit this behavior function as powerful role models and are the living proof that anything is possible if you have courage and perseverance. Entrepreneurship goes hand in hand with risk taking. It usually takes years of making mistakes and near failures to turn a startup into a successful company. Take Amazon.com for example, whose founder and CEO, Jeff Bezos took the risk of quitting his super-high-paying Wall Street job, racing across the country in his Honda to Seattle, and then starting the company from scratch. The legend of Steve Jobs, besides Apple's unstoppable product pipeline, includes his reemergence after a tremendous downfall. And as Mark Zuckerberg, CEO of Facebook says "The biggest risk is not taking any risk...In a world that changing really quickly, the only strategy that is guaranteed to fail is not taking risks." The role models who exhibit this behavior provide moral support for dealing with failure and inspiration to keep innovating.

UNDERLYING CONCERNS

The behavior is born out of cognitive goals like gaining knowledge or making sense out of something; avoiding misconceptions and erroneous beliefs (such as the belief that risks should be avoided). And it is born out of goals related to intellectual creativity; engaging in activities involving original thinking or novel or interesting ideas; avoiding mindless or familiar ways of thinking.

CHARACTER OF POLICIES, SERVICES AND PRODUCTS

Humble

Exemplary

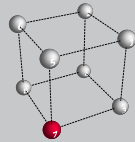
Trustworthy

Dedicated

7. IMPROVING YOUR SURROUNDINGS

Making your current living environment a better place

A2 personal responsibility
B2 output
C1 consume/use



BEHAVIOR

This behavior is aimed at adjusting ones immediate surroundings in the way one sees fit at a particular moment in time. It is about the little tweaks and adjustments that give a feeling of freedom and choice, a feeling of human belonging in a large city like Skolkovo. The improvements can be aimed at making your surroundings more efficient, environmentally friendly, esthetically pleasing, better organized, multi-functional, etc.

RELATION TO INNOVATION

A creative city like New York organizes its networks around art openings, fashion shows and nightlife. These networks are deeply important to how new innovations are produced, how cities work to sustain creativity and turn it into commercial value. As Elizabeth Currid describes in the book “The Warhol economy”, cities drive our economies; creativity drives our cities. A city that provides many opportunities for creative expression will profit from the cross fertilization between domains like fashion, art, architecture, music and graphic design.

Another way this behavior is related to innovation is the importance of taking initiative to innovate. People who are naturally inclined to take the initiative and just create what’s lacking in their town will feel empowered if they are given room to act upon their impulses.

UNDERLYING CONCERNS

This type of behavior is born out of task goals related to creativity and to management of ones daily life and ones surroundings. It stems from a need to engage in activities involving artistic expression or creativity on the one hand. And from a need to feel in control over ones surroundings, maintaining order, organization, or productivity and avoiding sloppiness, inefficiency, or disorganization on the other hand.

CHARACTER OF POLICIES, SERVICES AND PRODUCTS

Flexible

Reasonable

Understandable

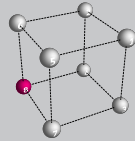
Transformable

Under-defined

8. LONG-LIVED SOCIAL ENTREPRENEURING

Entrepreneurship with a focus on long-term social coherence of Skolkovo

A2 personal responsibility
B2 output
C2 invest/own



BEHAVIOR

This behavior is aimed at balancing the near-term “profit motive” of a business with a more holistic mission of focusing on the long-term and serving customers, employees, shareholders, and the community at large. It is about ignoring short-term pressures, even sacrificing near-term profits, and investing for the long-term. Investing in innovation and in jobs and opportunities for the people in and around Skolkovo and providing long-term wealth for the local community.

It is about committing to the population of Skolkovo and sharing in the long-term benefits.

RELATION TO INNOVATION

This behavior is favorable in terms of innovation because long term success of a organization lies in the ability to balance short term R&D with a long-term strategic frame of reference. Radical innovation often requires a long breath, and a strategic approach to development (See for example Gartner’s “hype cycle” research methodology).

People that unapologetically build their business for the long-term provide the stability and that safety that a community needs to flourish. This community in turn provides the social capital and creative environment which will make Skolkovo the true innovation hub it strives to be.

UNDERLYING CONCERNS

This behavior is born out of integrative social relationship goals, mainly that of social responsibility; taking on social commitment, resource provision; promoting fairness or equality

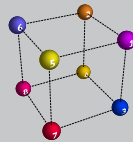
CHARACTER OF POLICIES, SERVICES AND PRODUCTS

Trustworthy
Strong
Visionary

SKOLKOVO AS A WHOLE

Qualitative specifications of the Skolkovo Innovation Ecosystem as a whole

Applies to all innovation goals in three dimensions



This paragraph discusses the qualitative specifications of the Skolkovo innovation ecosystem as a whole. It deals with the qualities of the complete innovation ecosystem which were already touched upon in the mission statement (see mission statement below).

“We, the stakeholders and initiators in the development of Skolkovo, want to attract people with diverse innovation goals to the Skolkovo innovation ecosystem. We want people to feel they matter as an individual, and we want to recognize their presence and affirm their contribution to the system. We want all the different specific reasons for coming to Skolkovo, for engaging and contributing to it, to be reflected in the design of the future city; in its tangible assets like buildings and infrastructure, in its intangible assets like social capital and informal networks, and in its organization and policies”

empathetic

- Making people feel at home
- Making people feel they matter as an individual, their presence and contribution is recognized, acknowledged and affirmed

human scale

- Linkable/ connectable/ engageable; as an individual it is easy to connect to and engage with other individuals, with groups and with society as a whole
- Even organizations have a face

goal-oriented

- Focused on realization of joint output (result oriented vs. effort oriented)
- Understanding and accepting that all behaviors matter for successful innovation
- Respect and recognition for each individuals' behavior; tolerance as an effect

SKOLKOVO AS A WHOLE

Qualitative specifications of the Skolkovo Innovation Ecosystem as a whole

The Skolkovo innovation ecosystem brings together people who pursue a wide range of innovation goals. As we have seen before in the context (driver E) there are a number of existing practices for dealing with diversity. The qualities named above reveal a Skolkovo way for dealing with diversity; the “space food” concept.

	MELTING POT	SALAD BOWL	STEW	SPACE FOOD
ANALOGY	The pot in which metals are melted at great heat, forming a new compound, with greater strength and other combined advantages.	Salad ingredients are chopped up and combined in a salad bowl	Ingredients remain distinguishable while the stew is an entity in its own right.	Food that is meaningful for it's effect. Overall nutritional quality of space food is the result of balanced mix of specific ingredients.
CONCEPT	Groups and individuals become reflected in one “common denominator”- culture	Groups and individuals mix together while keeping their own distinct qualities	Groups and individuals mix together and an easily accessible ‘new’ culture, as entity in its own right, serves as a shared language	Groups and individuals work together to create output, all focusing on the realization of an effect
PITFALLS	One group over-dominant Bland, non-descript culture	Lack of commonality limits interaction between groups	‘new’ culture not legible or profound enough	Lack of shared goal

ADDRESSING THE INNOVATION GOALS

Ideas for specific hard-, soft- and orgware which address the eight innovation goals

For each innovation goal ideas were developed for hard-, soft, and orgware with which the innovation goals can be addressed. This was done in a day-long workshop on the 8th of November. Prior to the workshop KVD studied the eight innovation goals in-depth, describing the underlying concerns, needs and desires. KVD also developed several idea directions based on the first exploration of the innovation goals in the previous workshop on the 13th of October (see results workshop II in supplement B).

Participants were asked to choose a specific innovation based on their own expertise and preferences to explore in more detail. Ideas were generated for hard-, soft, and orgware; tangible assets like buildings and infrastructure (hardware), intangible assets like informal networks, social capital, values and norms reflected in social behavior and in attitudes towards entrepreneurship (software) and organization, strategies and policies (orgware). Ideas were developed for the long term future as well as for the first practical and attainable steps. An overview of these ideas can be found in supplement C.

On the following pages four possible directions for development (idea directions) are presented for each type of innovation goal. Some ideas describe the long term future, others the first practical and attainable steps in the short-term. These first ideas are certainly not exhaustive but serve as an illustration of design directions and as inspiration for the further development of the Skolkovo innovation ecosystem.

1. INFLUENCING PUBLIC POLICY

Leading a group that makes new policies for Skolkovo

POSSIBLE FIRST DIRECTIONS FOR DEVELOPMENT



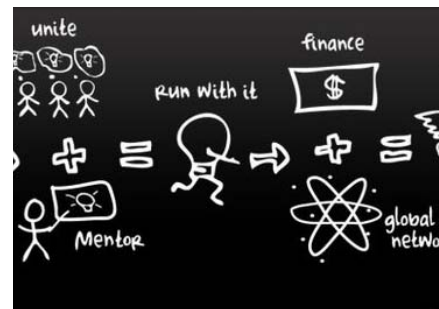
A. Judicial interpretation of legislation

Set up a judicial task force with the objective of establishing ‘room for experimentation’. This could be by looking for loopholes in existing legislation or by reinterpreting existing legislation in favor of the Skolkovo experimentation climate.



B. Stage for the grass roots

A lively process of community self-government depends on an endless series of ad-hoc political and advocate groups, functioning freely, each with a proper chance to test its ideas before the townspeople. Small grass roots movements, often unpopular at their inception, play a vital role in society. They provide a critical opposition to established ideas and will generate counter movements whenever things get off the track. Provide access, equipment and space (online/offline) to mount a campaign and the chance to get their ideas into the public area.



C. Keeping an ear to the ground

Early innovations, fresh ideas, ‘larval’ start-ups; they are all fragile and can easily be killed by unforgiving rules and regulations. They will simply never surface, their end is silent and invisible. But their ending can give valuable information on bureaucratic and regulatory dysfunction. Think about ways to optimize the legislative climate by studying problems that can be encountered, for example through ‘mystery innovation’ (like mystery shopping) or a ‘Kafka brigade’ (in UK and NL).



D. Power of the spoken word

Bureaucracy must be controlled at all costs (see also Wiki on “instruction creep”). A seemingly small gesture can send a powerful signal to people in Skolkovo.

Instead of regulating and instructing in writing, bring a task force to life that develops alternatives for written rules, regulations and procedures which have the same effect. Think of positive reinforcement of desirable behavior, using “social proof”, face-to-face communication of instructions (a concierge in every building) etc.

2. CLAIMING LONGEVITY

Creating conditions in Skolkovo that prolong life and/or give a feeling of immortality

POSSIBLE FIRST DIRECTIONS FOR DEVELOPMENT



A. Well-being centers

Provide a system of health care which is focused on maintenance of health; on preventive medicine. Emphasize recreational activities that keep people in good health, like swimming and dancing. Annual check-ups give people a complete picture of the state of their health. Health centers also monitor the local air and water for possible pollution. Provide space for research in biotechnology and pharmaceuticals so researchers can directly engage end-users and develop deep understanding of the end-user and gain knowledge about staying healthy and fit; about prolonging life.



B. Night life

People enjoy going out at night, meeting others and potentially developing an intimate relationship. What will the special quality of Skolkovo nightlife be? When most of the city's activities close down at night, the evening activities like cinema, bars, cafes and all-night diners should be clustered together to form well-lit, safe and lively places (hot spots) of evening activity.



C. Wall of fame

Provide recognition for residents' life's work. Honor people that made an extensive contribution to Skolkovo Innovation Ecosystem. This can be done through the naming of streets, buildings after residents, getting commemorated on a 'wall of fame', or celebrating a Skolkovo holiday in a residents commemoration.



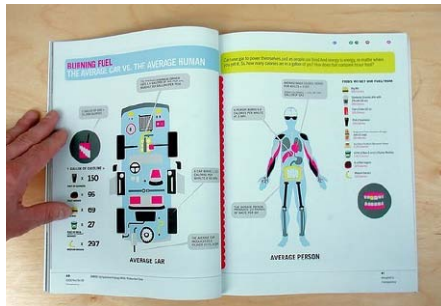
D. Children in the city

Define places where children can be free and safe. Make it possible for children to explore the whole of the adult world around them freely so they can find out what everyone is doing (and learn by copying). The absence of children playing in the streets is said to be an early warning sign of a dysfunctional society ("canary in a coal mine"). Build children's homes (second homes with second families) in every neighborhood where children can stay for a couple of hours or for a week (instead of daycare or baby-sitting services).

3. EXPLOITING VALUABLE COMMODITIES

Quick wins, consuming the low hanging fruit of the Skolkovo environment

POSSIBLE FIRST DIRECTIONS FOR DEVELOPMENT



A. Showcasing Skolkovo knowledge

In order for developed knowledge to have commercial value it needs to be accessible and explicated; it needs to be communicated in an insightful and “low threshold” manner (or sneezy, spreading through society like a virus, as described in Malcolm Gladwell’s “Tipping Point”). People who are skilled at this type of communication should be recognized and treasured. Explore methods to communicate ideas to potential buyers (Dragon’s Den/ New Venture/ Agora market place)



B. Space for individually owned commercial services

Enable individuals who exhibit this behavior to personally profit from it. Balance the distribution of business licenses in favor of individually owned shops and services, as opposed to only franchises. Make small rental spaces available to people hunting for fortune. The environment should be buzzing with entrepreneurial activity. This could be anything the people in Skolkovo want and will pay for; from food, dry-cleaning, barbershops, baby-sitting to guided tours of Skolkovo architectural highlights.



C. From trash to treasure

Something that one person considers worthless may be considered valuable by someone else. One man’s trash can literally be another man’s treasure. Use garbage collection and processing as an analogy for a business model for the future city of Skolkovo. What ‘waste’ will the city of Skolkovo collect and how can it profit from it?



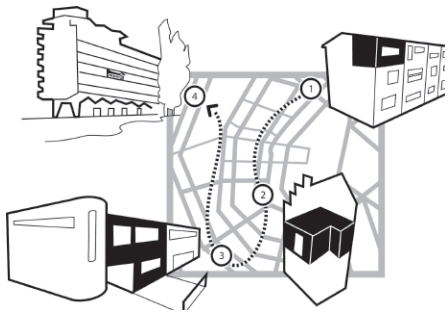
D. Copy/past or plug and play

Starting from scratch doesn’t mean Skolkovo has to invest in reinventing the wheel. In fact, it has the unique opportunity to gather best practices and state of the art technology, where other innovation centers may already be stuck with the obsolete technology or ideas that get in the way of further progress (see wiki “Law of the handicap of a head start”).

4. OCCUPYING YOUR PLACE OF LIVING

Creating your own long-term living environment (territory)

POSSIBLE FIRST DIRECTIONS FOR DEVELOPMENT



A. Earnership housing

Enable residents to flow from one accommodation to the next; a natural movement parallel to the development of their career in Skolkovo. Living longer at Skolkovo means more privileges (like MIT). A living career could start in the outskirts of Skolkovo on a camping and end in a self-built villa in the city center.



B. Belonging through food

Food is what connects us all to each other and to the natural world, which makes it an incredibly powerful medium for thinking and acting collaboratively. Growing and eating locally grown food, or self-grown food, can increase a sense of belonging; a sense of place.



C. Making your mark

Make it possible for people to have a unique, noticeable effect on their surroundings. People will go through great lengths to take ownership of their living place; erasing reminders of the previous occupant; to shape their own unique place in the world; to make their home accepted by but also different from others.



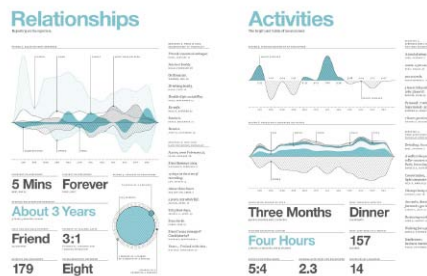
D. Connection to nature

Conserve the natural environment so people can access 'untouched' nature and experience timelessness and their connection to the natural world. Place buildings on those areas that are in the worst condition and leave the best areas (trees, grass, fertile soil) as they are. Keep trees wherever possible. Scatter public parks for easy access from all parts of town

5. MENDING THE SOCIAL COHESION

Decreasing tensions in Skolkovo Innovation Ecosystem and ensuring social coherence

POSSIBLE FIRST DIRECTIONS FOR DEVELOPMENT



A. Monitoring

Establish what the vital signs of the social cohesion in Skolkovo Innovation Ecosystem are. Develop ways to monitor them. For example; a vital sign may be 'density' or 'robustness' of social networks (robustness means the loss of a random connection, or even several, doesn't destroy the network). Another vital sign may be interpersonal confidence, a measure of perceived cognitive, emotional and material support from fellow citizens in a given reference period.



B. Inhabitant directed news

In order to resolve conflicts and tensions they must first be made apparent, brought to the surface. Provide modest funding for an inhabitant-directed, independent news publication. It should cover local news and include editorial opinions, criticism, persuasion and advice. Form is less important than content. For extra appeal it could include an entertainment section including reviews, classified ads and editorial cartoons. Care must be taken to ensure editorial diversity.



C. Hanging out

Provide spots where people can hang out, comfortably, for hours on end. This will benefit social cohesion to great extent. Given the long, cold winters conscious effort must be taken to provide indoor public places for informal gatherings with characteristics of successful outdoor meeting places. Finding a subtle balance of being defined yet not too defined and enabling casual, gradual involvement (as opposed to a enclosed space that is too intimate and vacant land that provides too little "reason to be there"). Also facilitate the organization of social gatherings.



D. Embedded sociability

Design for embedded sociability in living services. Think about low-threshold ways "the new" can engage with "the old" in Skolkovo. How can new and social media for example help new inhabitants to engage with their new neighbors, with existing communities like sport teams, hobby clubs, professional associations?

6. INSPIRING TO STRIVE FOR IDEALS

Inspiring people in Skolkovo to build an ideal society

POSSIBLE FIRST DIRECTIONS FOR DEVELOPMENT



A. Safe testing-ground

Develop Skolkovo as a safe testing ground for innovative products and services. The internal market of Skolkovo could be seen as a reflection of the Russian market and, with its diverse population, even as a reflection of the world market. As such it is the ideal environment to test ideas, prototypes and business models and to improve them with the goal of eventually spinning them off into the bigger world.



B. Alumni support

Develop an association of graduates (alumni) or, more broadly, of former students and former employees. support new alumni, and provide a forum to form new friendships and business relationships with people of similar background.



C. Accessible role models

Make accessibility of professors, teachers and higher management official policy of Skolkovo. Make it an explicit part of their job to help students find their passion. Allow them time for listening and mentoring. Select them for being personable and passionate about their jobs. Also invite inspirational people to come to Skolkovo to talk to students.



D. Tolerance for failure

Embed tolerance for failure in the Skolkovo culture. Prevent stigmatization due to failure. Embed respect perseverance and courage. Make Skolkovo a place where you can learn from your mistakes. Provide an abundance of mutual moral support, which instead of throwing the individual on his own resources, leads him to share in the collective energy and supports his own when exhausted.

7. IMPROVING YOUR SURROUNDINGS

Making your current living environment a better place

POSSIBLE FIRST DIRECTIONS FOR DEVELOPMENT



A. Room for urban interventions

Give people the slack to be able to intervene in the Skolkovo urban environment. These interventions could be DIY ‘fixes’ that are not necessarily the most elegant, (but usually original, inventive and effective); esthetic/environmental improvements like “guerilla gardening”; or street art/messages in public space. All communicate creativity of human beings in an otherwise ‘concrete’ environment.



B. Balance defined and undefined

Invite inhabitants to make creative use of their environment by giving not-too-defined affordances of the surroundings. City anthropologist William Whyte once argued for moveable seats because his observations revealed people’s widespread tendency to move them. People want their immediate park space to be organized to fit their preference at the moment, rejecting the immovable (defined) chairs and benches widely prescribed by designers. Public space could afford multiple uses.



C. Accommodate personal mobility

The future will bring an increasing array of small urban transportation means, ranging from simply walking to inline skates and electric scooters. These different modalities will increasingly be incorporated into people’s lifestyles; they are used as an expression of identity. Accommodate as many different ways of travel, optimizing the environment for each specific mode while making sure all modes can exist side by side.



D. Artist-in-residence

Provide residency opportunities that allow visiting artists to stay and work at Skolkovo. Their simple presence and exhibitions can spark creativity and can be seen as a statement by the Skolkovo city of embracing diversity. And they could work and with modern scientific processes such as biotechnology.

8. LONG-LIVED SOCIAL ENTREPRENEURING

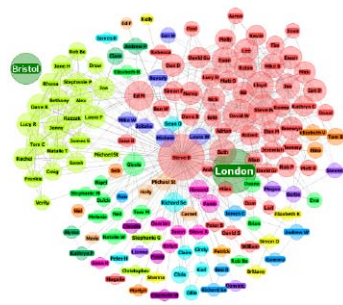
Entrepreneurship with a focus on long-term social coherence of Skolkovo

POSSIBLE FIRST DIRECTIONS FOR DEVELOPMENT



A. Attract business angels

Angel investors are often retired entrepreneurs or executives, who may be interested in angel investing for reasons that go beyond pure monetary return. These include taking social responsibility and making use of their experience and networks while mentoring the next generation of entrepreneurs. They are in it for the long term and are invaluable for start-up capital and realistic advice. Make Skolkovo a place where business angels gravitate to for all the right reasons.



B. Apply the rule of 150

British anthropologist Robin Dunbar suggested that 150 is the number of people with whom one can maintain stable social relationships; a cohesive group in which an individual knows who each person is, and how each person relates to every other person. To optimize social coherence it should be applied in business, research centers and faculties by occasionally splitting off divisions or 'cloning' oneself.



C. Stages of the life cycle

Include a balance of people at every stage of the life cycle, from infants to the very old and include the full slate of settings needed for all these stages of life. balance the full life cycle in Skolkovo Innovation Ecosystem. Persons at each stage of life have something irreplaceable to give and to take to the community. Each stage learns from the next, allow normal growth through the life cycle.



D. Stand out in Social design

Develop a design process that contributes to improving human well-being and livelihood; excel in human centered design. Teach researchers, designers and creative professionals they have responsibility and are able to cause real change in the world through social design.

4 NEXT STEPS

SUGGESTED NEXT STEPS

In this report the vision for the Skolkovo Innovation Ecosystem in 2035 was presented, which focusses primarily on the conditions (hard-, soft-, orgware) and the coherence between these conditions which an ecosystem should possess to be an attractive and effective environment for innovators. Now the time has come to work 'backwards' to identify the hardware, orgware and perhaps most importantly the software that will connect the future to the present.

Two important activities must take place before this can begin to happen.

1. STAKEHOLDER INVOLVEMENT

First the involvement of the appropriate stakeholders must be organized. At this time many teams are working on the development of Skolkovo, often without knowing exactly what the other teams are up to, and how all activities should relate to one another. The first objective is to identify which stakeholders should be involved in the further development of the eight behaviors and what their roles, tasks, responsibilities and authority should be.

Relevant stakeholders can be identified using a matrix (figure 4.1) and can be employees of the Skolkovo Foundation or representatives of resident companies, future students, external experts (like CSR or St Petersburg University) or key decision makers in the local or national government. Teams of stakeholders could center around existing subjects like the University, the Open University, Virtual Skolkovo, Smart City, Technopark, Resident companies, Schools, Healthcare, and City.

		INNOVATION GOALS →							
		1	2	3	4	5	6	7	8
STAKEHOLDERS ↓	UNIVERSITY								
	OPEN UNIVERSITY								
	SCHOOL								
	VIRTUAL SKOLKOVO								
	SMART CITY								
	COMPANIES								
	TECHNOPARK								
	HEALTHCARE								
	CITY								
	MOSCOW SCHOOL OF MANAGAEMENT								
	NEW SCHOOL OF ECONOMICS								

fig-4.1: Stakeholders / innovation goals matrix

In dialogue these stakeholders or teams should select the innovation goals which they feel apply in their case (figure 4.1). In togetherness the stakeholders, businesses, students, researchers should implement the full spectrum of innovation goals that will attract innovators and insure output for the long term future.

2. MATCHING TO THE WORK IN PROGRESS

The development of the Skolkovo hardware and orgware is well on its way. Urban planning and area programming for the first building phase in 2014 have been unfolded and a number of world renowned architects and city-planners have presented their designs for parts of the city. Furthermore, a larger number of multinational companies as well as start-ups have expressed their wish to participate in Skolkovo and legislation like tax laws and policies on admissions is in the making.

This work in progress needs to be matched to the directions brought forth in this report. In some cases the work being done will match the vision and mission, in other cases this match can be improved or is simply not there. On the basis of this inventorisation, a 'road map' of actions can be set-up, all the while focusing on the long-term objective and steering the work in progress carefully and consistently, without impeding the speed of development of the Skolkovo innovation ecosystem as a whole.

SUPPLEMENTS

A. RESULTS WORKSHOP I

Context Factors

Cluster 1 "Ikiga", success and productivity

- 1.A.13 [P] 'Work hard - play hard' philosophy gains power. Sk must have fun facilities and attractions as well as work /research ones. 'Sk. The Las Vegas of 2035.' type of idea"
- 1.A.14 [P] Growing value of family and work-life balance
- 1.B.6 [T] The costs are growing fast
- 1.C.2 [T] Less sharp borders between people and job (blending work and life time)
- 1.C.16 [P] Business > became self-adjustment (self-government)
- 1.C.21 [D] Intellectual property court
- 1.D.2 [D] Social issues have fallen behind in favour of competition and business issues.
- 1.D.4 [P] People will be increasingly focused on economic development and business start ups
- 1.D.5 [S] "Time is money; driven by the entrepreneurial and venture capital state"
- 2.A.14 [P] Researchers and scientists perform best in an environment that supports continuity and stability
- 2.A.20 [P] People need stress to be more productive
- 2.B.14 [P] young environment conducive to values of ventureness, risk taking and out of the box thinking.
- 2.B.23 [P] Competitiveness /selfishness in human genes
- 2.C.7 [P] Risk taking and entrepreneurial attitude
- 2. .4 [T] People don't divide 'work' from 'life'
- K.4 [P] Researchers who spend a lot of time working with researchers in other nations are significantly more productive than researchers who don't. [Bozeman & Lee (2003)].
- K.6 [P] Historically scientists have been left to their own devices to choose what they were interested in, how they work on itm and what they would do with their results.
- K.7 [D] Growing commercialization of scientific endeavors. An increasing share of scientific research and development in funded by corporations.
- K.8 [P] Underlying assumption in scientific research that allowing individuals to pursue their own self-interest will produce collectively better results than dictating orders.
- K.17 [S] Russians tend to do all the work themselves simply because they do not know how to share responsibility.
- K.25 [P] Bureaucrats by their nature are the exact opposite sort of people from startup investors.
- K.35 [P] "Most good startup ideas seem a little crazy; if they were obviously good ideas, someone would have done them already."
- K.37 [P] high-tech cities tolerate odd ideas, and smart people by definition have odd ideas.
- K.50 [P] Startups produce better results when able to fire people: better results when people have to perform well in order to keep their job
- K.52 [P] Startups are the kind of thing people don't plan, so you're more likely to get them in a society where it's ok to make career decisions on the fly.

Cluster 2 Entitlement

- 1.A.8 [S] Russians are proud of their leader
- 1.A.9 [S] Russians are proud of their country's achievements, especially in technology or science (Aerospace technologies, Military technologies)
- 1.A.17 [D] Change from traditional Russian scepticism towards government initiatives to the feeling of pride and ownership
- 1.C.15 [P] National identity / The Sk project is a Russian project (to be the part of leading processes) > International competition

- 1.C.18 [P] Local (individual development) became global > cultural benchmarking
- 1.D. [S] 'Russians' vs. the rest of the world. Culturally ingrained 'us' versus 'them'. 'Better' / 'Worse'
- 2.A.1 [P] Cultivating pride for being part of the Sk project, (measuring it with KPI: number of labs, projects, discoveries)
- 2.A.15 [T] Sk is a prototype of a gateway to the world: a window opening Russia to the world (like Peter the Great)
- 2.C.2 [S] Face control everywhere (people looking you up and down, do you belong here?)
- 2.C.5 [P] Low level of personal responsibility in Russia
- 2.C.16 [P] Russian people will help you to behave right or explain to you how you should behave (eagerness to give normative instructions)
- 2.C. [P] Russians like to compete with the best
- 2.C. [T] Sk could be an example of innovation development for other Russian cities. In the society there is an expectation for Sk as an example

Cluster 3 The laws of attraction

- 1.A.1 [P] A scientist is an unordinary person. Scientist / mechanic joke
- 1.A.4 [D] The growth of middle class
- 1.A.10 [T] Prosperity is associated with career in science and/or engineering. Being a scientist/engineer is prestigious, well-paid and gives high status in a society.
- 1.A.19 [S] 'Middle Class' is not big enough in Russia
- 1.A.22 [T] Formation of dual career couples (common interests, healthy families, etc.)
- 1.B.1 [T] The social structure of the society is changing at a fast pace
- 1.D.4 [T] Society around and in 'Sk' will be very picky. Use of online resources (such as social networking, specialized sites) to pick the best.
- 1.D.11 [P] Sk residents and workers are becoming very "international"
- 2.A.4 [D] "Top class environment as seen from outside; elite life, conditions, apartments etc."
- 2.A.4 [P] Celebrity Sk members, role models of the project, its evangelists, its attraction point.
- 2.A.5 [S] Knowledge sharing and excellence by collaborating with celebrity and prominent scientists and researchers
- 2.A.13 [S] Russians will see employment by Sk as a change of lifestyle with new, higher benefits
- 2.A.18 [T] Success stories (popping up and PR of it across the world to spread the word around)
- 2.B.13 [S] Difference between poor and rich people will decrease
- 2.B.20 [S] Universities are a way to avoid the army for young men
- 2.C.6 [T] Creative cities and places as a magnet to human capital. Competence of cities (Richard Florida)
- 2.C.9 [S] Big gap between rich and poor
- 2.C.10 [P] Best people attract best people (critical mass of best people)
- 2.C.13 [T] More competition for brains and smart people among cities and countries
- 2.C.17 [T] Increasing competition among innovation centres around the world
- 2.C. [D] The population become more entrepreneurial. More entrepreneurs between young people.
- K.5 [P] Scientists want to solve particular problems. And they want to be recognized, to earn the attention of their contemporaries, to transform the way other scientists think. The coin of the realm, for most scientists, is not the cash but rather recognition.

- K.14 [P] Russians engaged in innovation refer to their profession as a "calling". That is, they enjoy what they do, and not too sensitive to monetary incentives.
- K.15 [P] Importance of recognition of peers and increasing their self-esteem in the scientific community.
- K.23 [P] You only need two kinds of people to create a technology hub: rich people and nerds. They're the limiting reagents in the reaction that produces startups.
- K.24 [P] Startup investors are a distinct type of rich people. They tend to have a lot of experience themselves in the technology business. This (a) helps them pick the right startups, and (b) means they can supply advice and connections as well as money. And the fact that they have a personal stake in the outcome makes them really pay attention.
- K.26 [P] Wherever the startup is when it gets funded, it will stay.
- K.27 [P] Both nerds and investors are highly mobile.They'll go where life is good.
- K.28 [P] What nerds like is other nerds. Smart people will go wherever other smart people are. And in particular, to great universities.
- K.29 [P] What attracts professors is good colleagues. Professors when they're deciding where they'd like to work, consider one thing above all: the quality of the other faculty.
- K.30 [P] To spawn startups, a university has to be in a town that has attractions other than the university. It has to be a place where investors want to live, and students want to stay after they graduate.
- K.31 [P] "You don't build a silicon valley; you let one grow."
- K.32 [P] Like the rest of the creative class, nerds want to live somewhere with personality.
- K.33 [P] "Most nerds like quieter pleasures. They like cafes instead of clubs; used bookshops instead of fashionable clothing shops; hiking instead of dancing; sunlight instead of tall buildings"
- K.34 [P] It's the young nerds who start startups, so it's those specifically the city has to appeal to.
- K.36 [P] The implication of the organic growth hypothesis is that you can't be somewhat of a startup hub. You either have a self-sustaining chain reaction, or not.
- K.38 [P] Young people don't want to live in the suburbs.
- K.39 [P] Startups beget startups. People who work for startups start their own. People who get rich from startups fund new ones.
- K.40 [P] You need time to grow a silicon valley. The university you could create in a couple years, but the startup community around it has to grow organically. The cycle time is limited by the time it takes a company to succeed, which probably averages about five years.
- K.41 [P] Venture investors prefer to fund startups within an hour's drive. For one, they're more likely to notice startups nearby. But when they do notice startups in other towns they prefer them to move. They don't want to have to travel to attend board meetings, and in any case the odds of succeeding are higher in a startup hub.
- K.45 [S] Compared to other nations there are relatively few successful serial entrepreneurs or mentors for innovative entrepreneurs.
- K.46 [D] Entrepreneurship as a social force in Russian society is gaining momentum, particularly among young people.
- K.51 [P] successful start-ups will invest in other start-ups
- K.53 [P] Having positive role models can change the attitude towards entrepreneurship.

Open collaboration

- 1.A.6 [T] In 2035 scientists will not work/live in just one location but will work and travel among several innovation centres around the world. Thus, virtual services and new level of services are required. Global mobility requires mobile services.
- 1.A.7 [T] More Russians can speak English
- 1.B.8 [T] Communication
- 1.B.17 [S] Open-source business, fast technology cycle
- 1.C.5 [T] Development of partnership among different groups, collaboration
- 1.C.12 [D] Cooperation abilities (collaboration skills)
- 1.C.24 [P] To win the international competition you have to be local and global - oriented (harmony)
- 1.D.1 [T] Increased collaboration and remote services in health care.
- 1.D.10 [T] There will be increasing levels of international collaboration
- 1.D.16 [T] More use of technology for community and information collaboration
- 1.D.17 [S] The idea of knowing, being educated is changing: why learn if you can Google? With the change in Russian education system it feels like the common cultural background is disappearing.
1. .2 [T] open-source business, networking/cluster, new markets BRICS
- 2.B.1 [D] Education system to change towards online: rethinking education using research results from learning science. Education system is going to produce people with a broader outlook. More connected, free-thinking.
- 2.B.18 [P] People should have some common goal or task to achieve
- 2.C.4 [P] Russian people tend to focus on more complex issues and big projects rather than doing smaller, defined things every day > Big project mind
- 2.C.29 [D] Laws become more internationally oriented (oriented to international standards like WTO, European councils etc.).
- K.1 [D] Growing specialization in scientific research; increasing 'division of cognitive labor'
- K.2 [P] "Scientists who collaborate with each other are more productive, oftentimes producing 'better' science, than are individual investigators" [economist Paula Stephan, 1996, pp 1221-1222 see also "The Wisdom of Crowds" by Surowiechi (2004)].
- K.3 [D] Although most of the collaboration in scientific research takes place in a scientist's immediate vicinity, the rate of global cooperation is increasing.
- K.9 [P] Science depends on the free and open exchange of information, on disseminating information widely.
- K.10 [P] Corporations have an economic interest in protecting information
- K.42 [P] Business angel-funded startup companies are less likely to fail than companies that rely on other forms of initial financing
- Melting pot, salad bowl and stew**
- 1.A.2 [D] Civil society keeps developing. Human rights development
- 1.A.12 [T] Interest in cultural life keeps growing
- 1.A.18 [D] World climate change -> it will become warmer
- 1.A.20 [D] Legislation on UN-level standards, especially in the area of IP
- 1.A.21 [T] Educational system is focused on individual talent development from an early age
- 1.B.1 [T] Multi-cultural
- 1.B.2 [T] individual economy, individual/social balance. Specific tailored to individual.
- 1.B.3 [T] Sustainable development
- 1.B.4 [T] The communication between the groups are bad
- 1.B.8 [T] The association between the inhabitants become low >> decrease in in-person social intercourse and civic engagement in Russia as well as other parts of the world
- 1.B.10 [T] Segregation and social separation reaction
- 1.B.12 [S] Individualization
- 1.B.13 [D] Diversification and separation in society
- 1.C.1 [T] Civil society development and increase of community activity or social partnership
- 1.C.9 [D] Spread of best practices of human solidarity
- 1.C.10 [D] Separation of people according to identity
- 1.C.11 [D] Socialization of business
- 1.C.13 [P] Multicultural (tolerance)
- 1.C.14 [P] Globalization (immigration process) Huge metropolises become international (it's not just a Russian town at all) > multiculturalism
- 1.C.17 [P] Environmental friendly
- 1.D.7 [D] Multicultural - it can't be 'Russian' (Moscovites) and 'everyone else'
- 1.D.8 [S] Environmental issues have increased priority
- 1.D.9 [S] People tend to work according to the informal system of relationship rather than the formal one
- 1.D.13 [D] Sk culture (the way we do things around here) - how to build and how to sustain with the planned turnover of residents (high % of the population (students and start ups) will be forced to leave every 2-4 years).
- 1.D.22 [T] Contradiction in diversity: more diverse society offline, more united people online
- 2.A.2 [P] Accumulating unique database ensuring continuity so that new dwellers get the knowledge of those who left
- 2.A.3 [T] Transparent access to Sk community (rules of engagement)
- 2.A.8 [D] Foreigners (not Russians) strive for temporary and personal success (at Sk)
- 2.A.11 [P] Environment promoting the top of Maslow pyramid. The sense of satisfaction from discovering yourself.
- 2.A.16 [S] A community of common thinkers: scientists to scientists: same lifestyle, habitats etc...
- 2.A.17 [P] Common cultural code (language, legends, patterns, slang, characters, places, monuments)
- 2.A.19 [T] Sk populations (researchers, entrepreneurs etc.) will live more separately/zoning (mingle together)
- 2.B.3 [T] Increasing social awareness /responsibility. People will assume more responsibility for welfare of others, which will lead to more pro-bono/charity/etc.
- 2.B.5 [P] Social diversity produces understanding of value of different approaches, communication/importance etc.
- 2.B.6 [P] People need to be accepted by others, to be in a group, to work collaboratively, get support from others.
- 2.B.7 [S] People like to make friends
- 2.B.17 [P] Losing your language is like losing your culture
- 2.B.19 [P] People like to express themselves
- 2.C.8 [D] Students become more mobile and can leave easily
- 2.C.15 [T] Walkable city; many cities try to design urban space adapted to pedestrians and cyclists. Not car centred cities.
- 2.C.24 [T] Eco (or green) lifestyle. It concerns not only air pollution (land pollution etc.) but much more a way of life and cultural values.
- 2.C.27 [T] More immigrants
- K.44 [S] The Russian population is made up of a very diverse set of cultures, ethnic groups and languages.
- K.54 [P] The appreciation of the social climate in a neighborhood is a strong determinant of residential satisfaction
- K.55 [P] When deciding on a place to live, people tend to weigh the feel of the house more heavily than the feel of the neighborhood.
- K.57 [P] Features of a positive social climate are shared social values, having socially competent neighbors and being able to correct each other in a mellow fashion.
- K.59 [P] The social climate is experienced as more positive when there are clear rules for living together and when those rules are also reinforced by a third party.
- K.60 [P] People like to stay within their ethnic or cultural group, this does not automatically mean they do not tolerate other groups.
- K.61 [P] Rich people don't like to live amongst poor people.
- K.62 [P] Poor people tend to become dissatisfied with their own living conditions when living amongst people who are better off.
- Self-improvement and transhumanism**
- 1.A.11 [D] "Improvement of demographic situation; increase of birth rate, development of science and medicine leads to prolongation of productive life."
- 1.B.6 [T] Consumer-close technology
- 1.B.11 [T] Seeking for a healthy lifestyle
- 1.B.14 [P] Low in order is poised for development
- 2.B.9 [D] Tech is turning into a religion/ideology
- 2.B.15 [D] New tech expanding capabilities of a humans (neuro, bio/ ageing, nano/augmentations, IT / enhancements, E.T./out-reach to space) > produces a different outlook and responsibility
- 2.B.21 [D] 4P medicine: personalized, predicted, participation, prevention. Medicine is changing from classic to another step. People will not treat the disease they can predict it and prevent
- 2.B.22 [T] Phenotyping / genome sequencing > synthetic biology
- 2.B.25 [D] Increasing longevity
- 2.C.19 [T] People have fewer kids and have them at an elder age
- 2.C.23 [D] People live in changing environment and change identity many times in life (one person live in different times, epochs).
- 2.C.28 [T] More people tend to care about their physical health (fitness)
- 2.C.30 [D] Devices and gadgets will become a part of our life and even our bodies.
- 2.C.31 [S] People experience a lot of changes during lifetime. Parents can hardly be a reference point.
- Adaptation to survival mode**
- 1.A.3 [D] Political stability of the society
- 1.A.15 [P] Importance of keeping privacy when living and working in an open, small community
- 1.A.16 [T] Change from the sense of instability and un-safety to more stable, safe and higher quality of life
- 1.A.23 [S] Russians tend to know about rules, laws and regulations, but not always obey or observe them
- 1.B.3 [T] We work hard and need relax out of the city (country)
- 1.B.4 [T] The reaction of life to mega cities. The influence of conditions of mega cities like traffic/ air quality/loneliness on life.
- 1.B.5 [T] We need renovation the city technology in energy efficient, transport, constructing, etc.

- 1.B.5 [T] DIY culture leaders - It is a problem to make leaders work together on a project. Leaders are increasingly self-made men, go-getters go-get > the people that make it to the top are very ego centric.
- 1.B.7 [T] More and more people understand that living in Moscow is dangerous for their health
- 1.B.9 [T] "Reversive demography; Russia vs. Moscow (Sk) > Russia is aging, Moscow is becoming younger (metropolitan area)"
- 1.B.13 [S] Negative perception (attitude) of government (power)
- 1.B.15 [S] Heavy gap between law and its application
- 1.B.16 [S] 'Low price' for human life in comparison with other nations
- 1.C.3 [S] State domination on social processes
- 1.C.4 [T] Village life instead of metropolis life. Increased cost of property in city > people are trying to move families (+ children) outside metropolises
- 1.C.6 [T] "High involvement in projects; project orientation"
- 1.C.19 [S] State domination on social process
- 1.C.20 [S] Gentlemen's agreement without concluding contract
- 1.C.21 [P] Many researches may become un-commercialized according to the defence policy of Russia
- 1.C.23 [D] Comfortable living conditions
- 1.D.5 [S] Dependence on the state to fund the existence, the operation (vs. 'independence') (what if the next leader decides to stop allocating resources to 'Sk'. Can the city be self funding?)
- 1.D.9 [S] Young people will look for better quality of life
- 1.D.14 [D] Safety and security: there has to be a comfort level higher than the rest of Russia, on par with the likes of Singapore, Dubai, etc.
- 1.D. [T] People tend to avoid official politics. They live in a 'parallel' country and solve the problems by themselves
- 2.A.1 [T] Cities, towns and communities are becoming more sustainable by reducing individual transport.
- 2.A.6 [S] Russians have a fear of getting fired as they will lose all privileges connected to their job
- 2.A.9 [P] People (will) live to minimize stress and fear and to increase their comfort
- 2.A.10 [D] Protected future for participants: a contract so that he/she feels secure about the future
- 2.A. [S] Russians are fearful; danger (afraid to get fired), survival, trust, less agile
- 2.B.2 [S] Habit of intensive/focused effort for a short period of time as opposed to long hours of strategic and routine work. This increases turnover/project duration/ inventiveness
- 2.B.10 [S] Bur-cy is a political force with huge economical/business interests
- 2.B.11 [D] New way of education. In this new system you can study get knowledge and use them, doing the real things. You can recruit another people and create teams for new innovations creation.
- 2.B.16 [S] Distance to power/ relation of an individual and the state stick works much better in management - this needs to be overcome to unleash liberal/start-up/ entrepreneurial culture
- 2.B.24 [P] People are afraid of changes
- 2.C.1 [S] People should have working experience during their entire education
- 2.C.3 [P] Comfortable environment for living, tolerance
- 2.C.11 [S] People do not take ownership for public space
- 2.C.12 [S] The cities of Russia are a place for work (to gain money), not for living
- 2.C.14 [T] Tendency to have a more private place, living in individual houses, rather than multi-apartment complexes.
- 2.C.18 [S] If you are rich you are bad, don't stimulate entrepreneurship (cultural norm)
- 2.C.25 [P] Sk should give some guaranties for it's residents; provide stability
- 2.C.26 [S] Legislative factors depend on political factors
2. [S] Strong (strict) social structure; hierarchy. People should 'play this game', wear expensive clothes if you are rich etc
- K.11 [P] People want to do the right thing but no one wants to be a sucker.
- K.12 [D] a growing sense of 'background anxiety' and 'a rising fear of the indifferent government steadily breaking up with its population.'
- K.13 [D] Low levels of trust in government. In today's Russia between two-thirds and three-quarters of the population do not trust any political or public organisations (state institutions and even self-support organisations at the local level, parents' committees at schools etc.)
- K.18 [S] Tendency amongst Russian managers in the innovation sector to manage based on authoritarian order, often restraining the autonomy of subordinates.
- K.19 [S] The innovators of Russia cannot think strategically, relying on short-term breaks and jobs involving "all hands on deck".
- K.20 [S] The innovators of Russia are characterized by disregard for procedures, technologies and standards.
- K.21 [P] "We have not learned how to make vacuum cleaners, but sent a man into space."
- K.22 [S] Historical inability to producing reliable and repetitive mass consumer products while highly able to make one unique thing and sporadic and brilliant breakthroughs on complex issues.
- K.43 [S] Talented people tend to seek the security of working for large companies and institutions, rather than taking the risk of starting their own business.
- K.47 [S] Aggressive and often unscrupulous competitive behavior of large Russian companies
- K.48 [S] Inconsistent government policies
- K.49 [S] Corruption and administrative barriers
- K.56 [P] High housing density decreases residential satisfaction
- Place and belongingness**
- 1.C.2 [T] Move to nature (return)
- 1.C.3 [T] Back to the nature (natural products, face to face communications)
- 2.A.22 [T] Sk is a community; a village, to engage people as individuals
- 1.B.7 [T] Digitalisation
- 1.C.1 [T] Virtualization of life (transfer to online)
- 1.C.3 [D] Proliferations of new kinds of transport systems such as high-speed trains and 'helicopters' and maybe even teleportation.
- 1.C.7 [D] online services / IT infrastructure. People are increasingly using internet services instead of face-to-face communication -> IT infrastructure development
- 1.C.8 [D] Transport infrastructure (alternative kinds of transport) 2035 => teleportation
- 1.D.1 [T] People will use more technology infrastructure
- 1.D.11 [T] People will use more public transit
- 1.D.20 [T] "Virtual vs. live presence. With more time spent in 'facebook' like interactions, what will bring people together physically at Sk. Or is that even something to worry about."
- 1.D.21 [S] Technology infrastructure will be very advanced and may require regulatory change to achieve it.
- 2.A.12 [S] Strong communication and connectivity: everyone knows each other
- 2.C.20 [D] Networking society. People will become much more connected to each other. Not only through internet, but through social networks. People will organize on the basis of like-mindedness, as opposed to proximity (neighbours). Dispersion in space.
- 2.C.21 [D] Electronic society, no-paper society
- 2.C.22 [D] Less physical infrastructure for public use (like shops, libraries etc.) is needed, everything is ordered via internet.
- K.58 [P] Public familiarity: knowing the people around you by face, places to meet each other
- WISHES**
- 1.A.5 [D] To be a part of Moscow but be a project itself
- 1.B.9 [T] Vision of the city is changing
- 1.C.17 [P] Citizen friendly, hospitality
- 1.D.3 [D] 'Flywheel' of new business development. Autonomous new economic development (generator of start ups etc.)
- 1.D.6 [T] Kids/teenagers and spouses as a voice and force. They want to work and play and need opportunities relevant to them.
- 1.D.9 [D] new priorities will be given to Sk renewal to 2050
- 1.D.12 [S] Sk community is drawn together well into a 'community' because of the collaboration ecosystem.
- 1.D.15 [D] Education (K-12, University) - also: where will the kids go to college? There is a gap in the current plan.
- 1.D. [D] Increased state of collaboration within the 'Sk' community and internationally
- 1.D. [P] Location - close enough to Moscow, yet 'quiet' enough to do the best intellectual work (and raise a family)
- 1.D. [S] Healthy environment: ecology, food? Healthcare? And prevention via sports, exercise
- 2.A.1 [S] Unique local flavour in food and entertainment. Not global brands and franchises but small, diverse local shops.
- 2.A.7 [D] Reduce commercial/environmental pressure by having communication filters
- 2.A.23 [T] Ban on visas for Russians and foreigners (including labor migration, Sk specific visa benefits)
- 2.A.24 [T] Low or tax-free regime for Sk participants
- 2.A. [D] Towns/communities need to be 'open', inviting with enough space to walk and meet.
- 2.B.6 [D] People of different cultures and languages should find a way to communicate and to form a community
- 2.B.12 [D] Give the opportunity to all people to participation in ideas discussion. All people of Sk must have opportunity to build their environment.
- 2.B.27 [D] Establishment of a special economic regime - more open, tax exemption
- 2.B. [T] Tech entrepreneurs to be role models; they will lead people to developing practices characteristic of that community.
- 2.C. [P] Living, working and cultural place are nearby, mixed, connected
- 2.C. [T] Individualised education based on the needs of the student

B. RESULTS WORKSHOP II

Exploration of Innovation Goals

GROUP I

WRITTEN REPORT

We came up with 8 distinct images of the city, each reflecting one dominant behaviour. Of course we understand that the city will present a mixture of behaviours, but we deemed important to analyse the city through the lense of those 8 (or less - the most distinct) archetypes.

1. The other way Scenario emphasizes national pride and cultural view that Russia/Russians already deserve a special place among other nations. These worldviews produce a heavily ideological community - somewhat nationalistic: any activity should benefit the country and more than that - Russian network. Skolkovo doesn't praise foreign technology, putting all the effort instead into their agnostically original ideas and technologies.

A very vivid ideology connects Russians living/working abroad by giving them a clear national idea. Russian diaspora becomes a gateway to international markets of knowledge and tech - otherwise Sk community is very reluctant to establish links with foreign companies/people.

2. Investing in children

Sk people strongly believe that they are of a special kind and they translate that into strategic investment in conditions of living in Skolkovo. Children become their primary focus. The idea of the city for the next generation lies the foundation for all design and activities of Skolkovo.

All kinds of institutions and activities support developing creativity. Those include competitions, creative studios, museums. Child's way of looking at the world pervades minds of adults in Skolkovo: it gets reflected in out-of-thebox thinking, higher playfulness and cheerfulness of the city. It's colourful, friendly, welcoming.

3. Quick wins

A combination of significant national pride and focus on fast extractable results produces a distinct model for Skolkovo. Sk becomes a gray hole for any resources (domestic and then global) - people, ideas, etc. - which could be combined in a highly synergic way to produce significant market capitalization in a short time. The state invests all its political and administrative resource to support pulling in the most prospective, accelerating it and allowing for a quick capitalization.

4. Corporation / alumni club

This is one of the most distinct and vivid cultures of Skolkovo, based on a strong sense of entitlement, which gets converted into contributing to building/developing a producing machine - a corporation. Every single person in Skolkovo shares ideology of the corporation - everyone contributes, everyone has a stake. Even when people become successful and leave Skolkovo they retain a stake in the corporation and become its lobbyists and ambassadors abroad.

Everyone in Skolkovo is aimed at reaching the common goal - increasing capitalization of the corporation. Collaboration becomes a norm. Efficiency is self-driving - those who do not contribute can't be a part of the corporation. The communities are mixed because of the involvement of everyone - from a VC to a service worker.

5. Use it well > leave it

Sk participants treat the center as a good opportunity to reach entrepreneurial success. Although everyone is on his own, having similar goals people contribute to the quality of the system overall: city becomes more attractive when success level and professionalism of its inhabitants grow, more success stories appear.

The environment could be characterized with such words as liberal, venturous (it's better to try and to fail than not to try at all; failure is ok), socially coherent. The system is very dynamic - rules are changed on the fly - when people deem it necessary.

6. Eden /cosmopolitan

At the core of this model stands the idea to build a dream place to work and live. This utopic intention is reflected in every dimension of life in Skolkovo - in social interactions (people are very tolerant, accepting and therefore - welcoming), practices of urban development (green and sustainable city, services of the highest quality), practices of entrepreneurship - heavy emphasis on social entrepreneurship, "responsibility for sustainability".

Skolkovo society is very advanced in terms of awareness, is guided by humanistic values.

7. Ultimately competitive

Skolkovo becomes a territory where entrepreneurial success is king, competition flourishes, those who failed - do not stay. Staying is generally discouraged - those who succeed stay longer, but not for too long. Sk is a place with imposed rotation - among each category of people. It is a land of constant change.

Intense competition and high uncertainty attracts a specific kind of people - mostly young free agents. It gets reflected people's activities - the city lives by "working hard, playing hard" motto.

8. Steve

This Skolkovo is a product Skolkovo - a network of companies investing long-term in their products. Sk communities - tribes - are lead by product guys, who invest not only in tech, but into ideologies - ways of life. Sk becomes culturally innovative and diverse, accepting and connected to outside world. Those people who become successful stay and have an opportunity to create Skolkovo. Sk becomes an outstanding place for human-centered design, attracting the best designers and developers. This ideology is spilled over into arts and leisure, contributing to a very distinct image of the place.

TRANSCRIPT OF THE PRESENTATION

1. The other way The Skolkovo society or community will be pretty closed from the outside world with the person ideology referring to its national pride, to its history and so forth and it will allow it by crystallizing that self, Russian-self to build a network and to finally engage Russian Diaspora and that Diaspora will go as a gateways to the market because that Skolkovo won't allow people in more or less. It won't be cosmopolitan; it will be pretty much coherent and very ideologically focused, which will be reflected over social events and so forth into education, in the content.

2. Investing in children

It's all about innovation, creativity, reflected in work with children. It's reflected in all kinds of competition creative studios, it's a museum city, it's very open, and it's very colorful and cheerful, pretty much different from the first one.

3. Quick wins

Here we have a quick-win strategy. We have at Skolkovo allows even to focus resources, to get everything from Russia, and finally from elsewhere, to build ownership of that opportunities existing everywhere; so the focus that to take it, then to develop it inside and then to extract the value out of it. Everything will be built on bringing people in, bringing ideas in and bringing recourses in, and using the power of the state, you know, to extract value, out of it. But to your own advantage but it will create Skolkovo as a magnitude, made Skolkovo a magnet.

4. Corporation / alumni club

Everyone contributes to making Skolkovo, as its own company, successful. The building corporation that has a stake there, people exit Skolkovo really soon, really fast, but they have still ownership, a stake of it corporation, so they continue to promote its interest, to lobby and so forth. People inside are very collaborative and because they are all aimed at the present capitalization of that corporation. It's all comes from working on common goals. This corporation at Skolkovo is very efficient. There are no people who are not contributing, everyone does. And it creates a very interesting situation when you have the society as a mixed, a set of mixed communities, so these personnel, for instance, can mix with bankers, because everyone contributes, everyone works on common goals. Don't get compartmentalization.

5. Use it well > leave it

People contribute not so product but to value of the system by extracting value for themselves. It's very liberal in terms of your liberty, your freedom elsewhere, freedom of other start, it's coherent, and failure is ok there. And rules are commonly changing because people lobby that change of rules all the time, they are very responsible.

6. Eden /cosmopolitan

It's all about building a comfortable place. It will be because people are responsible, it will be green, it will be tolerant, all about social entrepreneurship, about social responsibility. It will be sustainably accepting and therefore involving people from the outside. And it will have all kinds of accessible and high quality services like healthcare, or consultation, no footprints at all.

7. Ultimately competitive

There will be imposed rotations. So if you are researching you can stay for more than 3 years, if you are managing you can stay more than 2 years, if you are an entrepreneur and you fail you can stay more than 1 year, if you don't fail you can stay for 1 more year to develop your company then you leave. It's all about constant change. Demography there is very different, free agents, very young people, very venturous for entrepreneurial, and aggressive.

8. Steve

A tribute to Steve Jobs, productory and its entrepreneurial environment. People are not building a home there but they are developing their products. There are building their companies. And those leaders, their chancellors are responsible for their companies and communities. They engage into strategic behavior for the very long term because the products need time to develop, and the companies need time to build and those who are successful stay in Skolkovo.

GROUP II

WRITTEN REPORT

A. Copy & Paste

To gain a headstart in the short-term for companies to start, the idea is to inject already existing projects, services and/or products into Skolkovo, by 'copy and paste'. The technologies used should be like 'plug and play', based in best practices found around the world. The process could be like adding value in Skolkovo, exchanging ideas with others to make the projects, services and/or products more mature, taking care of implementation and integration.

B. Experts

The set-up is looking for the uncompromised and best ideas, and preparing the best conditions at Skolkovo. The projects, services and/or products can be selected by using experts (internal or external) to make the right choices.

C. Laboratory

When starting or setting-up business in Skolkovo, participants should become their own laboratory to find out how to do their business right. There must be room for experiment and iterations during the process.

D. Commitment and success Essential for Skolkovo is to tell it to the world, talk about it and explain why we are doing things. Making mistakes is part of the process, also improve it, looking for commitment and have other joining the process. Skolkovo is the place to celebrate others success and be responsive for other people's success. In stead of only asking questions (which is common in Russia now), you should always get answers.

E. Assessment

People in Skolkovo will create communities and join (new) relationships. They dare to ask for this, they get feedback from others and are regularly involved in assessments regarding their behavior, qualities and abilities, with empathy and advise on their development.

F. Social life

Most important is the lack of 'Social life' (Personal life and Professional life seems to have been taking care of in the Skolkovo formulation). Social life is about involvement, taking a role, long(er) term engagement, relation to the environment and empowerment.

Come > stay > live > develop > engage

One of the missing items in Skolkovo master plan now is churches. In general, there should be more room and awareness for religion (in the broadest sense). This is needed in the multicultural society of Skolkovo.

G Making business

"We have the stuff (buildings, schools, hospitals); we lack ideas what to do with it." So it is with garbage. Can we make business out of garbage.

See point 1: injecting technologies from elsewhere, develop it, improve it and implement it in Skolkovo; the results can be an innovation with a world wide market.

H. Prototyping

Russians have a fear of experimenting and as we know, there is no home market and a lack of possibilities for prototyping.

I. Business model

Skolkovo should become the place where people are gaining knowledge by experimenting. This can be the overall Skolkovo business model. This can later on be brought to other Russians areas (contrary to exporting it to other countries).

TRANSCRIPT OF THE PRESENTATION

A. Copy & Past

The idea of the short-term innovation model, called 'Copy-Paste' or 'Plug-and-Play'; if you want to start in a short term, look at examples, best practices and try to copy and paste it into Skolkovo. Maybe it is not easy, we have to add value and you have to exchange ideas, you have to take care of the implementation or integration, but the idea for starting up as a head start, you could think of copying things and injecting existing models.

B. Experts

It should be uncompromised, everybody should be focused on this, you should use the best of everything and also raise best conditions to make this come true. The other discussion of us was about how do you find this kind of short-term initiatives? You have to make choices. And who is going to make choices? Probably, you need to have experts, invite experts from inside, from outside and make choices of which business models and projects you could copy and paste into Skolkovo.

C. Laboratory

Make your own laboratory, find out how to do things right, use experiments and its ratios in the process. It's a generic thing, which relates to being a successful society at the end. It's about conversation. Tell the world, talk about it, why we are doing things. You have to express, why we are doing things. You have to be making mistakes, of course, make improvements, have commitment and join everybody in a process.

D. Commitment and success

People have to celebrate the ideas of others, and success of others, you have to be responsive to ideas of others and their success. You have to start asking questions and of course, if you start asking questions, please also give answers. That is what should make the society of Skolkovo more interesting, not only asking questions, but also getting answers.

E. Assessment

About behavior: people should try to start creating communities, join relationships. People must be able and also dare to ask for and participate in these communities and getting more qualities; you also have to get feedback. This is different from answers. The feedback is about assessment.

How could you improve yourself in being a citizen of Skolkovo? And therefore you need empathy with your abilities to develop yourself.

F. Social life

About social life: in addition to two other types of life, personal life and professional life, probably quality of social life is missing. You have to take the role you want to be, if you want to perform in social life. There is a need for more engagement, you have to be related to the environment.

There has to be some empowerment.

'Come, stay, live, develop and engage': five steps in becoming citizen of Skolkovo.

G. Making business

"We have the stuff but we lack ideas what to do with it." With the stuff we mean building, hospitals, schools, materials, etc. How to start business with it. As an example: why not use the garbage collection and the processing of it as a business model for the future city of Skolkovo. We could take out successful models from outside, from everywhere, inject it into Skolkovo and develop on that.

H. Prototyping

About experimenting, knowing there is no home market, and a lack of prototyping possibilities in Russia, we know that from literature. We could be focusing more on how Skolkovo could be a real lab. Not only a lab, as an entity, as a building, but a society as a lab, a society where you can prototype.

I. Business model

Do more than grow up buildings to put people in, not a social experiment. Start gaining knowledge by experimenting; that could be one of the triggers of Skolkovo.

The city is not being built in 4 years, it's being built in 30 years. And in time you can do much more experimenting, so Skolkovo is a business model in itself. Skolkovo as a business model of experimenting, which you can probably export to other Russian areas. So you create your internal markets in fact, with your own experiments.

GROUP III

WRITTEN REPORT

1. Meet people outside of the Innovation Center, social and professional environment
2. Exchange ideas
 - 3a. Have a say in how the city works
 - 3b. Allow people to define their environment
4. Sustain auxiliary business in the Innovation Center
5. Implement and take ownership of city rules, regulations and processes
6. Easily interface with 'smart city' and city services
7. Be economically successful
8. Be happy
9. Not be slowed by 'red tape'
10. Think about the mid and long term success of the Innovation Center; do things today that improve tomorrow
11. Learn, continue to develop
12. Discover new things and new experiences; embrace other cultures
13. Be flexible, adapt to changes.
14. Be tolerant

Behavior we expect that residents will have:

Networking

Create and participate in professional associations

Create and participate in clubs (book clubs, social clubs, etc..)

Create and participate in sports teams

Go out to bars and cafes to socialize

Create and participate in forums

Invite nonresidents-residents to participate in all the above

Create web forums

Present ideas at seminars/conferences

To set up such seminars and conferences

Meet People (see 1)

To organize civil forums

To participate in city management system, shape city policy
To structure a city 'democracy'
To vote for local (district) and city representatives to represent the people in the city management structure
Run schools
See 3a
To demonstrate social responsibility for local business
Shop in the city
Eat and drink in city restaurant, cafes and bars
Use city banks and social services
Establish pricing policy to help businesses to service and be competitive
See 3
To be proactive in interaction with system, to inform about troubles in system and to use it to actively
Have campus card that allows access to all services
Participate in city systems
Knowledge transfer from established residents to new ones
Have mobile navigation system for internal and external areas.
To create professional assistance for start-ups with participation of majors
Majors need to lead
Provide residents with domestic help (allows them to be more efficient)
Online shopping (allows them to be more efficient)
Delivery service (allows them to be more efficient)
Provide civic centre for all forms of professional and personal support
See all other points!
To create "red tape" assistance
Business people set up and run the city with less rules
Residents to make their own rules (see 3)
To create successful stories or history of success
Skolkovo alumni
Walk of fame

To plant a tree in the Innovation Center and take care about it wherever you may be (metaphor)
Majors to provide free seminars and workshops
Interactive exhibitions and museums, edutainment
System of tutoring/mentoring
International festivals
To create national community clubs
Mini sport competitions
Create Team Skolkovo for all sports
Theme public spaces after different cultures
Have elected cultural minister on the city management board
To create special events and programs for neighborhood environments, some educational programs for pupils and specialists
No VIP zones

TRANSCRIPT OF THE PRESENTATION

1. Meet people outside of the Innovation Center To create professional associations, to be open. The communities are expected to be open for internal groups, for example, group of one cluster, group of bio-med cluster, group of space cluster; they should not be closed inside.
They should always communicate and firstly they should communicate inside of the innovation center and secondly they should communicate outside of the innovation center. They will create some associations, clubs, of course, sport teams and as venues for such a cooperation or for such an association. We see bars, fitness clubs, restaurants, coffee shops, and any other community venues. Also some internet community and some internet venues.

2. Exchange ideas

The community and the innovation center will be

efficiently if there will be a process of ideas exchange. For exchanging ideas there are some forums, conferences, seminars initiated by the residents. It will not be initiatives of the city management group or somebody outside of this community or societies.

3. Have a say in how the city works How the council of the city works. How this city will be managed. The community will manage this city; not only city management will set up rules but also communities and society will set up rules for the community, for the city. As a social value for such gathering community we consider it 'Agora'. Agora is going to be the name of the Arena, which is already in the planning to be in the guest zone. There should be some open venue space for such an activity. There will also be the city management system: you should be able to vote for the representatives on a seeking management board, so you have a vote for a district or Skolkovo community or representative and he represents that district on a city management board, like a political system, a public council.

4. Sustain auxiliary business in the Innovation Center Social responsibility for local businesses. Attracting businesses, for example retail, hotels, cafés, restaurants to the innovation center.

It is expected that Skolkovo community will use these opportunities, because they cannot compete with Moscow and for example some big malls. But if the community will not consider this retail system as a part of their responsibility to support the system, this system will not survive in our innovation center.

5. Implement and take ownership of city rules regulations. Residents will use some different gadgets, for example for navigation in the innovation center. Residents will use high technologies in their day-to-day activity, in their life, not

only in their business activity but also in their private life. Also it can be very useful for guests, for navigation program in the city. Also a campus card: you have this swipe card that will allow you access to everything.

6 Easily interface with 'smart city' and city services Of course residents or working residents, business residents will be economic efficient and the city management does everything to allow them to be efficient. Majors, who are going to be a part of our residents, will provide some additional services to young companies. Key partners will provide some services to young companies. Companies will teach other companies.

About the majors: when you are a start-up and want some marketing advice, you can go to a major and the marketing departments and they can help you up free of charge as a mentor or as a central civic center who has marketing experts, law experts or how these young companies to help become successful. Majors are part of the residents, as a part of the community to create such an environment.

7. Be economically successful

For a company to be successful, take away a lot of time frame on them in terms of having easy transport, having this small city closeout and buying services as domestic health, delivery services, online shopping. Allowing people to do in what they are good at, rather than have them go and clean their apartment or wash up themselves.

8. Be happy

Health and safety. Residents need to smile and demonstrate their good mood; not be afraid to demonstrate their mood.

9. Not be slowed by 'red tape' Take-over bureaucracy. Let business people set up the systems and processes. They are helping individuals to get through any bureaucracy. If you

have to register for something, they will come and bring the form for you, you sign, and don't have to go anywhere else, you don't have to go to different departments. Even buildings can have a personal concierge systems.

10. Do things today that improve tomorrow Something about success stories: you do something in Skolkovo, you come back and you want to see how it is developed. Keep residents involved. Think of a Wall of Fame: to get commemorated in some kind of pavement or brick in the wall for instance. Or there is an incentive, like a certificate to become a citizen.

11. Learn, continue to develop Residents will transfer knowledge from one company to another company, from companies to neighbor communities, and worldwide. As a tool for such transfer consider different conferences, seminars, exhibitions.

Residents will prepare special programs for neighbor communities, for schools, for engineers, in the area of electricity management, and water management in neighbor community or neighbor city.

And culture events: different festivals, international festivals. Maybe some culture exhibitions, also fun exhibitions, entertainment, some museums, entertainment museums.

12. Discover new payments and embrace other cultures. There will be a mix of different approaches, huge national diversity and as tools, the same events as previous: different festivals, some sport activity. Skolkovo should have a special Skolkovo team for all different kind of sports.

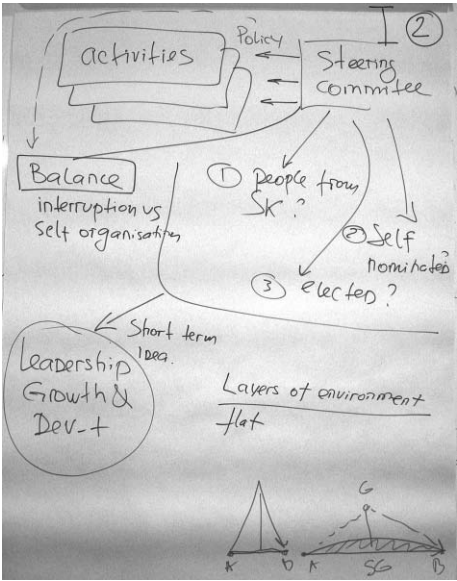
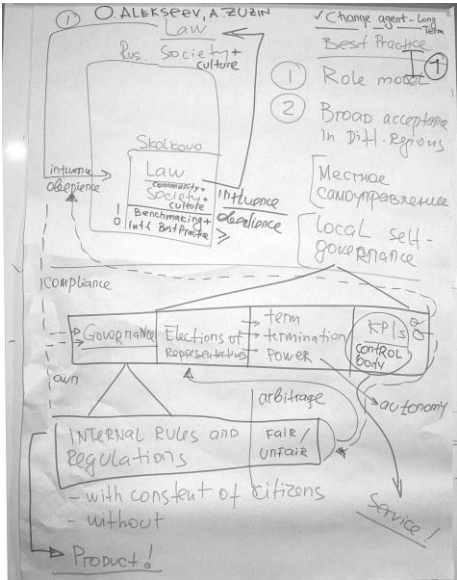
13. Be flexible, adapt to changes

14. Be tolerant

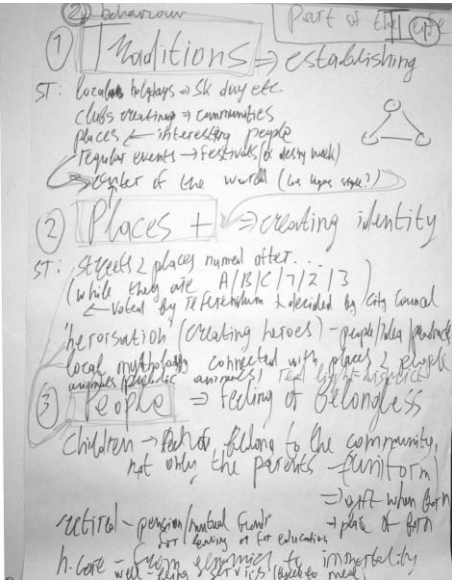
C. RESULTS WORKSHOP III

First ideas in eight directions for long- and short-term

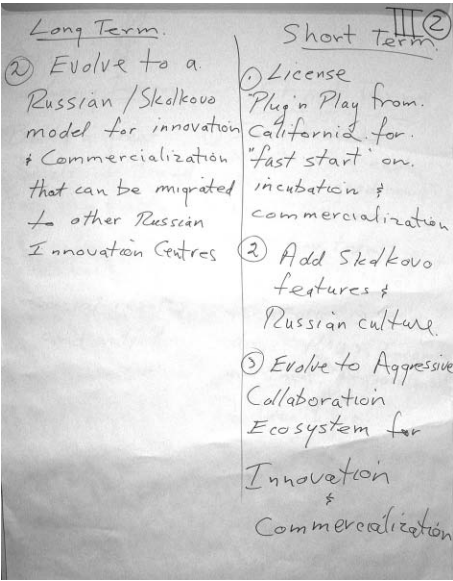
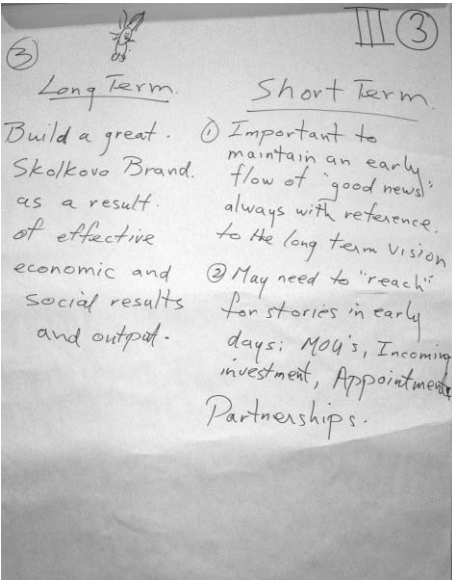
First ideas for Innovation goal 1
INFLUENCING PUBLIC POLICY



First ideas for Innovation goal 2
CLAIMING LONGEVITY



First ideas for Innovation goal 3
EXPLOITING VALUABLE COMMODITIES



First ideas for Innovation goal 4 OCCUPYING YOUR PLACE OF LIVING

Group 4 „Place of living“ IV①

long-term:

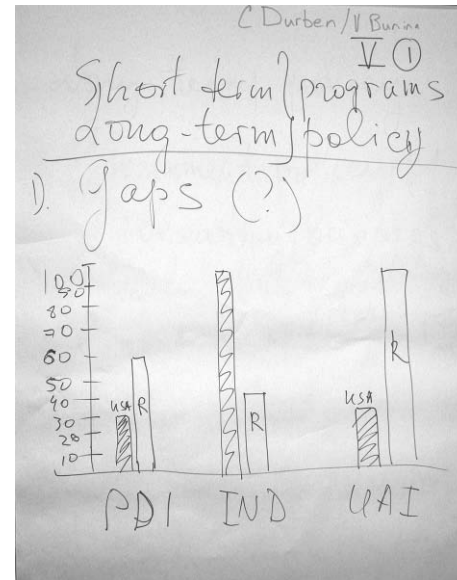
- 1) creation „mythology“ (mix „cooperative“ and local identities)
- 2) Get benefits of Skolkovo project and leave something behind when you leave

What can be left:

- business
- innovations, new ideas
- technology
- products
- event (local)
- physical infrastructure...
- traditions

- 3) underlining personal inputs

First ideas for Innovation goal 5 MENDING THE SOCIAL COHESION



Short term V③
activities

1. Sk information
two languages-bilingual
2. Personal mobility
(creating networks)
3. City communication
programs (physic & virtual)

II short-term: ④
IV②

- 1) participative practices of community development;
- 2) Establish local traditions;
- 3) Community relations programs.

Events / products:

- street sport tournaments
- clubs: scrabble ect...
- Salons: Arts, Literature...
- festivals
- Corporate days
- public art
- public celebrations / nominations

V②

Long-term policy

1. Government policy of liberating business facilitating
linked to N1. taxes permits
2. Ethic Code
3. Learning programs
Languages Intercultural Coaching

First ideas for Innovation goal 6 INSPIRING TO STRIVE FOR IDEALS

1. Vision: inviting for openness
reflective society (Sk as a lab) ← creativity
challenging status-quo

⇒ liberal policies in all areas
+ flexible

Sk design to embed qualities of novelty & creativity
education system fostering new thinking

2. Long-term

a. policies

- culture + inviting experiments with identity
+ motivating diversity + communication
- education
 - + no stereotypes
 - + holistic approach - body + mind
 - = personal growth technology
- testground for new tech (imports)

3. Short-term

a. products

- events → creativity
- grand challenges
- TV → ways of living / worldviews

b. services

- platform for communication,
sharing & problem-solving
- educ. products to allow
transition to a new level
(failure → out to play → in)

c. policies

- community-driven innovations
- hedging risks of comm. members
- preferences to alumni
(access to talent, etc.)
in exchange for providing mentorship
expertise, ...

First ideas for Innovation goal 7 IMPROVING YOUR SURROUNDINGS

Longterm:

- 1) Promote community
- 2) Democracy, effective invol. on community
- 3) Standards of life

Short term:

- 1) Introduce rules, which
can be easily changed
by community (core)
- 2) Promote volunteer
activity

First ideas for Innovation goal 8 LONG-LIVED SOCIAL ENTREPRENEURING

Other entr. social entr. consumers

FIN. & INST. ENCOURAGEMENT

- awareness
- to make s.e. easy
- to make it respectful.

→ Social 'subbotniki' = soc. entr. days

→ Exhibiting the existing practices from
outside

→ Festival of soc. aspects of St. fields
(inside + outside)

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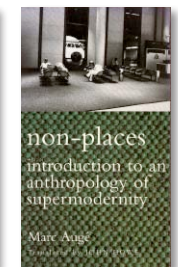
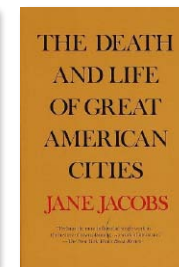
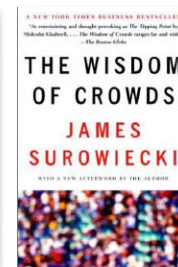
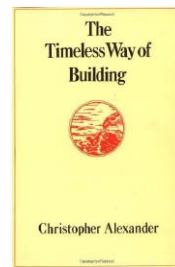
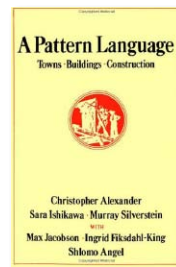
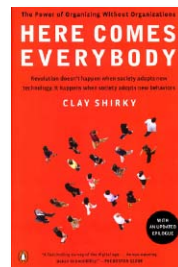
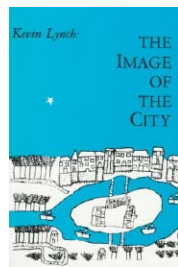
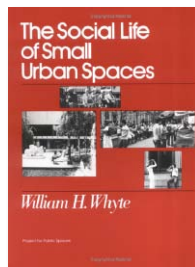
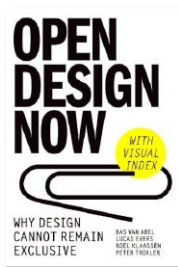
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E. ABOUT CONTEXT FACTORS

DEVELOPEMENTS

When a factor concerns a phenomenon that is currently changing, or one that is expected to change in the near future, it is called a development.

A development can be in the field of technology (e.g., the arrival of Bluetooth), society (e.g., the increasing number of double-income families), economics (e.g., rising interest rates), or demographics (e.g., the continuing increase in the aging population).

	FIELDS →									
	developmental	psychological	sociological	technological	economic	demographic	biological	political	philosophical	legislative
↑	developments									
↑	trends									
↑	states									
↑	principles									

It is becoming harder and harder to find a place where it is completely silent

Human life expectancy is increasing

City centres are becoming inaccessible for cars

Politicians are less driven by ideologies

The border between work and leisure is increasingly becoming blurred

TRENDS

A special class of developments is constituted by factors concerning tendencies in the behaviour, values, or preferences of (groups of) people. Such developments we often specify as trends.

For example, among teenagers, it is currently a trend to send hundreds of text messages per week; in many households it is 'trendy' not to cook at all or, conversely, to prepare immense, five course meals.

	FIELDS →									
	developmental	psychological	sociological	technological	economic	demographic	biological	political	philosophical	legislative
↑	developments									
↑	trends									
↑	states									
↑	principles									

People choose for more frequent and shorter holidays

People increasingly choose the internet for shopping

More and more friendships and relationships start on the internet

People start to eat more healthy food

STATES

A state is our term for a surrounding world condition that will probably not change in the near future, but does not have to be necessarily fixed. States are (or appear to be) relatively stable at the moment of observation.

Think of strong cultural norms, habits and traditions. Or think of your country's taxation infrastructure, the means of transport available, the number of children born each year, or the laws and regulations to obey. These conditions go relatively unchanged from year to year; they are stable in time.

	FIELDS →									
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↑	developments									
↑	trends									
↑	states									
↑	principles									

Pedestrians are the most vulnerable road users

The bedroom is a very intimate place to be

Time is money

Most people work too hard

The cultural norm is that when it comes to your children, only the best is good enough

PRINCIPLES

Principles are factors that are, by their unvarying nature, constant over longer (and longer) periods of time. The term refers to immutable laws or general patterns that can be found in human beings or nature.

For example: "our capacity to process information seems to be limited to approximately seven chunks" (Miller, 1956) or "we generally prefer colors in the order blue, green or red, and yellow" (McManus, Jones & Cottrell, 1981).

	FIELDS →									
	developmental	psychological	sociological	technological	economic	demographic	biological	political	philosophical	legislative
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↑	principles									

When disconnected from your own culture people tend to look for familiar things

People are in search for the meaning of life

People get easily distracted

People are penny wise but pound foolish

People like symmetry