UNCERTAINTY REQUIRES MANAGEMENT AND COUNSELING LEARNING!

Category: Experience based paper

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ABSTRACT

The internal and external networks were designed and implemented by the authors, acting as either managers or OD counselors. The paper will illustrate key elements of network setups for joint organizational, management and consultant-learning, and will be structured as follows: section 1 will be devoted to the contexts of the case studies and their implementation process, section 2 will look at the integrated governance-setup for management and organizational-learning; section 3 will focus on the benefits and results of the network-setups for managers and organizations; section 4 will conclude with the network challenges transforming professional identity of managers and consultants.

INITIAL SITUATION: CONTEXTS AND IMPLEMENTATION PHASES OF CASE STUDIES

According to sociologist & management cyberneticist Helmut Willke, context governance requires the consideration of interrelationships of organizations with their relevant environments.

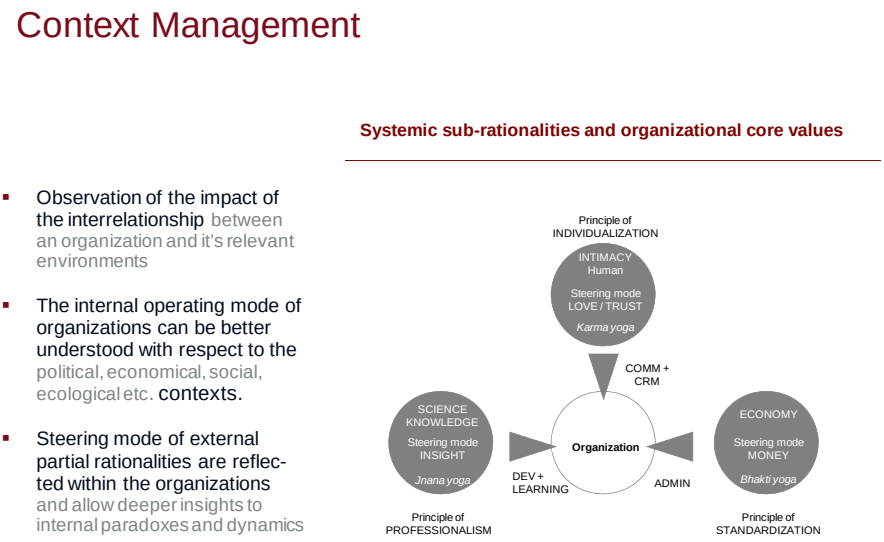

Figure 1: Systemic subrationalities

This is complementary to the intrinsic logic in the sense of operative closeness (Maturana/Varela 1984), which states that an understanding and description of organizations cannot be complete without the necessary consideration of their contexts.

ECONOMY	✓	Steering mode	⇨	Money
	✓	Steering instrument	⇨	Management by objectives
	✓	Ownership	⇨	Public or private financiers, private owners
	✓	Challenge	⇨	To embed objectives and standards in "lively" organizational routines
	✓	Impact of lack	⇨	Financial crises, loss of motivation, loss of loyalty
INTIMACY	✓	Steering mode	⇨	Trust
	✓	Steering instrument	⇨	Trust based dialogues and negotiations
	✓	Challenge	⇨	To treat individual with respect to their hopes, fears, needs and uniqueness
	✓	Impact of lack	⇨	Conflict escalation, segregation, exclusion
KNOWLEDGE	✓	Steering mode	⇨	Knowledge / insight
	✓	Steering instrument	⇨	Heuristic models for observation and reflection
	✓	Challenge	⇨	To offer free space for emerging innovations beyond economic pressure
	✓	Impact of lack	⇨	Short sighted decisions maybe resulting in misguided investments and sunk profit

These are defined, e.g., by the societal, technological, economical, ecological, and political/legal (STEEP) environment (Willke 1998, p.45). Environmental perspectives and contra-dictionary

sub-rationalities of organizations are relevant for arriving at a deeper understanding of cause-effect relationships, trends, or discontinuities in their full complexity.

Observing different types of (hierarchical-, project-, network) organizations we can act on the assumption of three key success factors: (1) Firstly the demands of developing and implementing standards into "lively" organizational routines or communication patterns allow economic survival. (2) Secondly a respectful communication of clients, partners, and staff members as unique individuals prevent organizations from loss of efficiency because of conflict escalation and exclusions of perspectives and know-how. (3) Thirdly the implementation of settings of "free space" allows management, organizational and system learning thus helping to avoid sunken profit fostered by short sighted decisions.

For the need to find a time limited and context specific "optimum" of balance with respect to these three contradictionary logics (economy, intimacy, knowledge) within one organization complexity management offers different tools of context governance as a soft steering mode.

This term of "soft governance" emerged from policy consulting standing for the attempt to intervene in complex social systems. It aims at establishing attractive frameworks for both innovative and effective "business" operations (Willke 2004) and drives system transformation via strong, leading visions, values and trust based negotiations (Rhodes 1996). One impact of this steering mode is strengthening self-management and self-responsibility of all actors involved.

The systemic counseling approach as a specific implementation mode of context management targets at realizing soft governance via context tailored communication set ups thus combining actors and actions in an unexpected and new way. This allows the social system to observe formerly blind spots and to learn how to learn (Willke 2004) by circumventing rigid patterns without eroding existing organizational structures.

Network-set ups show a lot of similarities to systemic counseling architectures: They build up novel, target and context tailored communication structures by combining new actors with highly demanded new actions. On the other hand – in contrast to counseling architectures – network-set ups have to exist not only for some months but for several years creating practical benefit for all partners involved.

Below we want to illustrate two different case studies of network set-ups as specific modes of context management and extrapolate their benefit for management and organizationnal learning as well as their requirements for transforming professional identity of managers and counselors.

Family-run global enterprise SWAROVSKI

The first – internal – network implementation took place at *Swarovski*, an Austrian family-run enterprise (20.000 employees) with excellent business performance on global level. Pressure on economic performance over the last two decades increased competition between business units for limited internal resources with speed and opacity as success strategies. A Vice-President's initiative to implement a cross-functional innovation platform failed because its allocation could not be resolved between the competing units.

This situation offered a small, cross-functional group of innovation managers a suitable milieu for creating and implementing an internal network through a bottom-up process. Appointed by business units to maximize a unit's profits, this group built cooperation structures that allowed a comprehensive overview of strategic targets, innovation projects, and accessible resources. Transparency, cooperation and civil disobedience became new paradigms driving the development of a trustful cross-functional coordination.

Phase (1) 2007: Idea creation and network build up

The idea of building up an internal innovation network was legitimized by organizational values tracing back to the founder Daniel Swarovski (1862 – 1956). In favour of innovation (»knowledge«) and profit maximization (»economy«), the top management was committed to innovation.

In the beginning of 2007 about 6 young, competent, and internationally experienced managers were assigned to overtake INNOmanagement functions, in parallel to their daily tasks in product or application management. Trying to resolve emerging issues, they frequently were confronted with passive resistance that proofed unable to break. As a result, this top management initiative came to an early halt due to barriers resulting from internal competition and distrust.

Three years earlier the Vice President (VP) set up an Innovation Laboratory called "i-lab" implementing idea management and creativity workshops.. It was to develop and rigorously test new prototypes (»knowledge«). However developed prototypes were rejected with the comment that prototypes were not addressing the requirements of the three, powerful business units. In this situation the new standing of i-LAB at the interface between technology provision and business unit demands turned out to be key factor to act as a neutral coordination and bridge function beyond self-interest and to spread trust through Swarovski's informal web of ties.

This was the context when the VP of Innovation as well as the INNOmanager of the businesses invented themselves as a steering committee for a network implementation: All relevant actors had recognized that in contrast to daily distrust success would only come through trustful and reliable cooperation. From the very beginning the idea was to build upon and improve cross functional communication basis between all business units and the technology unit. Another goal was to enable a step-up, without interfering with daily operations of powerful units.

The invisible mode of foundation functioned analogue to the systemic "submarine strategy" (Willke 2004) according to which one keeps a project confidential and tells (if at all) by the time it functions well. The first step-stone of the steering group was to negotiate and decide the network set-up as a whole and to develop joint roles and rules within network steering group for decision-making beyond market and hierarchy. In the "dark of the organization" topics and activities were gathered bottom-up from the business units and the technology unit in order to define SWAROVSKI wide innovation search fields without legitimation by a top-management's order. Because of enterprise-wide competition and negative trust in this phase (1) the question which individual should be delegated for the role of the network coordinator turned out to be very delicate. Within a transparent election procedure the VP of innovation (i-lab) was appointed as coordinator and the steering committee could start with mutual cooperation on innovation topics. Contrary to all unsuccessfully initiatives to establish an enterprise wide central innovation coordination and governance function up till now, it seemed to be the self-organized manner of this self-invention of which made this initiative a success (Simon 2004).

Phase (2) 2008: Standardization and enterprise wide visibility

The first objective of the cross functional steering group was to obtain an overview about the planning status, projects, methods, deployed controlling, etc. of all business units. The consensus was that Swarovski was not lacking creativity or know-how, but a common strategic focus across all initiatives.

The construction and implementation of communication-elements taken from systemic counseling context governance for fostering innovation was mastered by the steering committee

(Wilhelmer 2009). It created the basis for an intensive knowledge transfer across new business models, product-specific life cycles as well as for the collection of existing innovative ideas for product, support, and enabling technology projects.

The internal network functioned well as a "competence source" for developing new technological roadmaps and projects, some of which were economically profitable on the world-wide market within less than a year.

Additionally, the steering group and network meetings took a step-by-step approach to negotiate the draft of a vision statement as well as specifying network roles and rules for network self-governance. The speedy provision of information about developed management tools (e.g. portfolio management) demonstrated not only the drive of the steering committee to all members involved but also to their functional "home-subsystems" e.g. business unit etc.

It was thus the right moment for surfacing the first „submarine". Equipped with strategic areas, portfolio management, the House of Innovation, and initial innovative projects, the steering committee sought contact with the executive board. The positive feedback of the executive board upon the results gave rise to a continued and even strengthened engagement for the development of the network-architecture.

Initially rather market-oriented, the steering group embraced other topics – and in parallel also additional organizational units (such as research and development, or product development) – that were crucial for project successes. The steering group had grown sufficiently stable to start dealing and merging with different logics behind »economy«, »knowledge«, and »trust« inside the network.

Phase (3) 2009-2010: The internal network proving as crises manager

The financial crisis, which fully reached Swarovski in the year 2009, triggered a series of measures (»economy«) that targeted particular efficiency gains, including lay-offs and reorganization. Sizes of innovation teams were cut and the pressure to manage a turn-around based on innovation mounted. It was a period of visible nervousness and operational hectic. The crisis tested the network, too. It affected the cohesion of the steering group, e.g., by regular meetings getting rarer, INNOmanagers leaving out or leaving meetings earlier, etc. At the same time, however, the opportunity to pause and reflect on recent developments felt like a relief, and it held the steering committee tight.

The steering group contacted all heads of business units directly to inquire about their currently felt challenges and anticipated goals – and business heads responded. They replied with a catalogue of demands to be addressed in a short window of time. The steering group took up this catalogue and addressed it directly in form of questions to members of the network-meeting members during an open space format. A dramatic situation for Swarovski turned into a memorable hour of the internal network: over 70 employees resonated with the demands made by VPs of Marketing (of each business unit) and discussed in trans-disciplinary group settings various project ideas and goals. The group created within a very short time innovative and solid project ideas, all relevant outcomes of which were displayed interactively and openly ("open space"). Interestingly, the event was successful in another dimension: it created an enthusiastic mood. Ultimately, it led to projects that delivered and were positively recognized by the top management. The INNOnetwork stood the test of time and exploited a crisis of significant dimension to become visible, strengthen and demonstrate itself as a tool for crisis management.

Phase (4) 2010: The coordinator as a »server « of the network

The cooperation in the internal network required its own organization: A suitable form for cooperation could be found and continuously optimized through a process approach (Grossmann 2007). It built up a set of rules of the game that made a clear difference to the traditional distrust and actions of actors of SWAROVSKI thereby creating new obligations between steering group members. The construction of rules as communicative relations created differences between "inside" & "outside".

After overcoming crises the task was to hold the networking process ongoing: New members had to be integrated and introduced to the specific values, roles and rules had to be re-formulated due to new members demands and the distinction to the cooperation patterns within the business units had to be re-drawn and held. In this phase especially the tasks to keeping up difference to hierarchical organization and to figure out continuously the benefit of network results for the single units turned out to be central. The coordinator was required to prove his neutrality and responsibility for the network system as a whole and to build up acceptance of a temporary withdrawal of single steering group members without questioning their membership in the overall network-system.

This was the time when it turned out that the central coordinating function was required to act as a node in the network performing coordination for the whole system. The network management's central coordination function thus started to gain first routine in working as a "server in the net" (Grossmann 2007).

Phase (5) 2011: New set-up demanded

The year 2011 started with a fundamental announcement: The chairman of the executive board of management and most influential family member announced to retire from all functions within some months. Due to the fact that all units were reporting to an EXBO member being also a family member this information was accompanied by the additional announcement of a fundamental re-structuring process of overall SWAROVSKI enterprise.

Beyond paralysis the steering group members started to gather their perspectives on why the internal network should continue working drawing out benefits on the levels of efficiency and results with respect to the quality and speeded up tempo of launching innovations during the last two years. Due to network's visibility and appreciation the network coordinator achieved several offers to proactively join potential new emerging units. To bring these hidden persuasions of Top Managers into the communication of the steering group members and to reject the mix-up of the "internal network" with a traditional "department" and the "coordinating function" with the traditional role of a "line manager" turned out to be key success factor for the option of network survival. Within a floating organizational context the network had to remember its unique identity and to draw clear distinctions to the environment of all existing and potential new units and future managers.

Austrian Science Center Network (SCN)

The context of the second – external – network was the Science Center Network (SCN), founded to foster critical engagement of citizens with science and technology and supporting interactive, self-directed learning. Here, organizations like scientific associations, museums, schools, and engaged individuals joined the network.

Besides the SCN-EXBO acting as governing-board and the Network-Executive-Manager nothing was pre-set. Freedom and unpredictability allowed interested partners to create their own network vision and unique cooperation culture, define and align specific roles and rules and

midterm targets. Although launched top-down, the SCN was implemented by a bottom-up process. Voluntarily participating partners appreciated to join a space for mutual learning and to create coordinated actions based on trust and common interest.

SCN Phase (1): preparation

The preparatory phase started with the decision of SCN-EXBO (consisting of 4 persons originating from diverse organizations) to establish a new organization called "Science Center Network" which included the decision in favor of a network structure (as opposed to e.g. establishing a Science Center organization with a building). This first phase was thus marked as a period from the decision to install the Network-Executive-Manager (B. Streicher) and establish the new Science Center Network (SCN) association in June 2005 until the Kick-off Event (8 months).

During this phase, the association was legally founded, first contacts with potential partners were sought, first documents were drafted, describing the aims and intended activities and partnership agreement forms were designed (partners are expected no financial contribution, but active enagement and openness within the network).

Additional core activities included the search for external (public and private) funding and the launching of a website as marketing tool. The end of "Preparation" Phase was marked by the preparations for a Kick-off Event with the aim of making the Science Center Network, its aims and activities known to potential partners and stakeholders.

Stylized facts Phase 1	
Duration (months):	8 (June 2005 – January 2006)
# of team (full-time equivalent):	1 (0.5)

SCN Phase (2): build up

The second Phase of the Science Center Network was marked by two significant events: the Kick-off meeting for potential partners (20.1.2006) and the "Fascination Science Center" event for the public (24.10.2006) and thus covers a period of nine months.

With a successful "Kickoff" event which attracted considerable interest and 22 immediate partners and with the commitment for first grants, the Build-up Phase could be successfully started with a Network Coordination Unit and a full-time managing director within the Association.

A key step in developing the Science Center Network was to organize the first Network Meetings. Here, all participants created a long-term vision of the Network, its goals and success criteria. Network meetings were institutionalized (with a total of six meetings held during the period). In these meetings the identity of the Network and its "rules of the game" were elaborated bottom-up by the participants and subsequently committed to. The motivation, mission and resources of partners were collected as well as their expectations for the future development of the network in terms of topics or activities. These topics were then very helpful for guiding the network coordination unit in governing the network structure and development.

The end of the period saw the preparation for the first joint external Network activity, namely the event "Fascination 'Science Center'". With this event the Network would for the first time present concrete Science Center Activities developed and implemented by its partners. Moreover, in terms of public relations, the first partner brochure was published.

SCN Phase (3): development

After two compact phases for preparation and build-up, Phase 3 saw the extensive and continued "Development" of the SC Network between November 2006 and September 2008 (i.e. a period of 23 months). The beginning was marked by the "Fascination 'Science Center' event in the beginning and the end with the decision for a Science Center Network Analysis.
Network meetings worked as an essential instrument in developing the network. Partners commonly defined criteria for science center activities (SCA) as well as a mission statement as a common reference.

The network meetings emerged with distinctive core formats and culture: core formats include cafe dialogues, market place for resource exchange and matchmaking, international flashlights; introduction of new participants; principles of commitment & self-organization creates culture of trust and cooperation.

The latter also initiated a host of other activities like research ("Mapping SC activities in Austria", first network analysis) as well as international impulses, trainings and first publications. As first Network Project, a traveling exhibition based on the the "Fascination 'Science Center'" event, was initiated. This exhibition was conceptualized and implemented by a number of network partners, under the management of the Association's network coordination unit. Status and results of SC projects (jointly by partners, by individual partners including the Association itself) are regularly reported in the Network meetings to facilitate knowledge sharing, feedback and quality assurance, annual outlooks and planning support coordination and cooperation among partners.

These activities attracted an additional 32 partners to the network, thus reaching a total of 77 at the end of Phase 3.

In this period, the key principles of the SCN Association with respect to the network and its partners emerge more clearly:

- Act as an active node in the network (not in a hierarchical position)
- Provide organizational support, including thematic impulses
- Take up input from the network and re-introduce it as „sounding board"
- Attract partners who show active interest
- Openness and transparency
- Independence

Stylized Facts Phase 3	
Duration (in months)	23 (Nov, 2006 – Sept. 2008)
# of network meetings	11
# of team (full-time equivalent):	5 (4.4)
# of new partners (average per month):	32 (1.4)

SCN Phase (4): reflection

The next phase of the SC network development is characterized by an in-depth analysis of the network itself (October-December 2008 data collection) and the following (self-)reflection in the Network.

The Network Analysis brought forth a wealth of ideas and food for thought, since it brought in-depth insights on network structure (actors and their connections) and dynamics (processes, etc). A significant outcome was that the Association and the Network (both sharing the name Science Center Network) need to be clearly distinguished. Consequently, the aim of the

Association was elaborated by the Governing Council and can be described with the following principles:

- **Strategy**: show the potential of Science Center Activities as contribution to societal needs and challenges
- **Core areas**: Science Center Activities
- **Core functions**: network coordination and services; public relations/lobbying; promotion; exploration of new meanings of Science Center Activities
- **Core competences**: network governance and -organization; know-how about Science Center Activities, informal learning; research

In addition, launching Network projects on topics such as „Inquiry-based Learning", or "Art Cooperation" complemented the activity portfolio in this Phase. A symposium was organized and a concept for a new Network Project developed.

Last but not least this period is also marked with first steps towards 'regionalization' since all Network Meetings had so far been held in the capital city of Vienna. The 'prototypes' of these meeting in the provinces which were jointly planned and organized with a local partner hosting the meeting, proved to be very successful in attracting interested local SC actors.

Stylized Facts Phase 4	
Duration (in months)	9 (Oct 2008-June 2009)
# of network meetings	4
# of team (full-time equivalent):	6 (5.4)
# of new partners (average per month):	9 (1.0)

SCN Phase (5): diversification

The current Phase 5 of the SC Network development – from mid-2009 until today (April 2011) – can be characterized by "diversification".

This diversification refers to an extension of current activities through international cooperation, partner visits and excursions to new target groups (use of SCA for Society). Moreover, differentiation and priority-setting – both in regional (regional meetings as prototyped in Phase 4 with local SC initiatives) and thematic terms (e.g. poverty, democracy) – took place. With the setting-up of a Working Group for developing an Explainer Curriculum another novel element of SC Network activities was introduced.

Marketing and Public Relations for SC activities and the SC network became a priority for the Network Coordination Unit which besides regular publications also introduced a web intranet and facebook site for enhanced Network collaboration.

Stylized Facts Phase 5	
Duration (in months):	22 (July 2009 – April 2011)
# of network meetings	9
# of team (full-time equivalent):	6 (5.8)
# of new partners (average per month):	23 (1.2)

INTEGRATED NETWORK-GOVERNANCE-SETUPS FOR MANAGEMENT AND ORGANIZATIONAL LEARNING

SWAROVSKI ‘s integrated network setup

The internal network was set up to fluidize rigid boundaries and to build new ties between competing units and innovation actors all over the enterprise. Regarding to network architecture we can observe the following different functions (cf. Figure 2):

1. network coordinator
2. Cross functional steering group innovation managers
3. Enlarged complementary counselor staff
4. SWAROVSKI network meetings
5. Enabler and innovation projects
6. informal Teams

SCN ‘s integrated network setup

The external network was implemented to offer communication set ups for building new linkages between diverse social systems like science, education, arts, economy etc. in order to foster engagement of citizens with science and technology. Regarding network architecture we distinguish the following functions (cf. Figure 3):

1. SCN Executive Board (Governing Board)
2. Network Executive Manager
3. Enlarged complementary counselor staff
4. SCN network meetings
5. SCN public events, projects, field research and working groups
6. SCA projects

Central terms of different modes of learning

What do we understand by management learning?

Observing organizations as social systems we distinguish subsystems e.g. “management system”, “expert system”, “functional units” etc. By *management learning* we understand the transformation of communication patterns between 1st, 2nd, 3rd etc. management level as well as between different professional groups within management system or managers representing different subsidiaries within an enterprise.

What do we understand by organizational learning?

Organizations learn more efficiently and effectively compared to their competitors (Willke 2004) if they

- learn to learn; and
- make clear and transparent decisions about goals of the learning process.

Yet how can learning be purposefully interwoven in organizational structures? Willke (2004) proposes that it does require new components that circumvent rigid, normative structure patterns, but without eroding existing structures. More informal forms of organization, including cross-functional teams, networks, or task forces, may be more appropriate and useful (Willke 2004).

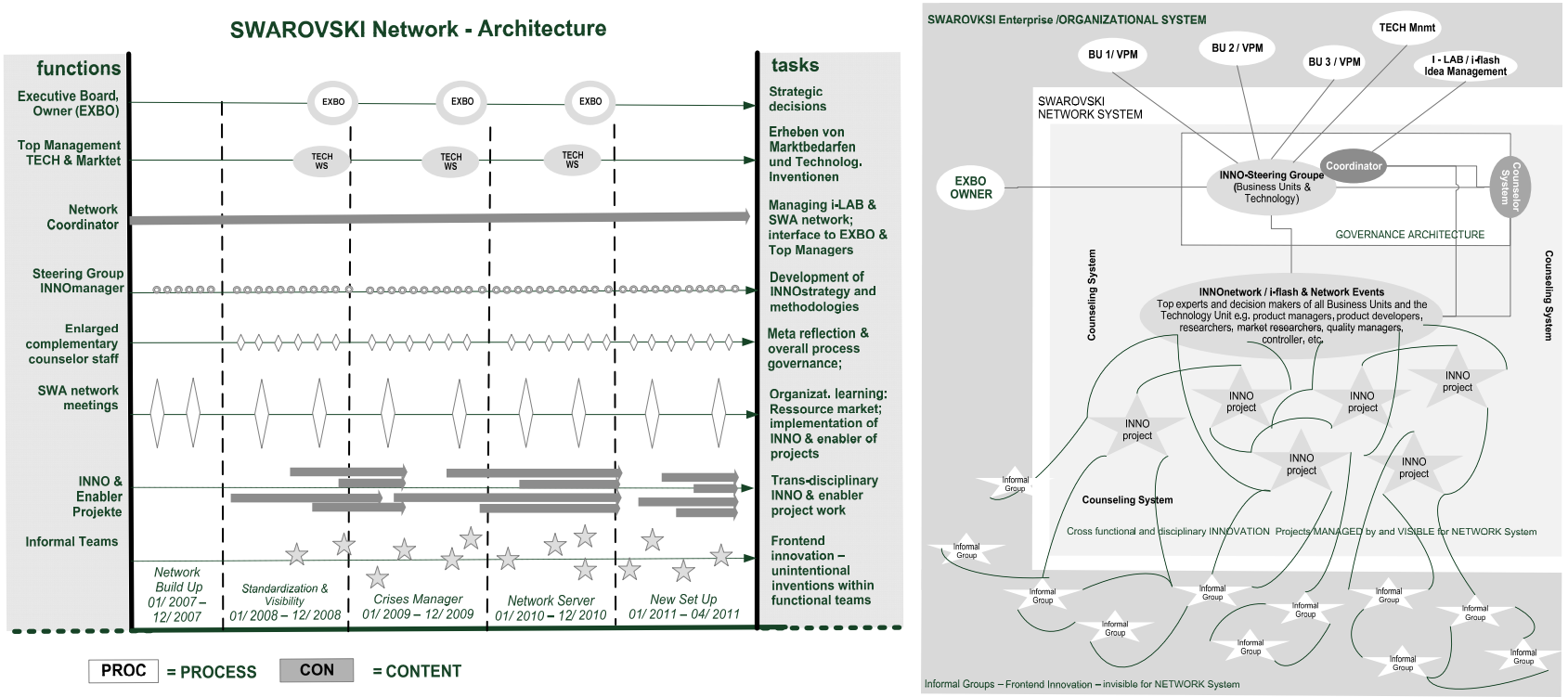

Figure 2: The Swarovski INNOarchitecture of tasks, roles, and annual planning.

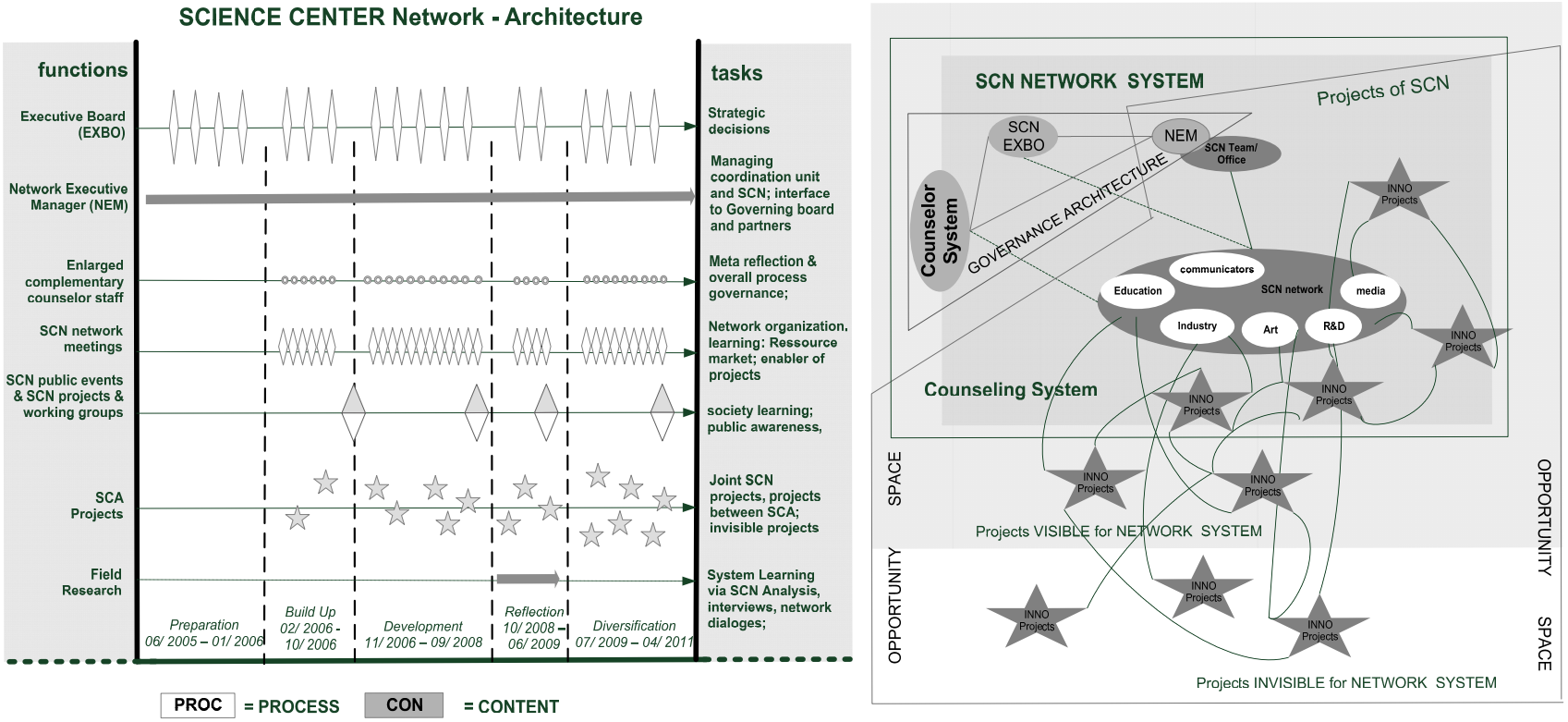

Figure 3: SCN network architectures / roles and levels

. What do we understand by network-system-learning?

Observing network-organizations as complex social systems we commonly identify different subsystems within context tailored set-ups. Speaking about system-learning we focus on the transformation of communication patterns between these functional elements of the network-system as a whole

Functions and learning-modes of two network set-ups compared

FUNCTION	SWAROVSKI	Science Center Network - SCN
EXBO	✓ Hierarchical Element of SWAROVSKI enterprise ✓ offer free space for network development ✓ acceptance and mentoring of network results ✓ evaluation of results on content and profit side	⇨ Founders of SCN idea deriving from diverse organizations (R&D, Policy, Accountancy) ⇨ Conceptualizing network system and differentiation of single functions like "association", "network", projects etc. ⇨ Definition and updating of network strategy ⇨ Yearly evaluation of network setup performance

Learning mode: management learning

⇨ In SWAROVSKI building up relationships between the cross functional steering group and the EXBO allowed management learning of EXBO (top managers / owners): Network results proved that time investment into cooperation leads to more efficiency and profit (steering mode: trust). In parallel EXBO remained outside the systemic counseling system. This allowed avoiding proactive questioning of EXBO's role in supporting or hindering the progress of the internal network.

⇨ SCN-EXBO acts as an autonomous group meeting at least twice a year to decide central positions. Intensive discussions within SCN-EXBO allowed all involved actors to define characteristic logic and dynamic of networks, which this was essential for developing a context tailored network set-up. The joint heuristic allowed EXBO management team learning on two levels: On the one hand to figure out different functions and steering modes between hierarchical and network organizations and on the other hand to use theoretical heuristics for practical intervention planning. Similar to SWAROVSKI enterprise SCN-EXBO team remained outside the systemic counseling system not allowing to be questioned in its mentoring role for the SCN network-system with the exception of one member of EXBO-Team member (M. Fischer).

FUNCTION	SWAROVSKI	Science Center Network - SCN
Network Coordinator / *Network Executive Manager*	✓ Periodically elected by steering group members ✓ Limited period of coordinator-ship ✓ neutral node of internal network system ✓ Periodically evaluation and optimization of network setup performance in cooperation with external counselor system ✓ secure connectivity of network activities to SWAROVSKI demands and culture ✓ Draw and secure difference to hierarchical routines and logic ✓ Lobbying for INNO network	⇨ Assigned by EXBO ⇨ Unlimited network management function ⇨ Founder and head of SCN office ⇨ neutral node in overall SCN network system ⇨ Ambassador between diverse social systems (science, education, economy, arts etc.) ⇨ Lobbying for partner's activities and SCN idea and fundraising for initiatives ⇨ Enhancing system learning via field research ⇨ Driver of transformation and expansion of SCN network on content as well on set-up side.

Learning mode: individual learning of network managers

⇨ In *SWAROVSKI the Vice President of Innovation* being elected as network coordinator managed to circumvent decision paralysis with respect to implementation of an enterprise wide innovation function: Based on his systemic expertise the Vice President utilized two external counselors for building up a bottom up context tailored network set-up in a step-by-step counseling process. Starting with a core team of about 30 actors the case for action on "what happens if nothing happens" encouraged 6 central innovation managers to voluntarily participate within the so called INNO steering group. Currently the great challenge is to stick to own beliefs and keep up identity and boundaries of the internal network while environmental structures are changing completely.

Coordinator's lessons learned were: (1) Standing up for his believes by searching for different solutions beyond top management orders was the key success factor for network implementation. (2) The internal network was not the aim but a very useful instrument to reach the goal of how to advance despite lack of cooperation. For the first time an initiative in this direction gained success. This required the Vice President of Innovation to gain an overview about principles of how networks are processing cooperation and decisions. (3) Visibility in organizations often hinders social innovation which has to be carried out by a "submarine strategy" in the darkness of organization. (4) Enlarged counseling staff meetings were a training on the job about how to design workshops for small and large groups. Today moderating open space for SWAROVSKI units has become a new support of i-LAB department (Vice president of innovation). (5) In parallel the lessons learned was to change role and routines by governing steering group meetings and network events which affected role performance and identity of systemic counselors.

⇨ Within the kick-off-event the *SCN Network Executive Manager* (B. Streicher) and her mentor of EXBO Team (M. Fischer) experienced the effect of dialogue oriented OD methods. This lead to implementation of complementary counseling staff working over the last 5.5 years. The main focus about reflection, design and intervention planning was on preparation and evaluation of SCN network meetings. This was complemented by the theoretical knowledge on network structures of two EXBO members. On an individual level the lessons learned were: (1) To survey observation criteria of counselors and to utilize them for planning own working groups. All interventions where critically questioned with respect to "wording" and targeted "effects" thus ensuring connectivity to thinking and wording of natural scientists. (2) Wider knowledge about different dialogue formats and implementing them within training on the job by adopting moderation functions. It was this time when moderation staffing changed from "two external" to "Network Executive Manager with one external" counselor. (3) Insight of added value of using outside perspective of external counselors for checking possible blind spots and questioning undesirable impacts (4) Distinguishing carefully between activities requiring network or project structure and involving Association or Network; (5) Focusing on the benefit of each activity for the Network as a whole, not for individual partners. (6) Realising how open culture within the Network can be fostered by own attitude.

FUNCTION	**SWAROVSKI**	**Science Center Network - SCN**
Steering Group *(function)*	✓ INNO Manager (middle management) inventing and implementing themselves as steering group on their own initiative ✓ Bottom up development of enterprise wide innovation targets, -strategy, controlling and steering instruments e.g. portfolio management, house of innovation ✓ Building a unique identity (values, cooperation mode) differentiated from line management ✓ INNO Manager transferring, implementing, assessing targets, standards by means of line management functions ✓ Sounding board for current needs of diverse units ✓ Acting as co-entrepreneurs driving enterprise wide innovation and profit	Tasks done by ⇨ SCN EXBO (strategic targets) ⇨ SCN network partners (transfer and implementation in home-organizations) ⇨ SCN Office (development and implementation of standardized instruments e.g. homepage) ⇨ SCN Network Executive Manager: Driving expansion of SCN on content, partner and regional level.

Learning mode: management and organizational learning

⇨ *SWAROVKSI steering group* invented itself by deciding for cross functional cooperation on eye level and lively transparency with respect to functional targets and interests. The (1) lessons learned became the overall target: to put individual unit's interests into perspective of enterprise wide innovation ability. This step (2) of self-invention was based on a previous critical meta-reflection about dysfunctional cooperation patterns within SWAROVSKI management system, drawing a boundary to these patterns in favor for living new, open and trustful culture. In terms of Edgar

Schein a “cultural island” (Schein 2010) emerged in the enterprise.

Lessons learned (3) was that steering group members had to act as change managers in their line functions transferring new patterns and instruments into operational daily life. This allowed organizational learning inside out without an “outside-in-push” of external innovation-advisors.

⇨ *SCN network partners* learned (1) to take responsibility with respect to extension and depth of transferring new know-how and instruments into their home organizations or usage of supportive instruments developed by the SCN office. Bilateral dialogues outside network meetings allowed (2) Network Executive Manager to get aware of central topics and demands within the partner network and to use this information for designing next network meetings on large group level. Thus (3) organizational learning was based on a transparent community as well as informal bilateral dialogues and negotiations between single actors.

FUNCTION	SWAROVSKI	Science Center Network - SCN
Enlarged complementary counselor staff	✓ Consisting of Vice President of Innovation and two external systemic counselors ✓ Focus on the counseling system (= whole network system) including the coordinator, steering group, network meetings and possible new network functions of the future. ✓ Simulation of network idea via organizational structural constellation ✓ Diagnosis of lacks of cooperation via cross functional interviews ✓ Step-by-step development of network implementation process based on feedback loops of actors involved in foundation process ✓ Target finding and design of individual workshops with the steering group and large network meetings ✓ Development of network architecture (set-up) and governance of its implementation and context tailored transformation ✓ Reflection on environmental changes / SWAROVKSI and its impact on network transformation ✓ Questioning of Vice-President´s role in acting as a network partner of the internal network system ✓ Coaching of coordinator related to design and moderation of workshops and large group events for individual units ✓ Critical outside perspective on specific dynamics of operational network management practice over the years of foundation and network establishment ✓ Periodical evaluation and joint publication of the process	⇨ Consisting of Network Executive Manager, an EXBO member and two external systemic counselors ⇨ Focus on the counseling system (= partial network system) including the Network Executive Manager, network meetings and excluding SCN-EXBO and SCN office as social subsystems ⇨ Reflecting current topics inside and outside SCN partner network and evaluation of individual Network meetings ⇨ Deciding topics, methods and division of labor related to single network meetings ⇨ Building up enlarged complementary staff as a reflecting and governing group based on trust and mutual appreciation ⇨ Reflecting and changing roles of cooperation (Network Executive Manger overtaking step by step more responsibility in conceptualization and moderation of individual SCN network meetings;) ⇨ Reflecting results of field research on SCN relationships and demands and conceptualizing interventions for SCN system learning ⇨ External counselors utilized for quality assurance with respect to an additional outside perspective on specific dynamics and potential methods to be used in regional SCN network meetings. ⇨ Joint publication

Learning mode: management and counselor learning

⇨ *SWAROVSKI:* In the very beginning the ties between external systemic counselors and single set-up functions were very close as the architecture was developed bottom-up in a step-by-step feedback-loop guided process. After the steering group had given itself a

vision and strategy it developed diverse instrument standards in cooperation with internal and external experts.

This was step (1) of changing counselors' role: The coordinator took responsibility for face to face steering group meetings on monthly basis respectively telephone conferences following the same time series. Thus continuity was at the base of success for enterprise wide standardizations. Meanwhile counselors transformed their role from continuous moderators of the steering group to supervisors, questioning roles and rules as well as strategic planning on an annual base. Over time the importance of Network Coordinators coaching role increased, giving counselor's sparring-partner role a new relevance within the cooperation. After four years a marketing employee started to introduce seminar questionnaires after each network meeting asking for participant's satisfaction with the overall design as well as the moderator's performance. Due to the fact that large group events do not allow intensive relationship to external counselors two-thirds of participants fed back satisfaction with the external moderators' performance while one-third gave critical feedback to their performance – whereas the overall design and process was praised by all participants. Following traditional patterns the marketing expert recommended changing moderators as soon as possible.

This was step (2) of changing counselors' role: On the one hand dysfunctionality of traditional feedback questionnaires – asking for personalized deficits were discussed in complementary staff in addition to common spreads of diverse feedbacks. A new insight for the network coordinator was that participants couldn't know and observe counselors work of conceptualizing and implementing network set-up and individual implementation steps as a whole process. While the network-coordinator was seen as the person in charge for the good design and overall process of the large group events external counselors were judged on a personal level of sympathy and attractiveness. On the other hand the network coordinator didn't see an opportunity to reject implementation of questionnaire and recommendation of changing moderators of the marketing expert because of the powerful position of the marketing expert. Implementing a new staff for network meetings consisting of an internal and external moderator proofed as a well fitting solution for this unexpected dead-end.

In parallel in a step (3) the coordinator and one of the counselors started joint publishing of this social innovation at conferences and with publishing companies which allowed joint learning as well as an increasing image of coordinators achievements within SWAROVSKI enterprise.

⇨ Also SCN network build up needed a close cooperation at the very beginning of the implementation process although counselors were not in touch with all functions of network set-up (SCN EXBO excluded). Questioning strange vocabularies and interventions allowed step-by-step building up trust as well as a joint language and similar procedures of observation, intervention and evaluation. Feeling more comfortable with the systemic-loop-line of observation, intervention planning, moderation and evaluation the Network Executive Manager started to take responsibility for the second moderation role within the large group network meetings in an early stage of the process. A good clearing process of requirements for good cooperation allowed both the manager(s) and counselors to transform their role. This

led to step (1) of transforming counselors contributions within SCN network moderation by rotating the personal presence of two counselors involved within the series of individual network meetings. The continuous integration of both counselors within continuous evaluation and conceptualization process of the enlarged counseling staff hindered the drop out from the relationship to SCN network system and allowed Network Executive Manager to utilize diverse strengths of counselors for reflecting possible blind spots and widening own network management capability on the job. This mode of jointly governing the process as a whole (close coupling within complementary staff) as well as giving free space for maneuver for the network manager and SCN office (loose coupling with SCN network and SCN office) can be seen as a good practice for balancing closeness and distance in a useful way.

FUNCTION	SWAROVSKI	Science Center Network - SCN
Network-Meetings	✓ Participation only by invitation of steering group members ✓ staff members of business units, R&D, product- development, technical sales, marketing, communication, HR etc. ✓ role of giving witness for building up new values and cooperation culture ✓ Idea generation answering to specific demand of business units ✓ Conceptualizing new projects and allocating cross functional teams ✓ Processing organizational learning via meta-reflection of lessons learned ✓ Resources exchange via market places ✓ Proof of high internal potentials and know-how within enterprise during financial crises affecting all actors involved with high motivation and pride of being part of this powerful enterprise ✓ Identification opportunity in critical times of financial crises and overall restructuring processes.	⇨ Voluntary participation: Recommendation by network partners and participation after a preceding dialogue with Network Executive Manager ⇨ Roles of signing partners or guests ⇨ members of education (universities, schools etc.), „communicator (museums, science centres)“arts (art students, artists), science (applied scientific organizations), policy (municipality and ministries), industry (public owned companies & intermediaries, etc) ⇨ „Sharing resources and experience (market of knowledge, contacts, venues etc.) ⇨ Experience of being a part of an important “bigger whole” of a proactive civil society ⇨ Living a dialogue oriented cooperation based on appreciation in distinction to home organizations ⇨ Social entrepreneurship going for building up diverse potentials for “future civilization” ⇨ System-learning by discussing results of field research ⇨ Implementation of lessons learned in one’s own home-organization on one’s own responsibility

Learning mode: individual learning / organizational learning / network-system-learning

⇨ Within SWAROVSKI network-meetings (1) organizational learning was enhanced by moderating transparent feedback processes and negotiation processes between the coordinator, steering group members and cross-functional members of internal innovation network as a way to assess both benefits and needs for further improvements of network structure and cooperation rules. Additionally (2) individual learning was supported by options of acting as hosts within world café rounds or drawing conclusions of table dialogues within the large group event on process side. In parallel (3) new insights in demands and problem solution processes taking place in individual units allowed individual leaning on organizational and content level for single staff members of SWAROVSKI.

⇨ SCN network gave itself roles and cooperation rules (e.g. deciding against quality

standards) within moderated large group sessions and thereby built up its own identity and organizational culture. (1) Organizational learning took place in meta-reflecting dialogues on building up roles and rules as well as on (2) drawing lessons learned from partner projects (SCA) as well as from SCN network projects (SCN). In addition (3) system learning was enhanced by presenting results of the field study and moderating feedback loops between all network actors within network-meetings (NEM, SCN–EXBO). Besides (4) network meetings offered a communication set-up for individual learning by gaining insights into current questions and demands of other social systems as well as by learning on content side from communicators or international guests presenting new ways of how to present hands-on experimental science communication for children and grown-ups.

FUNCTION	SWAROVSKI	Science Center Network - SCN
Projects	✓ cross functional innovation projects ✓ cross functional enabler projects (R&D, management tools) ✓ decrease of time to market of innovation and increase of profit through innovation	⇨ Projects between partners without participation of Association SCN – cross organizational and organizational learning / Visibility through lessons-learned dialogues in SCN network meetings. ⇨ SCN projects in cooperation with all partners – enlarging visibility of Science Centre Activities in Austria and fostering important topics for public awareness ⇨ SCN projects in cooperation with several partners – fostering important topics in public and sharing funds for innovative projects

Learning mode: (cross-) organizational and organizational learning

⇨ Within SWAROVSKI enterprise cross functional projects allowed building up new expert-networks on specific topics thereby enabling organizational as well as individual learning on content side. The bottom-up implementation of *technology or market-driven* innovation projects enabled cross-functional/hierarchical organizational learning between experts and decision makers as well as inventions for radical innovations on the market.

⇨ Projects between partners of SCN foster organizational as well as cross-organizational learning, changing patterns of the partners´ home-organizations via cooperation within cross-organizational projects.

⇨ SCN projects on current topics target “society” learning by raising awareness for specific critical questions.

Individual / management / organizational / system learning on an overview

	INSIGHTS	MODE of LEARNING	CASE STUDY
ECONOMY Mode: *money* Instrument: *standardization*	✓ Network set-up (roles & rules)	⇨ Management learning ⇨ (network) organizational learning	⇨ SWA (steering group), SCN (enlarged staff) ⇨ SCN network meetings
	✓ Coordinator changing his role in steering group (manager)	⇨ Management learning ⇨ Counseling Learning	⇨ SCN (NEM) ⇨ SWA (COOR)
	✓ Acting as change managers implementing new instruments in departments	⇨ Organizational Learning	⇨ SWA (steering group) ⇨ SCN partners
	✓ Counselors acting as Supervisors of steering group and sparring partner of network coordinator	⇨ Counseling Learning	⇨ Counselor system
	✓ Introduction of internal/external mixed moderator staff for network meetings	⇨ Management Learning & Counseling Learning	⇨ SWA (COOR) / SCN (NEM) & systemic Counselors
	✓ Speed up of time to market and increase of profit via innovation projects	⇨ Organizational Learning	⇨ SWA (projects) ⇨ SCN (SCA and SCN projects)
	✓ Utilizing synergies and resources within partner projects	⇨ (cross) organizational Learning	
INTIMACY Mode: *trust* Instrument: *dialogues & negotiations*	✓ Build up of an own network culture / identity	⇨ Organizational learning & Management Learning	⇨ SCN & SWA network
	✓ More efficiency and profit through trust	⇨ Management Learning	⇨ SWA (EXBO)
	✓ Stand up for own believes	⇨ Management Learning	⇨ SWA (COOR)
	✓ Submarine strategy for build-up	⇨ Management Learning	⇨ SWA (COOR)
	✓ Enlarged staff used for gaining outside perspective on possible blind spots and unwanted impacts	⇨ Management Learning & Counseling Learning	⇨ SCN enlarged staff
	✓ Joint language and identity within enlarged counselor staff	⇨ Management Learning & Counseling Learning	⇨ SCN enlarged staff
	✓ Cooperation instead of competition ✓ Giving free space for maneuver	⇨ Management Learning ⇨ Counseling Learning	⇨ SWA (steering group) ⇨ Systemic counselors
	✓ Insights in current demands of network partners	⇨ Management Learning	⇨ SCN (NEM)
	✓ Negotiation of topics and interests	⇨ Organisational Learning	⇨ SCN & SWA network
	✓ Lessons Learned of projects	⇨ Organisational Learning	⇨ SCN & SWA network
	✓ Transparent feedback loops between all functions included	⇨ Organisational Learning	⇨ SCN & SWA network
KNOWLEDGE Mode: *insight* Instrument: *heuristic models and formats*	✓ Heuristic model as a base for intervention planning	⇨ Management learning & Counseling Learning	⇨ SCN (EXBO) & Counselorsystem
	✓ Principles of network dynamics	⇨ Management Learning	⇨ SWA (COOR)
	✓ Intervention formats and moderation role	⇨ Management Learning	⇨ SWA (COOR) & SCN (NEM)
	✓ Evaluation and publication of insights in network set-ups and dynamics	⇨ Management Learning & Counseling Learning	⇨ SCN & SWA network managers and systemic counselor
	✓ Acting as hosts of world café rounds and delegates of working groups	⇨ Individual learning of network partners	⇨ SCN & SWA network partners
	✓ Cooperating within projects	⇨ Organiszational learning and individual learning	⇨ SCN & SWA network partners
	✓ Presentations from external guests	⇨ Individual Learning	⇨ SCN & SWA network partners
	✓ Field research – presentation and discussion of outcomes and moderation of feedback loops between network actors involved	⇨ System-Learning and counselor learning	⇨ SWA (COOR), SCN-EXBO, SCN network partners , enlarged staff
	✓ „Public conferences/events on scientific issues organized by SCN	⇨ Society Learning	⇨ Society / citizens

Figure 4: Overview on learning modes (source: Wilhelmer 2011)

BENEFITS AND RESULTS OF NETWORK-SETUPS FOR MANAGERS AND ORGANIZATIONS

Sociologist Dirk Baecker describes the necessity to tie together these three logics ("Economy/Order", "Intimacy/Trust", "Knowledge/Insight") of context control in process-oriented communication as the "revolution of organization" (Backer 2003). This revolution transforms a recurring concept of the 19th century ("*those who work, produce*") into a new one ("*those who work, communicate*"). Communication enables individuals and organizations to create something which cannot be created stand-alone. Purpose and motivation for cooperation stem from an increase in productivity, which is arising from dealing with opportunities and crises through the pooling of complementary interests and recourses (Grossmann 2007).

Are networks suitable instruments for soft governance?

Social anthropologist James Clyde Mitchell (1969) defines networks as a specific set of interconnections between so-called "actors". Because actors are often tied to one another in a non-trivial manner, various feedback loops between actors may critically influence patterns of actor's behavior and the whole system behavior. In addition, actors of complex systems can show adaption to constraints of the environment by means of self-organization (Maturana/Varela 1984).

Looking at areas of application for network-organizations one observes that they are often employed as means of communication. They are in place to coordinate transformations between different subsystems such as "economy", "science", and "politics" with the aim to increase spread and availability of knowledge.

Networks and sub-rationalities

Economy / Order	Intimacy / Trust	Knowledge / Insight
Decreasing opportunistic behavior in favor of increasing the development of mutual, economic and personal relationships as a signal for interest in a long-term cooperation	Reorientation from competing to cooperating relationships Investment into the development and growth of trust-based communication	Selection of suitable network partners and establishing an openness for the unusual and the new (open mind)
Negotiations between network partners while keeping a balance of individual interests – in order to create individual benefit	A quality of relationships built on long-term partnering (networking) aligned by a common vision and intrinsic values of all network partners	Systematic gain of insight into the functioning of networks by developing suitable network structures according to specific network activities as well as selection of suitable roles and processes for realization

Figure 5: A systematic for network governance based on Sydow Windeler 1999 (source: Wilhelmer 2010)

Networks constitute specific types of social systems. They incorporate features, structures, and pathways that are familiar one's own environmental experiences. The use of generalized empirical values and experiences (in face-to-face relationships) makes networks a tool for governing complex social systems. J. Clyde Mitchells (1969) points out the interdependent dynamics between

- consciously implemented network sub-structures;
- single network activities; and the
- evolutionary dynamics of internal and external networks.

There are no networks "as such" but only network structures with roles and rules of the game designed and shaped according to the local context and development. That is to say, networks as tools for soft governance cannot be copied from one context to another or serve as best practice examples. Instead, they are a useful framework for how to think (not what to think) and need be tailored to the specific underlying organizational context. As such the design and set up of any network constitutes an individually acting social subsystem (with its own sub-rationalities) within the whole system of the organization.

What do networks contribute to organizational learning?

Networks can be considered a means for soft governance and tool for complexity management. They reintroduce and/or foster trust, endorse difficult settings, integrate negotiations independent of existing hierarchies, and govern themselves through envisioning.
They fill in existing gaps created through demands of the organizational or societal environment but which are ignored, delayed, or too slowly addressed – provided they penetrate rigid organizational structures without interference or influence on performance capabilities.

Networks of cooperation

- result from organic growth and create themselves as an individual social system outfitted with visions, goals, rules, and structures (and hence, they cannot be prescribed from outside);
- have a function & culture that is distinct from other organizational forms;
- are emergent and fragile;
- require a constructive approach to differences and change; and
- exist only as long as they are needed, wanted, coordinated, and supported (Gray/Wood 1991).

Organizational learning fosters networks by

- exploiting internal capabilities to address difficult situations; and
- making decisions about the nature and type of "missing information" to be communicated and circulated within the organization.

What do networks contribute to individual learning?

Network actors are "change agents" of organizations, thoroughly engaged and capable individuals compensating for what organizations are still lacking. They offer no security or comfort zones, and constitute no permanent structural solution. On the contrary, it requires a steady self-awareness of its members toward addressing critical questions.
Several features that make networking attractive include:

- professional growth by taking on rewarding tasks;

- opportunities for shaping and participative decision-making of (e.g. organization wide) relevant open issues;
- responsibilities for driving topics and results;
- (e.g. organization- or community wide) visibility as a stepping stone for advancing professional carriers;
- experience of rewarding relationships with partners or colleagues based on appreciation of contributions; and
- culture based on content & quality as well as joy & enthusiasm (Grossmann 2007).

Networks create "change energy" from the distance of their members to theories-in-use, from their neutral position with regard to organizational units or levels of hierarchy, as well as from their balance of "transformation" and "preservation. The effectiveness of networks depends to some extent on central actors, the failure of which can affect a network's performance seriously and calls for rules of engagement between actors.

NETWORK CHALLENGES TRANSFORMING PROFESSIONAL IDENTITY OF MANAGERS AND CONSULTANTS

The paradox of the management of complexity is that decisions have to be made in situations where no-one has sufficient information at hand to make the correct one (Simon 2004). Yet decision makers are part of a communication system that offers other means than making decisions alone – attract the attention of others and in this way achieve a steering/governing effect that provides better orientation.

Networks answer a learned lesson from complex systems: top-down management has become obsolete for a sustainable realization of goals. They enable living in self-governance according to internal drivers, including vision, goals, roles, and rules, and offer context control through sufficient scope to create self-governance tools focused on the expected benefit of all relevant stakeholders. They also visualize a basic principle of social systems, namely that complex organizations have no single optimum but different optima in different times. Networks are a visible proof for successful viable alternatives building on system dynamics.

Their competence lies in dealing with inequality, risk, and unpredictability – not on order and standardization of operations. Network architectures reintroduce knowledge put under taboo into main communication channels of the organization, and transform it into collective process steps/processes of the organization without claiming an intellectual ownership. The participation in networks provides participants individual learning on-the-job and living of principles of systemic management (Willke 2004). As our case studies reiterate, networks function as "cultural islands" (Schein 2010) and "submarines" of organizational change. In order to function well, they require willingness and culture of continuous learning by all participants.

From today's perspective we can draw the conclusion that counseling social networks starts with counselors being tightly linked to network managers as well as with nearly all elements of the network set-up. Over time this kind of cooperation changes, loosening ties first to single elements (e.g. steering committee, network meetings), transforming from regular counseling steps to sporadic counseling sessions within strategically relevant or critical situations. In a next step all ties to set-up elements are transformed into loosely coupled relations and counselors' role transforms into being a supervisor and network management coach within strategically important or critical situations. This situation demands new awareness and focus of both managers and counselors:

Being aware of the danger that too loose a contact between counselors and network organization can lead to damage of connectivity, understandability and thereby added value of

external counselors and that too tight a relationship will hinder network managers' and actors' growth of capabilities, both sides are demanded to rebalance roles and closeness in order to secure continuity. If they fail doing so cooperation will end and the network manager has to replace the input of an outside perspective by cooperating with another external sparring partner. Staying alone will loosen the capability of network coordinators (particularly in internal networks) to draw and hold a good distinction between the own culture of network organization and typical patterns of hierarchical procedures.

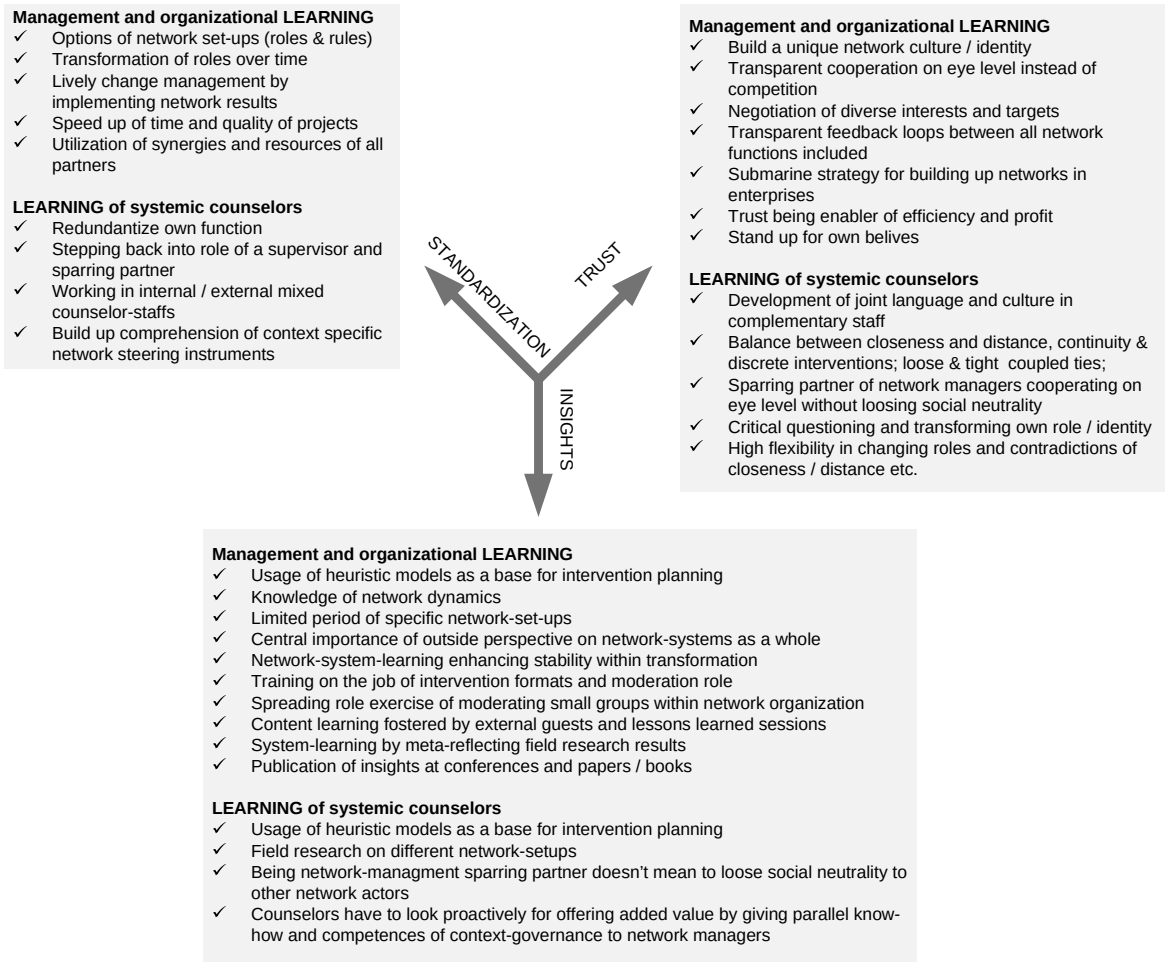

Figure 6: Management and counselors' learning related to contra dictionary logics

Depending on content and planning, networks are a useful instrument for balancing sub-rationalities of "Economy", "Intimacy", "Knowledge " in complex social systems and thereby fostering sustainability of social systems. The implementation process in both networks pushed management and consultant learning on following levels:

a) Both actors had to confront themselves with unpredictability related to partners' reactions as well as to environmental impacts on the ongoing process. Both had to utilize each other as a resource for observing the process as feedbacks for planning next steps or adapting roles or rules.
b) Both actors had to learn by explaining their implicit mental models related to network-management and to developing network-organizations. Within the complementary-staffing

both had to generate mutual understanding about interventions on levels of (1) context-management, (2) soft-governance and (3) breaking of communication-patterns.

c) Individual learning-on-the-job within complementary-staffing enabled network-managers to partially act as moderators of single steps, gaining visibility of their new competences in the network, and thus transforming communication patterns inside out.

d) Consultants had to learn to stay in distance waiting to be asked for support and to enhance new abilities and self confidence of network-management on how to govern complex social processes. This kind of loose linkage between the network organizations and their consultants required a lot of trust and transparent information about what is going on within the single steps without losing empathy for the client system.

e) Newly created and implemented cooperation paradigms encouraged all partners to critically question traditional role expectations and cooperation roles between managers and consultants;

Consequent orientation along benefits of networks guides consultants as well as managers to constantly questioning their cooperation roles and procedures. This requires role-distance, courage, and faithful standing for own beliefs.

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