



Berne University of Applied Sciences
HTI Management Center Berne
Switzerland



CHARLES STURT UNIVERSITY
Australia

Leo Buerki

SYSTEMICS

Five-stage approach to deal with complex challenges



**Guiding through complexity –
dynamic & deep understanding**

**Foster emerging future -
concepts & solutions**

**Living sustainable success -
joy & satisfaction**

**SYSTEMICS - a whole new mind for
managing complexity in organisations**

Prof. Leo Buerki
HTI Management Center Berne
Switzerland

Consultant for organizational
development and culture

Systemics – a whole new mind for managing complexity in organizations!

I'm pleased to have the honor presenting you our approach from Management Center Berne, Switzerland – which was developed to become a powerful strategically leadership tool in cooperation with Charles Sturt University, Australia – our mentor Otto Scharmer from MIT Boston and inspirations through Daniel Pink – a White House speech writer with some amazing ideas for key future competencies for sustainability!

My name is Leo Buerki, I'm professor at the Management Center Berne in Switzerland and owner of a consultancy for sustainable leadership, organizational learning and system dynamics simulation.

“System thinkers in action” do understand the short term and long term of fundamental changes. They think systemically, and they act with practicality with the big picture in mind. They go about their work by simultaneously taking into account system forces while attempting to alter those very forces in order to transform the system itself. As the bedrock of their existence, leaders need to place their actions in the context of promoting greater sustainability. Systemics is an approach to build up leadership in us and in others.

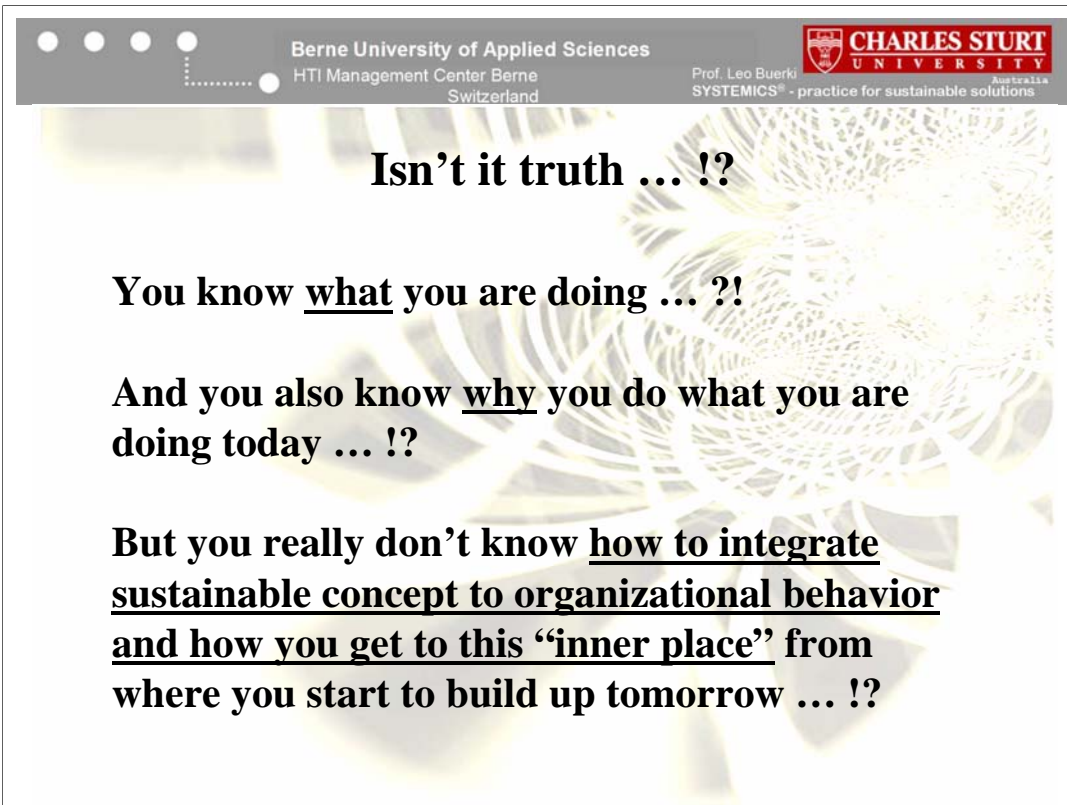
The aims of Systemics is –


Guiding through complexity – dynamic & deep understanding: in the picture symbolized as fuzzy zone and openness.


Foster emerging future – concepts & solutions: in the picture symbolized by getting a structure and letting go to see future potential.

Living sustainable success – joy & satisfaction: the heart of the picture – a living and changing area with new qualities and meaning!

I invite you to get a first glimpse to this exciting process navigating in complexity and viable future by developing sustainable leadership!




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Australia
 Prof. Leo Buerki
 SYSTEMICS® - practice for sustainable solutions

Isn't it truth ... !?

You know what you are doing ... ?!

And you also know why you do what you are doing today ... !?

But you really don't know how to integrate sustainable concept to organizational behavior and how you get to this "inner place" from where you start to build up tomorrow ... !?

Three questions - or better three propositions

Isn't it truth ... !? That ...

You know what you are doing – because you do it well and already for a long time! Otherwise you wouldn't be here!? ... and ...

You also know why you do what you are doing – consulting theories and study to optimize impacts to our processes! That's what you are interested to find here on this colloquium!?

But you really are not sure how you should integrate all those good ideas in your company, because your company is unique and no standard solution could improve sustainability to its best! You don't know where your activities, your inner place from where actions starts is to be found! You don't know how you get to this inner place from where you start to realize what you want to do and putting in to action, what you learned here – you are afraid to go back home being alone with your ideas - and nothing will change!?

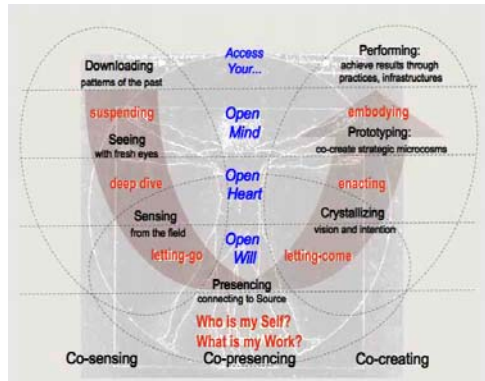
What makes successful and sustainable leadership becoming true – how do successful leader get to their impressive results?

At MIT Otto Scharmer is tracing those processes of successful leaders and manager in different fields! The so called process U is the strategically framework – and Systemics is the operational tool to put sustainable concepts in to action! Systemics "cycle of solutions" is enabling not only gurus to deep insight, innovation and new ideas – a process helping all of us to become more successful and sustainable.

What does it mean to become a “System thinker”?

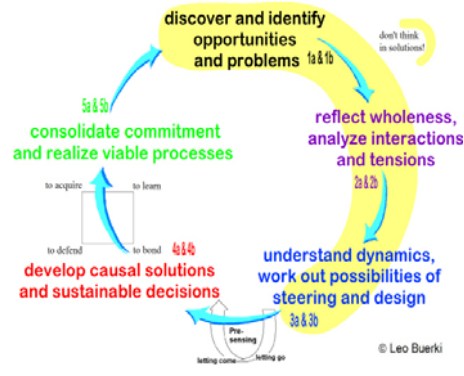
Sustainable leadership

Presencing – U-Process
social technology to address highly complex challenges



C.O. Scharmer (MIT, Boston)

Systemics – cycle of solutions
operative process to solve highly complex challenges



L. Buerki (Management Center Berne)

Sustainable leadership

The input for the new ideas for Systemics we got from MIT, Boston: The U-Process is a methodology for addressing highly complex challenges - for solving complex problems or realizing complex opportunities. It is a “social technology” for transformation of reality, within and across the worlds of business, government, and civil society. By using the U-Process, an individual or team undertakes three activities or movements: Sensing the current reality of the system of which they are part, carefully and in depth; Presencing and reflecting to allow their “inner knowing” to emerge, about what is going on and what they have to do; and then Realizing, acting swiftly to bring forth a new reality.

The U-Process has been developed through twenty years of intensive learning-by-doing by Joseph Jaworski and Adam Kahane of Generon Consulting in partnership with Otto Scharmer and Peter Senge of the Massachusetts Institute of Technology MIT and the Society for Organizational Learning SoL. They have done this development in a range of settings around the world, with corporate executives and line managers, politicians and public servants, activists and revolutionaries, scientists and intellectuals.

The U-Process is simultaneously a cutting-edge technology and a distillation of ancient wisdom. It is a process that many creative people - business and social entrepreneurs, inventors, artists - use when they generate breakthroughs. The U-Process takes what has previously been an individual, tacit, intuitive, and largely unreplicable practice, and embodies it in a methodology that can be used collectively and consciously to open up and make visible concrete fields of opportunity.

Systemics and its “cycle of solutions” is giving you the opportunity to travel through the U-Process by using a set of methods to accompany you through this highly complex challenges! It's an exiting journey whereas you get confronted with your own pattern of thinking, your mental maps and deep believing! But also explore your own universe of innovation – and producing flow-moments in your team!

System thinkers work together to see not just the whole of the system at hand but to also become conscious of their own lenses, through “suspending judgment” and “redirecting”, that is seeing from multiple vantage points and from within the emerging future.



Systemics high touch solutions – future key competencies

... out of the Information Age - into the Conceptual Age ...



1. Discover and identify opportunities and problems
Empathy **Not just logic but also empathy**



2. Reflect wholeness, analyze interactions and tensions
Symphony **Not just focus but also symphony**



3. Work out possibilities of design, understand dynamic
Story **Not just arguments but also story**



4. Develop causal solutions and sustainable decisions
Play **Not just seriousness but also play**
Meaning **Not just accumulation but also meaning**



5. Consolidate commitment and realize viable processes
Design **Not just function but also design**

Key competencies for future success by D. Pink - author of the bestseller,
Free Agent Nation, is a former White House AI Core speechwriter

Key competencies for the Conceptual Age

There's good news and bad news for us:

The bad news is: people who earn their livings using linear, logical, analytical skills (e.g., computer programmers, engineers, CPA's [Certified Public Accountant] and lawyers) may soon find their jobs in jeopardy, if they haven't already. As more that our work is replicable, the more we are in danger!

The good news is: anyone can develop the traits upon which both professional and personal success and fulfillment will depend in the newly dawning *Conceptual Age*. In **A Whole New Mind**, Daniel Pink describes a new era beginning to take shape in the global economy. This new economy calls for skills and talents that, historically, have been largely discounted in the workplace – creativity, empathy, intuition, and the ability to link seemingly unrelated objects and events into something new and different. Those six competences are necessary to get successful through the “cycle of solutions” and are related to the 5 stages. We combine the left and right hemisphere of our brain!

Note: Unless you've been holed up in a cave for the past decade, you have probably heard some chatter about the battle of the “right-brain” vs. “left-brain,” and of the set of skills and talents attributed to each of the brain's two hemispheres. In very simple terms, the left hemisphere is called on when performing logical, linear, and analytical tasks; the right hemisphere is adept at creativity, empathy, and the ability to combine seemingly unrelated ideas into something new. Although both hemispheres work in tandem and each of us use both, most people have a propensity to one side or the other. Thus, an artist may find calculus impossible and maddening, while an engineer might find it extremely taxing to draw anything but stick figures.

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Not just focus but also symphony

2. Reflect wholeness, analyze interactions and tensions

“What’s most important is invisible to the eye”
J. Day; McKinsey London

Method to capture complexity in a system:
Double-Cross-Impact-Analyze

Capturing the invisible, implicit knowledge!



Wirkung von Variable		Wirkung auf Variable →					Wirkung auf Variable →				
		1	2	3	4	5	6	7	8	9	10
1	NCS Business share of +51% (Switzerland)	1.0									
2	Mining and processing of Bauxite, fabrication of Alu		1.0								0.5
3	Main business partner Alcan (Canada)			1.0	2.0						
4	Main business partner MCC (China)				2.0	1.0	2.0	2.0	2.0		
5	International financing net worker UBS (Switzerland)					1.0	0.5				
6	Co-financing partner Mitsui as strategically counter						1.0	0.5			
7	Pre-financing partner IDC (South Africa)							1.0	0.5	0.5	0.5
8	Consulting GHR for contracting (Switzerland)								2.0	0.5	1.0
9	Cooperation with World Bank									0.5	0.5
10	Use of Rio Tinto Harbor										1.0

2. Stage in Systemics “cycle of solution”:

Symphony means the facility to put together pieces of seemingly unrelated material, to detect broad patterns rather than to deliver specific answers. The most important prefix of our times may be “multi.” Everybody multitasks; our communities are multicultural; the entertainment industry produces multimedia, just to name a few examples. Those who are able to master the art of juggling and, indeed, meshing divergent information and knowledge will be rewarded in the Conceptual Age.

To survive and prosper in the Conceptual Age, we need to be inventors and metaphor makers – to “think outside the box” (a metaphor in itself). Metaphorical imagination (i.e., understanding one thing in terms another, to understand interactions) is essential in forging connections and communicating experiences that others do not share.

It is impossible to address a complex challenge by tinkering with it piece-by-piece. We must see reality as a whole. Most efforts at creating change fail because we fail to see reality. All too often our expertise, our training or our paradigm blind us from seeing the system as it is. Instead we see what we want or expect to see. Our lenses act as barriers to innovation. Systemics is going to breach these barriers.

To make “invisible interactions” visible we developed the “double-cross-impact-analyze” whereas we gather sensitive dynamic knowledge about how things are interacting in a system. It’s a approach to discover blind spots too and to foster deep dialoging about those normally not discussed structure which determine system behavior: an enormous concentration of tacit knowledge in a holistic pattern! It’s our core tool to develop a deeper understanding and develop holistic capacity in a team! By using the double-cross-impact-analyze you overcome the analytic approach to “first take all apart and the realize, when taken apart, the system loses all its essential properties”. Furthermore, we put in actions all the parts (assessed variables) without losing their properties!

A comparison: our eyes realize the pattern of squares holistic and as a dynamic interaction – so we are able to realize only with a few “assessed variables” (different gray scale of the squares) the picture of Charlie Chaplin! Actually a very complex structural synthesis. By using the “double-cross-impact-analyze” we are shaping the structure of our project, company, innovation – and “see” their dynamic structure.

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Not just arguments but also story

3. Work out possibilities of design, understand dynamic

“Map of Interactions” – dialog with the system

We look on the structure, qualities, wholeness and are telling the story of the system from different point of view – an interpretation of the actual viability and potential for development.

3. Stage in Systemics “cycle of solution”:

As information becomes more freely and instantly available (i.e., internet), facts become less valuable. Instead, the context in which these facts are placed and the delivery of the facts with emotional impact become the critical element. That is exactly what the aptitude of Story (or narrative) is: context enriched by emotion.

A new movement called “Organizational Storytelling” is afoot in some of the most prestigious and normally staid business in the world. NASA has begun using storytelling in its knowledge management initiatives; and Xerox, recognizing that its repair personnel learned to fix machines by trading stories rather than by reading manuals, has collected those stories into a database called Eureka (*Fortune* estimates its worth at \$100 million to the company).

The same is true in the medical field. Dr. Rita Charon, a Columbia University Medical School professor launched the narrative medicine movement in an article in the *Journal of the American Medical Association* that called for a whole-mind approach to medical care. In it, she declared, “Along with scientific ability, physicians need the ability to listen to the narratives of the patient, grasp and honor their meanings, and be moved to act on the patient’s behalf.”

We are convinced that story telling is also essential for sustainable leadership. By telling stories you are building up a shared map of reality and decide together on which aspects of the system you need to learn more about: dialoging with the analyzed system, letting go actual pattern and letting come innovative solutions.

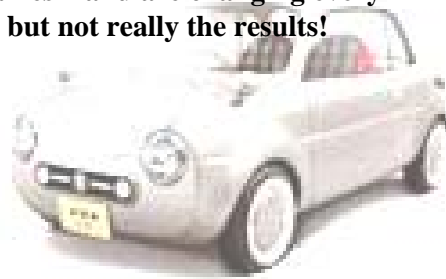
In the “map of interactions” we learn to tell stories about the system (as a result out of the double-cross-impact-analyze). We can describe the constitution of the system as a whole (1), we are able to define the best indicators (or symptom) in the system (2), we know the variables for transformation - we don’t have to do much to be successful (3) - and we can localize the “engines of the system” (4) – where it is effective to define solutions. And we can reflect variables being the “real goal” of the system (5). And by telling the story about the system in a conceptual way you may ask yourself: is that a system I want to be part of? Do I see a sense, am I motivated to go along or do I have to change the structure? (6) With so exercise you will be able to tell “conceptual stories” about your own company, it’s not difficult – it’s only different! “The Conceptual Age can remind us what has always been true but rarely been acted upon – that we must listen to each other’s stories and that we are each the authors of our own lives.” (D. Pink)



Not just seriousness but also play

4. Develop causal solutions and sustainable decisions

cars are basically built up by millions of different parts in different companies – and are changing every year – but not really the results!



Nobody needs a washing machine??!

What we do need are clean clothes!!!

Ultra-sound turns clothes 'ultraclean'

Dennis Normile, Japan -- Global Design

<http://www.designnews.com>

all the millions of different plants and creatures on earth are basically built up by only 23 amino acids!

4. Stage in Systemics “cycle of solution”:


Combining work and play has become a successful strategy for many corporations. “People rarely succeed at anything unless they are having fun doing it.” According to the Wall Street Journal, more than fifty European companies, including Nokia and Daimler-Chrysler, have engaged consultants in “serious play,” a technique that uses Lego blocks to train corporate executives. Executives are also discovering that humor is an accurate marker for managerial effectiveness.

The core of this Phase is a wilderness solo designed to allow us to connect with what is going on in the system as a whole and to uncover our own vocation or calling in relation to that system.


Out of the “map of interactions” we support a methodology to design scenarios, wherein we see “basic behavior” and “archetypes”. We imitate the nature of living systems, that we don’t have to understand all the details – but we need to see the pattern.

This principle is comparable to the 23 amino acids in nature building up all living creatures! We believe in the power of combination – and not in a dilettante analyze and millions of “special solutions” ... it’s a powerful generator of new ideas – or in other words the sources of evolution on earth!

We developed a set of 10 principle for viability – e.g. one of them is dealing with deep reflection of the function of a product: Not further development of products – but their functions are central for innovation! If we think on washing clothes we immediately see a washing machine in our mind! But it’s not the washing machine what makes us “happy”. No – we want clean clothes! And how we get them – that’s a creative challenge! So did a Japanese company: They soon will sell Ultra-sound machine integrated in your cabinet ... what a (r)evolution!



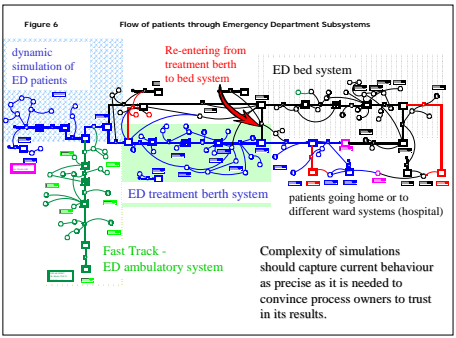
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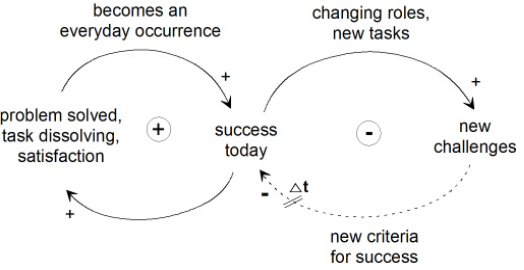


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Not just accumulation but also meaning

4. Develop causal solutions and sustainable decisions





Testing scenarios for different solutions:
Systemics and Simulation

4. Stage in Systemics “cycle of solution”:


To see a meaning in our life is a fundamental drive – elementary for viability! Spirituality is finding its way into the business place: Five years ago, Ian Mitroff of the University of Southern California’s Marshall School of Business and consultant Elizabeth Denton conducted a research project called *A Spiritual Audit of Corporate America*, interviewing nearly one hundred executives about spirituality in the workplace. Most of the executives defined spirituality not as religion, but as a basic desire to find purpose and meaning in one’s life. In the Conceptual Age, Daniel Pink foresees a rise in spirituality *in* the workplace as well as an increase in spirit as business – businesses that serve a population searching for meaning in their lives.

Related to play and meaning - uncovering deeper knowing about what is going on in the system – is something important, but still rarely applied in business and leadership. Most of us are trained to objectify problems and systems as something separate and distinct from ourselves. In doing so we forget that we are very much an active part of the systems we’re trying to change. We are in deep relationship with the whole system. We learn to work within systems and systems learn to work within us. It is impossible to grasp the system as a whole without a consideration of our own relationships to it, and opening ourselves up to the question of what this whole is demanding of us. Only through deep dialoging play and meaning can be cultivated.


We borrow here ideas from the fields of industrial design and venture incubation. You don’t spend months making careful and complete plans. Instead, you launch and learn, building and testing models in the real world, in a cycle of quick iteration from one version to the next. Throughout this process you will share other learning’s and you will coach each other. During this stage, you recruit new players who bring with them missing competencies, resources, and relationships, to help you enact innovations. This augmentation beyond the original you enlarge your work by creating a new reality.

In the book *Presence*, the authors explain that, “This experience has been termed presencing because it is about becoming totally present to the larger space or field around us, to an expanded sense of self, and, ultimately, to what is emerging through us. Once we have achieved that stance, as individuals and as a team, moving up the U involves acting in service of bringing that emerging reality into being.” (P. Senge)

The loop-diagram shows that our success today can be so satisfying that we do something becoming a everyday occurrence! The more we are successful – the more we are changing roles and provoking new tasks. New challenges lead to new criteria for success – and if we don’t change our behavior, we will disappear – as a result of our own success!



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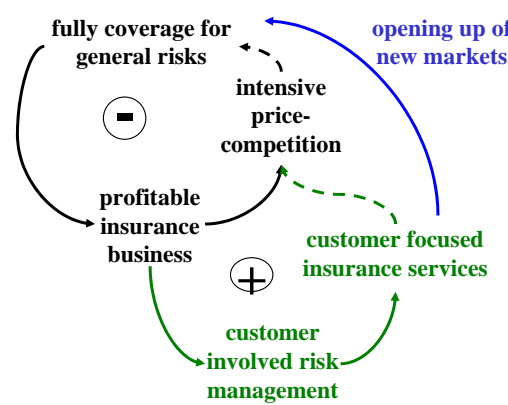
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Not just function but also design

5. Consolidate commitment and realize viable processes

Innovation Management
Scenario-Design “risk-management”
Swiss industrial insurance

Sustainable Leadership
Top-management Systemics commitment:
viability in a network
of 900 employees from 50 nations!





5. Stage in Systemics “cycle of solution”:

In our world of abundance, it is no longer enough to create an economical, functional product; it is economically crucial, as well as personally rewarding, to create something that is emotionally engaging. Gordon MacKenzie, longtime creative force at Hallmark Cards. MacKenzie, who often spoke to school groups, always started his speech with the question: “How many artists are there in the room?” Inevitably, in groups of children in kindergarten and first grade classes, every child would enthusiastically wave his or her hand in the air. In second grade, about three-fourths of the children would raise their hands, and in third grade classrooms, only a few children would admit to being an artist. By the sixth grade, not a single hand went up as the students looked around to see if anyone would admit to what they had now learned was *deviant behavior*.

The final phase of in the “cycle of solutions”, realizing of designed solutions, is both - familiar and unfamiliar. In this phase we make real what we have learned in the cycle so far by building scenarios, prototypes and then pilots that begin to enact a new reality - to change the system from what it was to what it will be.

We are familiar with the activities of this phase because they are typically what we do in our working lives: we create projects, policies, processes, and products. But the route that you will taken after the intense dialog with the system and the emerging possibilities, solutions and vision is atypical. By this phase the team has gone through a deep process of sensing, deep understanding and Presencing, which means that they arrive at the point of execution with a new level of preparedness. Their execution work is different because all the outputs from this phase are the realization of a shared intelligence, and not simply the accumulation of many individual ideas. The emphasis in this phase of the work is on hands-on, rapid-cycle creation and evaluation of multiple alternative ways of addressing the challenge at hand.

You and your team will be able to identify and choose a few innovation initiatives that you see as the most effective active activities having the potential to change the whole system. And you will live this sustainable success in joy and satisfaction!



Systemics want's you to become a “make it happen leader” !!!



“Basically we never use the stuff that comes out of our annual planning session. We spend three days in creating this thing called a strategic plan, then we go home and never look at it again. It’s been that way for the last 15 years.”

- Describe -** Not just logic but also empathy
- Connect -** Not just focus but also symphony
- Interpret -** Not just arguments but also story
- Understand -** Not just seriousness but also play
- Invent -** Not just accumulation but also meaning
- Live it -** Not just function but also design



Senior manager
in international firm

Underwood, 2002

Become a “make it happen leader” for sustainability

Systemics is not a solution for sustainability – that you surely realize in our short travel through the five steps. Systemics is a process through complexity, to get a dynamic and deep understanding of the system you want to steer. You get tools to foster emerging future – concepts and solutions to realize a sustainable goal. And you learn about living sustainable success – not by suffering and sacrifice – no by living joy and satisfaction.

You got a impression, how to combine the six future key competencies in the cycle of solutions:

We describe a system not only by using our logical thinking but also by fostering our empathy

We do not connect variables like in mechanical system – we build a a symphony wherein every variable plays its unique role and produce a deep understanding for the whole

We do not distill arguments to convince you but telling stories about the whole system that gets us emotionally attached to the challenges and problems


By understanding the wholeness we become not more and more serious – no we start to play with the system to find new ideas and solutions

For us solutions are not “more of the same” – accumulation – no we want to build up meaning and trust for a sustainable development and success


Finely when we are ready to live our decisions and solutions – we do it not just as a function – we are proud to deliver designed beauty and having joy to do so

And if you are in this systemic process, you are smiling about the quotation above. If not, you know how harmful it can be, if you are part of such a company “talking about strategies” and not “making them happened”!

Thank you!
You have any questions now ... or later? ... then please send postcard ... !



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Systemics is a registered trade brand by Berne University of Applied Sciences – Management Center Bern. Since 1996 a permanent team is fostering this approach and is a USP of our University!

I'm since 1995 at the Management Center Berne and for me Systemics is not only a process so realize opportunities or solve problems – no it is a general way to think and live! So I don't have to distinguish between „business life“ and „private life“ – I'm supported by Systemic to be a unique and holistic person with a high potential for being happy!

I hope I could give you some new ideas and inspiration to become a “system thinker”! And if you like to know more about Systemics - to study at our University or as a consultant approach - you can anytime contact me:

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Thank you for your interest and feedback to Systemics!