Transformative tools for a transition to an ecological civilization

Zero-Carbon Business Opportunity Assessment (Z-BOA) and Scientific Trend Assessment for Sustainability (STAS)

Dennis Pamlin, Senior Advisor, RISE


WHY NOW?

ECO CIVILIZATION TRANSITION

- **Ethical principle**: utilitarian vs harmony
- **Objective**: profit maximization vs sustainability (healthy and quality of living)
- **Value**: Labour value, market value vs natural value
- **Social relations**: competition/ most adopted survive vs. collaboration
- **Driver**: technological innovation for economic efficiency vs tech innovation for ecological efficiency and human flourishing
- **Institutional**: cares more for capital, less or even not at ll for people and nature (as it is assumed that increased GDP will result in an improved sociegy) vs. Care for people and planet
- **Energy base:** fossil fuel vs sustainable energy
- **Geo-physical limit**: neglect vs respect
- **Production mode**: linear product vs circular service
- **Consumption style**: materialism/basic needs vs green/ experience

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ECO CIVILIZATION TRANSITION

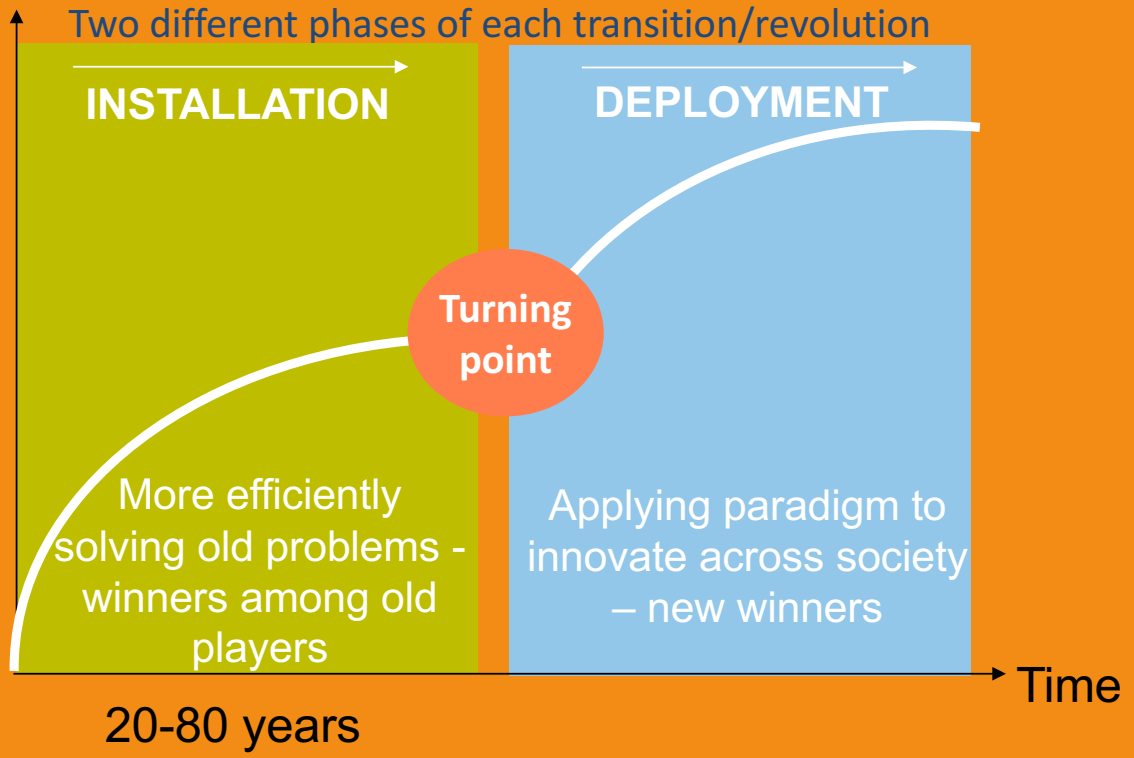
1771- 2007 (336 years)
The industrial revolution

1829-
Steam, coal, iron & railways

1908-
Automobile, oil, mass production

1981-
IT & telecommunication

2007-
The eco civilization transition/revolution?



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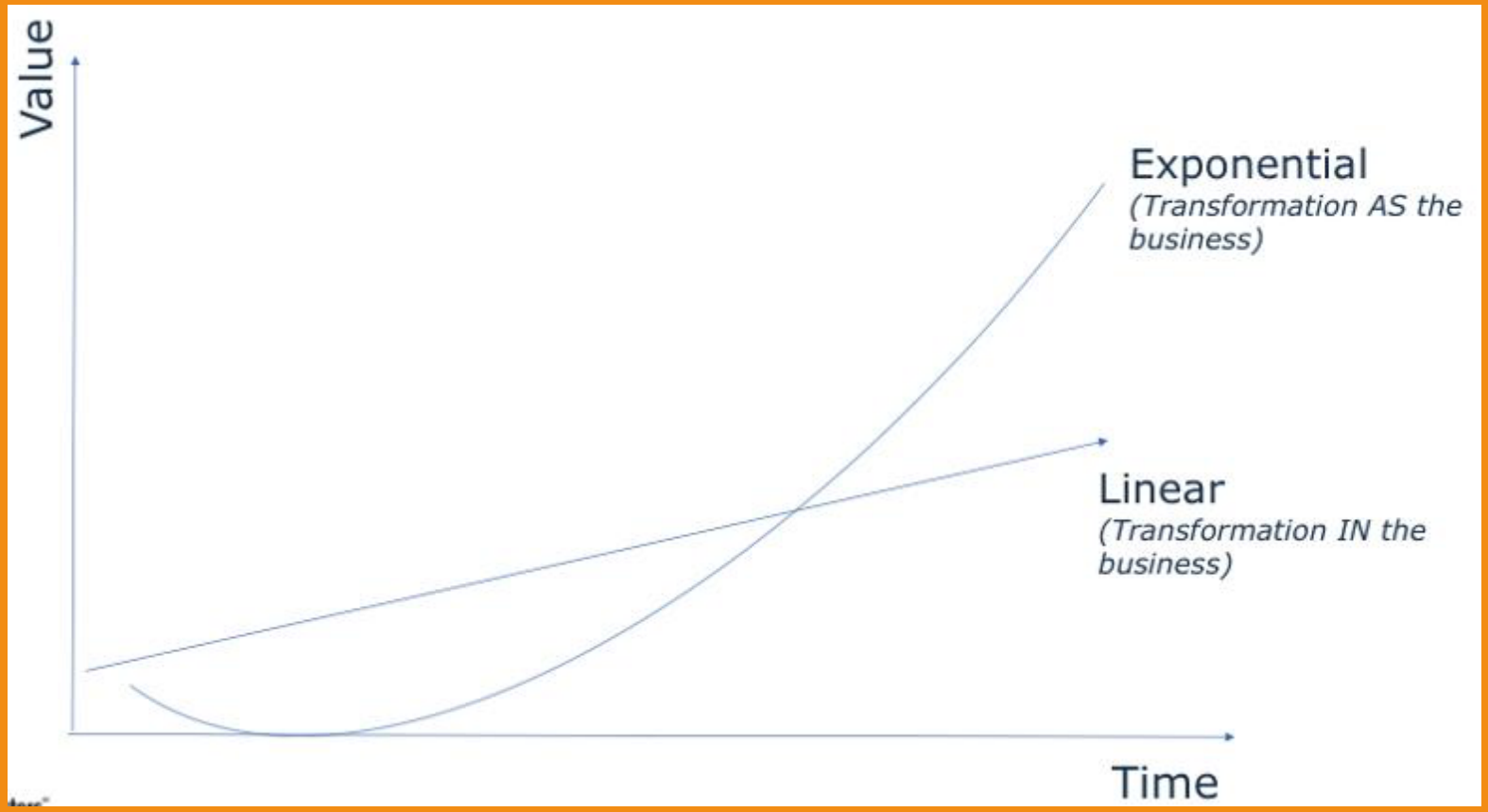
BEYOND INCREMENTAL - THE TRANSFORMATIVE



Exponential transformation requires patience and risk tolerance

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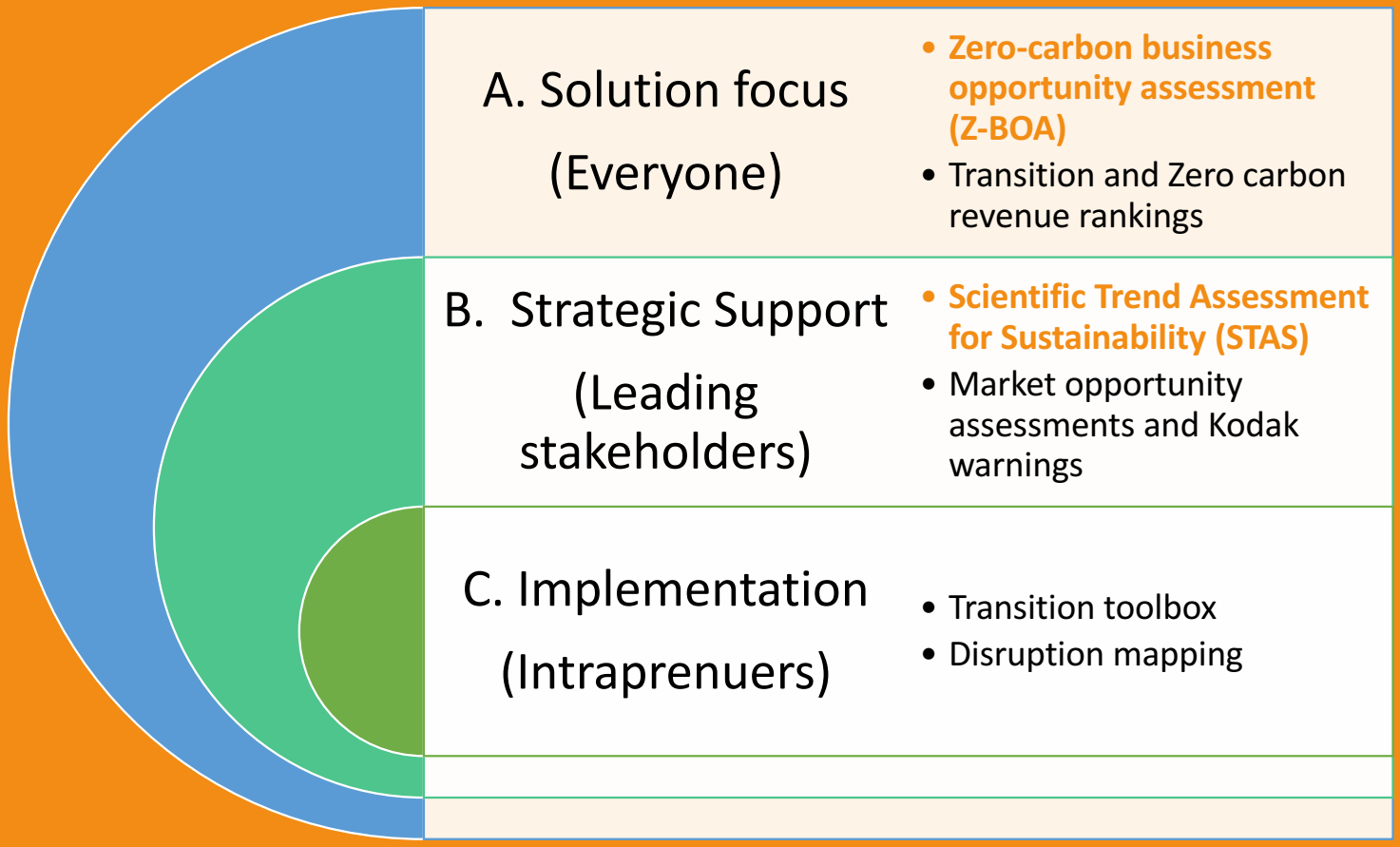
Tools for the transition that can be used today

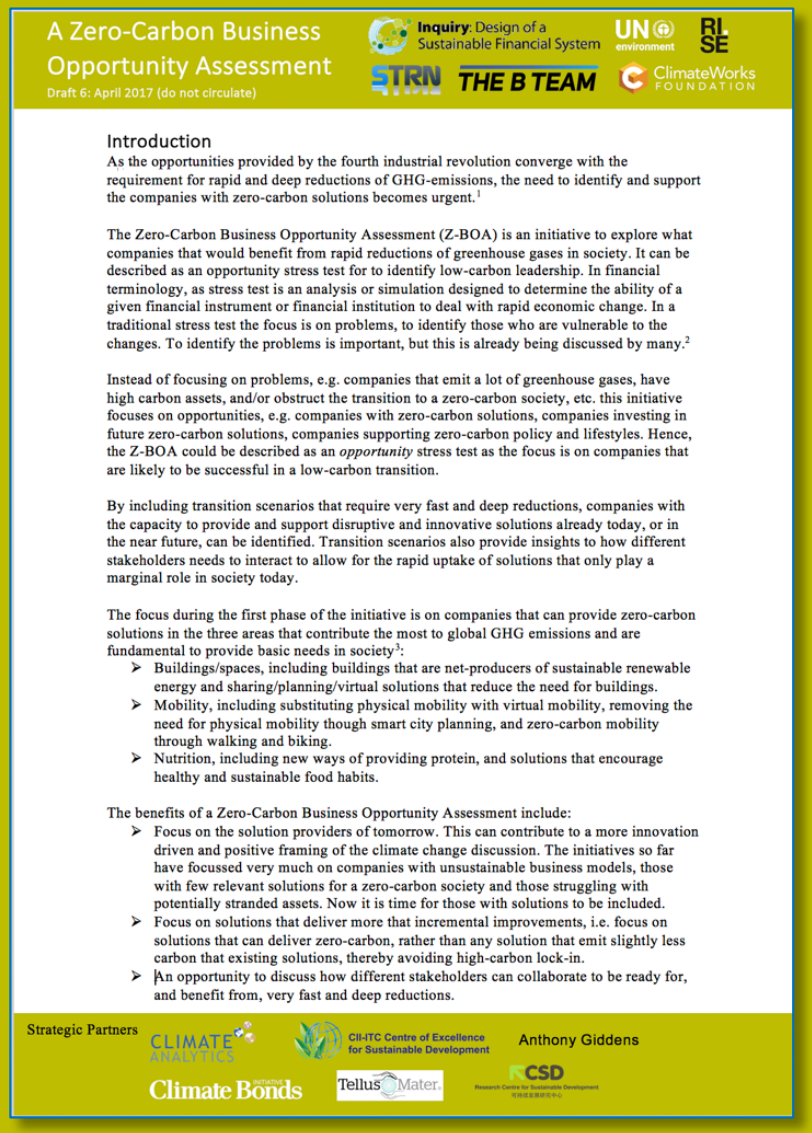
SUSTAINABILITY/ECO CIVILIZATION TRANSITION SUPPORT



Zero-Carbon Business Opportunity Assessment (Z-BOA)

OBJECTIVE

Establish a Zero-Carbon Business Opportunity Assessment that can identify, categorise, and ultimately rank, companies based on how well positioned they are to benefit from rapid GHG reductions. Focus is on companies that sell and, in different ways, promote the solutions we need, rather than those who only focus on the reduction of their own emissions.



A Zero-Carbon Business Opportunity Assessment

Draft 6: April 2017 (do not circulate)

Inquiry: Design of a Sustainable Financial System

UN environment

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STRN

THE B TEAM

ClimateWorks FOUNDATION

Introduction

As the opportunities provided by the fourth industrial revolution converge with the requirement for rapid and deep reductions of GHG-emissions, the need to identify and support the companies with zero-carbon solutions becomes urgent.[1]

The Zero-Carbon Business Opportunity Assessment (Z-BOA) is an initiative to explore what companies that would benefit from rapid reductions of greenhouse gases in society. It can be described as an opportunity stress test for to identify low-carbon leadership. In financial terminology, as stress test is an analysis or simulation designed to determine the ability of a given financial instrument or financial institution to deal with rapid economic change. In a traditional stress test the focus is on problems, to identify those who are vulnerable to the changes. To identify the problems is important, but this is already being discussed by many.[2]

Instead of focusing on problems, e.g. companies that emit a lot of greenhouse gases, have high carbon assets, and/or obstruct the transition to a zero-carbon society, etc. this initiative focuses on opportunities, e.g. companies with zero-carbon solutions, companies investing in future zero-carbon solutions, companies supporting zero-carbon policy and lifestyles. Hence, the Z-BOA could be described as an *opportunity* stress test as the focus is on companies that are likely to be successful in a low-carbon transition.

By including transition scenarios that require very fast and deep reductions, companies with the capacity to provide and support disruptive and innovative solutions already today, or in the near future, can be identified. Transition scenarios also provide insights to how different stakeholders needs to interact to allow for the rapid uptake of solutions that only play a marginal role in society today.

The focus during the first phase of the initiative is on companies that can provide zero-carbon solutions in the three areas that contribute the most to global GHG emissions and are fundamental to provide basic needs in society[3]:

- Buildings/spaces, including buildings that are net-producers of sustainable renewable energy and sharing/planning/virtual solutions that reduce the need for buildings.
- Mobility, including substituting physical mobility with virtual mobility, removing the need for physical mobility though smart city planning, and zero-carbon mobility through walking and biking.
- Nutrition, including new ways of providing protein, and solutions that encourage healthy and sustainable food habits.

The benefits of a Zero-Carbon Business Opportunity Assessment include:

- Focus on the solution providers of tomorrow. This can contribute to a more innovation driven and positive framing of the climate change discussion. The initiatives so far have focussed very much on companies with unsustainable business models, those with few relevant solutions for a zero-carbon society and those struggling with potentially stranded assets. Now it is time for those with solutions to be included.
- Focus on solutions that deliver more that incremental improvements, i.e. focus on solutions that can deliver zero-carbon, rather than any solution that emit slightly less carbon that existing solutions, thereby avoiding high-carbon lock-in.
- An opportunity to discuss how different stakeholders can collaborate to be ready for, and benefit from, very fast and deep reductions.

Strategic Partners

CLIMATE ANALYTICS

CII-ITC Centre of Excellence for Sustainable Development

Anthony Giddens

Climate Bonds Initiative

TellusMater

CSD

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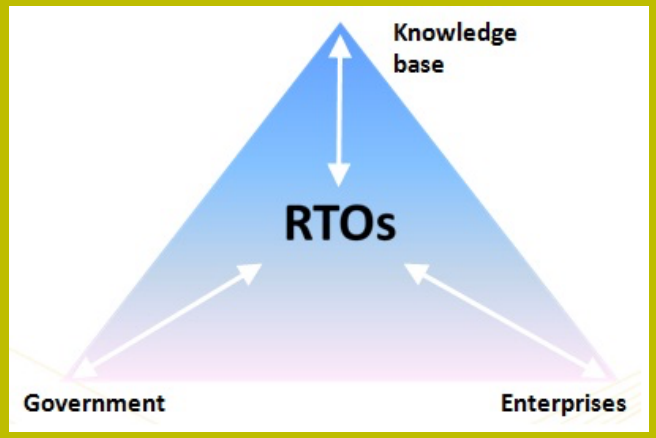
INITIAL TARGET GROUPS

1. **Companies**
   Initially those providing and encouraging, or are interested in providing and encouraging, zero carbon solutions
2. **Governments (local and national)**
   Initially those who are supporting, or are interested in supporting, zero-carbon emission solutions. Of particular interest are those governments who want to become leaders in exporting zero carbon solutions.
3. **Financial stakeholders**
   Initially those who are supporting, or are interested in supporting, a rapid zero-carbon transition.



Zero-carbon opportunity assessment

Three prong assessment

1. A zero-carbon economic assessment
2. A zero-carbon policy assessment
3. A zero-carbon transition assessment

Filters

1. A zero-carbon global equity filter (11 billion people)
2. A multiple risk and opportunity filter for zero carbon transitions

Economic assessment: Why

FTSE Russell

1. Problem bias

Climate change in media, in policy making, business, etc. has focused on those emitting emissions and how to stop them. This is a challenge both in terms of supporting what is needed and the focus on negative aspects.

2. Lock-in

According to IEA we now have infrastructure in place that will result in emissions that will take us beyond 2°C. A new generation of investments are needed that allow us to move beyond improvements in existing systems.

3. Investment opportunities

New technologies, business models and the structural changes due to the fourth industrial revolution provide unique opportunities. Many stakeholders, including the finance sector, is about supporting, not stopping

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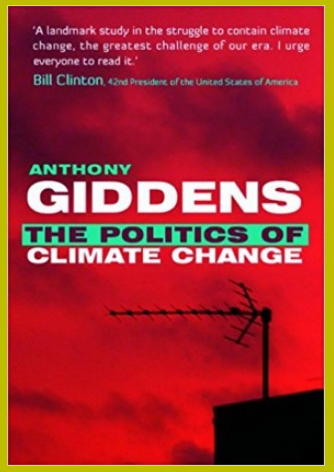
2.1 Policy assessment: Why



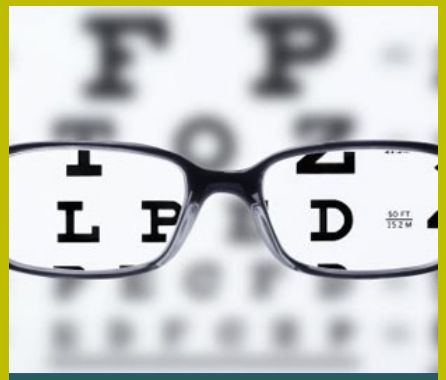
1. Old Leadership

Leadership from the corporate sector must move beyond being dominated by old perspectives and too much ignorance about zero-carbon solutions

2. Lack of priority

The way marketing and PR is filling public spaces with messages that do not encourage action or highlight leadership is problematic, so is the absence of climate change as an urgency

3. Old tools



A key challenge is that tools and structures are not well suited to turn long-term threats like climate change into drivers for innovation.

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Expected results

1. Solution Focus

Many are still of the impression that zero-carbon solutions are either expensive or ugly, or even non existing. It is important that the work with the financial sectors does not reinforce this view

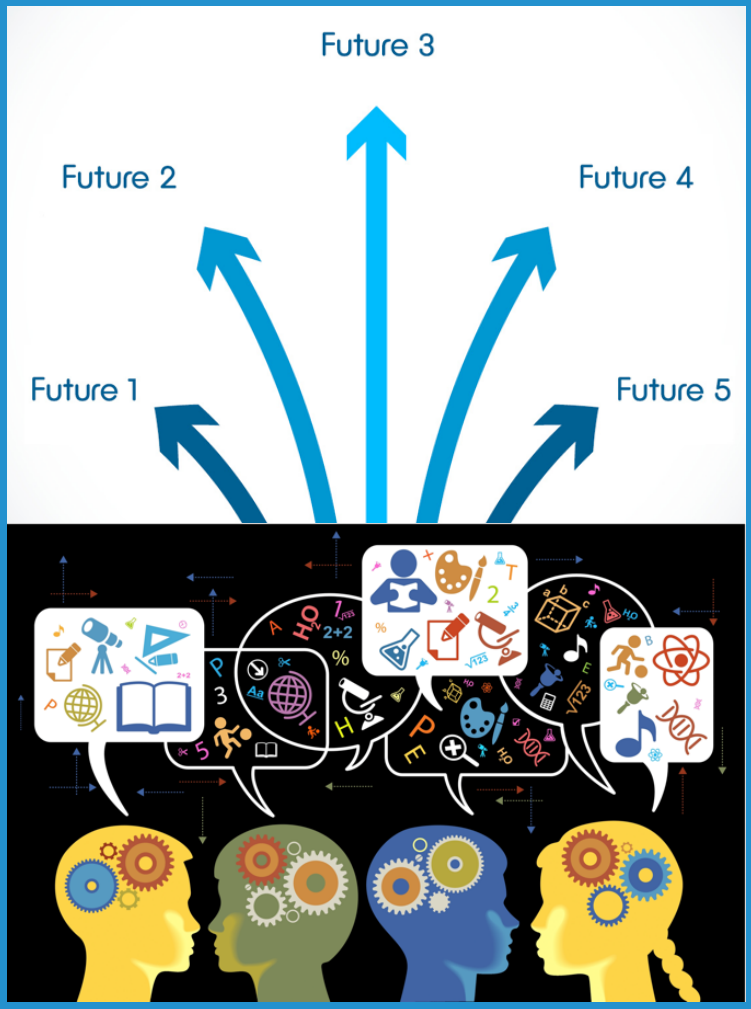
2. Positive Targets

Most well known climate targets are still about reductions, getting to zero, or phasing out. It is time for positive targets that focus on new solutions, new jobs new revenues.

3. New Clusters

Focus on traditional sectors with traditional solutions tend to result in incremental improvements in existing systems. Focus on whatäs needed encourage

Scientific Trend Assessment for Sustainability



Overall objective

1. **Establish the world's most credible web platform for environmental scanning of key trends. A platform where the most important and discussed trends are presented through a scientific lens.**
2. **Provide companies and other stakeholders with relevant and tailor-made trend assessments that can be used to guide strategies and innovation.**

Current situation

1. **Trends are increasingly important**
   The rapid changes in society in general, and with in business in particular, triggered by rapid technological development, new business models and shifting values have created a demand for trend assessments that are more science based.
2. **Scientific assessments are in higher demand**
   The new media landscape has encouraged polarizing views and dramatic headlines, clickbaits, etc. There is now a demand, in media as well as among decisions makers, for science driven data and platforms, beyond 140 characters.
3. **Data can be analyzed and presented in new ways**
   An increasing amount of available data require credible stakeholders to curate and make sense of complex relations, in a transparent way. New ways to visualize, and tools that allow for interaction with data, provides the opportunity to presented complex data in a way that can be understood and used by more groups in society.
4. **Tailor-made assessments are possible**
   New ways to sort and process data allow for tailor-made assessments.

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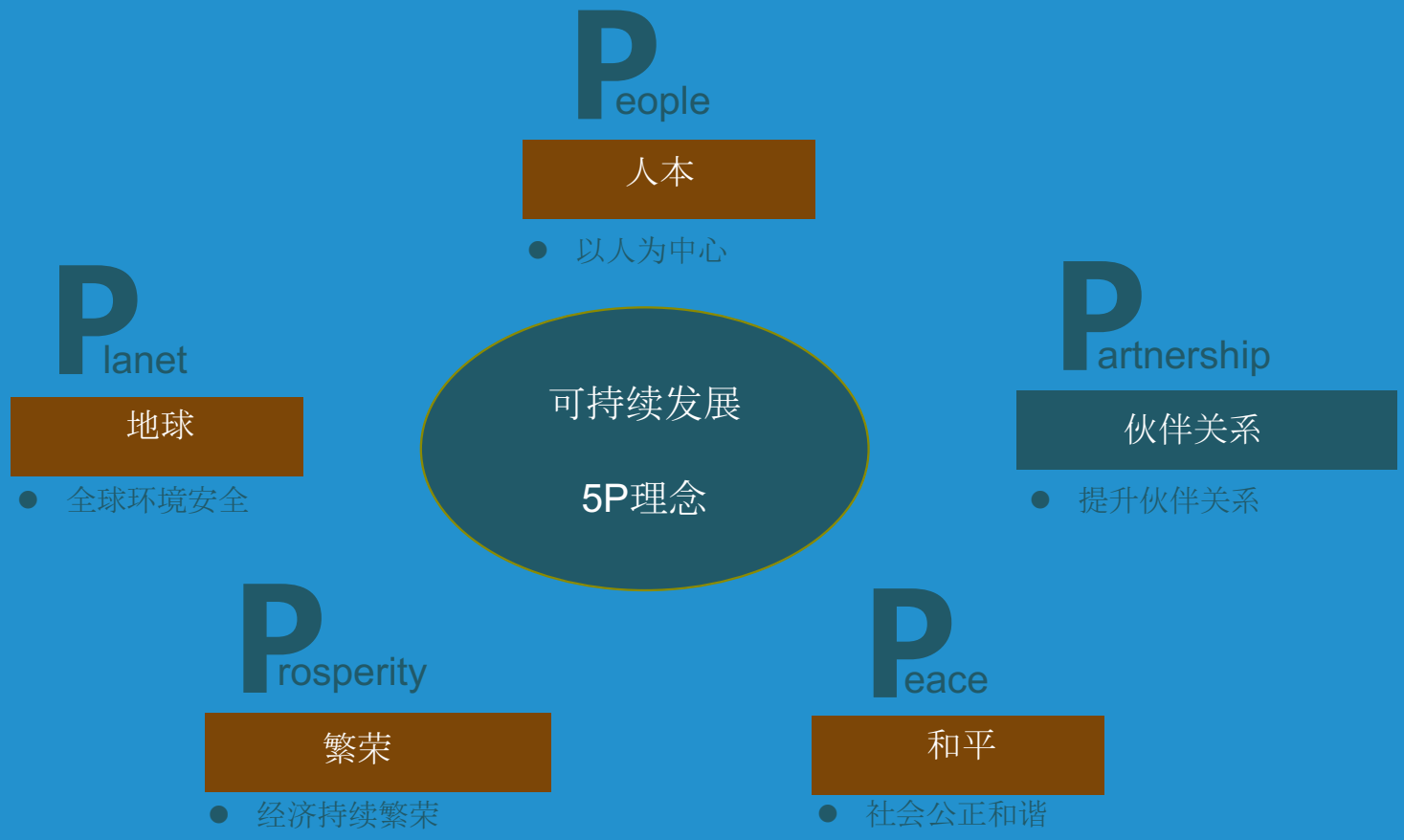
Focus on sustainability/ eco-civilization



Basic Categorisation (Innovation relevance)

1. Trend area
I. Technology
II. Economy
III. Politics
IV. Geopolitics
V. Business models
VI. Values/ethics

2. Area of relevance
Service
I. Energy
II. Mobility
III. Nutrition
IV. Consumption/ production
Sector (Stock markets)
I. Energy
II. Materials
III. Utilities
IV. Etc.

3. Driving Stakeholders
I. Business
II. Politics
III. Academia
IV. Think-tanks/NGOs

4. Knowledge Stakeholders
I. Business
II. Politics
III. Academia
IV. Think-tanks/NGOs

5. Time horizon
I. Next year
II. < 2020
III. <2050
IV. >2050
V. Unknown

6. Geographical Scope
I. Global
II. Regional
III. National
IV. Unknown

7. Economic Scope
I. >Trillion €
II. > Billion €
III. < Billion €
IV. Unknown

8. Human Scope
I. All humans
II. >3 billions
III. > 1 billion
IV. > 100 million
V. < 100 million
VI. Unknown

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Underlying categorisation (scientific risk assessment)

1. Data sources used

I. Large number of peer reviewed reports
II. A few peer reviewed reports
III. A single report
IV. Interviews/Polls
V. Own assessments/black-box

2. Probability assessment

Yes/No
If Yes what probability

3. Uncertainty assessment

Yes/No
If Yes what uncertainty

4. Falsification criteria

Yes/No

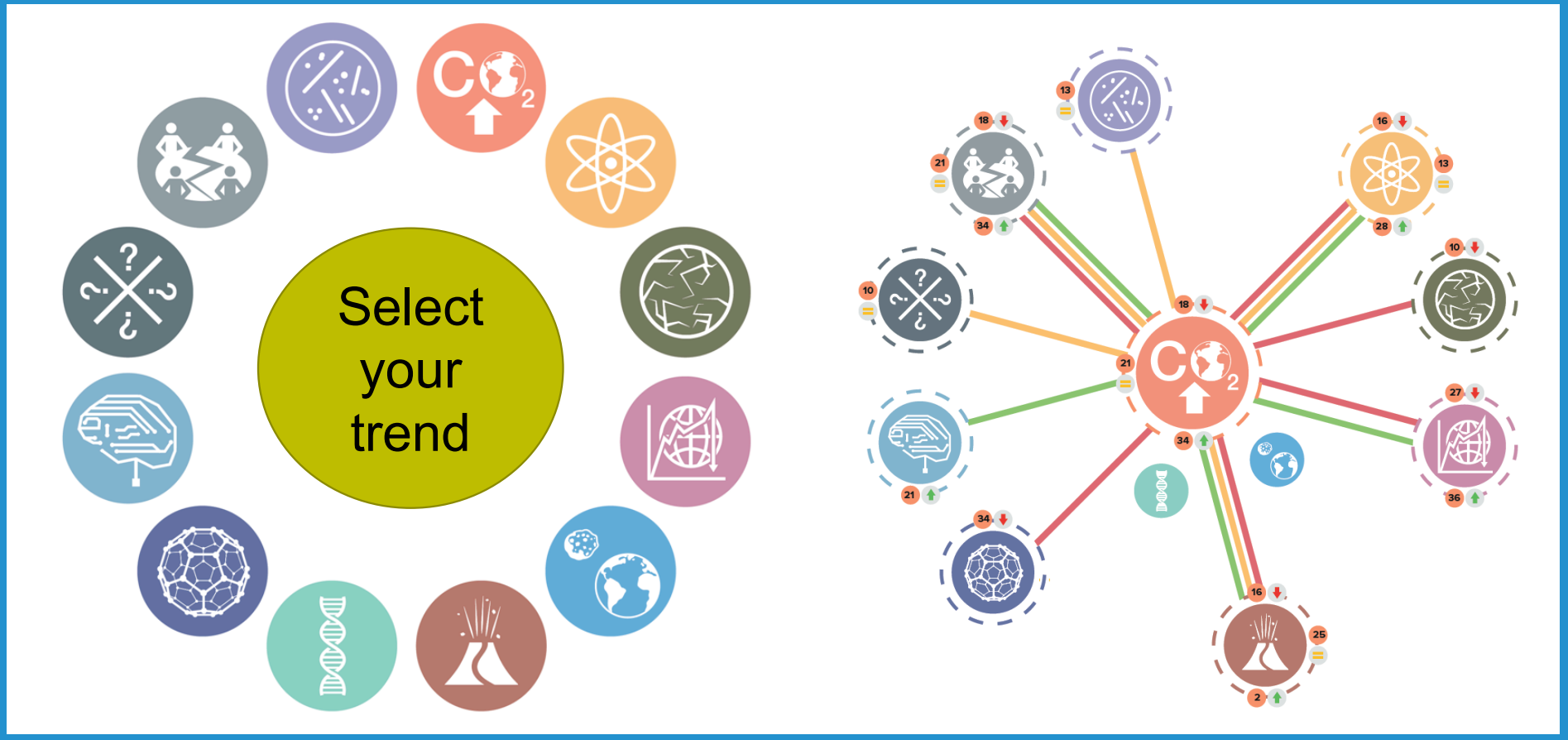
5. Publisher of trend

Name and publication

6. Prediction rate publisher

(after two years)

Guiding support towards eco-civilisation



Supporting a transition to an eco-civilisation

1. Identify and support leaders

Zero-Carbon Business Opportunity Assessment

2. Understand and use trends

Scientific Trend Assessment for Sustainability