

FRAMEWORK FOR
STRATEGIC SUSTAINABLE
DEVELOPMENT (FSSD) -
PICTURE BOOK ON BASICS.
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STRATEGIC SUSTAINABLE DEVELOPMENT

How does leadership unify ethics with money, small topic with all of civilization, past and now with the future, all tools with planning, and sectors with each other?

<https://www.sciencedirect.com/journal/journal-of-cleaner-production/vol/140/part/P1>

In a special volume of Journal for Cleaner Production (JCP), the scientific journal with the largest impact-factor on the sustainability arena, the international front-line of strategic planning for sustainability has recently been published. Via the displayed web-address, you can access the summaries of this volume.

The scientific breakthroughs on this arena are as sensational as they are dangerously unknown by most leaders today:

1. Sustainability is now *defined* in a robust way, you can monitor and control your transition towards it.
2. Doing this systematically is growingly easier, more fun, and economically more rewarding than any alternative.
3. In this way you can also make more real use of the UN sustainability goals, Circular economy, Planetary Boundaries, ISO26000, GRI and any other tool or concept for sustainability.

If you want to complete your understanding of this highly important topic, you may chose to read not only this PP presentation and the summaries of the special volume the web-address leads to, but also review the special volume. If you chose to do this, there is a fast track manual, perhaps 30 minutes or so, to get a quite good overview:

- Browse the editorial, the first article of the volume. It reviews the unique features of leadership and re-design for sustainability, and explains why this kind of knowledge, "How do you actually *do* this", is absolutely key.
- Browse second article, about the Prisoner's dilemma, to get a deeper sense of the self-

benefit, the business case, of sustainability.

- Browse article 3, a review of 29 years work behind the leading unifying framework for strategic sustainable development, FSSD.
- Browse article 6, an article about the process of cross-sector FSSD planning and cooperation.
- When reading the editorial, you may find other articles you would like to read more in depth, they are all presented here.



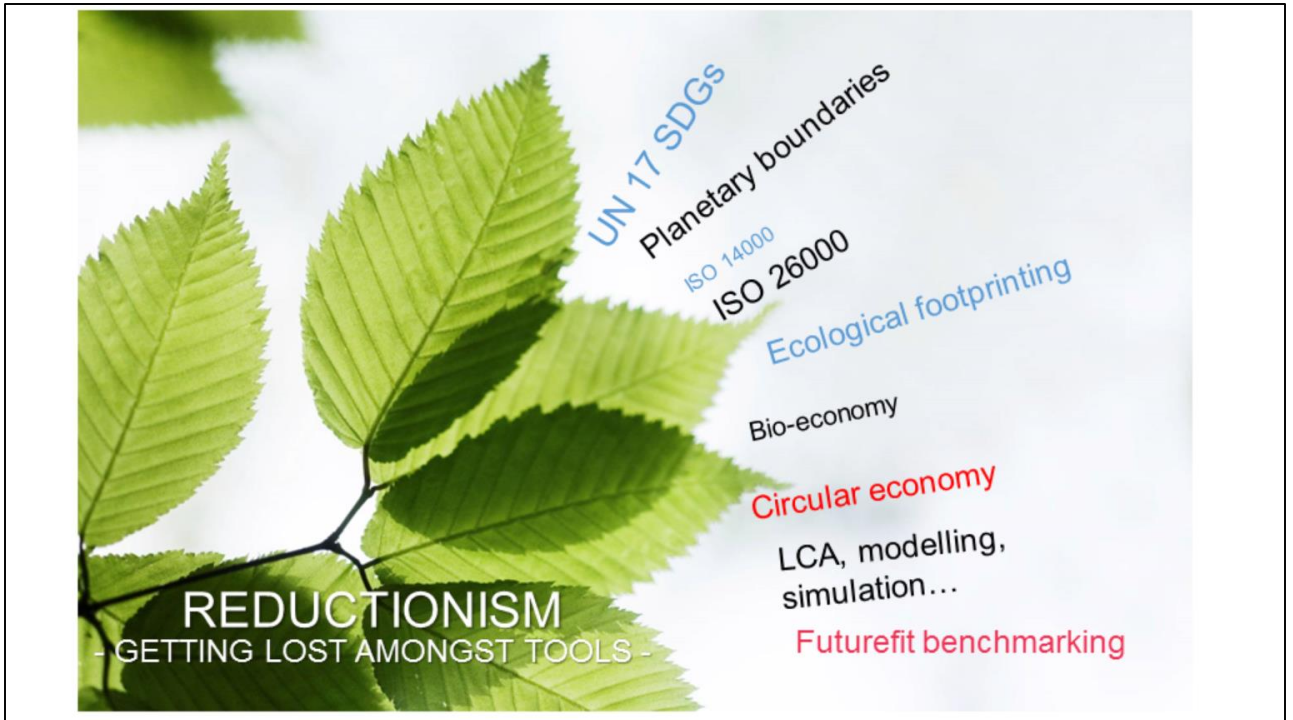
FRAMEWORK FOR STRATEGIC SUSTAINABLE DEVELOPMENT (FSSD)

- A result from 29 year's
scientific consensus work -

In this presentation we model a possible future where humans can feed themselves sustainably, while at the same time running a number of other sectors sustainably such as energy, traffic, forestry, fisheries, waste management, industrial production, economies, and our social care of each other. There is one framework designed to make sure all sectors can become sustainable *together*, within the *same* universal sustainability constraints. The constraints are called "boundary conditions for sustainability". Anything and any vision complying with those conditions is sustainable, anything outside of the boundary conditions is not.



The main problem of un-sustainable development is not that a general human characteristic would be greed. Most people are wonderful and helpful and sometimes even self-sacrificing, and sometimes we are greedy too. But the latter has little value as an explanation, since it is scientifically shown that *the winning game for each person and organization is to support the big system of which all of us are dependent*. So, is the main driver of un-sustainability short-sightedness? But who has shown that you cannot be a winner in the short term *in a way* that allows you to be a winner also in the longer term? The main problem is neither of those things. The main problem is that though individuals are generally very intelligent in the management of complex systems, very large groups have a tendency to be dumber than its dumbest participant. Which is a pity, since many people together obviously know more than each individual separately. The problem is called reductionism. An obsession with details *at the cost* of the big picture and the boundary conditions for being successful in it. It is like we are all seeking knowledge, but risk drowning in information.



Another area of reductionism, looking at one thing at a time, is the universe of nice tools and concepts for sustainable development. They are mostly presented without any relationship to the full scope of sustainability, nor with any relationship to each other. As if they competed with each other. What exactly are all those tools and concepts doing, and how are they relevant to any organization or sector wanting to become sustainable?



There is yet a common dimension of reductionism that most people probably recognize. Every actor, and every group of actors, tend to have their respective assumptions, action plans and budgets. In “drill-holes” or “silos”. How can we create cohesion also in this perspective, drawing from politicians, finance-institutes, producers, sales-managers, the general public...so that they can become intelligent *together*? The overall ambition ought to be easy to agree on – we do not want to systematically destroy our own conditions for survival, but strive towards attractive images of the future on local/regional/national/global levels.

REDUCTIONISM BEHIND TWO FLAWED DOCTRINES SHARED BY MOST LEADERS AND SUSTAINABILITY SCIENTISTS

1

Sustainability pays off only if it is shared by all

2

Sustainability cannot be operationally defined

More and more executives in business and the public sector really do want sustainable development. So, what is holding society at large back? Why is the pace of positive change still so slow? Two flawed doctrines are deeply embedded in the heads of leaders, molders of opinion, and even in the heads of most scientists who generally have no experience in leading any complex organization to any complex goal. The doctrines are directly proven flawed by the framework to be presented, but only few leaders are yet aware of its existence. Let's tackle the flawed doctrines one by one:

TWO FLAWED DOCTRINES SHARED BY MOST LEADERS

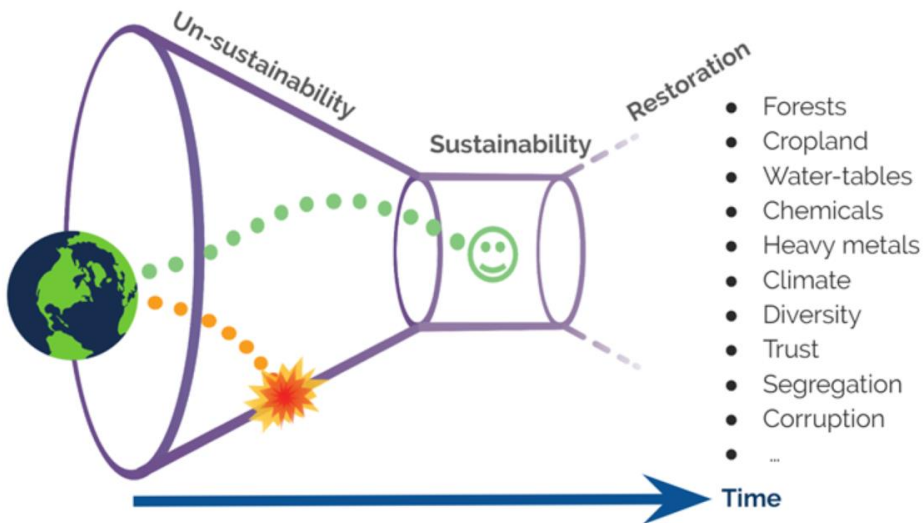
1

Sustainability pays off
only if it is shared by all

This is how this flawed mindset sounds: "I am all for sustainable development, but politicians must step up and change the rules for everyone, otherwise our organization will loose if we move ahead of the others".

The competent question is: how much can our business do and gain from, without any assistance from politicians, and if we *do* precisely that – could we perhaps gain from it? And if we do gain from it, might this positively influence competitors as well as politicians into a more fruitful dialogue and co-creation? A positive cycle instead of a vicious?

THE GREATEST CHALLENGE EVER

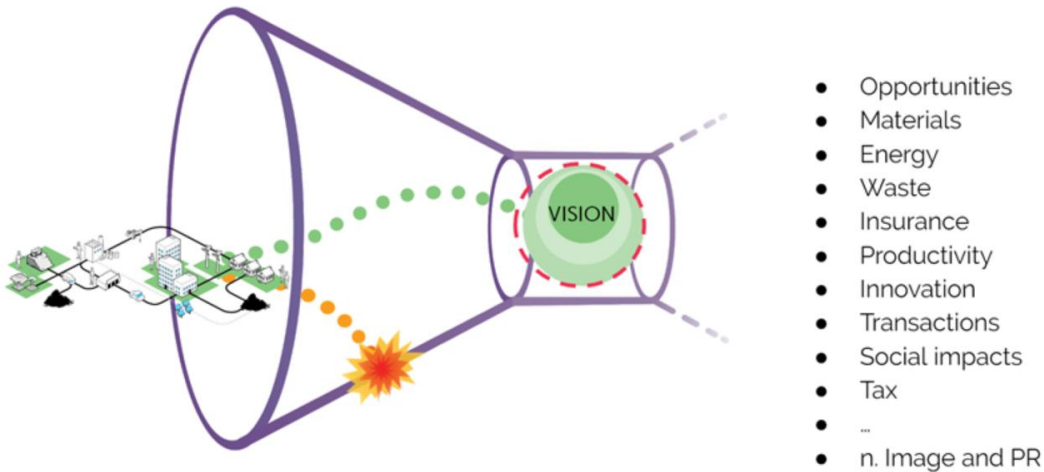


The truth *is* the opposite to the first doctrine. No matter what other organizations are doing, *it is a winning game to be ahead towards sustainability*. Not *too* fast for return of investment. And not *too* slow for being relevant on more and more sustainability driven markets. Just surfing on the cutting edge. This logic follows from the funnel-metaphor:

Unsustainable development makes the world, with all its organizations, move deeper and deeper into a "funnel" of declining potential to sustain civilisation, and in the end all higher lifeforms. As the world, on the average, keeps losing forests, cropland, water-tables, purity, climate-regulation, what will those resources cost further ahead in the funnel? When even more people on Earth are bidding on the remainders?

GREATEST BUSINESS OPPORTUNITY EVER

RELATIVELY LOWER COSTS FOR...



Some rhetorical questions: What will happen to opportunity costs for those who are not *preparing* for the inevitable market changes that will follow? Is it a good or bad idea to foresee how sustainable and healthy foods can be produced further ahead in the funnel? What will happen to costs for scarcer and scarcer resources? Is it a good or bad idea to learn how to sell products and services that waste less resources? What will happen to your transaction costs if trust is lost in your company and your stakeholder networks? Creativity and loyalty amongst staff? Together those and myriad other things make the self-beneficial rational for proactivity clear; to be ahead of the game towards the opening of the funnel is a winning-game, *no matter what others are doing*. But again, don't move *too* fast, because then you don't get return on investment in time. And certainly not *too* slow, because then others will beat you to it.

Just surf at the cutting edge, to be a real influencer for good, not vicious, cycles! But how could you, if you are captured by the false doctrine number 2 and keep investing in measures that may seem more sustainable but are not strategically assessed? How can you be ahead of the game if you don't have a robust definition of the opening of the funnel to steer towards? This whole strategic perspective is exactly the same for finance institutions. It is poor risk-management to invest money in reactive organizations, evaluated by snapshots on "ethics" and "clean-tech", but failing to see if they flunk strategically in their step-wise approach towards sustainability. For finance institutions and society alike, the most crucial element of "strategy" is to put money where it needs to be for stepwise processes towards the full scope of sustainability.

TWO FLAWED DOCTRINES

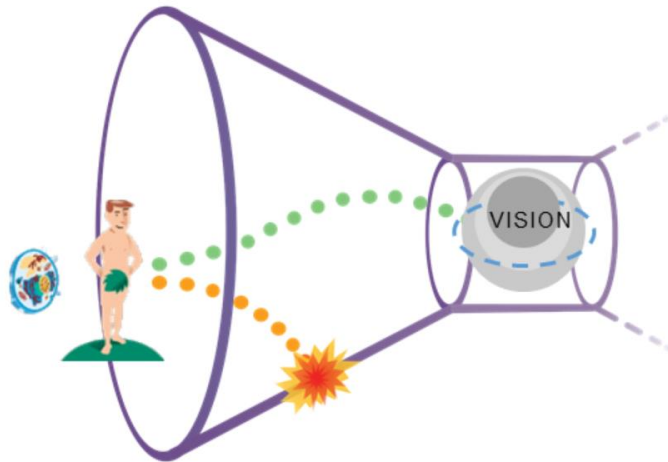
SHARED BY MOST LEADERS

2

Sustainability cannot be
operationally defined

Which brings us to the second false doctrine. This was true some years ago, but not any longer. Today, we have a robust definition of social and ecological sustainability, one that can be used for systematic real-life change while (i) systematically improving the bottom line economy by opportunities and superior risk-management and (ii) supporting society at large. How was it developed?

Cancer treatment



How to define any complex assignment in any complex system can be understood by an analogy that most people today have the knowledge to understand.

Before we understood that cancer occurs in a single so-called cancer stem cell that then multiplies, we could not cure any patient even though we tried with all possible methods. The patient's time runs out as if the patient came further and further into a funnel, where the space for health and a long life systematically shrinks because of the disease. But when we understood the root-cause of cancer, that a first cancer cell (cancer stemcell) divides into two, then 4, then 8 cancer cells etc. the boundary conditions for the cure of cancer were suddenly on the table:

There, in the opening of the patient's funnel, two boundary conditions must obviously be met in order for the patient to be cured:

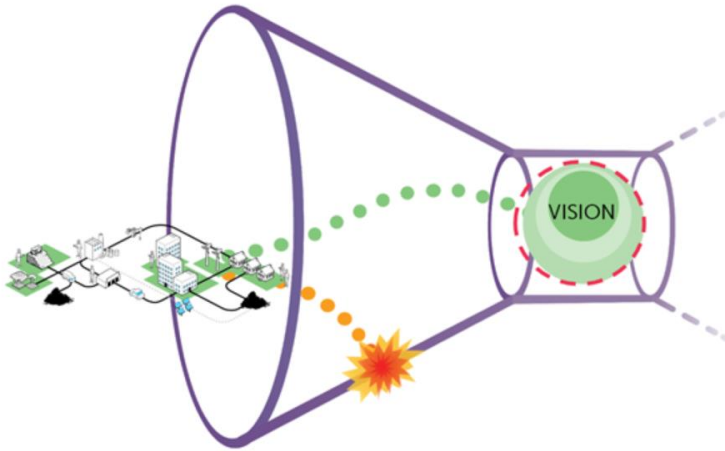
- (i) We must kill the last cancer stem cell, but ...
- (ii) ...we must not kill the patient.

With this analogy one can understand one thing: one can even accept side effects of the treatment, if only the final goal is clear and attractive (in English such decisions are called "trade-offs", one takes the evil with the good). However, clearing trade-offs in such a systematic and rational way *implies* that one can define the goal. Today, over 50% of patients are cured just because different experts - pathologists, radiologists, surgeons, radiotherapists, pharmacologists, nurses - could suddenly co-operate against the same boundary conditions at the

patient's funnel opening. Or in other words – they pool the knowledge from their respective “silos” into a clear and rational joint venture.

GREATEST BUSINESS OPPORTUNITY EVER

RELATIVELY LOWER COSTS FOR...



- Opportunities
- Materials
- Energy
- Waste
- Insurance
- Productivity
- Innovation
- Transactions
- Social impacts
- Tax
- ...
- n. Image and PR

Now, the “patient” is the global civilization, and all communities within it are suffering from the deadly disease “un-sustainability”. How could experts possibly coordinate their fields of expertise into joint systematic and rational joint-ventures, if they do not know that the opening of the funnel is today defined by robust principles for re-design – the boundary conditions for sustainability?

THE SEARCH
FOR UNIFYING
OPERATIONAL
BOUNDARY
CONDITIONS FOR
SUSTAINABILITY
MUST BEGIN
HERE...



If we are to find unifying principles for sustainability applicable for such use, we must begin at this scale. What are the basic mechanisms by which civilization *destroys* this system more and more – causing the funnel of systematic decline?



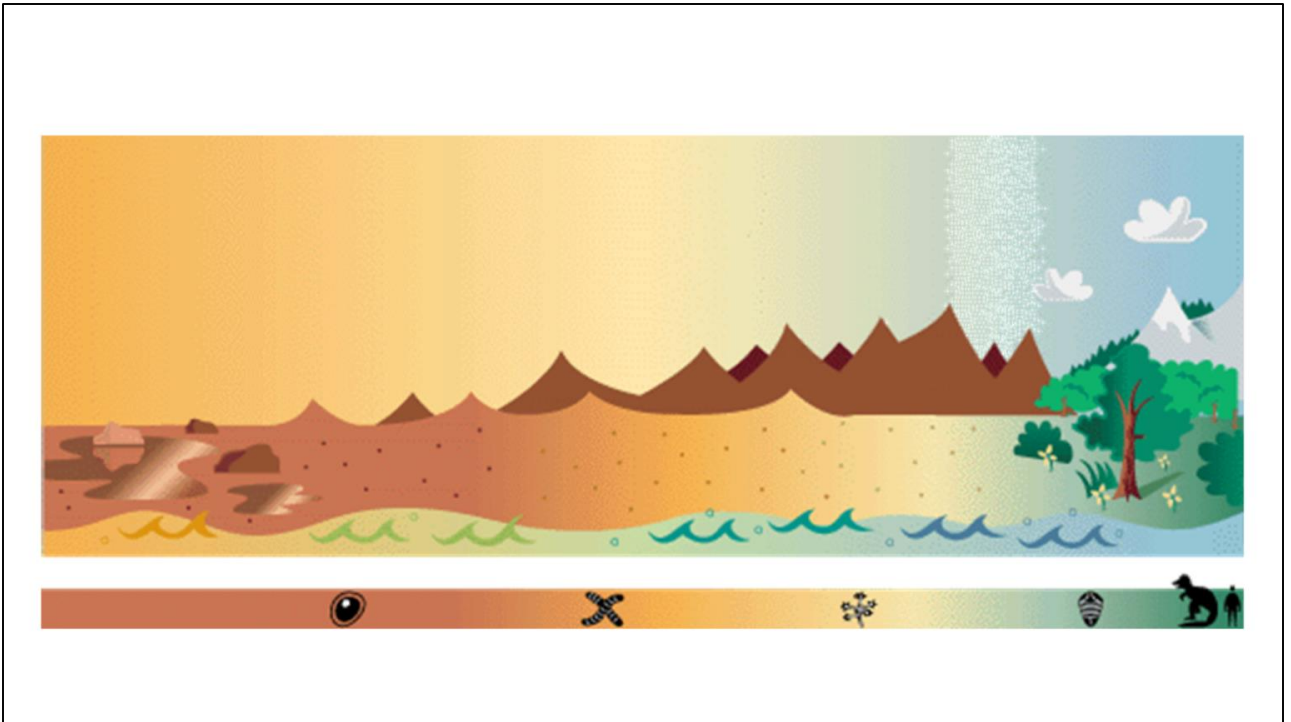
To find such basic mechanisms of destruction is key, because putting a “not” in those mechanisms would give us principles or “boundary-conditions” for re-design. For as long as an organization or planning-topic does not contribute to any of the mechanisms of destruction, it is free to create and be innovative also “outside of the box”.

To have a “positive” definition of sustainability, painted by some attractive narrative, may *sound* nicer than a “negative”. However, this feeling is misleading for at least three reasons:

1. First, we know upfront, that a sustainable organization or region can look in many different ways. So if sustainability can, and should, look in many different ways, how can it be *defined*? Well, by understanding what we should *not* do. This is also a way to be more “out-of-the-box” creative!
2. So, obviously we must search for basic principles that *any* sustainable goal in the future must comply with. But since “sustainability” was an irrelevant term until humanity became unsustainable, we need to understand, upstream in cause-effect chains, what the *basic mechanisms of destruction* are that cause myriad of sustainability-related impacts downstream.
3. Using basic mechanisms of destruction as exclusion criteria for innovative re-design, by putting a “not” in them, stimulates creativity and innovation much more than any prescription. “For as long as you do not contribute to those basic

mechanisms of destruction, you are free to do whatever you want”.

Redesign by principled constraints, i.e. boundary conditions phrased as exclusion criteria, is not only logical and rational for any kind of redesign, it is more creative and fun too! So let us search for basic mechanisms of destroying the biosphere, and the social system, so that we can apply that understanding for an open-ended and “out-of-the-box innovative” redesign.



In our search for basic mechanisms of destruction, let us first take a look at evolution. How was nature and human societies created in the first place? How could anything evolve into wonderful ecosystems and social systems for what we now need boundary conditions to not destroy?

The natural cycle between plant cells and animal cells on Earth has served as the 'engine' by which evolution (biological evolution, and lately, after humanity entered the scene, also cultural and technical evolution) has been possible. There is one billion (!) years between each biological event symbolized by the evolving species on the time axis in this picture. From the creation of Earth 4.5 billion years ago, it took around one billion years for the blue-green algae to appear. After another one billion years the seas of the biosphere also had primitive colonies of one-cellular organisms. It took another one-billion years to create complex multicellular plants where the myriad cells cooperated to play specified roles. After yet another one billion years the first primitive animal cell entered the scene, the amoeba was the starting point for high-metabolism life and mobility of the animal kingdom. This created the natural cycle of interchange between animals and plants, and it triggered a fast boost in diversity, giving us what we refer to as 'Nature' within only 0.5 billion years. The big Cycle of Nature has thus – in 3.5 billion years – created 'Nature' from a worthless mixture of disorganized matter in the primeval atmosphere. Now it is time to ask: *what are the basic mechanisms by which human society destroys this wonderful cyclic*

engine of life?

BASIC MECHANISMS OF DESTRUCTION



Earth's crust

Production of compounds

Physical means

Scientific exploration has only come up with three basic mechanisms by which ecosystems, with their biodiversity running the life-sustaining bio-geochemical cycles, can be destroyed. We can destroy them by...

1. ...polluting them *more and more* (the funnel) with mined materials e.g phosphates in lakes from fertilizers, or fossil CO₂ in the atmosphere from fossil fuels,
2. ...polluting them more and more with chemicals such as NO_x from cow-urine in too intense farming, pesticides from crop-land or chemicals from industry and consumer-goods,
3. ...*physical* encroaching such as soil-compaction from too large clear-cuts of forests, destructive irrigation of cropland lowering ground-water tables, or putting more and more asphalts on fertile land.

So we *know* that a sustainable civilization in the future has ceased to run all those three basic mechanisms of destruction. And the individual organization or sector wanting to be part of the solution, aiming towards the opening of the funnel, ought to develop a vision where it does not *contribute* to the violation of those mechanisms at the local, regional or global scales. Again, can this be done?

Experience shows that it is not only possible, it is easier and more fun than any other alternative for sustainable development. And it will help you make better use of any tool or concept you may like to assist your transition.



ECOLOGICAL SUSTAINABILITY PRINCIPLES

In an ecologically sustainable society, *nature is not subject to systematically increasing...*

- 1** ...concentrations of substances extracted from the Earth's crust.
- 2** ...concentrations of substances produced by society.
- 3** ...degradation by physical means.



Let us now take a look at social sustainability. Is this girl living in a socially sustainable society? We don't know really. But *if* she is, there is probably cooperation in motion to improve her situation, built on a general sense of trust and common meaning across communities. Most likely she *trusts* her parents in general, they trust their respective bosses and they, in turn, trust their bosses too and so on. Which science shows means, that there is *no general abuse of power in the system*. There are no structural obstacles in the way of some key elements of vital and functional social systems.

MECHANISMS OF DESTRUCTION



Health

Influence

Competence

Impartiality

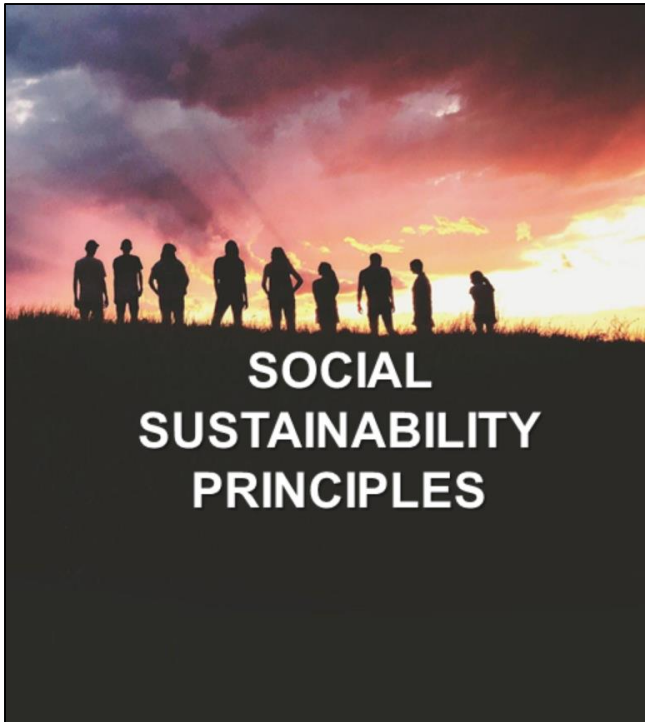
Meaning-making

Missimer, M., 2015. *Social Sustainability within the Framework for Strategic Sustainable Development*. Blekinge Institute of Technology, Karlskrona, Sweden. Doctoral Dissertation Series No. 2015:09.



There are five possible structural obstacles in the way of trust, i.e. *abusive power-structures* or *abusive norms upheld by those with power*.

In a socially sustainable society, there are no structural obstacles to Health (think e.g. "Working-conditions"), Influence (think e.g. "voting and polls"), Competence (think e.g. "learning programs at work"), Impartiality (think e.g. "level of fairness"), and Meaning-making (think e.g. "Freedom of religion"). If you are interested to learn more, there are many ways for this, from scientific reports and articles of the special volume (see first slide) to easily-accessible manuals for how to improve organizations by heading towards compliance with those principles.



In an socially sustainable society, people are not subject to structural obstacles to...

- 4** ...health.
- 5** ...influence.
- 6** ...competence.
- 7** ...impartiality.
- 8** ...meaning-making.

When we our organization is sustainable, it does no longer systematically *contribute* to...



... increasing concentrations of matter from the Earth's crust



... increasing concentrations of substances produced by society



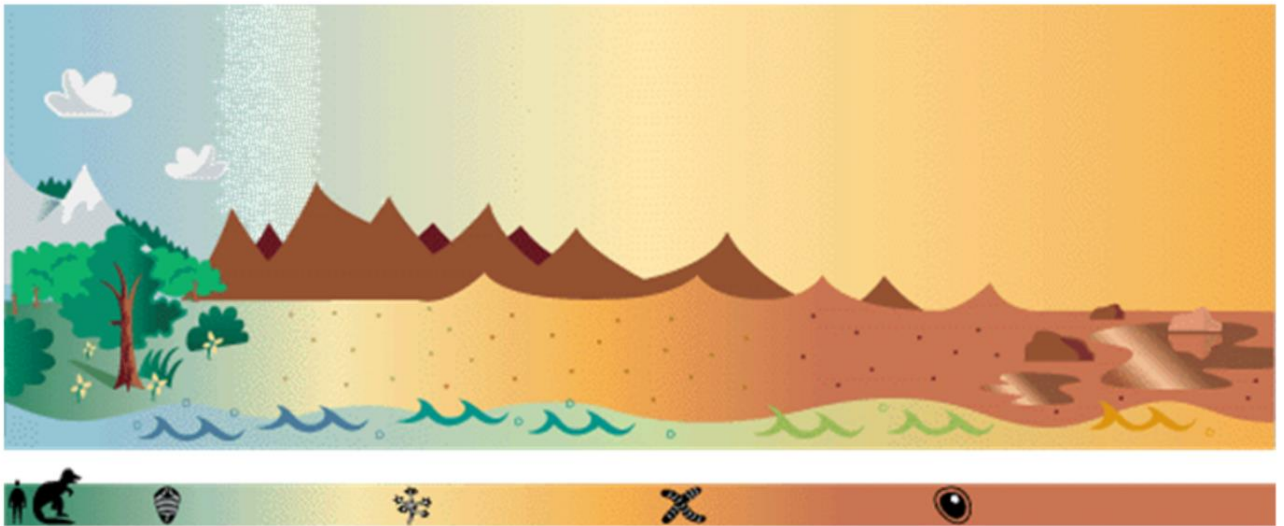
... degradation by physical means



... structural obstacles to people's

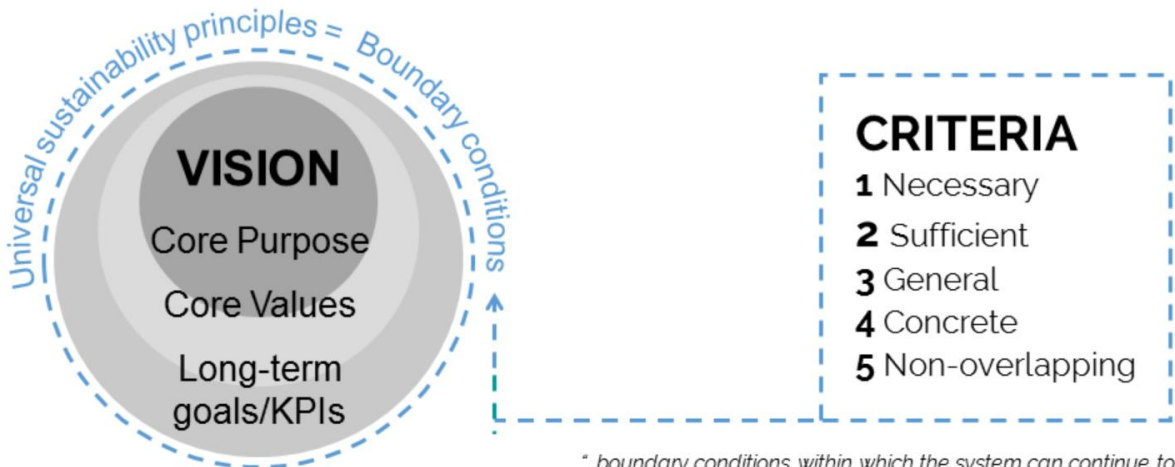
- Health
- Influence
- Competence
- Impartiality
- Meaning-making

So, here are the eight basic and unifying sustainability principles, three ecological and five social.



So, after a creation period of 3.5 billion years, we are violating all those basic sustainability principles. We are systematically allowing forests and soils to become deserts, and the creation of waste supersedes primary production and re-integration into natural cycles. As a consequence, resources are declining at the same time as impurity is increasing. It's called linear processing of matter, from resources to waste and with insufficient returns to resources. For as long as we globally violate the basic principles, thus producing more waste than resources, we are going backwards in evolution. As if the 3.5 billion year creation-film is played in reverse. During this dangerous path towards more and more ecological problems, moving deeper and deeper into the funnel, we are losing trust between people at many levels. This is precisely at a moment in human history when *we need trust more than ever* to do something also about the ecological problems. We have created a funnel of diminishing capacity to sustain civilization. Again, the basic principles for a sustainable society, 'system conditions', are pictured in the slides 15 and 18. But if an individual organization wants to re-design itself towards sustainability, how can their boundary conditions be translated from the global principles in slides 15 and 18?

UNIFYING AND OPERATIONAL PRINCIPLES



"...boundary conditions within which the system can continue to function and evolve, outside of which it cannot."

Missimer, 2015.

Again, those basic principles for ecological and social sustainability are *designed* to be robust for analysis and planning. It means they can be applied as *boundary conditions* for *redesign* of anything to become sustainable. For boundary conditions of any goal to be robust for analysis and planning, they need to comply with five criteria. They need to be

- necessary* (but not more to allow for non-prescriptive creativity),
- sufficient* (so that essential aspects of the goal are not forgotten),
- general* (to be understood across sectors and disciplines and allow for co-creation),
- concrete* (to allow for concrete real-life change), and
- non-overlapping* (to provide comprehension and allow for rational indicators of transitions).

Any sustainable scenario – and there are myriad possibilities – would comply with these principles. And any scenario that does not comply with all the boundary conditions is non-sustainable and will cease to exist.

Since sustainability is the overriding challenge to all of civilization, the boundary conditions for sustainability should inform ANY VISION AND ANY STRATEGY!

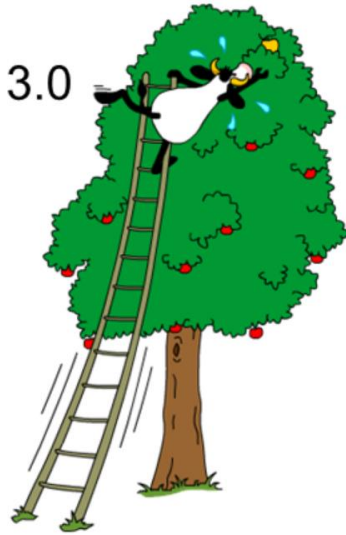
Whatever you dream of for the future, why planning for it to end outside of what can be?

But how can it be that society, after all, have come up with so many good solutions to sustainability-related problems without assessing those principles?

Sustainability 3.0



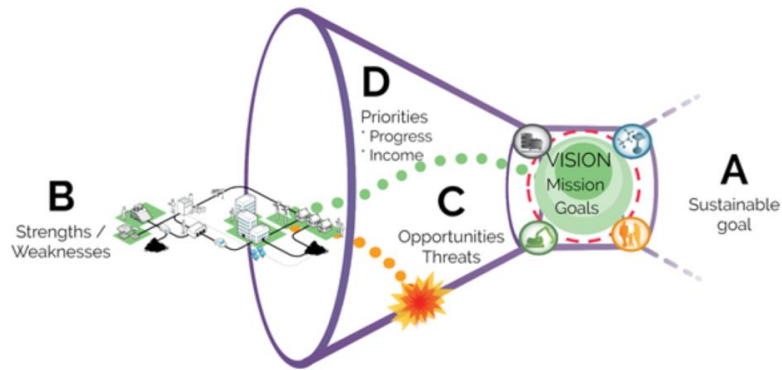
Sustainability 1.0



In the early days of inevitable paradigm shifts, picking low hanging fruit is OK. You can always change some obvious toxin to something less toxic, and why not turn to recycled materials when those are cheaper than virgin feedstocks? It is when the higher hanging fruit is to be picked strategically thinking organizations can no longer react on problems. The higher hanging fruit, so called because they rely on relatively larger investments, tackle the problems of old paradigms at a deeper level. Now we are not only going to make energy systems a bit less destructive. *They are eventually going to comply with basic sustainability principles all together.* The same goes for traffic systems, forestry, agriculture, fisheries, spatial planning, and material flows in industry. Anybody can understand that society does not become sustainable unless all those key-systems get sustainable *together*. How could this happen, unless sustainability is defined at the basic principled level? Possible sustainable scenarios, when all essential subsystems are sustainable together, can only be modelled if we have access to basic sustainability principles, applied as boundary conditions for re-design.

ABCD- PROCESS =

Intuitive structure for any strategic planning!!!!!!!

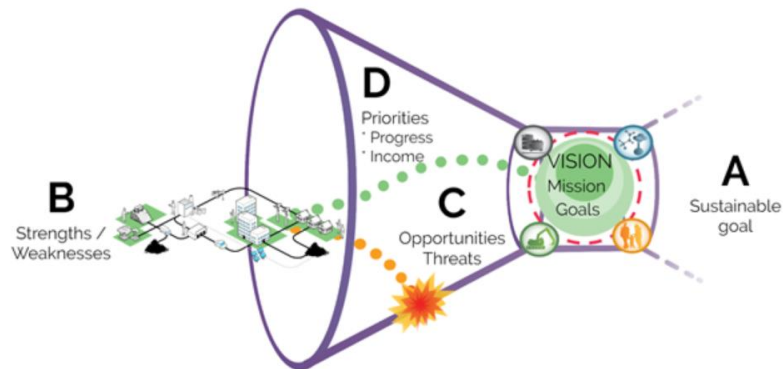


This slide captures it all! By use of the universal sustainability principles, any organization or sector can make an ABCD assessment of their operations so that also Sustainability version 3.0 can be tackled. Large money tie resources for relatively long timeperiods before pay-back, so they are rarely invested unless it is trusted that (i) pay-back will occur fast enough and (ii) the investment can serve as a stepping-stone towards the next investment with the same qualities (i) and (ii).

“A” is a distant principled vision complying with the basic principles (not contributing to violation of the principles at any scale). B is an outline of current challenges and strengths in context of that future vision. C is in outline of possible steps towards the vision, i.e. smart ways of solving the problems from the B-list. And D is about prioritizing the possibilities from the C-list into a stepwise plan towards the opening of the funnel. If you read the terms under 'B' and 'C' you get the acronym which many business people use – SWOT analysis. Well, this slide presents a sustainability-SWOT. If you are really dreaming of a vision for your organization or sector, why putting it outside the boundary conditions of sustainability, outside what can be in the future? If you do this right, you will move towards sustainability in a systematic way, and with a safer and safer economy due to the dynamics of the funnel.

ABCD- PROCESS =

Structure for tools in sustainability context

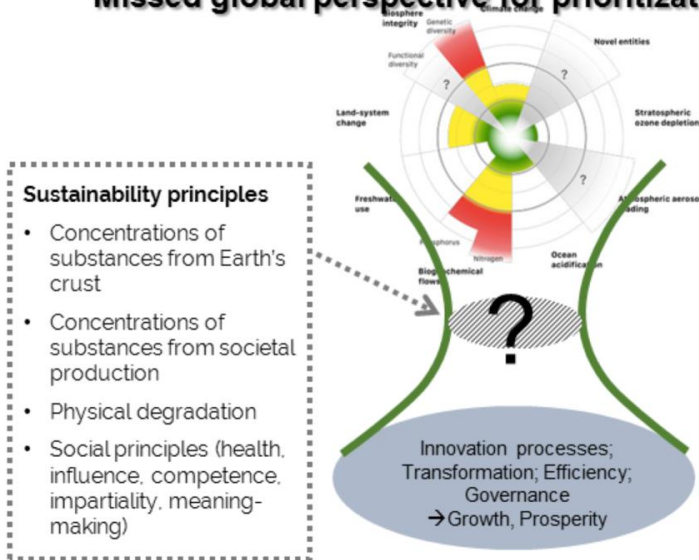


UN SDGs, Circular economy, Planetary boundaries, Indicators, LCA, Modelling, Simulation, CSR, ISO14001, ISO26000, Foot printing, Labeling, Balance scorecard, Industrial Ecology, Scenario planning...

Once the ABCD process has created a clear overview-plan where details no longer blurr the big picture, we can avoid reductionism also when it comes to tools. Once you and your colleagues/stakeholder have the (A) overall map of your vision within the boundary conditions of sustainability, (B) your overall strengths and challenges mapped out, (C) a good laundry list of opportunities for future steps, and (D) a prioritization plan for how to bridge the gap; *now* you are ready to see what tools you may want to help you bridge the gap, and *now* you will know how to best inform those tools to help *you* bridge *your* gap to sustainability. Outside of this understanding, all tools are more or less worthless since they are not tailor-used to *your* specific challenges and planning. The framework we are talking about is not a competitor to any other tool out there, it is there to help you *chose* the tools you may need for your specific transition, and it helps you inform the use of those tools to function cohesively together. Many tools and concepts are excellent, and they deserve a better fate than to be used with no understanding of how they relate to *your* mission.

ABCD for Planetary Boundaries

Missed global perspective for prioritizations? (D-step)



An example of this is the Planetary Boundary concept, launched by Prof's Rockström and Steffen et al. This slide is produced by Rockström, showing: for as long as we keep violating the basic sustainability principles of the FSSD framework, we will keep passing planetary boundary after planetary boundary, and more planetary boundaries will be "invented" as we continue on this dangerous trajectory. So, we cannot plan ahead by backing off from the trespassing one planetary boundary at the time, not the least since we trespass them together ("how large is my share"?) and since we don't know all of them yet. We must guide our organizations, innovation programs, way of governance, ways of monitoring true efficiency and growth by use of the basic sustainability principles – the violation of which causes the planetary problems in the first place. Once that is understood, we can use the Planetary Boundary concept as a way of helping us with the *prioritizations* at the D step of ABCD analyses. Or, in other words, to avoid "red-alert" of the Planetary boundary concept when we prioritize actions in the planning of our own organizations and sectors.

ABCD for UN SDGS

Have we missed any detail from 17 narratives under our A,B,C, or D?



The UN sustainability goals (UN SDGs) are interrelated descriptive stories about sustainability, but do not inform the individual organization how to strategically apply them for re-design. They are also overlapping, e.g. yet do not cover the full scope of sustainability. There are, for instance, gaps on what sustainable forestry or agriculture would entail, or how to relate to the chemical society's emissions of substances, or nuclear power...

Yet, the UN SDGs represent a "global agreement" to inspire the world to become sustainable. The importance of this cannot be overrated, on one condition: That leaders on all levels everywhere learn to use them as a *complement to their own systematic FSSD planning*. The UN SDGs could, dependent on the main messages in each, be divided into three groups:

* **Social SDGs:** 1 No poverty; 3 Health and wellbeing; 4 Quality Education; 5 Gender equality; 8 Decent work and economic growth; 10 Reduced inequalities; 16 Piece Justice and Strong Institutions

* **Ecological SDGs:** 2 Zero Hunger; 6 Clean water and Sanitation; 7 Affordable clean Energy; 12 Responsible consumption and production; 13 Climate action; 14 Life under water; 15 Life on Land.

• **Governance and administration:** 9 Industry, Innovation and Infrastructure; 11 Sustainable Cities and Communities; och 17 Partnerships for the Goals.

The hands-on way to use them strategically for the individual organization or planning objective, is to cross-read the respective ABCD analyses with the SDGs to see if anything is forgotten under respective A, B, C and D, and/or to inspire even more creativity when stakeholder networks and regional sectors compare notes between their respective ABCD assessments.

ABCD for CIRCULAR ECONOMY

Missed anything under A, B, C, D for capitalizing our reuse and recycling? 1)

How does CE relate to all the other tools and concepts out there?

How much *needs* to be recycled?

What should not be recycled?

What essential economic aspects are left out?

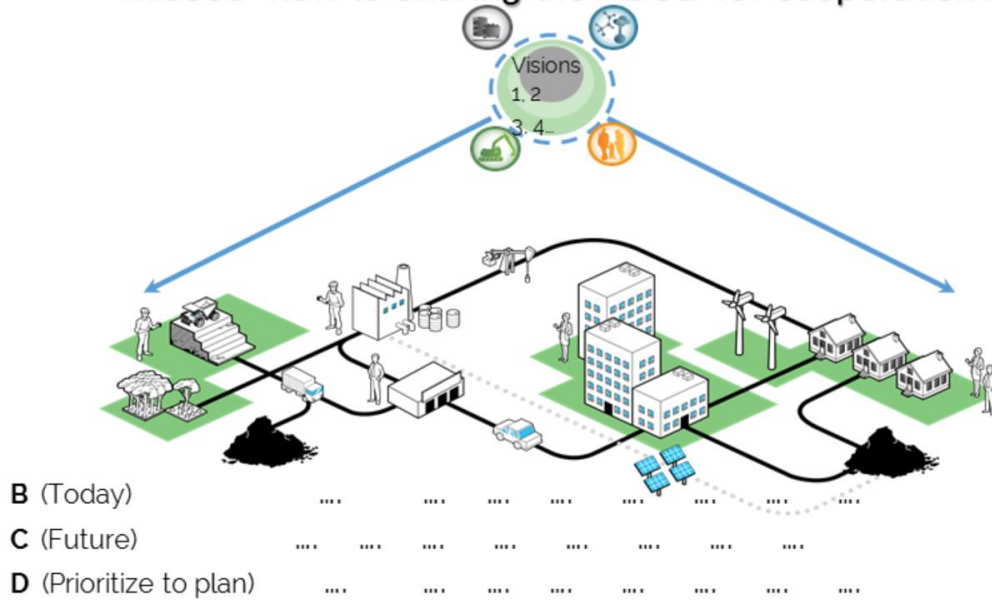
What social/ecological aspects have got nothing to do with recycling?

1) Capitalizing reuse and recycling is but one minor element of Strategic Sustainable Development

The last example is Circular Economy. It means progress through re-use and recycling as much as possible, while capitalizing such savings. However, once you have understood the sustainability principles and the ABCD process, you can again use circular economy as a way of helping out under each of the ABCD levels. "Where does our ABCD analysis detect opportunities for the capitalizing of material savings and recycling? You will then detect *other* questions as well that Circular economy will not help you with. *How much* needs to be recycled to arrive at compliance with the basic sustainability principles? The answer is that all materials are different in this context. Another question is, what should *not* be recycled but *phased out of use* since it will be too dangerous or costly to use recycling for managing them within the sustainability boundary conditions. An example could be CFCs, or Plutonium, they should certainly not be recycled. And finally, what aspects have got *nothing to do* with any kind of flows, e.g. the weight of machinery in forestry and agriculture, or the size of clear-cuttings, or destructive ways of fishing or putting asphalt on farm-land or.... And what economic aspects are left out of circular economy e.g. the distribution of income-differences and how those influence trust in a system. Putting Circular economy in context of your plan towards the full scope of sustainability may help you capitalize some of the steps there, while avoiding the risk of missing the majority of sustainability challenges you have.

ABCD- PROCESS for community-building

Missed how to sharing the ABCD for cooperation?



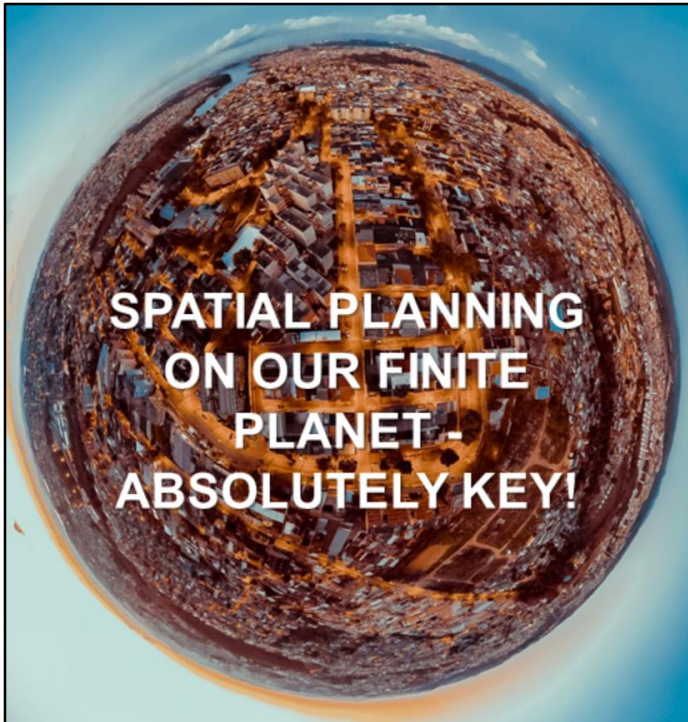
This brings us to a cross-sector planning model. If all actors in a value-chain, or region, do their respective ABCDs, they can compare notes, and find opportunities to synergies and cooperation. And vice versa, if all of them have their different "stories" about sustainability, but no valid and rigorous definition of it, how could they *possibly* move systematically into a future where they together comply with basic principles they are not aware of?

HOW MUCH GENERIC DETAIL FOLLOW under “A” FROM THE SUSTAINABILITY PRINCIPLES?

**Spatial planning
absolutely key!**



Once we have stopped "cheating" with un-sustainable energy from fossil fuels and nuclear power (i.e. linear material flows from the Earth's crust that inherently have not future), everything will be a struggle for *areas or "surfaces"* on earth. The future of civilization relies completely on our competence to plan ahead with this in mind, *spatial planning*. So think for a minute of our need for areas on Earth. What type of areas are essential for life and sustainability, and how would you order those functions by their relative importance?



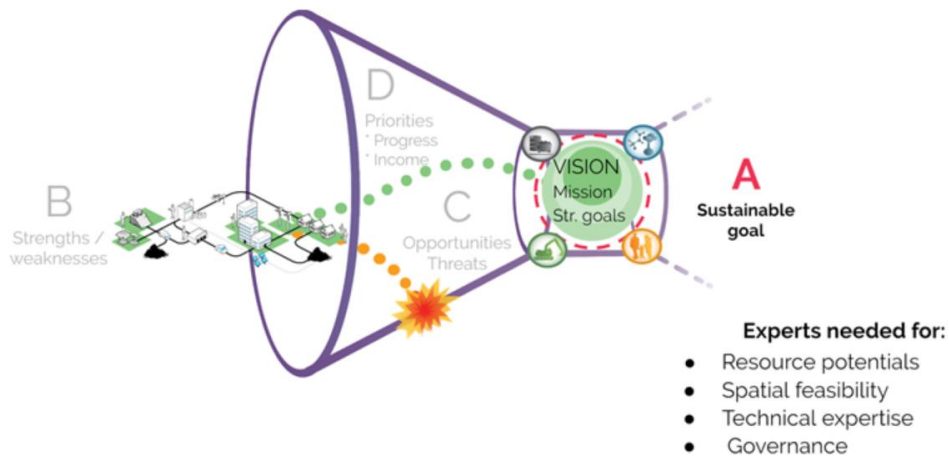
When we have stopped “cheating” with concentrated energy (SP1), all is about prioritization of areas; in order:

- 1** Planet (*biodiversity, nutrient cycles, climate regulation...*)
- 2** Food (*cropland, fisheries, interactivity with forests...*)
- 3** Energy/materials (*forestry, damms, windparks, PhotoVotaiacs...*)
- 4** Infrastructure (*streets, houses, recreation...*)

It occupies *areas*...

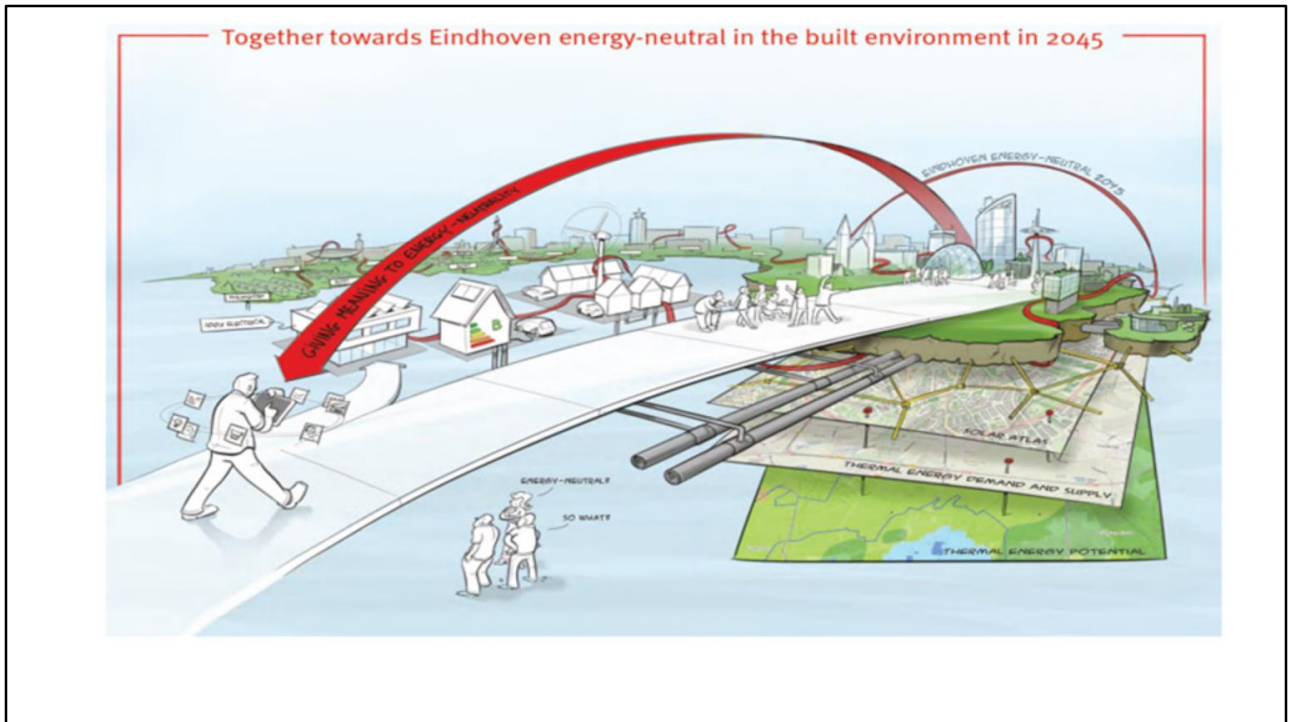
1. For nature and its biodiversity to run the cycles of nature on which all of society is totally dependent,
2. To produce food – we need enough food, until we can plan for anything else. This is how civilization started in the first place, i.e. farmers learning to feed the rest of us while we could specialize on other things that are also essential for civilization,
3. To create resources for anything else that civilization needs, e.g. timber or primary energy for recycling, and
4. Finally the infrastructure of civilization takes its toll from the areas that are given to us on our finite planet.

CROSS-SECTOR MODELLING OF GOALS/FUTURES/VISIONS



Any timely leader towards the future needs to consider a few easy-to-understand imperatives that follow the sustainability principles of any possible future:

- Possible. The idea as such that the future can be attractive and possible within sustainability constraints, i.e. basic principles of sustainability.
- Better economy. A step-wise planning to get there is growingly the dominating determinant for success on more and more sustainability driven markets.
- We need to co-create possible futures by use of expertise around (i) resource potentials, (ii) spatial feasibility, (iii) technical expertise and (iv) governance modelling and co-creating futures within the basic sustainability principles.
- Once this obvious big picture is clear, the rest is intuitive!

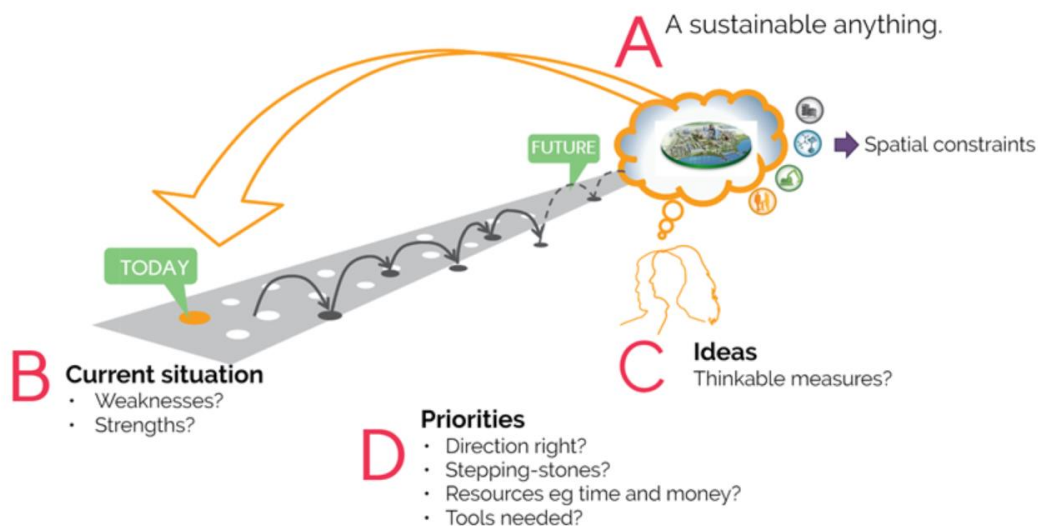


This slide displays how attractively this can be modelled. The city of Eindhoven decided to apply the FSSD for the city just like Philips, having it's head office there, was applying it for their innovation- and sustainability teams: The idea of survival of Eindhoven, defined by robust boundary conditions for cross-sector modelling, and then getting there systematically...

The result can be seen on the homepage of Eindhoven. The city is electrified as regards energy and traffic. The whole fuel-sector is removed because of this – all vehicles are directly charged on the grid. No smoke-stacks or emissions anywhere. A diverse blend of sustainable energy is fed into smart grids and new innovations of energy-conservation and energy storages, a digital economy makes sure that house owners with photovoltaics on their roofs can reduce their electric bills by the amount of electricity they produce to the grid. The spatial (area-)planning is called "decentralized concentration", or in other words – cities are no longer characterized by urban sprawl. The planning of cities and suburbs instead respects and protects the surrounding areas that feed them, people travel by area-effective fast trains from suburbs to cities and back, people bike and walk to purchase whatever they need that has been transported to shops by efficient electrified boats, trains, trucks with elegant logistics. And around it all, you find forestry and farmlands, all managed within the same boundary conditions as the city itself. It is attractive, it is doable, the innovations to make it happen is out there. This way of thinking should be *owned* by all leaders of tomorrow, not only people concerned with sustainable

forestry or farming. *All* actors should think like this: what can *I*, or *our* organization, do to support a transition to this attractive future, where are the stakeholders that would like to co-create it with me or us, and how can we move stepwise together to avoid the walls of the funnel, have more fun, and serve as role models for all?

A COMPLETELY INTUITIVE AND LOGICAL ATTITUDE - Learning by doing-



This whole presentation is really not about people needing to study a lot before they can start acting or investing. It is the opposite way around, i.e. learning by doing in line with a structure that, to be honest, is completely intuitive for any strategic thinker. Strategic thinkers know, for example, that you cannot even begin *practicing* strategic thinking if you don't know where you are going. Furthermore, that complex goals in complex systems call for boundary conditions by which you can be innovative and co-create "outside of the box". The main mission of this presentation is not only to present modern science that makes this possible – at last. We hope, as much, to be inspire a positive *attitude* that strategic thinkers may intuitively apply to sustainable development. Fortunately, a growing number of leaders and organizations are currently learning *how* to apply this attitude in reality, learning by *doing*.

They co-create big-picture goals that *can* exist i.e. check them against the basic Sustainability Principles.

They realize that each step towards such goals needs to serve technically, culturally and economically as platforms for forthcoming steps towards the goal. All to avoid the disastrous and costly wall of the "funnel".

An increasing number of organizations have also begun to *cooperate* systematically towards societal goals. In these exciting cases, organizations within and across sectors are learning to comply with robust boundary conditions for sustainability *together*. For instance in value chains informed by FSSD, or in even wider stakeholder networks where also finance institutes and politicians are involved - *Product Service Systems*.

An increasing number of those proactive stakeholder networks furthermore understand the *self-benefit* or *competitive advantages* of such strategies, over and above what others are doing. In other words, we need not wait for systematic action until our obsolete macro-economy and geopolitics have improved. On the contrary, competent strategic development and investing pays off more and more, even *within* our obsolete paradigm, which in turn opens up for *creation of rolemodels for attraction of more effective policies* – in positive re-inforcing cycles.

For that same reason, *investing* in companies moving in this direction is the perhaps most essential element of societal change – to seed money to where it needs to be and before it is too late.

Having said this, we need to address one strong warning: proactivity is *not* enough per se, nor ethics, nor "clean tech". *Strategic competence, i.e. ABCD towards robust sustainability principles, must support all these initiatives.*

Difficult? Well, over and above the ethical and intellectual advantages of this intuitive way of thinking, it is also more fun, easier and economically viable than any other alternative.

FRAMEWORK FOR
STRATEGIC SUSTAINABLE
DEVELOPMENT (FSSD) -
PICTURE BOOK ON BASICS.
PROF. KARL-HENRIK ROBERT,
BLEKINGE INSTITUTE OF
TECHNOLOGY

IN OCTOBER 2018

STRATEGIC SUSTAINABLE DEVELOPMENT

How does leadership unify ethics with money, small topic with all of civilization, past and now with the future, all tools with planning, and sectors with each other?

<https://www.sciencedirect.com/journal/journal-of-cleaner-production/vol/140/part/P1>

Again, check out this slide! There you can find the references to all claims in this presentation. And/or, you can ask for any scientific reference you would like to get directly as a PDF file. Good luck with anything you are going to do in life, and whatever it is you long for and want to be a good steward of, check it against the basic and unifying boundary conditions for social and ecological sustainability.