

INNOVATION AND SUSTAINABLE DEVELOPMENT THROUGH ENTREPRENEURSHIP

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Creating Innovative Practices

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ABSTRACT

The development and productive use of knowledge is becoming the key process of value creation for organizations as well as for societies. This fact changes the nature of work, organizations and the role of workers: work is becoming knowledge work, done by autonomous professionals working in networks, where relationships are based on reciprocal appeal. Autonomous professionals are becoming the driver of innovation and success. They will only play this role strongly, when they can act as entrepreneurs: work from their personal drive and talents, are free to take initiative and responsibility to develop themselves and to create what they see as valuable, and are able to create a context that enables them to do this.

Introduction:

In the first part, I will put entrepreneurship and innovation in a broad economical, social and organizational context. In the second part, I will focus on the practical question: how to create work practices in which individual entrepreneurship and collaborative innovation thrive?

In today's global knowledge economy, knowledge is the primary source of

innovation, sustainable value and wealth. The development and productive use of knowledge is becoming the key process of value creation for organizations as well as for societies. This fact changes the nature of work, organizations and the role of workers: work is becoming knowledge work, done by autonomous professionals working in networks, where relationships are based on reciprocal appeal. This means that the autonomous professionals are becoming the driver of innovation and success. They will only play this role strongly, when they can act as entrepreneurs: work from their personal drive and talents, are free to take initiative and responsibility to develop themselves and to create what they see as valuable, and are able to create a context that enables them to do this. Loyalty, obedience and compliance were core values in the industrial economy. In the knowledge economy, these values will lead to mediocre results. Passion, talent, creativity, freedom and responsibility are needed for excellence.

In the first part of this article, I will elaborate why this kind of entrepreneurship is called for and will explore the consequences for individuals and organizations. This puts entrepreneurship and innovation in a broad

economical, social and organizational context.

The second part will look at the more practical question: how to create work practices in which individual entrepreneurship and collaborative innovation go hand in hand? I will present eleven design principles that can be used as guidelines for creating such of practices that are needed in the context described in section 1. These design principles are the results of our three years of research on global innovation practices.

1 The need for entrepreneurship, innovation and sustainability

Economic and social developments

To understand the need for entrepreneurship in organizations, I start to summarize an analysis of some global, fundamental developments that are taking place in society and economy:

Economic and societal development meets. The concept of wealth is broadening (Beinhocker, 2006). Moving from a strong focus on financial gain, we are becoming more and more aware of the fact that issues in economy and society are interlinked and part of a global system that is vulnerable and complex, that can not be controlled and managed, but asks for awareness and responsibility of individuals and organizations. Development of society as a whole is dependent on economic development and vice versa (B.M. Friedman, 2005): economical success and productivity is strongly correlated with growth in trust, openness, tolerance, responsibility and democracy. This calls for an enlightened form of self-interest, in which individual and organizational development and wealth go hand in hand with the development of an open society based on trust and democratic values, and with a strong economy in which many participate.

Survival in a knowledge economy calls for *continuous improvement and innovation* of an organization's products, services and processes. An increasing body of research shows that innovation leads to increased turnover, market share and profits (Volberda, Van den Bosch & Jansen, 2005). Innovation is needed to find new solutions for current issues in organizations and societies, and is crucial for sustainable development. It is striking that the traditional R&D departments are no longer the primary source: innovation is created more and more by dispersed networks in which users, production workers and developers interact. Also, we need to look at innovation from a broad perspective: it is not only technological in nature, but also social: developing new and innovative ways of organizing and managing are becoming an important driver for innovation and success.

Any specific innovation or improvement has a temporary value, the *sustainable value lies in the ability to improve and innovate*. A sustainable organization has the ability to be knowledge productive: to identify, gather and interpret relevant information, to use this information to develop new skills and to apply these skills to improve and radically innovate operating procedures, products and services (Kessels, 2001). Learning lies at the heart of this process: tracing relevant information, and developing and applying new competencies are based on powerful learning processes.

The process of innovation through knowledge productivity is a creative process, driven by human intelligence, knowledge, passion and creativity. This puts the human *individual at the heart of organizing*. This is not only true for a small number of highly talented people at the top: the number of creative professionals is growing rapidly, and already making up more than one third of the working

population in developed countries, being responsible for more than 50% of the total productivity (Florida, 2002). This creative productivity demands courage, entrepreneurship, emancipation and passion. Conformism, loyalty and obedience, the carriers of the traditional economy, will not take us very far in the knowledge economy.

Individuals are operating in *networks on a global scale*. Globalization is taken to the individual level (Th. L. Friedman, 2005), where every individual has worldwide access to information and people. Space and markets are no longer local. Social and economical activity transcends national and regional borders. The national market economy is transforming into a worldwide network economy (Rifkin, 2004). In a network economy, access and participation take the place of selling and buying, cooperation based on reciprocal appeal and trust take the place of competition and conflict, and common interest replaces individual interest.

The worldwide network society is potentially powerful but also vulnerable. We are more and more aware of *global interdependency*. Large differences in access, development and wealth are likely sources of tension and pose limitations to global and to individual development, safety and prosperity. This calls for awareness, empathy and active engagement of organizations and individuals in order to increase participation of as many people as possible in economic and social development.

When we reflect on these developments, it becomes clear that there is an increasing need to create organizations that are knowledge productive as well as environments that enhance the wellbeing of our workers; use individual autonomy and responsibility, diversity and networks to develop innovative solutions for key

challenges in organizations, economy and society; support the entrepreneurship and development of a large group of people who are now bystanders, to enable them to participate in economic and social development; stimulate powerful human networks across organizations and societies that foster safety, freedom and wellbeing.

These are not easy challenges, and a simple overall strategy with guaranteed success is not available. But if we need work in this direction, where could we start? Where can this development be influenced and strengthened? A good starting point could be the daily work practice and the way individuals and organizations organize the work.

1.2 The changing nature of work

When we take a closer look at the changing characteristics and demands of work in organizations, we can see the following based on a previous analysis, (Kessels & Keursten, 2002):

- The nature of work is changing. Much routine work is becoming automated or is being outsourced. Knowledge work, in which workers have to combine and interpret information and knowledge to find solutions for new problems they encounter in their daily work, is replacing routine work more and more. Such knowledge work has the characteristics of learning processes. Knowledge workers cannot get their job done and add value without learning. Organizing work and organizing learning are becoming inseparable.
- In knowledge work, the individual worker is the owner of the most important means of production: the capability to add value through creating and applying knowledge.
- Continuous participation, learning and development in this type of work are based on intrinsic motivation and curiosity. Without these, no one can keep up for long.

- Excellence and innovation depend on individual professionalism, responsibility, and passion. Without these, performance is at best satisfactory.

- Synergy is created through networks in which individuals connect and cooperate based on reciprocal relations. Without these, initiatives will remain at the individual level. Traditional command and control styles of managing will not work in such an environment.

1.3 The central role of individual autonomy and entrepreneurship

When we acknowledge that knowledge work is of growing importance and that individual passion, talent, creativity and connections are driving excellence in this work (Florida, 2002), it becomes clear that we need to shift our focus to the individual and build strong and sustainable organizations around autonomous professionals. These are individuals who contribute to innovation and improvements, who are aware of their talents and contribution and develop these continuously, who ask for autonomy, responsibility, and influence, and who place high demands on their work environments. Autonomy refers both to having the space to influence the setting of goals and the way in which the work is organized, as well as having the ability to actually make use of this space. Autonomy is based on the one hand on a large degree of ownership, self-regulation, self-awareness, belief in one's own competence, and emancipation, and on the other hand on characteristics of a workplace which offers room for the critical reflection on work methods, goals, views and principles (Kessels, 2005).

Autonomous professionals are entrepreneurs of their own talent, network and work, rather than employees following instructions. They own the most valuable means of production: their talent, their ability to learn and to add value through

knowledge. In that sense every individual is an entrepreneur by definition. They can be very active or very passive as an entrepreneur, but they cannot say to their boss: 'be an entrepreneur of my talent'. As an individual entrepreneur they need to take responsibility and ownership for their work and development, and also for developing connections and relationships needed for productive cooperation. The combined initiatives of these entrepreneurial professionals are the source of innovation and value. Those individuals who understand the interwoven nature of economical and social development, of personal and collective wealth, will play a key role in creating individual, organizational and societal success.

1.4 Conclusion: the changing relationship between workers and organizations

The key importance of knowledge work done by entrepreneurial professionals, has important consequences for individuals, organizations, leadership and human resources practices:

- Autonomous professionals are becoming more and more aware of their key role and are placing high demands on their work environment. They choose environments in which working and learning are one, in which they can work on issues that interest and intrigue them, in which they have freedom and responsibility to make choices, and in which they are triggered to continuously learn and apply these new learnings. Such an environment is attractive for autonomous professionals, and stimulates them to work to their full potential.

- The challenge for organizations is to create such an enticing work environment and develop new and attractive ways to organize, based on reciprocal appeal. This is a prerequisite for any innovative and sustainable organization. The individual

professionals are challenged to continuously work on developing and using their talents and on strengthening their networks. This is a prerequisite to get access to work and to stay attractive for the environments they want to participate in.

- Leaders and professionals need to create a corporate curriculum: an organizational environment in which learning and working are not separated, but integrated. They need to develop solutions to turn the daily work environment in a powerful learning environment that stimulates knowledge productivity. This kind of productivity is the basis for innovation and sustainable success, and learning lies at the heart of it.

- An organization cannot own the means to be knowledge productive, they belong to the individual. Organizations cannot buy people. They can give an individual tenure, but this individual always has a free choice and can leave the organization any time (with up to several months notice). This creates a shift in power between workers and organizations. With the emancipation of the workers into entrepreneurial professionals, the organization is becoming more and more an environment created to develop and use the full potential of individual workers, instead of a system in which individual workers need to fulfil a predefined role in a planned and controlled way. Organizations are becoming the background for free creative work of individuals cooperating in networks.

- If the entrepreneurial professional takes ownership of his work and development and is owner of the most important means of production in a knowledge economy, the question can be raised: who owns the organization? Will such professionals still accept management and anonymous external stakeholders as 'owners' of the work, the ambitions and business? It could very well be that the dominant management

and shareholder value thinking is coming to its limits. A first signal is that in recent years, more and more entrepreneurs are withdrawing their companies from the stock market. Their aim is often to recreate space for entrepreneurship, which is difficult in the stock market focus on share value and quarterly reports.

2 Creating innovative practices: research on guiding principles

In this section, the analysis in section 1 will be brought to the level of practice: what does it mean for work practices in which learning and innovation need to take place? In 2001, we started a research program in order to gain understanding into the factors that promote or inhibit learning and innovation in practice.

2.1 Research question

In our research programme, we were curious to investigate how the broad developments, described in section 1, could be translated to daily work practices in organizations. We focussed our research on the following key question:

How to create innovative practices, in which learning and working become one, in which autonomous professionals can work together in creating valuable innovations?

2.2 Research design

Our research design consisted of three stages:

- Reconstruction of innovation projects: we analysed processes and results of 16 innovation projects in various organizations and networks in the Netherlands, China and Indonesia. We used document analyses and interviews to reconstruct what happened and to analyses which factors made this project successful or unsuccessful. This stage resulted in a first overview of factors that promote or inhibit success in innovation practices.

- **Extensive parallel research:** in which we closely followed nine innovative practices for more than a year, while they were running. We used observations, interviews and process reports. The data of this phase were used to develop principles for innovative practices. This was done via a process of inductive analysis (Patton, 1990), a process in which categories of analysis come from the data: they emerge out of the data rather than being imposed on them prior to data collection and analysis. As Merriam (1988) describes, we looked for recurring regularities within the data. In this way, twelve design principles were formulated.

- **Validation:** to validate, sharpen and elaborate the design principles we interviewed leaders of innovation projects and experts from various fields (learning, innovation, organization). This resulted in a revised set of eleven design principles that (project) leaders and facilitators can use to increase the chance for success in knowledge productive, innovative practices.

2.3 Results

We formulated our results in the format of guidelines for people involved in creating and facilitating innovative practices. Here, the eleven guidelines will be summarized.

1: Formulate an urgent and intriguing question: Developing an urgent and intriguing question is necessary for knowledge productivity. Such a question is not a given, it needs active development in interaction with key players and stakeholders (Weick, 1995). Urgency not only relates to a rational urge but especially to the personal feeling that there is an urge: the question has to be formulated in such a way that the people who work on it, have the feeling that the question cannot remain unanswered. It becomes intriguing when people have the courage to develop new perspectives on the question. The question

should be formulated in such a way that it leaves space for various perspectives and directions. The question should evoke the participants' curiosity and should match their ambition.

2: Creating a new approach In order to find new solutions ('thinking new'), you need a new way of working ('acting new'). A new way of working is not only about new techniques and e.g. new forms of structuring a meeting, but also about giving shape to an innovative process. You should create a new path along the way, as you go (Garud & Karnoe, 2000). It is about thinking through a new perspective from which you experiment. It is also about breaking through patterns that people became accustomed to because of existing structures. In creating a new approach it remains important to keep using the elements that are already powerful in the current way of working (there is no need to throw away everything).

3: Working from individual passion: Individual motives are a powerful engine for innovation and a condition to make it something special: without strong motivation, excellence and breakthroughs are not likely (Kessels, 2001). These motives deal with a passion for a certain theme or with a personal interest. When you can work with things that are important to yourself, you create ownership (take responsibility) and entrepreneurship (take action). People's own motives also make them curious. When it is about your theme, you want to go for it. Even when it means that you have to leave the conventional roads and have to search for new ones. People dare to be disobedient and break existing patterns. This is necessary to find new roads and come to innovation. When people feel ownership, they are likely to do anything to keep the process going. Even when things get tough, they manage to regulate their motivation.

4: Making new combinations of subject matter expertise: For an innovation subject matter expertise is essential: innovations are about real new concepts and ideas in certain knowledge areas. Therefore it is crucial to constantly examine, combine and develop new subject matter expertise. Innovation evolves when new connections are made (Nahapiet & Ghoshal, 1998). Finding new connections can be done by: (a) bringing in new ideas from a different context or expertise; (b) playing with and changing the context in order to give existing elements new meaning. By looking for new combinations, you are better able to recognize and use the expertise that is already there. The subject matter expertise of a participant in the project can become visible as soon as someone with complete different expertise is involved in the process.

5: Working from mutual attractiveness: For innovation processes, an environment in which people are attractive to each other is necessary. This means an environment with powerful and constructive relations between people. Interactions in such an environment can be fun, pleasant, creative, but also confrontational. In such an environment the care for each other and trust play an important role (Von Krogh, Ichijo & Nonaka, 2000). For people it becomes interesting to work with others and to invest in them, when others in turn are able to contribute to their own ambitions (Kessels, 2001). In this way both have an interest in the well being of the other and in the success of the joint initiative. Creating such an environment, asks a lot of all the people involved. Openness and genuine interest towards the ideas and contributions of the others play an important role. It is about building on each other's contributions instead of criticizing these.

6: Starting from strengths: People use to be very critical: we think that we can best contribute to a process by looking for the

weakest points and put an effort into improving these weaknesses. In such a way of working, the focus lies on the things that are not there. It appears however, that you can improve an innovation process by working with the things that are already there, the things that you are already good at (Cameron, Dutton & Quinn, 2003). By making explicit each other's contribution to the process and by using your successes as a starting point, you can speed up knowledge development. It helps in recognizing the strengths that are there and ways to use them in future.

This principle consists of three elements: Look back and define the successes that you had. Share these. Examine the contribution of each one in the group to this success. Give it a future perspective: what can we bring about the coming period with help of these strengths? This principle contributes to reflection that is needed to acquire metacognitions, the focus on success contributes to people's self-efficacy (people's judgments of their own capabilities). This helps in designing new insights and solutions.

7: Learning by creating something together: In the case studies, we saw groups who found it hard to make valuable connections with each other and developing new knowledge. They kept having polite conversations, discussions and reflections. This principle is about designing, developing and making new products and services. By creating something collaboratively, people acquire and combine knowledge, insights and skills (Ruijters & Simons, 2004). Designing something helps people to move their perspective from analysis to design, and from differences to connectedness. Because you make something that will be your own product in the end, you make explicit what is important for you personally. Experiences that used to be implicit now become explicit, you talk about them and

elaborate upon them. That is crucial for the development of new knowledge. Within this principle it is about creating a common practice instead of talking about it.

8: Enticing to see new signals and to give them new meaning: For innovation it is necessary to develop an antenna for new signals and to entice people to give more and new meaning to those signals (Weick, 1995). Starting to look for new (little) signals and to develop a kind of sensitivity for it is the first step. The second step is to actively look for new information that learns you more about these signals. Finally, it is about a process in which you collaboratively develop new meaning based on the information you found. The use of new, not yet existing words and other kinds of representations, and the use of stories are important in this principle. Something new can be seen and accepted by others when its meaning is connected to something people know already. So make sure to always connect the new meanings to the old (Nooteboom, 2000).

9: Connecting the world inside the practice to the one outside the practice: In order to be successful, you need to connect the world inside the innovation practice with the world outside the innovation practice. Otherwise it could easily happen that inside the innovation practice great ideas are developed that never cause a breakthrough in the real world. Positive attention from persons with a certain status, or attention from media, gives access to the outside world to what happens within the particular innovation project. This kind of attention in itself is not enough to realise a break-through, but it offers the opportunity to meet people and start to connect the two worlds (Agrocluster, 2004).

10: Make it a social and communicative process : Knowledge development is a social process. Communicative and social skills are the vessel in this process

(Kessels, 1996). That's why it is important to give attention to the quality of the interactions: encourage listening to each other, investigating underlying meanings and assumptions, focusing on understanding before judging, connecting each new input to previous ones, concentrating not only reflecting on the past but also generating new futures. These can improve and strengthen the shared learning and innovation process considerably (Von Krogh, Ihijo & Nonaka, 2000).

11: Support actively the development competencies : The development of competencies (abilities) is essential in order to innovate (Kessels, 1996). Doing new things with new people makes it necessary to learn new things individually and collaboratively. This enables participants to realise innovations. Principles 1-10 are pointed towards the innovation process itself, this last principle focuses on the crucial and lasting role of learning in this process. The faster people learn together, the more knowledge productive they are. A specific innovation, improvement or invention - possibly patented - may be of great economic value, but the true value lies in the people's *ability* to generate these improvements and innovations. This ability helps to apply the previous 10 principles. Also, applying the previous 10 principles supports the development of new competencies.

It is of importance to work actively on individual and collective competencies: the innovation process should be designed as a learning process for the people involved. Therefore it is important to think of the competencies that should be developed, to define what competencies everybody can contribute, and to develop approaches and ways of working that stimulate learning in that direction.

2.4 Conclusion and reflections

As an answer to our research question, we found characteristics of a work environment in which entrepreneurship, learning and innovation are stimulated and supported. We have formulated these factors as design principles and aids for innovative practices. In the validation phase we found that the design principles help to give meaning to the important moments that took place within the innovation practices we studied. From the literature study it became clear that the principles need to be connected with a concrete practice, and at the same time people need to choose those principles that connect to their passion. Then, the principles serve as useful guidelines.

Our research project still continues. We recently elaborated aids for each of the principles: more elaborated guidelines, tools and methods. This is being done on the basis of our findings in literature and on practical examples from the cases. The next research phase will be devoted to further design, sharpen and test these aids.

In the next research phase, these three points of attention serve as a basis: Now there is a set of 11 principles. These are quite a lot. It raises the question how the principles relate to each other. In view of our research findings in the previous phase, it is conceivable that not all the principles need to be worked with at the same time. Our hypothesis is that it works best if people make combinations of principles that best match their preferences and the process breakthrough they want to achieve. We will test this hypothesis in the next research phase. We will do development research in order to find out how people work with the principles and how we can stimulate the application of the principles.

Under the principles lie various mechanisms that make them 'work'. In the next phase we want to uncover these

mechanisms. By doing so we want to better understand how the principles exactly contribute to the learning process.

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