Principles for Integrative Change Processes in Regions - Including Best Practice Cases from Austria, Egypt, Sweden and USA

This is a work in progress. Please do not cite without permission of the author.

Clemens Mader
Institute of Geography and Regional Science
University of Graz
Heinrichstrasse 36
8010 Graz, Austria
clemens.mader@uni-graz.at
Tel: +43 316 380 8895

Abstract
The aim of this research project is to investigate integrative principles for change processes in regions. Four case studies, in Austria, Egypt, Sweden and the United States of America provide empiric ongoing regional best practise cases to verify investigated principles. Initial results have shown that one can improve change processes considering five integrative principles based on sustainability approaches. Those principles are:

(a) Regional Entrepreneur as Key Actor with intrinsic motivation (the life force or energy for the activity and for the development of the internal structure is what we refer to as intrinsic motivation (Deci E., 1985, p.8)).

(b) Network, Actor Network Theory (ANT) & Creative Milieux built on trust: mutual trust among partners, actors involved and affiliates, either close or part of a wider network. Networks supporting the process and the emergence of creativity and innovation

(c) Organizational Learning and further education of involved actors

(d) Transdisciplinary Research Management: reflection of possibilities of integrated application oriented research and participatory research on future process opportunities
(e) Participation: strong communication between different hierarchies of actors based on a clear vision and transparent policies
1 Aims and Methods

1.1 Expected Outcomes

The initial title of the research project, accepted and funded by the Austrian National Bank is “Transdisciplinary Change Processes in Regions”. This title implies the initial aim and hypothesis of the work, stating, “Transdisciplinarity is necessary to achieve successful change processes in regions.” The involved research team has been convinced that the integration of research work and expertise is essential to run regional development processes. The initial expected outcome of the work was a change map, demonstrating methods for regional change processes, including research work and exchange at different levels. Starting from the initiation of a process by different kinds of actors (local stakeholders, business institutions, university or research institutions themselves,) up to the final evaluation of processes, representing concrete research work as part of the learning process, the reflection of this “process of a process” made us aware, that equally or even more important than the research aspect, there are more principles that need to be taken into account. Secondly we followed the sustainability approach of an integrative combination of economic, social and environmental characteristics that have to be taken into account to achieve a sustainable regional development process. This integrative approach of disciplines being connected and influencing each other has then also applied to the principles for change processes in regions. Having the best practices case studies in mind, we found out, all five investigated principles interact with each other and therefore need to be integrated into the regional change process in an integrative way. As a fact we talk of “Principles for integrative change processes in regions”.

1.2 Structure and Methods

The work first describes the theoretical background of entrepreneurship, social networks, organizational learning, transdisciplinarity and participation. Then the chapters on the principles for integrative change processes in regions follow, finalized by an executive summary and outlook.

Four case studies, in Austria, Egypt, Sweden and the United States of America provide empirical ongoing best practice cases to verify investigated principles. Initial results have shown that we can improve change processes if we consider five integrative principles based on sustainability approaches. Those principles are:

(a) Regional Entrepreneur as Key Actor with intrinsic motivation (the life force or energy for the activity and for the development of the internal structure is what we refer to as intrinsic motivation (Deci E., 1985, p.8)).

(b) Network, Actor Network Theory (ANT) & Creative Milieus built on trust: mutual trust among partners, actors involved and affiliates, either close or part of a wider network. Networks supporting the process and the emergence of creativity and innovation

(c) Organizational Learning and further education of involved actors

(d) Transdisciplinary Research Management: reflection of possibilities of integrated application oriented research and participatory research on future process opportunities

(e) Participation: strong communication between different hierarchies of actors based on a clear vision and transparent policies

To investigate the principles, expert interviews in each of the four best practice regions have been done. The interviews included questions on the vision of the process, as well as
the Key Actors role, the involved network, educational programmes and organizational learning, integrated research programs as well as used participatory methods.

Recognising the principles in the course of the interviews, the literature research has been done before and during the empirical research.

2 Status Quo in Research

2.1 Regional Entrepreneurship - Key Actors

Before talking about regional entrepreneurship, we need to define entrepreneurship. Then we can talk about strongly connected fields of social and regional entrepreneurship. Those terms are in the past few years often used terms, unless the meanings and concepts behind do already exist since ever, just have not been named as such.

There has been a long discussion on entrepreneurship in the past. In german translation, an entrepreneur is someone who starts a new business. At the same time this definition is not satisfying as there needs to be more than just establishing a new business to become an entrepreneur. Beginning with the french econoomist Jean-Baptiste Say in the 19th century who describes the entrepreneur as someone who “shifts economic resources out of an area of lower and into an area of higher productivity and greater yield”. This can be interpreted in a way like “an entrepreneur creates value” (Dees, G. p1, 2001). In the last century, the scientist most connected with the term of entrepreneurship is the Austrian economist Joseph Schumpeter. In his interpretation, an entrepreneur is an innovator with new products, new production methods, new markets or new organization methods. Therefore, Schumpeter expands his definition already from the profit oriented business to the organizational and change management approach. The same line follows Peter Drucker who describes the entrepreneur as someone who “always searches for change, responds to it, and exploits it as an opportunity” (Drucker, 1995, p.28).

Now, having explored the field of entrepreneurship in its pure form, concentrating on new value and profit, we come closer to regional entrepreneurship by explaining social entrepreneurship as level in between (see table 1).

<table>
<thead>
<tr>
<th>Kind/characteristics</th>
<th>Innovation</th>
<th>New market</th>
<th>New method</th>
<th>Social mission</th>
<th>Regional development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurship</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Entrepreneurship</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Regional Entrepreneurship</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Table 1: Characteristics of entrepreneurship, social and regional entrepreneurship

Social Entrepreneurship came up by the public demand to find solutions for obvious social problems like diseases, poverty, or social exclusion. Business, consultants as well as academics are showing more and more interest to social entrepreneurship as this seems to be a solution for life. In this paper (chapter 3.1) Sekem is described as one case study showing good practices also in the field of social entrepreneurship. The founder Ibrahim Abouleish therefore has been awarded with the Right Livelihood Award in 2003. The Right Livelihood Award was established in 1980 to honour and support those “offering practical and exemplary answers to the most urgent challenges facing us today”. The jury of the Award, lau-
reated Sekem “...for a 21st century business model which combines commercial success with social and cultural development” (Right Livelihood Award Foundation, 2008). This shows the combination of social engagement with business benefit.

One could argue entrepreneurs, managing their business with great social responsibility, have also social aims as social entrepreneurs have. This might be true, but social entrepreneurs go one step further as they use the business as a tool for their social mission (Mair J. 2006; see table 1).

Integrating what we have heard about entrepreneurship and social entrepreneurship, a further category relevant for principles in integrative regional change processes, is regional entrepreneurship. As shown in table 1, regional entrepreneurship includes the characteristic of regional development as a core aim of the process.

Fritsch & Mueller measured German regions of their level of regional entrepreneurship. As measurements they used the start-up rate and the employment growth rate to indicate the level of entrepreneurial region. As a consequence of their research, they found out, that innovation activities and entrepreneurial climate play a leading role in promoting entrepreneurship among regional actors (Fritsch, Mueller, 2007). Actually they do not define those characteristics in their research.

One thing we have learned from working on organizational and systemic change is that the leaders are hard to identify in advance. Sometimes they are CEOs or presidents, but often they do not occupy positions of obvious power in a corporate hierarchy (Senge, p.12, 2008). What Senge is stating, is, that it is not always easy to identify the key actor or entrepreneur, but one can be sure, in every process, there needs to be anybody, with an intrinsic motivation, to start a change process.

2.2 Social Networks, Actor-Network-Theory (ANT) & Creative Milieus

When talking of a network, as metaphor, one can imagine a network like a spider net or a fisher net. Lines connect the nodal points with each other. This metaphor is applicable to a number of kinds of networks like the internet or the network of traffic and roads. What we recognise with those networks is that there is communication in both directions going on, along the lines, in between the nodal points. In a narrower sense as social network we understand people connected with each other by nodal points (points, positions) as well as the connections (lines and relations) between the nodal points. If we talk of social networks, we talk of actors (sometimes represented by institutions) as nodal points and the communication with each other as lines.

Networks will shape today’s presence and the future on different levels. Today we find networks on global scales like research organisations, governmental organisations (United Nations),

The economic development of regions depends on a number of aspects (Bauer-Wolf, 2008):

- Amount an quality of enterprises in connection with number of work places
- Density and quality of technological, knowledge-based, cultural and social infrastructures
- Access to and qualification of human ressources.

Hereby we already recognize the importance of social networks when it comes to regional development and regional change processes.
**Actor –Network Theory (ANT)**

Regarding the regional entrepreneur dependent of a social network, we come to the Actor-Network-Theory defined by the french sociologist Bruno Latour (Latour 1999). Later in his research, Latour was stating that is was rather a theory than a method to learn from actors. Latour sees actors not only as humans but he saw them as nonhuman entities representing actors in a network. Therefore, his idea is that human action is only generated in networks. Regarding an entrepreneur, and if you take away all his surrounding people, and even tools for communication like the computer (as being also part of the network), one could not act as entrepreneur.

**Creative Milieus**

Therefore, being part of a network is essential for regional entrepreneurship. We remember innovation being one main character of regional entrepreneurship (table 1). To create innovation, there needs to be space for creative thinking. To be creative, an intense exchange of informal, social and personal contacts is necessary. The management of information from diverse sources is often the basis for inspiration, ideas as well as collective learning processes (Lubbe (2006), Fromhold-Eisebith (1995)). Now the milieu can also be seen as a network, but describes the kind and innovational character of the network. Camagni R. member of the french GREMI research group describes the milieu as follows: “the set, or the complex network of mainly informal, social relationships on a limited geographical area. Often determining a specific external “image” and a specific internal “representation” and sense of belonging, which enhance the local innovation capability through synergetic and collective learning processes” (Camagni, 1991, p.3).

### 2.3 Transdisciplinary Management

A shortcoming of many former change and research processes is that they were mainly directed from the top down without appropriately being based on stakeholders’ needs and wants (Gibbons & Nowotny, 2001; Somerville & Rapport, 2000; Scholz & Marks, 2001; Steiner & Posch, 2005; Stauffacher & Scholz, 2006). Development implies change, and every change is driven by processes. To ensure regional sustainable development, applying transdisciplinary change processes and transdisciplinary research is needed. Within this context, transdisciplinarity means a mutual knowledge exchange between academics and society in order to promote a mutual learning process between them. Consequently, transdisciplinarity leads from science on/about society towards science for/with society, and to learning at all stakeholder levels, including students but also scientists, other experts and practitioners as well (Scholz & Marks, 2001, p. 236; Steiner & Posch, 2006, p. 880, Jucker, 2002).

“Transdisciplinarity is seen as a core element for coordinating a transition process. It provides a framework for integrating the knowledge of a wide range of experts and stakeholders. At the same time a common base of knowledge is a promising starting point for cooperation between the involved stakeholders. Integrating not only interests, but also different modes of thought, expert’s and local knowledge leads to more robust results.” (Transdisciplinary Case Study Research Group at ETH Zurich, CH (2006)).

Hereby, transdisciplinarity calls for knowledge integration at different levels from disciplines, systems, interests, and modes of thought (Scholz & Tietje, 2002):

1. **Disciplines:** “A good method should provide the structure and procedures for systematically linking or even fusing together knowledge from different fields and branches of science. The method should organize a natural and social science interface and even allow for relating quantitative and qualitative research results.” Interdisciplinarity in the change
process opens a wide range of views and knowledge for stakeholders and experts. This enables a broader range of solutions for tasks in change processes.

2. **Systems**: Businesses as well as regional change processes are often divided in subsystems. For example in regions this might be the economic development of the region, the environment, and the social structures. In a transdisciplinary change process, all those systems have to be involved and guarded to ensure a sustainable development of the region.

3. **Interests**: “The diversity of interests is most obvious in planning or environmental studies. When for example an industrial site or a national park for wetland conservation is planned, the interests of the landowners, farmers, residents, and natural protection agencies are potentially conflicting”. The first research question (Q1) of this research project is asking: “How can stakeholder focused communication and stakeholder management as part of transdisciplinary change processes and transdisciplinary research become part of transformative education in a real-world context?” As a consequence of this question, involving stakeholder interests (including those who are directly or indirectly affected and who are in an active or passive role) at various project levels becomes crucial for the success of a transdisciplinary processes (Steiner, 2008).

4. **Modes of Thought**: There are different types of modes of thought such as intuitive or analytical modes or convergent and divergent thinking. Certain processes in regional development and change management require a synergetic interplay among various modes, such as between convergent and divergent thinking as part of creative problem solving. Involving these modes of thought, contributes to a success of the process, as real interests and different ways of thinking can be integrated.

Certainly, compared to a top-down directed change process or research process (typically only affected by the core-decision makers such as CEOs, mayors, planners, and other experts), the transdisciplinary process shows comparable higher complexity that also requires further competencies in order to be handled. Those are needed because not only stakeholder preferences have to be taken into account, but because of the involvement of stakeholders within the problem solving process. This requires specific skills of collaboration. By that not only the number of system elements (with regard to participants) is higher, but also the system itself shows more interaction going on among the system elements such as back-and-forward feedback loops. These system characteristics further lead to higher time sensitivity with respect to the development of specific system patterns.

### 2.4 Learning Organizations & Learning Regions

**Learning Organizations**

According to Peter Senge, learning organizations are: “...organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole together” (Senge, 1990, p.3)

Investigating organizational learning within a process needs to take following aspects into account:

- Learner
- Learning paths
- Qualities of learning
- Learning barriers
Individuals, Actors and participating groups can be seen as learners within learning processes. The influence of the learners and the network of people with influences on each other make organizational learning possible.

According to Senge (1990), organizations can only learn if individuals learn. Although this is not a guarantee for the emergence of a learning organization, but without individual learning, the organization cannot learn. Regarding the region as organizational structure, including regional actors (entrepreneurs, citizen, industry, public institutions, NGOs,…) we need to be aware, that the learning and developing region is only possible by the voluntary contribution and participation of actors being parts of the region.

**Learning Regions**

Taking into account global developments and recognizing the shift from an industrial to a knowledge-based economy especially in Europe; learning regions have been promoted as concept for successful economic development in many countries of Europe (Morgan 1997; Hassink 1997; Butzin 2000; Boekema et al. 2000; Landabasso et al. 2001; Fürst 2001). The capacity of both individuals and organizations to engage successfully in learning processes is regarded as a crucial component of economic performance in the knowledge-based economy. Oinas/Virkkala (1997) even speaks about the 1990s as being the era of the learning economy and the learning region and Malmberg (1997, 576) refers to the ‘learning turn’ in economic geography (Hassink, 2004).

### 2.5 Participation

Basically, participation can be seen as political life perception with democratic values. Participation further means to take part in processes as well as having the chance and possibility to take part (Hagedorn, M. & Hagedorn, U. 2003).

If we talk about participation in regional development, the relationship between the drivers of the process and by the process affected people and civil groups is meant. Therefore “participation” as synonym for codetermination has been mostly used in political processes of urban and regional development. In the course of the Earth Summit in Rio de Janeiro, 1992, participation has become a key principle for sustainable development. Especially in chapters 27 on partnerships with NGOs and chapter 28 on Local Authorities of Agenda 21, participation is given a key role for the development of sustainable regions. “Non-governmental organizations play a vital role in the shaping and implementation of participatory democracy” (Agenda for Change (LA21), p46).
3 Principles for Integrative Change Processes in Regions evaluated by four Best Practice Cases

Bringing theories of chapter 2 together with what we have learned from case studies in chapter 3, we will find out, that a set of five interconnected principles is necessary for sustainable change processes in regions. Each of those principles have been manifold described in literature as stand allone core indicators for change processes but have not been brought together so far and their interconnections and relations have not been investigated by now.

In this chapter, the principles are described, demonstrating empirical examples from four case studies and showing correlations to each other, unless the cases come from different cultures and continents (USA, Egypt, Europe), are of different size (Mega-City New York, State of Egypt, City of Malmö and rural town Eisenerz), have a different history and different visions.

---

**Control** | **Participant’s action** | **Examples**
--- | --- | ---
**High** | Has control | Organisation asks community to identify the problem and make all key decisions on goals and means. Willing to help community at each step to accomplish goals.
Has delegated authority | Organisation identifies and presents a problem to the community. Defines limits and asks community to make a series of decisions which can be embodied in a plan which it will accept.
Plans jointly | Organisation presents tentative plan subject to change and open to change from those affected. Expects to change plan at least slightly and perhaps more subsequently.
Is consulted | Organisation tries to promote a plan. Seeks to develop support to facilitate acceptance or give sanction to plan so that administrative compliance can be expected.
Receives information | Organisation makes plan and announces it. Community is convened for informational purposes. Compliance is expected.

**Low** | None | Community told nothing

Figure 0: A ladder of community participation: degree of participation, participant’s action and illustrative modes for achieving it (WHO, 1999)
3.1 The Best Practice Cases

3.1.1 Sekem Development Foundation, Cairo, Egypt

In 1977, Dr. Ibrahim Abouleish founded the Sekem initiative on an untouched part of the desert (70 hectares) in an area 60 kilometers northwest of Cairo. The name Sekem is the transliteration of a hieroglyph meaning “vitality”. Over the years, Sekem became the “umbrella” of a multifaceted agro-industrial group of business companies and several NGO’s encompassing a variety of socio-cultural-human development institutions and cooperative associations. Currently, Sekem is regarded as an outstanding world-class, socio-business corporation. In fact, in August 2003, Dr. Abouleish was selected as one of the world’s outstanding Social Entrepreneurs by the Schwab Foundation. In December 2003, the Right Livelihood Foundation awarded Sekem and Dr. Abouleish the prestigious “Alternative Nobel Prize”. According to the statement of the Award, “Sekem demonstrates how a modern business model combines profitability and success in world markets with a humane and spiritual approach to people while maintaining respect for the environment.”

Sekem’s mission is to achieve sustainable development while assuming corporate social responsibility and human development. Sekem achieves its mission by capitalizing on information technology, research and development, and active management of supply chains quality control, customer relations, and preservation of the natural environment.
The functions of Sekem are performed through three closely related but independent components:

1. Economically profitable enterprises: This component consists of the Sekem-Holding Company which embraces several agro-industrial-manufacturing and technological companies; each is managed as a separate specialized business.
2. Holistic socio-cultural-human development: This component is implemented under the umbrella of Sekem Development Foundation (SDF).
3. Human rights empowerment and enhancement: This component is the responsibility of the Cooperative of Sekem Employees (CSE) which conducts programs for human resource development and promotes equality, democracy, and dignity among all employees.

3.1.2 BO 01 Western Harbour, Malmö, Sweden

The city of Malmö is making its way within the prosperous Öresund region, in the south of Sweden, situated next to Copenhagen. The recipe for success is their conviction of the importance of sustainable development. With holding the first European Housing Exposition “Bo01” (translated as “living 2001”) in 2001, Malmö set a major step, arranged by the non-profit organisation SVEBO. The vision was to build a “City of tomorrow”, a pilot project on the theme of sustainability with a diversity of various designs and where new technologies and innovations could be tested. The support and believe of the mayor of Malmö, Ilmar Reepalu, played an important part and together with lots of people, institutions and departments involved, this vision turned to be reality. The Bo01 is situated at the Western Harbour, an old industrial area near the city centre, and years after the housing expo closed the vision has emerged, is still growing out from the Bo01 to the rest of the Western Harbour, to other districts of Malmö or even to other cities in Sweden and abroad. So Bo01 serves as a trigger for further city development. At Bo01 some 350 appartements were built in a sustainable way. High-quality materials, a demanding architecture and variety, compact living on a high standard as well as the area being supplied with 100 % locally renewable energy, characterise Bo01. Difficulties at the beginning departed and nowadays Bo01 is a trendy area to live in and very popular for leisure activities.

With this housing exposition on sustainable principles Malmö should act as an international best-practise exemplar, where knowledge and technology could be transferred to cities all over the world. While the planning and building process of Bo01 proceeded with little public participation, the Ecocity Augustenborg in Malmö marks a different example. Augustenborg is the name of a housing area build around the 1950s, and was successfully revitalised with an active participation of the residents. Project ideas were developed and within their design and implementation the residents played an important part. Thereby emerged a new children’s playground, a rainwater management, house fronts were repaired and insulated to make them more energy efficiency, roofs were gardened and other steps were taken to make Augustenborg a sustainable city district. So the city of Malmö is implementing and planning lots of projects and processes are going on to make Malmö more liveable, competitive and sustainable in a holistic way. The efforts become noticeable.

3.1.3 plaNYC, New York City, USA

In occasion of the Earth Day 2007 (June 5th), the City of New York’s mayor, Michael R. Bloomberg announced a long-term plan “for a greener, greater New York”. The plan, called PlaNYC laid out 127 initiatives designed to address the challenges of the City of New York (NYC) whose population will grow by one million by 2030 (PlaNYC,2007). This growth
of population will accompany challenges among many, in the fields of housing capacity, infrastructure, urban environment, climate change, and crime. The PlaNYC includes planned 127 initiatives in the fields of:

- Housing: Create homes for almost a million more New Yorkers, while making housing affordable and sustainable
- Open Space: Ensure that all New Yorkers live within a 10-minutes walk of a park
- Brownfields: Clean up all contaminated land in New York
- Water Quality: Open 90% of waterways for recreation by reducing water pollution and preserving natural areas
- Water Network: Develop critical backup systems for aging water network to ensure long-term reliability
- Transportation: Improve travel times by adding transit capacity for millions more residents, visitors, and workers; Reach a full “state of good repair” on New York City’s roads, subways and rails for the first time in history
- Energy: Provide cleaner, more reliable power for every New Yorker by upgrading the energy infrastructure
- Air Quality: Achieve the cleanest air quality of any big city in America
- Climate Change: Reduce global warming emissions by 30%

Only one year after starting the process, already 118 out of 127 initiatives have been launched and some could be already completed.

### 3.1.4 Eisenerz, Austria (work in progress)

### 3.2 Regional Entrepreneur as Key Actor (work in progress)

The core principle for integrative change processes in regions is to have a key actor with an intrinsic motivation to start and run a sustainable change process. A key actor in the role of a regional entrepreneur, as described in chapter 2.1 can be found in all four best practice regions.

<table>
<thead>
<tr>
<th>Region</th>
<th>Function</th>
<th>Motivation</th>
<th>Vision</th>
<th>Networks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egypt</td>
<td>Ibrahim Abouleish - private regional entrepreneur</td>
<td>Intrinsic</td>
<td>Poverty alleviation, Egyptian economic development; Sustainable development;</td>
<td>Business, policy, private, NGOs, social entrepreneur, academic,</td>
</tr>
<tr>
<td>Malmö, Sweden</td>
<td>Mayor, environmental department, SVEBO</td>
<td>wip</td>
<td>wip</td>
<td>Policy, business, civil society groups, RCE Skane</td>
</tr>
<tr>
<td>NYC, USA</td>
<td>Mayor</td>
<td>wip</td>
<td>wip</td>
<td>Policy, academic, advisory board, business,</td>
</tr>
<tr>
<td>Eisenerz, Austria</td>
<td>Mayor</td>
<td>wip</td>
<td>wip</td>
<td>wip</td>
</tr>
</tbody>
</table>

Table 2: Regions, sectors, motivation and vision and networks by the key actors, work in progress: wip
3.3 Social Network, ANT, Creative Milieus (work in progress)

As indicated in chapter 2.2 and listed in table 2, the network is closely connected with the key actor of the process. The network supports the process by its competences and cooperates in projects. Trust is hereby essential in connecting the network with the key actor and the integrative change process. Those two principles are strongly connected to each other and make the integrative aspect of the change process obvious.

As proven in the best practice case of Sekem, the network is part of a creative milieu and contributes with its innovative ideas to be realized by the process management of the key actor.

3.4 Transdisciplinary Research Management (work in progress)

Ongoing research during the change process is essential to improve the development of change processes. In all four cases (table 3), research is strongly integrated by special research programs (Eisenerz, PlaNYC), or even research institutions established especially in the course of the process (Sekem, BO01).

<table>
<thead>
<tr>
<th>Region</th>
<th>Research Institutions</th>
<th>Public/Private</th>
<th>Inhouse/External</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sekem, Egypt</td>
<td>Heliopolis Academy</td>
<td>Private</td>
<td>Inhouse &amp; minor external</td>
</tr>
<tr>
<td>BO01, Malmö, Sweden</td>
<td>RCE Skane, Dept. for sustainable urban development; Inst. for Green Roof Research, wip</td>
<td>Public</td>
<td>Inhouse &amp; External</td>
</tr>
<tr>
<td>PlaNYC, USA</td>
<td>Columbia University, City University NY, Pratt University, wip</td>
<td>Public &amp; Private</td>
<td>External</td>
</tr>
<tr>
<td>Eisenerz, Austria</td>
<td>National research programs, wip</td>
<td>Public</td>
<td>External</td>
</tr>
</tbody>
</table>

Table 3: Transdisciplinary Research Management of Best Practise Cases

3.5 Participation (work in progress)

Participation and transparent processes on certain levels, contribute to proactive behaviour of involved and affected people. Pro-active behaviour enhances personal mastery and a creative milieu during the process. Therefore, participation is strongly connected to creative milieus, networks as well as organizational and regional learning principles.

3.6 Organizational & Regional Learning (work in progress)

Organizational Learning within the process management team and in a further step, regional learning within the whole affected region improve the regional change process. In all four regional best practise cases, organizational learning plays a crucial role (at least processes in Egypt and Sweden; (USA and Austria wip)) and leads to regional learning in a broader community.

3.7 Principles for Integrative Change Processes in Regions (work in progress)

Now, bringing all five principles together, we recognise the integrative and interrelated aspect of all five principles. A system model will visualize the relations all principles have
to each other and show the multiplying effects the principles have if they function together.

4 Executive Summary & Outlook (work in progress)

A matrix including all principles and examples from the best practise cases will function as a kind of change map. This change map has also been the initial intention of the research project, to make it easy for regional actors, and entrepreneurs to work with the results of the project. In the further development and upcoming research projects, the principles can also be tested in the framework of organizations, networks, or business institutions. The expansion of the principles as basis for the evaluation of change processes has also already been thought about.

5 References


