

CHAPTER 4.5

The Natural Step

*Nestled in the Coastal Mountain Range of British Columbia just North of Vancouver, Whistler is gifted with spectacular scenery and the people who live here feel close to nature. The town has developed a culture that is strongly supportive of environmental stewardship. Avid skier and mountain biker **KEN MELAMED** first met Natural Step founder Dr. Karl-Henrik Robèrt on the ski slopes of Whistler. This fortuitous meeting led to Whistler's leadership as the first municipality in North America to use the Natural Step framework for community planning. What follows is an introduction to the framework from Mayor Ken Melamed, integrating stories and lessons from Whistler's journey.*

SUSTAINABILITY IS THE CHALLENGE OF OUR TIME. North Americans are the leading culprits of stress on the planet. We have no excuse for dragging our feet. Sustainability is the challenge of finite resources, threatened ecosystems, and seven billion inhabitants. Today, 80% of the world's resources are consumed by 20% of the population. Emerging societies covet the lifestyle of the developed world and will eventually achieve it. Canadians should embrace a move to social justice and to solving this global challenge.

Whistler is a poster child for unsustainability. We depend on two million visitors a year, many from far-flung places—our eco-footprint is massively beyond our share of what the planet can afford. Our challenge is to correct our course to a pace that is acceptable and affordable to the community. Whistler has been practicing sustainability using *The Natural Step Framework* on our journey to create a new future. Progress has been made on resident housing, First Nations partnerships, habitat protection, and transit, but we have much more to do. Our intention is to lead by example and inspire others to join the movement.

Whistler is the first community in Canada to use *The Natural Step Framework*. As mayor, I have had the good fortune to study informally with Dr. Karl-Henrik Robert, founder of The Natural Step (TNS). Developed in Sweden 20 years ago, TNS is growing as an open-source operating system—a system available to all. The Framework has been used extensively by corporations and businesses, as well as by non-profits and local governments. Based on science, TNS sets out the *system conditions* for a sustainable society. There are basic scientific realities of our environmental challenges that are universally true. With common understanding of these realities, people can find areas of agreement and reach consensus for action.

For too many sustainability is still a mystery. *The Natural Step Framework* addresses the greatest sustainability challenge of all: the need for competent leadership. Becoming a competent leader requires practice in making decisions within our complex system. The Framework addresses this. For effective activism this competence must also exist at the grassroots level.

If we are to be effective, there must be a ‘robust operational definition of sustainability’ in place. Within a scientific context, we need to know what our end goals are—that is, what sustainability means in our own community. To paraphrase Dr. Karl-Henrick Robert,

To be strategic about the complex endeavour of sustainability, leaders need to know how to define the endpoint. The case for sustainable business goals, defined in a robust way, provides an unexploited opportunity for ‘doing well by doing good’

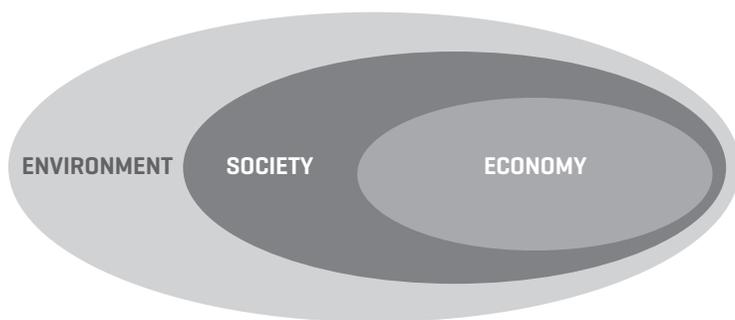
in business, and thereby allowing business leaders to merge seemingly disparate ideas.

The Framework helps us choose where we want to go and the rules or guidelines to get there. It is non-prescriptive and allows ample room for creativity. Working from shared values, scientific principles, and inclusive processes, communities, businesses, and organizations can move forward in stepwise actions.

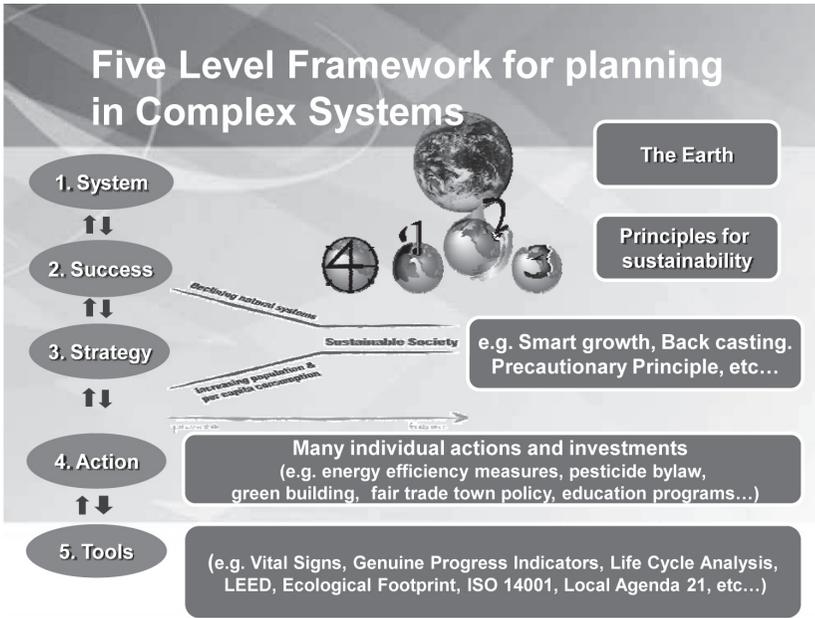
KEY TNS CONCEPTS

THE NESTED HIERARCHY

Language and communication must be used carefully as motivators for behaviour change. We can move farther faster by letting go of outdated concepts and models, which limit and channel our thinking. New mental models are being created to replace the ones protecting the status quo. This graphic, the nested hierarchy, is a better representation of interdependent systems than the more traditional overlapping circles or ‘three-legged stool’ models.



The health of the economic and social systems is entirely dependent upon the health of the environmental system. Success should happen in all of these spheres: economy, society, and environment. The Framework teaches us how to manage tradeoffs and improve our decision processes. For example, which is better wind, coal, or nuclear power?



THE NATURAL STEP FRAMEWORK

TNS Framework can be applied to any complex planning endeavour in any system. At every scale from buying a bicycle to space travel, the process is universally applicable. The wording, however, is not user friendly, so take a breath.

THE FOUR SYSTEM CONDITIONS FOR SUSTAINABILITY

These rules should be as commonly known as the rules of soccer. It is not necessary to memorize them, just know that they are available. The great news is that they are complementary and compatible with all other sustainability tools and approaches.

“CARE INSTRUCTIONS FOR SOCIETY”

In a sustainable society:

- I. People are not subject to conditions that undermine their ability to meet their basic human needs.

2. Nature is not subject to systematically increasing:
- concentrations of substances extracted from the Earth's crust
 - concentrations of substances produced by society
 - degradation by physical means

Another way of expressing these conditions is as the four root causes of un-sustainability. The “cowboy version” of this, from Calgary, is: we dig stuff up too fast, we poison the system with too many chemicals, we overload the engine, and there is widespread mistrust because people cannot meet their needs.

WHISTLER four root causes of **un-sustainability** the NATURAL STEP

1 We dig stuff (like heavy metals and fossil fuels) out of the Earth's crust and allow it to build up faster than nature can cope with it.

2 We continuously damage natural systems and the free services they provide (including climate regulation and water filtration) by physical means (eg. over-harvesting and paving wetlands).

3 We create man-made compounds and chemicals (like pesticides and fire retardants in carpet etc.) and allow them to build up faster than nature can cope with them.

4 We live in and create societies in which many people cannot meet their basic needs (eg. to find affordable housing or earn a living wage).

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TRANSDISCIPLINARY ECONOMICS FOR SUSTAINABILITY

Manfred Max-Neef, a Chilean economist, has provided very important and powerful insights into what is called the social system condition. The planet doesn't care and will carry on nicely without us, so sustainability is inherently a social imperative.

POSTULATES FOR A TRANSDISCIPLINARY ECONOMICS FOR SUSTAINABILITY.

1. The economy is to serve the people, the people are not to serve the economy.
2. Development is about people and not about objects.
3. Growth is not the same as development, and development does not necessarily require growth.
4. No economy is possible in the absence of the ecosystems services.
5. The economy is a subsystem of a larger and finite system, the biosphere, hence permanent growth is impossible.

We must redefine growth and quality of life, and the broken economy. In order to bring more collaborators on board it is important to frame sustainability as an economic opportunity and a path to continued prosperity.

NINE HUMAN NEEDS: SYSTEM CONDITION #4

Max-Neef has identified nine human needs, offering new perspectives on the classic work of Bruntland and Maslow. Apart from basic subsistence, these needs are not hierarchal. Missing three or more indicates a condition of poor health. Note the need for idleness (leisure)!

By rebuilding trust between emerging and established countries, we can create more equal societies. We know that our work does not end at clean water, food and shelter for all.

Need ¹	Example	Satisfiers ^{2,3}
1. Subsistence	Food, housing, work	Affordable housing program, urban gardens
2. Protection	Insurance, rights, family	Insurance system, medical system, preventative medicine, police
3. Affection	Friendships, relationships	Family dinners, life partners, caring for pets, writing letters, telephone calls
4. Understanding	Education, literature, news, life-long learning	Book clubs, work training, school system, preventative medicine
5. Identity	Habits, work, social groups	Jobs, volunteer opportunities, religions, sense of place, participating in neighbourhood organizations
6. Creation	Abilities, skills, work	Entrepreneur programs, art programs, cooking groups, decorating, writing, workshops, dance
7. Participation	Responsibilities, social groups	Direct democracy, festivals, cooking groups, pot lucks
8. Leisure	Sports, peace of mind	Skiing, meditation, gardening, cooking groups, dance
9. Freedom	Equal rights	Direct democracy, Charter of Rights, transportation systems

Adapted from Ekins, Paul and Manfred Max-Neef [edt.] [1997]

HOW EASY IS SUSTAINABILITY?

How easy is sustainability? My theory is that sustainability is complex, so get over it and on with it. Go past top 10 lists and seconds only acts. Let's ask people to challenge themselves and step up, and use price signals for the others. Small early wins build confidence toward the next steps, and champions will drive change by example and courage.

The Lapland Sami people herded reindeer, but indigenous cultures should not be confused with sustainability. Sustainability is a New Age challenge. Seven billion people cannot go back to living off the land. Cities and population density are necessary to protect habitat for species diversity and land for agriculture.

The planet is finite and needs care. Humans are the cause of ecosystem declines and we are all responsible for correcting these trends. Everyone is in the game—no one gets a pass. The danger is that the developing world is copying our broken model. That's all the more reason for us to get busy and break the cycle.

Behaviours can be challenged, and change effected. Upstream preventative actions are the most cost-effective. The anti-smoking shift, for instance, was finally achieved with scientific and medical research. If we base our decisions on science and systems thinking, and attend to the 'care instructions' for the health of the planet, we will choose actions that compel us to respect ecosystem function and each other.

Canada is now leading the world in applying *The Natural Step* at the community level. TNS Canada has condensed the approach into a one-hour web-based course. This strategic approach has the power to transform quickly. The more we apply it, the more competent we become. We can make wiser investments for the long-term, protecting future generations and reducing the risk of stranded investments. We can have success by doing good and have fun creating a new order. Practice makes perfect, so let's get busy!

REFERENCES

Max-Neef, Manfred. *From the Outside Looking In: Experiences in Barefoot Economics*, 1992.

Max-Neef, Manfred. *Human-Scale Development*, 1991.

The Natural Step Canada: www.naturalstep.org/canada

Whistler Centre for Sustainability: www.whistlercentre.ca

Resort Municipality of Whistler: www.whistler.ca