Transition Area Bouzovsko?

Is the Transition approach applicable in socially/culturally less responsive areas?

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This publication is the 6th of 6 publications by PermaLot focused on paving the way for re-establishing local sustainability in Bouzovsko. The series may be viewed as a Local Agenda 21 contribution to the UN Decade for Education for Sustainable Development.

1st volume: "The Cider House"- a proposal for a combined food-incubator/ nature-school/ cold storage/ eco tourism center in the Moravian village Bouzov Svojanov. Max V Jensen, June 2002

2nd volume: "Permaculture in PermaLot" Legal and cultural motivated obstacles to Local Sustainable Development in The Czech Republic, Max V Jensen, August 2008

3rd volume: "Environmental Impacts of Passive Houses" -A comparative analysis of life cycle estimated costs and environmental impacts of two different approaches to 'Passive House' construction. François Gonthier-Gignac and Max V Jensen, December 2007

4th volume "Turning Waste Into Gold" An Environmental Management fairytale based on a true story. Recommendation for sewage treatment in Bouzovsko, based on a comparative analysis of estimated future financial, social and environmental impacts of three different alternatives. Max V Jensen, June 2008 [Contribution to the international year of sanitation; 2008]

5th volume: "Applied Landscape Ecology by Multifunctional Agriculture" Comparison analysis of two different land use design approaches, each aiming to balance financial, social and environmental impacts. Max V Jensen, December 2008

6th volume: "Transition area Bouzovsko" Is the Transition approach applicable in socially/ culturally less responsive areas? Max V Jensen, December 2009

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-To all of our/my hosts; friends, colleagues and strangers-become-new friends in Norway and USA.
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Thank you, from the bottom of my heart, without you the world would be a much poorer place.
Also a warm gratitude towards my supervisor Jens Müller, for patience, advice, support and amazingly fast response time: AAU will be a poorer place when you retire!

Most significantly I'm indebted to my wife Radka (and Johanka, our daughter), for supporting me in this endeavor, putting up with my 'time-off', and aiding in the description of the Moravian village behaviour.

Front page photo is of the mobile cider press operated by the organic farm 'Jen Sen'.
Even though Bouzovsko can boast being home of some 100 hectares of orchards, this is the only farm producing final orchard products for sale locally, and ensuring the profit stays within Bouzovsko. The name 'Jen Sen' translates to 'Only Dream', and was initially derogatory coined by the Mayor of Bouzov; Zdenek Foltyn.

Summery…

What would happen to the specific Czech rural area of Bouzovsko, if suddenly -or gradually in a 15-year time span- a drastic shortage of fossil fuels occurred?
The aim of the Transition Initiatives is to prepare for such a possibility through a communal based positive gradual descent. The question posed and answered in this M.Sc. thesis is:
1) Is the Transition approach applicable in socially/culturally less favorable areas?
2) How can Bouzovsko again become sustainable?
3) How may the Transition concept best be applied in Bouzovsko?

Based upon an empirical comparison between localities in Norway, California, Oregon, New York and The Czech Republic, including two different future modeling techniques and aligned with methodologies aimed at analyzing potential for implementation of new technologies and policies, the conclusion is:
That it is unlikely to implement the Transition approach in socially/culturally less favorable areas; that the parameter which prevents this is the lack of a popular understanding (by the local population), that it there is no other way possible, and finally that the best way to ensure the application is to follow the model of the 'Shock Doctrine': Have a specialized plan ready for implementation when the time is right.

Clarification:

The term: "socially/culturally less favorable area" is in no means an expression for lack of social or cultural life in Bouzovsko or other rural areas. It relates to the potential of 'Transitioning', in other words: Less likely to adapt the methodology of the Transition Initiative due to difference in social/culture background, as compared to the areas which already has adapted the Transition Initiative.

Index:

1. Introduction to the study and dilemma

"Our cultural bias toward focus on the complexity of details tends to ignore the complexity of relationships. We tend to opt for segregation of elements as a default design strategy for reducing relationship complexity.
Any consideration of how they work as parts of an integrated system is based on their nature in isolation.
The purpose of a functional and self-regulating design is to place elements in such a way that each serves the needs and accepts the products of other elements."

David Holmgren, 2007

Millions of Eastern Europeans discovered how precariously their modern lifestyle is, when suddenly private corporations and foreign states shut off the supply of gas during January 2009.
What would happen in case of serious unrest in the oil production hubs of the world: Or simply; if the fuels we have become so dependent on, once again hit the price levels of the summer of 2008 …or higher…and stayed?

In particular: What would happen to the specific Czech rural area of Bouzovsko, if suddenly - or gradually in a 15 year time span- a drastic shortage of fossil fuels occurred? Would it be possible to gradually implement a sustainable 'bottom-up' plan of resilience towards such as situation?

This thesis evolves around the introduction of 'The 12 steps of Transition' to Bouzovsko, in accordance with 'The Transition Handbook'. Such steps includes elements of landscape ecology, environmental management, energy planning, along with enhancing the social infrastructure of the area, and securing local economy.

The ‘transition movement’ is rapidly spreading across the world as it aims at establishing a functional and self-regulating society. It is designed as a positive response to the Peak Oil phenomena, which is best highlighted in a brief historical context.

1.1. Energy context

A series of leading researchers believes that the world reached it’s absolute peak in oil consumption in 2008, which means that the remaining half of crude oil will be harder to reach and thereby significantly more expensive [Post Carbon Institute/Heinberg, 2008]

The industrialized society historically led the market to orient its choices around scarcity of work. When industrialization began to be the new standard, natural resources and energy were available in large quantities at very low prices. This reality is based on a neoclassical assumption of a world of unlimited resources. As a result, mechanization has been brought to astounding levels, where few workers are now necessary to accomplish the same tasks and produce the same products. This context gave industry an opportunity to create more complex and specialized products, leading to significant increase in energy and resource inputs. As these inputs were cheap and available, mass consumption of energy intensive products became normality.

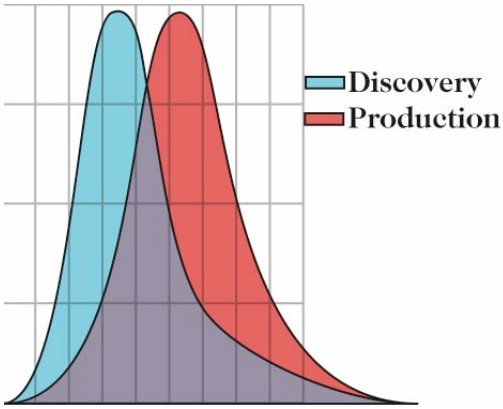


Fig. 1.1.a: Hubberts Peak

In 1956, geoscientist Marion King Hubbert working for Shell Oil Company, predicted (fairly correctly) that the US production would reach its historical peak in 1969, then start to fall, never to rise again (Campbell and Laherrère 1998). This defined the concept of ‘Hubberts Peak’, According to which the production rate of oil will follow a roughly symmetrical bell-shaped curve based on the limits of exploitability and market pressures. This term later became interwoven in the term ‘Peak Oil’, and has been experienced by a series of oil producing countries. (http://en.wikipedia.org/wiki/Peak_oil). Based on their experience and statistics, Campbell -ex-chief geologist for Amoco along with petroleum engineer Laherrère announced for 2008 the "cheap oil crisis", when the world will turn to a permanent fossil fuels scarcity, a context where it would become impossible for the industry to keep its actual level production, as the prices of energy will rise drastically (Campbell and Laherrère 1998.). This

story can be told for the majority of the natural resources, and is reflected in the important rise of the gross cost of products. This movement is accelerated with the rise of new economies in the emerging countries, leading to an additional increase in overall demand.

1.2: Introduction to the Transition concept

The first notion of the 'Transition Town' concept originated in N. Ireland in 2004, however an internet search of "Transition Initiatives" (as the concept has developed to be called) will currently find 239 'official' (as of November 2009) small towns, large cities, even entire peninsulas and bioregions (and 1000's of 'mullers' and unofficial initiatives) engaged in a grassroots exploration of what it means to redesign our local systems so that our basic needs—food, water, energy, economics, transportation, health, and housing—are sourced locally and dependably at all times. (Online response by Rob Hopkins, 2009)

The transition movement is a whole-systems approach to community design focused as much on the relationships between elements as the elements themselves. So rather than approaching urban planning as an isolated concept, the Transition movement emphasizes the impact which planning decisions have on all other aspects of community life. Instead of creating policy in reaction to events, the Transition movement suggests looking at the bigger picture, and then approaching policy based on creative, thoughtful relational design. The approach is different than the conventional top-down planning, which tend to focus on putting out fires while the other focuses on creative, empowered, design processes. *It all starts off when a small collection of motivated individuals within a community come together with a shared concern: "How can our community respond to the challenges, and opportunities, of Peak Oil and Climate Change?" (www.transitiontowns.org)*

The start is to form an initiating group and then adopt the Transition Model in order to engage a significant proportion of the people in the community to kick off a 'Transition Initiative'. The Transition model is outlined in the book 'The Transition Handbook'. Central elements is the '12 transition steps' as described in the below textbox from www.transitiontowns.org:

Fig. 1.2.a: The 12 steps of Transition

1) Set up a steering group and design its demise from the outset.
- This stage puts a core team in place to drive the project forward during the initial phases.
2) Awareness raising
-Build crucial networks and prepare the community in general for the launch of your Transition initiative.
3) Lay the foundations
-This stage is about networking with existing groups and activists.
4) Organise a Great Unleashing
-This stage creates a memorable milestone to mark the project's "coming of age."
5) Form sub groups
-Tapping into the collective genius of the community, for solutions that will form the backbone of the Energy Descent Action Plan.
6) Use Open Space
-We've found Open Space Technology to be a highly effective approach to running meetings for Transition Town initiatives.
7) Develop visible practical manifestations of the project
-It is essential that you avoid any sense that your project is just a talking shop where people sit around and draw up wish lists.
8) Facilitate the Great Reskilling
-Give people a powerful realisation of their own ability to solve problems, to achieve practical results and to work cooperatively alongside other people.
9) Build a bridge to Local Government
-Your Energy Descent Plan will not progress too far unless you have cultivated a positive and productive relationship with your local authority.
10) Honour the elders
-Engage with those who directly remember the transition to the age of cheap oil.
11) Let it go where it wants to go…
-If you try and hold onto a rigid vision, it will begin to sap your energy and appear to stall.
12) Create an Energy Descent Plan
Each subgroup will have been focusing on practical actions to increase community resilience and reduce the carbon footprint.
The 12 steps are not prescriptions, but principles that anyone can use to begin the process of transition from oil dependency to local resilience. It is worth noting that although the term "Transition Town" has stuck, what we are talking about are Transition Suburbs, Transition Islands, Transition Valleys, Transition Anywhere-You-Find-People.

Rob Hopkins, The Transition Handbook

1.3: Problem definition and research question

The aim of this MSc thesis is to critically evaluate the potential of implementing the basic applied methodology of the '12 transition steps' on the rural area in Moravia, The Czech Republic; the same rural area which have been the backdrop of my various other semester projects, both in the Human Ecology diploma study, and the 4 semester Environmental Management MSc study. It is noteworthy that the hitherto successful Transition initiatives all

are initiated in the aware and wealthy 'hotspots' of the world; in essence confirming the theory of Robert Inglehart, that people with "Postmaterialistic" values are much more likely to prioritizing protection of the environment. (Inglehart, 1996). The term "Postmaterialistic" is hardly a definition that characterizes this rural region, not even the current development of the Czech nation. This raises the question:

1) Is the Transition approach applicable in socially/culturally less favorable areas?

To shed light over this question, results of a recent study trip in rural Norway will be included, displaying the approach to sustainability in a country/region where the wealth isn't a discouraging factor, but where the public interest is comparably low. In comparison another study trip to Transition Town Ashland (Oregon), and personal conversations with Jason Bradford, the founder of WELL (Willits Economic LocaLization www.well95490.org), reveals the potential and pitfalls of the movement, when an aware and involved group of citizens get together in a rural area.

A central theme of 'Transitioning' is to re-establish the local infrastructure; to implement local production of basic resources, it is necessary to re-establish grain and oil mills, grain-silo's, renewable power and heat generation, other food processing facilities etc. This brings us to question number two:

2) How can Bouzovsko again become sustainable?

Furthermore, the transition concept contains a dilemma in regards to approach.
Recently international climate-economy researcher Terry Barker of Cambridge University and member of IPCC (International Panel on Climate Change), suggested that the current economic crises may result in a cut of 40-50% of CO2 emissions due to decline in economic activity. (Barker, 2009) [–Recent fact is that the economic recession in USA last year led to an American 10% Co2 emission cut!] During the same climate conference it was mentioned how 40% of global electricity production might be supplied by renewable energy in 2050 (Lund, 2009). Would this mean we would easily manage to solve a large part climate emergency?
In other words the transition concept may be viewed as the question of the egg and the chicken; what needs to come first? -Is it a question of changing *the approach* in order to change the *society*, or is the *society* in reality changing its own *approach*, due to other pressures? Question 3 therefore is:

3) How may the Transition concept best be applied in Bouzovsko?

1.4. Report structure

Through viewing two future scenarios, and conducting a back-casting experiment based on acceptance of peaking of fossil fuels and climate change, I hope to identify some common avenues that are applicable for Bouzovsko. This theory will be balanced through using elements of AAU's Environmental Management curriculum, such as 'Institutional and Discourse Assessment' and both "social construction of technology" and 'Social Carrier of Change'.

The empirical research is based on experiences abroad, evaluated in comparison with the knowledge I have gained from 11 years work within -and study of- the particular rural Moravian region of Bouzovsko, The Czech Republic, as outlined on page 2.

It is within the above context that the feasibility and method of introducing the '12 transition steps' to Bouzovsko will be examined.

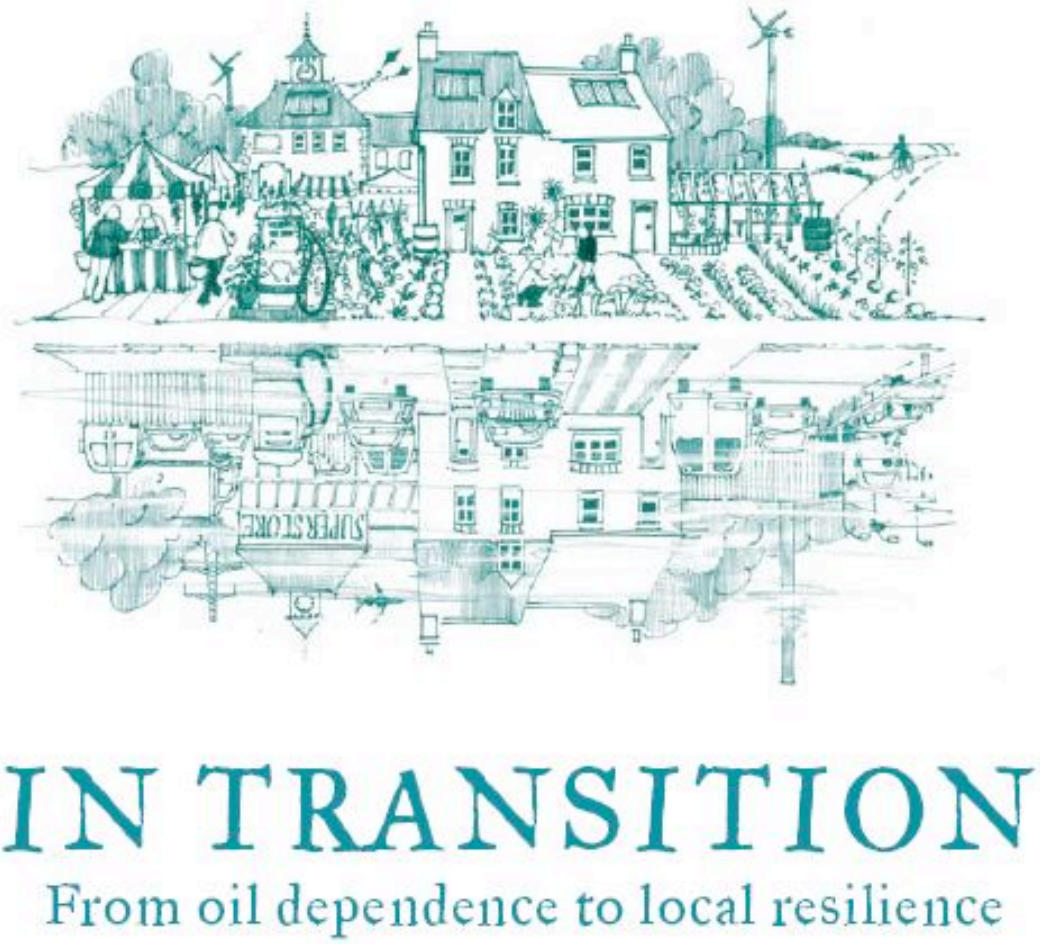


Image 1.4.a: Cover from the Transition film. 2009

2. Theories and methods

"It is not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change."

Charles Darwin

2.1 Introduction to the concepts of future scenarios and back-casting.

The overall issue of this assignment is about what *might* happen during the future, and how the local reaction in Bouzovsko *may* be. And in the words of the Danish writer, Robert Storm Petersen: "It's tough making predictions, especially about the future".
To research this dilemma a whole new science has emerged, with a vast series of tools; modeling, scenario building, back-casting etc., all based on the newest available information and statistics about available resources, global consumption and consumer patterns, social behavioral research etc.
To gain an insight into the potential development of Bouzovsko, I've chosen to view it in the light of two such published researchers, who share the common awareness of the emerging climate change, and view it in combination with the peaking of fossil fuels and general current development. In addition to this two different future modeling techniques will be used and aligned with methodologies presented in this chapter, aimed at analyzing potential for implementation of new technologies and policies.

2.1.1 Presentation and summery of Holmgren and Chamberlin's scenarios/stories.

Scenarios describe a likely and possible development, which never-the-less doesn't claim to be the most likely development. By setting up several scenarios, a *space* is created within the scenarios, which contain the future development. The scenarios should be viewed in context with each other; it's really the *space* which is the interesting, rather than the particular scenarios. In addition both of the chosen authors points out a series of 'Wild cards', which in some way or another would distort the scenarios and space if added; this includes elements such as Extraordinary natural disaster (asteroid hitting Earth) and extra-terrestrial intervention, down to more tangible elements such as collapse of UN, internet, or transformative technological breakthrough such as self replicating nanofactories etc.

Whereas classical corporate scenario planning typically use variables such as economic growth rate and regulatory framework, David Holmgren base his four future scenarios on Climate Change and Oil Production Decline, as he views these areas as fundamental for our present society, and seek to highlight the future changes they will evoke. (Holmgren 2009) The four scenarios are determined by four combinations of either a slow or fast oil decline, combined with a benign or destructive climate change, as visualized in this matrix:

Holmgrens scenarios:

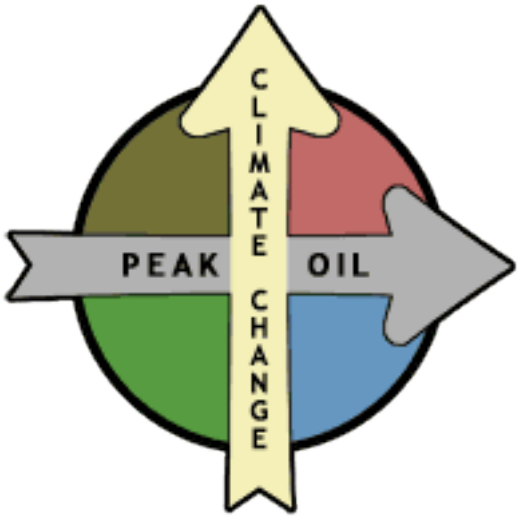


Image. 2.1.1.a

1) Brown Tech; Top down constriction:

Strong national policies and actions in response to energy peak and rapid climate change. Massive centralized investment by corporations and governments in non-sustainable technologies; strong military protectionism. Fuel production results in increased food, water shortages and accelerated climate change, which ultimately leads to civil riots, as part of a slowly but surely doomsday development.

2) Lifeboats; Civilization triage:

This is basically the 'Mad Max' scenario; Starts out with a progressive collapse in economic and social organizations; local wars incl. nuclear weapons, famine, disease resulting in halving of the global population in a few decades. Some strongholds of sustainable communities survive, thriving on what's possible to salvage from the urban areas. Significantly they embody groups of people saving knowledge and culture, enabling the new civilizations to build on some of the knowledge of ours.

3) Green Tech; Distributed power-down:

Climate/peak fuel changes occur slowly and the global development is one of smaller national shifts toward use of renewable energy sources, holistic organic agriculture,

decentralized green-tech businesses: “Resources flow to a greater diversity of responses”. Rural and regional economies are re-established, supporting the greater society.

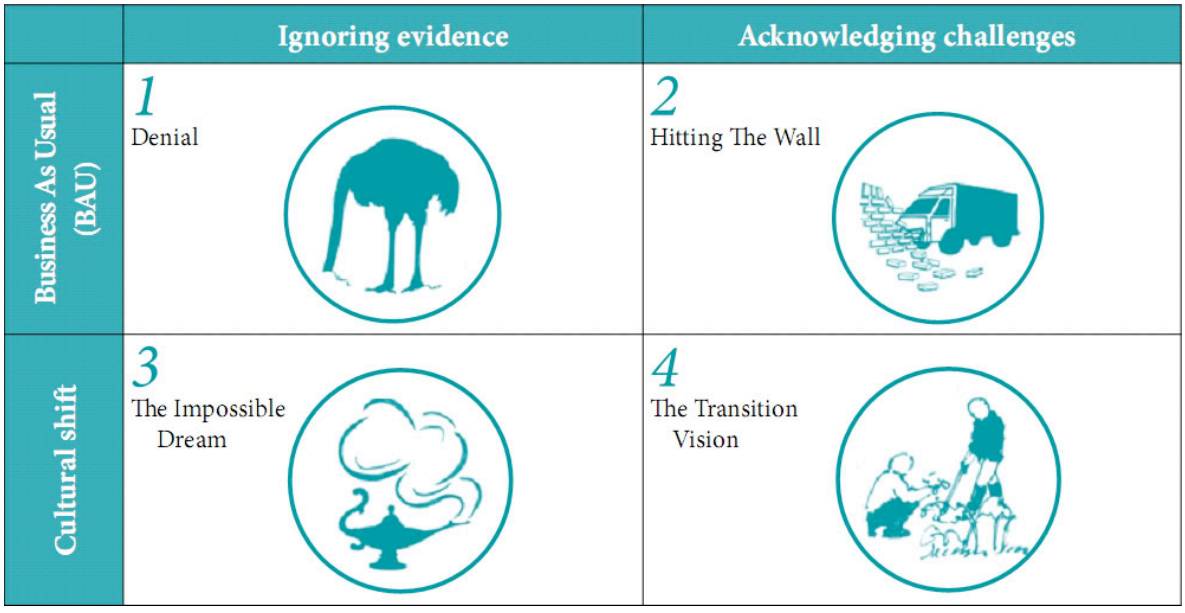
4) Earth Steward; Bottom up rebuild:

Rapid ‘peaking’ of all fossil fuels results in global economic depression, resource wars. Part result is abandonment of the large agriculture estates, furthering the food shortages. Increase in riots, in addition to epidemics and pandemics. Collapse of tax base curtails national governments. Hollowing out of cities, escaping to the countryside for food. Eventually population respond by establishing a ‘bottom-up rebuild of almost Ecotopian characteristics; urban areas turned into self-sustained gated egalitarian communities, with marauding gangs and warlords patrolling the countryside.

Shaun Chamberlin initiates his book “The Transition Timeline” (Chamberlin, 2009), with four ‘stories’, as he explains that part of the identity of any culture is their common myth and history; their story. The stories are build upon the following matrix:

Image. 2.1.1.b

Chamberlin's “stories” [Goes to year 2027 & quite UK based]



Vision 1: Denial; Business as usual / ignoring the evidence

Describes the effect of a ‘Bjorn Lomborg’ approach, where external forces such as peaking of fossil fuels, combined with the collapse of the American economy, gradually, but fast, leads to mass unemployment, homelessness and polarization

between ‘haves’ and ‘have nots’. In year 2019 it’s announced that it’s now too late to stop runaway climate change; that climate feedback loops are now the primate cause of global warming. This leads to the decade of new evangelism, along with continuous species extinction…

Vision 2: Hitting the wall; Business as usual / acknowledging challenges

The premise here is that of governmental initiatives and control such as cap-and-trade, however these systems soon prove incapable at preventing power outages as symptoms of peaking; in effect it becomes a national free-for-all as the last resources gets mined. The disruption of the global climate is the consequence, and the situation looks dire for large parts of the globe.

Vision 3: The impossible dream; Cultural shift / ignoring the evidence

A government driven positive change based on ‘TEQ’ (Tradable Energy Quota’s), which des serve to generate a new economic world order. Simultaneously there’s massive funding for transition initiatives, and a wave of this happening. Unfortunately it is all aimed at the 2007 advice of the IPCC to stabilize the CO2 emissions at 500ppm, which turns out to be incorrect, as more and more climate feedback mechanisms occur. Society still consumes all available fossil fuels, as it becomes apparent that we’re all aboard Titanic…

Vision 4: The Transition Vision; Cultural shift / acknowledging challenges.

This is based on changes driven by the people for the people…and planet. Another significantly different from the Vision 3, it is founded on a precautionary principle in terms of the CO2 emissions. This is ensured by an effective TEQs system, in effect installing the war-time ration schemes, only this time on energy consumption. Centrally for this ‘story’ is that production and consumption becomes subordinate to quality of life, with a ‘Happy Planet Index’ (HPI) replacing the GNP. The aim of zero net emissions are within reach, partly through ‘carbon draw-down’ techniques in agriculture. Population growth is regulated through better education and well being for women globally.

It is clear that the differences between Holmgren and Chamberlin’s future potentials are minute, and that it could be interesting to match them with scenarios created by a ‘climate change deniers’ such as statistician Bjorn Lomborg or the Czech President Vaclav Klaus, however despite the fact that they haven’t made similar scenarios, it would not serve a purpose within the framework of this project, as the main precondition is to see if it’s possible

to implement the transition model within the rural area of Bouzovsko, and the transition model is a response to climate change and peak oil etc.

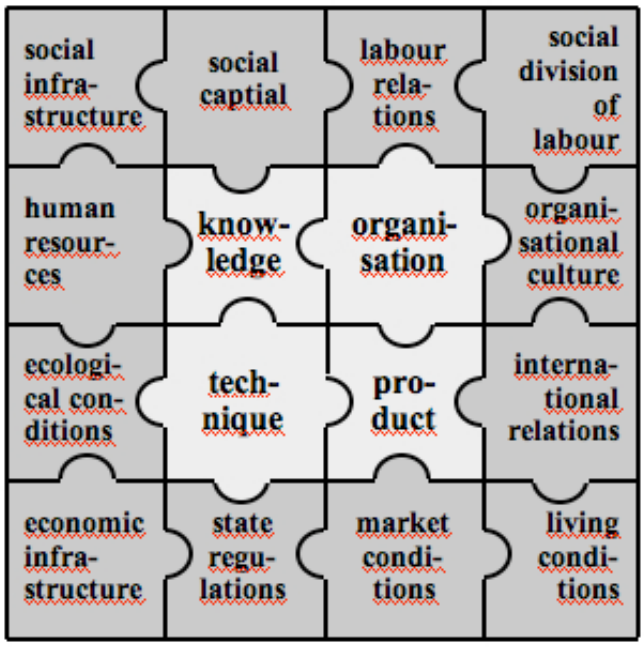
Bearing this in mind, the issue at stake is which kind of combination, or 'space' within the above elements are most likely to occur in this particular cultural setting, as it is a proven fact within future research that the real outcome tends to be within the mixture of the various scenarios. (Rolf Jensen, 1996)

2.2 Intro to social carriers of technology and related methodology

According to Charles Edquist and Olle Edqvist, we may view the local area of Bouzovsko (as any area), as numerous social units (such as town hall, businesses, organizations such as the football clubs, or the volunteer firemen brigade, households, or simply the regular pub-goers). These social units are called *social carriers of technology*, (Edquist & Edqvist, 1979) with technology being defined as "*Technology is one of the means by which mankind reproduces and expands its living conditions. Technology embraces a combination of four constituents: Technique, Knowledge, Organisation and Product".* (Müller et al., 2003).

This definition is illustrated in what has become known as the 'puzzle model', with the four elements of technology illustrated in white and here surrounded by some contextual elements, which it relates to illustrated in grey color.

Fig. 2.2.a: Müller's Puzzle model



It is important to bear in mind that this is a static illustration; the reality is that the four central pieces are in motion, in effect each element being in contact with all of the surrounding elements, which also is shifting and interrelating with each-other.

When viewed in relation to the Transition concept, the *knowledge* would express the awareness and aim of creating local resilience, the *organization* the overall 12 step plan; *technique* the individual local adjusted steps, and the final *product* being the implemented changes, the EDAP (Energy Descent Action Plan), etc.

Proceeding from this definition of 'technology' and 'social carriers of technology', professor Jens Müller further defines: "***The aptitude of a society to reciprocally match its changing social structure to the changing technological capability of its social carriers of technology we define as the technological dynamism of the society.***"

Fig. 2.2.b:
Technological Dynamism of Society

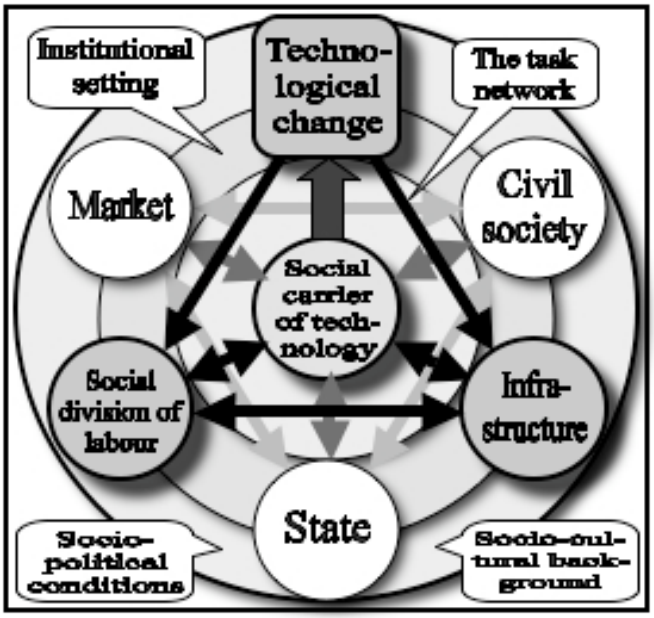


Fig. 2.2.a Notably illustrates the framework for technological dynamism of society as one where the social carrier of change is central in the development, however influenced by many strong external factors. The side effect of these strong surrounding parameters are high-lighted by the fact that the following 6 conditions must be fulfilled for any 'social carriers of technology' to successfully introduce a particular technology:

Fig. 2.2.c: 6 conditions for success of 'social carriers of technology'

1. ***Interest*** in applying the technology, i.e. be motivated to obtain and operate the technology;
2. ***Power*** to materialise its interest, i.e. be in possession of the required socio-political and economic means;
3. ***Organisation*** to exert the power to establish the necessary internal conditions for applying the technology, and must be affiliated an interactive external task network;

The unit must further have:

4. ***Information*** about the technological options, i.e. be able to assess the potential alternatives in relations to the desired need fulfilment;
5. ***Access*** to the technology in question, i.e. be able to obtain and procure the hard- and soft ware of the technology;
6. ***Knowledge*** about how to operate the technology i.e. be in possession of the capability to handle the required technique and work organisation.

(Müller et al.,2003)

While it is clear that the 'Transition elements' fit within such definition of technology, and constitute a social carrier of technology, a dilemma arises when we incorporate the different vested interest of the *receiver* and the *supplier*, as a long term successful outcome is hinged on a joint fulfilment of the above 6 conditions.

-An illustration of this may be the development aid of the 70'ies, where technology transfer frequently occurred, without the support systems in place to ensure the successful long-term implementation of the new technologies.

Research within this topic (Müller 1980, Robinson 1988 and UNIDO 1995) has lead to the conclusion that *both* the introduced technology *and* the social setting need to be changed in order to ensure a successful outcome.

Fig. 2.2.d: Relative conditions of the 6 conditions

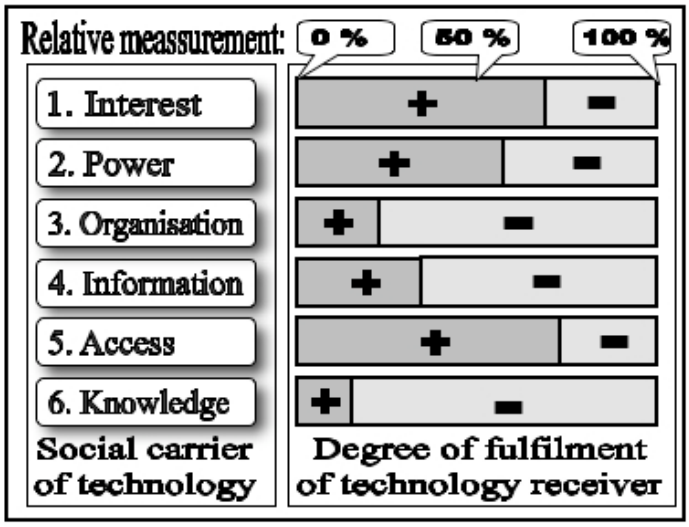


Fig 2.2.d exemplifies it graphically, which introduces a dilemma for introducing transition model in a less than favourable area such as Bouzovsko; the accompanying text clarifies that *"**ideally** the receiver is the most motivated, has the main socio-political power (possibly not the economic power), and is organised to a reasonable extent. What he lacks most is information, access and knowledge."* Now, where does this lead us if the rating on a similar graph based on a survey of residents in Bouzovsko would indicate that the three first bars would be close to zero? In other words; the technology may be out there, as well as a supplier, however is the *receiver* interested in getting it?

2.3. Radical Technology Change

While we're introducing dilemmas, we may also want to compare it within the framework of the definition of "Radical technological change", as introduced in the 8th semester As part of the lecture series which aimed at illustrating why knowledge about politics and power is a must for planners and the like. (Lokke, 2008).

The central lesson is that the question is not whether the suggested changes are beneficial, that the time is right or if it's relatively easy to implement; the issue is whether the 'power' (be it financial, egocentric, formal/non-formal etc.) among the recipients is ready to receive it..

In this depicture of technology a 5th element is included, that of 'Profit', which typically is a cornerstone for any consideration. This does not work against using the model for the transition model, as part of what it is build upon is the permaculture principles by David Holmgren, one of which specifies: "Obtain a yield" (Holmgren, 2003).

"Radical technological changes":

When more than one out of five circles are changed

Technology:

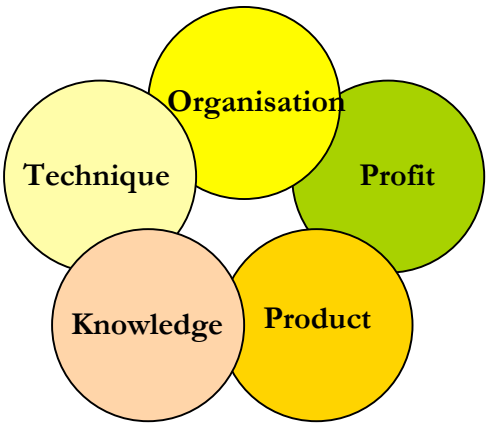


Fig. 2.3.a

The action of 'Transitions' has been defined as follows by Philip J. Vertragt et al.: *"... gradual continuous processes of societal change in which society changes structurally* (Rotmans et al. 2000; Kemp and Rotmans 2001). *A transition is the result of connected developments in several societal domains: culture, technology, economics, ecology, institutions, behavior, and worldviews".* Viewed in line with implementing the Transition concept in Bouzovsko, it would…

1. Alter the organization in Bouzovsko to a 'bottom-up' involved movement, rather than the current representative town hall model.
2. Re-direct the profit issue, as in the current model majority of profit from local manufacture leaves the area to the estimated 90% of owners/shareholders (based on income) who live outside of the Bouzov region. Generation of local economy and 'recycling' of the profits within the community is central to ensure local sustainability.
3. The products would need to be geared more to local needs rather then 'export' of the region; this would ideally result in less animal fodder being produced within the agriculture, and more final products made from the logging industry, etc.
4. The knowledge to do so may be old, however predominantly it is lost and has to be re-established. This could mean retraining or replacement of the persons in charge of the current production.

5. Lastly new small-scale techniques, silos and manufacturing plants would have to be established, and ideally current industry based on negative use of the local resources for export and/or polluting industries, would be altered to a more sustainable productions.

All in all we're looking at a serious "Radical technological change". Professor Frede Hvelplund, AAU, used the above illustration to emphasize that 'Radical technological change' is the same as changing technological path, and that *"Technological path dependency exists, when it is institutionally very difficult to change technological path."* Emphasizing that the political system must be independent of strong interest groups. (Hvelplund, 2008). Hvelplund goes on to point out the three following solutions for "Radical technological change":

Fig. 2.3.b. Solutions for Radical Technological Change:

1. The three levels: Regulative, Normative and cognitive are dependent upon the system in which they are embedded.(Macro-structure, economic interests, ecological conditions, etc.)
2. Therefore: An old system cannot change itself radically.
3. Consequently radical technological changes needs the construction of new organizations having a new set of regulative, normative and cognitive institutions.

(Hvelplund, 2008)

Now, this seems as a solid support for the creation of a new paradigm in Bouzovsko; perhaps the 12 steps of transition? (Hopkins, 2008)

As outlined in the Institutional and Discourse Assessment of the political decision process in Bouzov (within my 8th semester project report: Jensen, 2008), it is clear that the political power in Bouzov: the 15 town hall members, (and directing in the shadows; the management of the traditional dominating business; the Agriculture company; Klopina s.r.o), the situation in Bouzovsko can at best be described as being ruled by strong individual interest groups, and in addition adhering to 'Groupthink', as thriving under the following three conditions as described by social psychologist Clark McCauley. (McCauley, 1989)

* *Directive leadership*. [The word of the Mayor is traditionally accepted across the board.]
* *Homogeneity of members' social background and ideology*. [The upbringing during the socialistic regime enforce a tendency to always accept/agree rather than oppose, when being confronted directly, such as during a council vote.]
* *Isolation of the group from outside sources of information and analysis.* [The rural life in Bouzovsko is relatively isolated, (apart from the influences of mainstream media), especially

when added to the fact that the town hall members are 95% mono-lingual, and not known to be particularly open for new input.]

Kamau and Harorimana illustrates how such collective behaviour results in any of the following failures, of which the last is exactly why there's a need for a transition plan in Bouzovsko:

Fig. 2.3.c. Failures caused by GroupThink:

1. Incomplete survey of alternatives
2. Incomplete survey of objectives
3. Failure to examine risks of preferred choice
4. Failure to reevaluate previously rejected alternatives
5. Poor information search
6. Selection bias in collecting information
7. Failure to work out contingency plans.

(Kamau, C. & Harorimana, D. 2008)

2.4. Partial conclusion

The chosen methodologies are a hybrid of approaches used within business management, such as the future scenarios, (though the two specific models were chosen due to their emphasis on peak-oil/climate changes), as well as series of theories within technology transfer/ social carrier of technology, and reaching somewhat into socio-political aspects of such decision-making. The discussion about the methods introduced dilemmas of implementing the transition model in Bouzovsko; particularly in consideration of the current administration of the area, however also in lieu of the general population; issues which we'll learn more about as we move forward with the empirical research in next chapter.

The central dilemma may very well be: Is now really the right time for *'Edaptation'* in Bouzovsko?

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edaptation // noun. 1. *the act of a community adapting to climate change and peak oil by creating and actioning an Energy Descent Action Plan*. 2. *the act of transitioning to a post carbon future in a positive, pro-active manner* 3. (*Sociology) a far reaching and widespread yet significant modification of individual and community attitude and behaviour*. 4. *the act of moving from oil dependency to local resilience community by community*. 5. *the act of personal attitudinal and behavioural change*.

(Sonya Wallace, 2009)

3. Description of the Case Studies

"As innovation becomes more central to the way we make our livings and how we tackle pressing challenges we face – from global warming to health pandemics – our well being will depend more and more on what we share with others and create together".

C. Leadbeater, 2008

Initially an outline of the socio-geographical features of the target area; Bouzovsko, will be presented, before describing case studies of various transitions steps, in areas and countries which all has some relevance in comparison to researching the possibility and avenues of 'transitioning' Bouzovsko: The new 'Transition Ashland' within the contrasting ideal situation for implementation, The success and lessons learned from 'Willits Economic LocaLization' in California, the life boat approach of TCLocal in New York, and lastly the sporadic approaches in Norway, within a similar cultural difficult setting. Majority of the information about the case studies arise from a series of informal meetings and talks during a 3 week journey in Norway in August 2009, as well as 6 weeks journey in California/Oregon in October/November 2009. Some background knowledge is based on having lived 5 years in those 2 American states, a total of 2 years in Norway and 11 years in The Czech Republic. The issues of relevance are highlighted in the chapter conclusion, leading to chapter four which focus on the future of Bouzovsko.

3.1. Location, Setting and Delimitation of Bouzovsko

The Moravian rural region of Bouzovsko consists of 12 small villages united under the larger village of Bouzov, all-together constituting the home of about 1500 people. The concept of 'environmental management' of this forested rural backwards region is symptomatic to many other rural regions, in the fact that the concept is virtually unknown: Any related development is largely depending on state/EU measures and funds along with the personal convictions of the town hall members.

Bouzov consists of a rural landscape with about a 40/60% distribution between forests and fields as the aerial photomap on Fig 3.A. clearly shows. The forests are mainly on the slopes and peaks of the hilly landscape that varies between 280 and 425 meter above sea level, and

new cultures planted are predominantly non-native deciduous plantations. The profitable hunting business maintains a too large population of deer and wild pigs, which poses a difficulty for surrounding farmers and gardeners. Following the approach of the previous regime, the fields are relatively large, not intercepted by hedgerows, tree lines etc.: A landscape element further made difficult by the present faulty local administration of the EU agriculture donations. (Jensen, 2008). All fields are intensive managed and very limited measures are taken to prevent erosion. The agriculture is 98% managed by one large corporation 30 km away, a result of changing the nationalized agriculture Co-Op's into shareholding companies, which gradually has merged. The result in Bouzovsko is that virtually all resources are removed from the local area and in reality substituted by fertilizers, insecticide, erosion and some low-income seasonal employment.

Image. 3.1.a Map of Bouzovsko's 13 villages

3.1.1. Social context

The following description from EU's initial rural development plan for The Czech Republic ('Sapard'), briefly explains the psychological/social obstacles towards new initiatives, as well as explain the decline of the populations in the rural areas:

Fig. 3.1.1.a

> *"Many rural micro-regions are in a great need of renewal of their technical infrastructure, renovation of premises and provision of services. Until some of these basic needs are met it will be difficult to reduce the present rates of rural depopulation and the consequent drift to the cities and expect economic regeneration at the same time. In the past decades, agricultural functions in rural settlements were separated and placed in large agricultural establishments. Farm buildings inside settlements remained unused. Under the former totalitarian regime, nationalization of land and the development of large-scale collective farming reached the greatest dimensions in the former Czechoslovakia compared within the entire Eastern bloc. Farmers became accustomed to 8-hour working days and an employee-type regime. As a result, ownership relations were broken and thus the relationship to the land changed. The jobs available in agricultural enterprises could not cover the demand for employment in villages. As a result, at present many workers commute to towns and rural population suffers more from unemployment."*
>
> *Sapard, 2002*

3.1.2. Employment

No existing official statistics that only covers Bouzovsko are available. The estimate of the Vice-Mayor, K. Zatloukal, is as follows: 40% general laborer (incl. drivers), 5% agriculture workers, service trade 25%, state funded (such as teachers, post, town hall) 15%, finance/administration 10%, and 5% others.

The unemployment in the region is highly above the average, with wages and salaries well below the average (15,445 monthly gross wage in 2004 as compared to national average of 15,445 monthly gross wage in 2007: These figures are for the whole regions, and is significant lower in Bouzovsko.). The regional share of GDP per inhabitant is also low—with 77% of the national average and a bit less than 47% of the EU average

3.1.3. Public participation

The organizations with most active members in the region are the volunteer fire brigade, as well as the football clubs; which at times overlap, with the former arranging the sports tournaments. A central part of the activities of these two organizations are social drinking, and it is rare to find women as members in the groups. In addition there's a group of people united around the catholic church in Bouzov, and a few special interest group around a theme such as the upkeep of a couple of lakes, group of senior women, and the choir. It is noteworthy that a large part of the non-formal social infrastructure traditionally is hinged on the 'camaraderie' between the men at the pub; this is where exchanges of services gets

arranged, frequently in a non-monetary exchange.
In regards to political parties it's my impression there's very little active involvement; that the few who speaks up gets voted into the town hall, often as 'independent'. Even so, research has shown that the cooperative party constellations in the rural regions frequently completely contradict the party lines as compared to the national level (Čmejrek, 2008). It is important to emphasize the significant difference between the development of environmental politics, public participation, social movements etc. as experienced in Scandinavia/ Western Europe, and the contemporary situation in Bouzovsko.

While the regulatory instruments predominantly are aligned through the common EU measures, and some of the social movements and public viewpoints of the larger cities may correspond to the development in N-W European countries, this is far from the case in the rural municipality of Bouzovsko. This situation here can well be subscribed as a vortex, where the prevailing winds are that of continuity of status quo, as determined by the large (19%) of communist party voters out of the 1264 voting residents (Some villages in Bouzovsko has up to 35% communist voters as compared to the national average of 15%). As mentioned above, the culture mentality is to not participate in the public decision process, apart from voting for the various elections; last election turnout was 67,4% (Source: Czech Statistical Office, 2003). It is important to bear in mind the socio-cultural effect implemented during the previous regime, combined with the change to a capitalistic society where everyone fend for him- or herself.

In other words, the various phases of environmental politics and activism has not reached the town hall or municipality of Bouzovsko, if anything it may slowly be moving to the 'Awakening' phase. Reaching this level is a hard chore as even the current Czech president in his recent book 'Blue planet' echo the perspectives of Bjorn Lomborg, stating that there is no environmental crises. President Vaclav Klaus is also on record for having stated: *"Civic associations are the biggest threat to democracy"*. Viewed in such a local public opinion, the integration phase of environmental activism with it's agenda 21 issues, seem like utopian, as the conditions for such development such as context, accepted bridge-builders, enlightened civil servants, and cultural acceptance are non existing. The 'relation' based on solidarity constituting the civil society in the classical model of the political power structure is in other words without power.

3.2.1. Transition inspiration: Ashland, Oregon

Ashland Oregon is one of a string of progressive 'green' towns on the West coast of USA. Common to most of these 'green pockets' such as Santa Cruz, Berkeley, Ukiah, Arcata, Ashland, Eugene, Corvallis is that that it's University towns, traditionally they attracted the alternative 'hippie' scene, who moved to the surrounding area and developed homesteads and micro businesses a generation or two back. Now the towns all have very well established natural food coops (as large as European super markets), farmers markets, and a wide selection of local shops and products. In addition this segment of the population has been very active in grass root organizations, as well as in local politics, which is evident as you pass through the towns from a number of perspectives, perhaps most clearly in Ukiah, (the small town which pride itself of the first organic brewery in the USA), as a huge banner was stretched across the main street saying;

Fig. 3.2.1.a

It is within such context that "Transition Town Ashland" operates. In other words a world apart from the scene in Bouzovsko or as experienced in Norway, but quite like Totnes, the de facto 'birthplace' of the transition movement; a progressive town in UK. It's a place where the concept of transitioning is well received, and where a network of similar minded individuals and organizations already exists.

I took part in one of the meetings of the initiating group, in the common room of the new co-housing development, which had been spearheaded by on of the group members.
The project was officially accepted as a 'Transition Town' in December 2008, and noteworthy it was instigated by individuals who already were quite active and experienced within synergetic groups, and well rooted in the community. They appeared to adhere to the '12 steps of transition' very well, as they were busy planning the future events. The events ranked from the monthly movie nights (next one to be 'The Age of Stupid', direct imported from U.K), to arranging for presentations with a series of very varied community groups (recall one titles something like 'League of women academics' at the local University, there was a church newsletter, as well as the 'League of Women Voters' and many more).

They made plans of how to cooperate with youth groups at the University to disseminate information at an event there, and discussed several established transition tactics of ensuring involvement by some of the many curious people who showed up to the open monthly transition events every 3rd Thursday.

A central element of the success of the transition concept is that it attempts to be very mainstream and personal; yes, plenty of online information exists, including a wide geographical range of social 'ning' groups exist, including http://transitionoregon.ning.com/group/transitionashland, however it is through the interpersonal exchange that the groups has success. This includes events such as participating at the annual 4th of July parade, where the electrical vehicle powered float of the Transition Ashland, actually won the 1st prize, which worked as a great publicity stunt for the newly formed official organization.

To several of the people attracted to the events it serves as an initiation to actually feeling the possibility of having influence in local public decision making, for instance by contributing to a report providing feedback to the local town hall on their Values, Vision and Goals.

Shaktari Belew, one of the initiators, was part of a group being trained as national transition instructors, and recently she joined two other instructors in facilitating a public 'webinar' on how to arrange for, and stimulate workgroups. As part of the webinar presentation, the following slide was used to demonstrate the structure used in Transition Ashland:

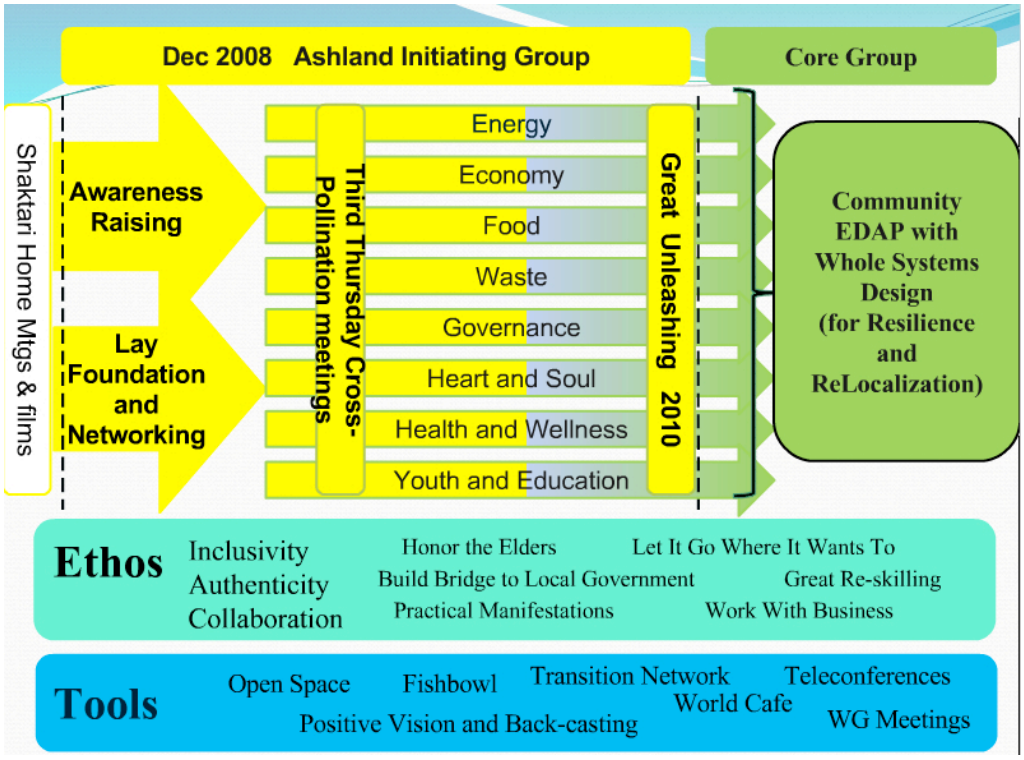


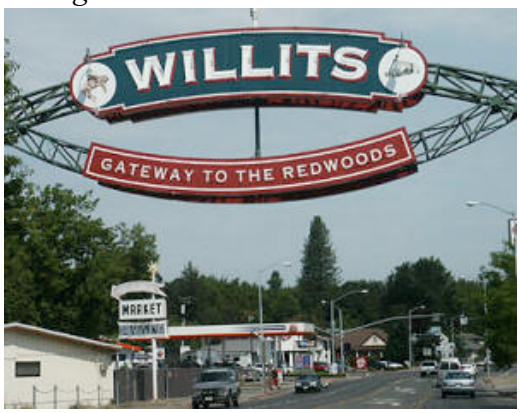
Fig. 3.2.1.b Organizational flow chart of Transition Ashland

Now, it's significant that many of the plans of Transition Ashland are still on the planning table, and we needn't look no further than to Northern California, to see that reality is that not all re-localization attempts goes this smoothly, as my talk with Jason Bradford, initiator of Willits Economic LocaLization (WELL) illustrates.

3.2.2 Transition inspiration: Willits, N. California.

Jason Bradford has a doctor degree in Biology and his research work took him many places around the globe. The realization of the global development caused him, his wife (a general practitioner) and their twin boys of age 6, to relocate from the San Francisco area up to the small town of Willits, (13.000 inhabitants) a couple of hours drive North of S.F.
Whereas Willits is nearby Ukiah, it doesn't quite fit into the list of 'green pockets' as outlined above. Traditionally Willits has been a logging town, which means that during the 90'ies it was one of the last strongholds for the 'red-necks' against the 'Earth First'ers', in what has been called 'The battle of the Redwoods', (according to my personal experience, as I lived 3 years in Arcata, a 'green pocket' town 1,5 hour drive North of Willits).

Image. 3.2.2.a: Willits main street



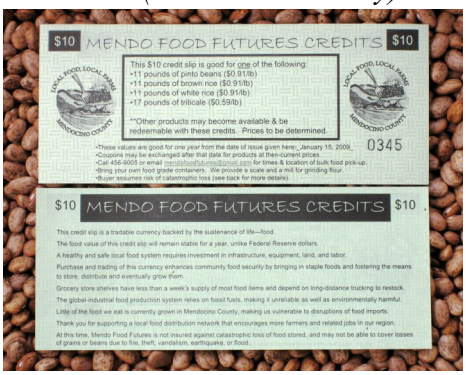
Times are changing and majority of the loggers has had to look for different employment, as the logging was accelerated at unsustainable rates during the 90'ies. The energy of the 'Back to the Landers' of the 70'ies were gaining more influence as they for years had been a large alternative population living in the hinterlands, carving out their own niches of sustainability, some with arts and craft, others funded by the sale of marihuana; now quasi- legalized as 'medicinal'.

This was the small town where the Bradfords settled and in which Jason after a couple of months arranged the first public screening (and subsequent debate) of a new movie titled "The End of Suburbia", largely focused on the effect of peak-oil. 20 people showed up, and it lead to a follow up meeting where 60 people came; The Buzz was on! Systems got initiated to make it a community effort, away from the personality focus, and gradually "WELL" was established. (Bradford, 2005). This happened about the same time as the dawn of the

transition movement at a college in Ireland, however the 2 initiatives have yet to merge, though they are very similar in aim.

It soon became clear that in spite of the county being very progressive (it was the first county in US to ban GMO), the local area was far from sustainable; that majority of the produce was trucked in, and what was grown locally was to be

Image. 3.2.2.b: Local currency in Ukiah (Mendocino county)



consumed elsewhere; much as the present situation in Bouzovsko. Jason build on his scientific background to research the lack of resilience in the community in regarding to food; learned that all available food in the stores would be gone within a week if not replenished continuously, etc. Jason went on to become a host of his own by-weekly radio show "Reality Radio" on the new local progressive radio station 'kzyx'. Throughout 2,5 years, Jason Bradford became well known, both in the county, as well as internationally, as his show became available for download on www.globalpublicmedia.com.

Reality Radio featured 1 hour long in-depth high level interviews with some of the leading researchers and writers within themes such as Peak-Oil, climate research, ecological economy, bio-fuels, local sustainability etc. Simultaneously with this development WELL was involved with establishing a local currency based on grain (as opposed to gold reserves) grown in the Sacramento valley, trucked in on the return trip by a local trucking company and available in bulk from WELL, working with the town hall, running a community farm, setting up a commercial kitchen incubator and a series of other issues, much like the graph of Transition Ashland illustrates; WELL became an inspiration for a number of similar initiatives across the country, who looked to WELL for advice on organizing such citizen resilience groups.

This was the knowledge I had when I contacted Jason Bradford for an interview, and learned that they recently had moved up to Corvallis in Northern Oregon. I did go and enjoy their hospitality there instead, and learned a little of the rear side of the medal of being an out-of-town idealist in a rural area which isn't quite ready for the transition.

WELL is still very active in Willits, and according to the information on their site the organization has changed the community considerably during the recent 5 year anniversary of the first showing of 'End of Suburbia", however the Bradfords decided to move on. A large part of the reason to leave their permaculture retrofitted house in Willits, was due to better employment conditions as general practitioner, and for Jason to get into new challenges…however another reason seem to be a certain degree of disillusion from not having penetrated enough in Willits with all of the effort put into 'WELL', as this letter from the August edition of the 'Well-bucket', the newsletter of WELL expresses:
"I have been studying the topic of local and sustainable food systems and food security for a few years now, and have even spent a lot of time working on actual transition projects here. These are all doing fine, but I have been frustrated by the pace of change (very slow) and the barriers to change (very big)…"
During the conversations the Bradfords were consistent in maintaining a positive future oriented tone, though a funny detail did slip out; That at some time in Willits someone had asked Jason if he really was an undercover CIA agent? (!), as an example of the estrangement they would get from some segments of the locals, due to lack of understanding of their dedication to seemingly non-selfish idealistic work.

Whereas the 'Founder syndrome' is well described in literature about social-entrepreneurship and building communities (Christian, 2003) with resulting issues of pioneers moving on, it's my impression that a central cause for the shift of the Bradfords, was a realization that the population in general (be it in Willits or beyond), could not be swayed to look seriously at creating a shift in lifestyle and sufficient 'resilience' to exterior peak/climate changes, as long as the everyday economical situation and consumer lifestyle is the dominant paradigm in their life. In the case of introducing Transition to Bouzovsko, the advice was to follow the example of a re-localization group in Tompkins County, New York state, where a small insider group of serious researchers has joined to create a set of 'relief plans' in lieu of the expected future changes. This lead to the allegory that he had reached the conclusion that the 'Shock Doctrine' wasn't far off. This relates to the book by Naomi Klein of the same name, or rather to a wing of neo-classical economists educated at University of Chicago, who practice a model of taking advantage of disasters to push various policy, business or legal deals, which would not have been accepted otherwise.

In other words; that the 'Radical Technological Change', as described by Frede Hvelplund in chapter 2, may only be possible during a crises, and that in such time of 'shock', the advantage goes to whoever has an available response plan.

3.2.3. Transition inspiration: 'TCLocal', Tompkins County, central New York state.

This initiative is apparently situated in 'fertile grounds', (much as Ashland and Totnes), however rather than following the public approach of Transition Ashland or WELL, the initiators of TCLocal has chosen to function as a 'think-tank'. The steering group consists of only 3 people, with about a dozen of co-researchers and 50+ subscribers to their public newsletter. The summery of their public presentation of the aim is articulated as follows:

Fig. 3.2.3.a: TCLocal web introduction

> *TCLocal: Planning for Energy Descent*
>
> *Some time in the next 30 years, life will start to become very different from what it is now. By mid-century we will use much less energy; we will live every aspect of our life much closer to home; and we will be much poorer in material terms, because energy and wealth are basically the same thing in an industrial society…[]…Since the supply of oil and other fossil fuels is finite, this outcome is guaranteed. The only question is, Shall we plan for what we can see coming, or just let it happen to us?*
>
> *A group of area citizens, TCLocal, has begun planning now. TCLocal contributors are committed to researching various aspects of energy descent in Tompkins County and writing up a preliminary plan for each aspect based on purely local challenges and resources. This is one such plan.*
>
> *www.tclocal.org*

On their website (www.tclocal.org) they have made an impressive list of topics for a comprehensive energy descent plan, with main chapters such as:

● Food production and distribution	● Water
● Heating	● Transportation
● Emergency services	● Health care
● Education	● Manufacturing

Each chapter has a long list of subchapters as visual in the attachment. A central issue of the TCLocal is that they limit the amount of involved people to the ones interested in contributing with the various chapters; avoiding effort of bringing people up to speed on the general need for sustainability as briefly explained; *"We're not telling people what they **ought** to be doing; we'll be telling people what they **have** to be doing, when we pass the peak of oil production"*

(Bosak, 2006).

Part of the possibility of doing it this way is that the public education is taken care of by several other organizations in the progressive area; TCLocal is simply installing themselves as the back-up system if/when the precautionary principle should not function sufficiently (as Jason Bradford felt is the case).
The force of the TCLocal approach is not only the ability for qualified folks to focus on the issues; it is also a very professional approach to build relationship and confidence among administrators/authorities, which may not be the case when typical idealistic grass root approach the same people.

3.3.4. Transition inspiration: Norway

During August of 2009 I toured a series of places in Norway (with my family) hinged on sustainability issues on a networking tour funded by the Norwegian grants. An important background for the journey was that during the period from 1989 to 1998, I've spend a total of 2 years working in Norway, during 3 different periods at several different locations. My general experience of the 'Norwegian way of life' was that it represents a paradox in comparison to my observation that most countries in Europe start being progressive about environmental/ecological/community issues once a certain level of wealth has been reached. Not so with Norway in 1998; The amount of organic products on the shelves in the most progressive supermarket would not reach more than 10 different items; vegetarian cooking was equal to starvation according to most peoples opinion, and the country was high on consumerism; quite opposite right on the other side of the border to Sweden, where even on the train it was possible to buy a meal with organic meat, or something as unheard of as vegan!
In other words; a central aim of the journey in August was to see if this had changed; if there indeed were a movement of resilience happening, despite the lack of official transition initiatives in the country.

Image. 3.3.4.a: House of straw bales at Hurdalsjoa ecovillage

We did find pockets of it, however the general environmental conscience still seemed absent, or at best at an infant stage. In other words quite comparative to the state of Bouzovsko

Hurdalsjoa ecovillage, the only ecovillage under development in Norway, has build several strawbale houses, have a strong focus on community, low-impact living and in due time intends to expand their agriculture. Unfortunately the issue of setting up a community from scratch in a relatively remote area, consumed the majority of the sparse resources of the about 30 inhabitants, making it analogue to an island in a big ocean, without any serious impact on the surrounding population in the rural area.

We likewise visited the founders of the Norwegian network for natural building and permaculture, as well as one of the most well known natural builders in Norway. The feed-back was somewhat similar: The Natural Building organization has not been successful at generating 'new blood' for years, and is rather stagnant, lacking on replacement for the board members who's now withdrawing. The permaculture association is somewhat caught in teaching for the choir, though common for both organizations is involvement in development projects in Russia.

Image. 3.3.4.c: Greenhouse/ meeting room at Gaia Architects

Image. 3.3.4.d: Intensive vegetable production at Foldsae

Our stay at the ecological vocational secondary Waldorf school Foldsae, was as such much more inspiring; not a fair comparison as they took over a huge agriculture school for the price of 1 Norwegian crown(!), and has about 25 pupils +volunteers and staff working more or less full time state funded. In relation to the surrounding region they operate a small shop providing organic dairy, vegetables, berries and eggs (will be bio-dynamic as soon as certifiable). They also provide a series of cultural events open to the nearby village, many demonstrations of natural building and appropriate technology. In addition several people has moved to the school as employees, though suspiciously many come from different nations; Germany, the Netherlands, UK, Chile and Columbia, as does many of the long term volunteers. It's good for the global aspect, (and most conversations are held in Norwegian!), however it raises the question why it's not more attractive to Norwegians to be working with these issues?

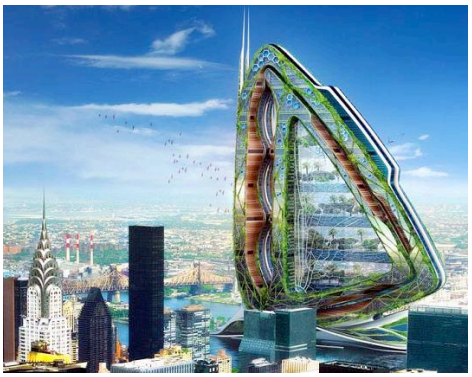
Despite the many inspiring aspects of Foldsae, fact is that it can hardly be called a Transition initiative, as it (along with the other places we visited in Norway), are more of a working

demonstration of sustainability, (much like the working museums we visited in Lillehammer and Oslo where craft was actively taught and époques lived in), not quite an initiative created "by the people, for the people" (as Lincoln once put it). In this aspect they are more akin to a miniature TCLocal; they have low tech answers and knowledge ready when people will come to ask …*what they* ***should*** *do when we pass the peak of oil production"*, paraphrasing the quote by Jon Bosak.

Image. 3.3.4.e: Living museum, Lillehammer

The Norwegian experience should be viewed in light of Norway being significant due to the fact that it still has a considerable amount of its inhabitants situated in remote villages and a thriving widespread respect and knowledge of its old crafts and traditions, despite the fact of the country being one of the worlds most developed countries. The many rural settlements are quite self-contained in terms of water, sewage etc, even to the extent that many are serviced by hydropower. Perhaps the reasons for the lack of transition initiatives, are that the steps towards resilience in Norway in general are not so significant as in many other parts of the 'developed' world? The hardest part for Norwegians would be to be self sustained with food, however for a country with as much oil reserves and finances as Norway, it would not be hard to establish self contained energy efficient multi-leveled food factories, likely floating in the Fjords??

Image. 3.3.4.f: architectural concept of vertical gardens in city



Fact is that vegetable gardening on a household level seem to be extremely rare in Norway, to the extend that it was during second week of our 3 week road trip in August we actually pulled over and parked the car to take the below photo when we suddenly realized we had come upon the first household vegetable garden! Despite the hardship of short seasons and climate this is an obvious transition issue to address; imagine if the house on the

Image. 3.3.4.d: Rare sight of household vegetable garden

picture featured a lean-to green house covering the whole 1,5 storey of this southern side? Would add much to the quality of life, as well as savings in heating and potentially 60% of the household's vegetable consumption.

3.4 Partial conclusion

It may seem absurd to compare The Czech Republic with Norway, considering the difference in economic development, climate, infrastructure, etc. however due to my personal experiences after having lived 11 years in The Czech Republic, and 2 years in Norway, I repeatedly identify parallels to the social behaviour of the two countries. Without claiming to be a sociologist, I find the parallels are due to a well anchored patriotism; it's noteworthy that both countries have a long history of foreign rulership and are both relatively young as an independent nation. It leads to a firm connection with the crafts and cultures of the past (Ability to harvest hay with syth is gaining popularity among many young Czechs), along with a strong individuality; it is clear that both countries are lacking far behind in such developments as ecovillages, co-housing, co-operative managed industries etc.
Having identified the processes of transitioning/re-localization in areas of ‚green pockets', such as Ashland and Willits, and seen the need for a solid resident involvement in order for it to succeed, it makes it quite challenging to implement such a resident-driven change in Bouzovsko; indeed in countries such as The Czech Republic and Norway.

The example of TCLocal points the way of a different approach; centralized though resident driven. It is a ‚lifeboat' approach in accordance with Holmgren's scenarios, however due to Friedmans theories for „Shock Doctrine", (as elaborated by Naomi Klein), it may be able to succeed once the time is right; especially if no alternative guidelines are in place?

4. Comparative Analysis of the empirical cases

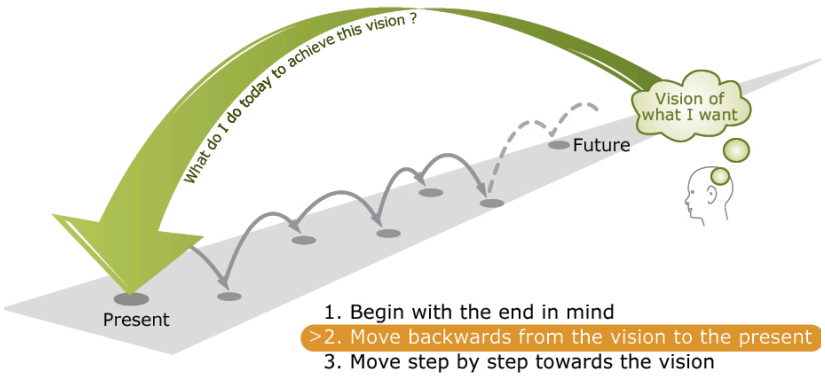
„Vision without action is merely a dream.
Action without vision just passes time.
Vision with action can change the world.“
Joel Barker

We have now specified a seemingly wide series of scenarios, methodologies and related approaches. To narrow it all down, relate various factors to the issue at hand in Bouzovsko, we'll try out a couple of the approaches of the Transition ‚tool-kit', namely ‚back casting'as well as a ‚Transition Tale'(Timeline tool #2 and 3, Chamberlin 2009) , Part of which is attached; it will likely be developed to a whole novel, inspired by Ernest Callenbach's ‚Ecotopia'.

The consequeses of the scenario building in relation to the methodology will be used to narrow down the approach of implementing Transitioning in Bouzovsko.

4.1. Introduction to Back-Casting, delimination:

This technique is another approach to viewing into the future, but with a significant twist. Rather than simply following steps which are a continuation of our present approach extrapolated into the future, it starts out with a definition of our aim of the future at the given year, and actions for reaching it are then identified, within the given time frame. The origination of this technique is somewhat unknown; it dates to the oil crises of the 70'ies and it has especially been probagated by Amory Lovins of the Rocky Mountain Institute and Karl-Henrik Robért of ‚The Natural Step'.



In our case we're looking to reach a certain amount of ‚Transitioning' within Bouzovsko by year 2025. In ideal case we would be aware of a series of data for the year 2010, such as amount of food produced within the area; how much of it staying, how much being ‚exported' vice versa; how much is 'imported' to the area, both by the local shops and by residents shopping out of the area. We would need to know the amount of residents dependent on income from outside of the area, how much energy is consumed, incl. coal and firewood burned, an overview of the state of insulation in each permanent dwelling, as well as the intra-area commuting patterns, etc. Quite a bit of data, and securing these data would be a work for a team for a duration of a year or more, which explains that out of the 239 official „Transition Initiatives", there's only 2 final EDAP's published (Energy Descent Action Plan) at the time of printing this thesis.

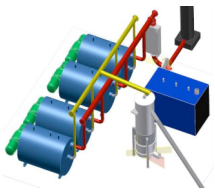
In addition to all of this there's the wild-card realities of the future changes. Will wars or pandemics occur? When? Will we even feel the effect of the fossile fuel peak, or will life just continue as during the past 65 post war years? How about the water crises? Will the administration in Czech make the bureacratic permission process more expedient, allowing us to implement changes? Case example: This autumn it became legal to implement grey water harvesting in California, as effect of the draught; previously it was illegal…

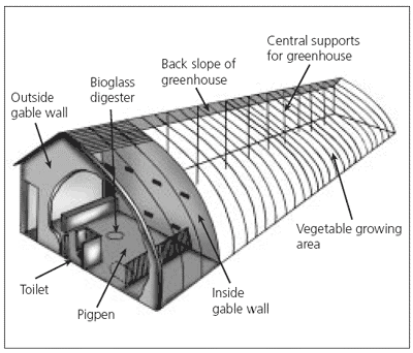
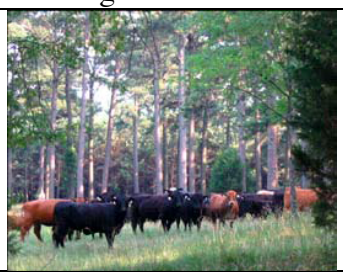
Without these data the back-casting below simply relies on a series of assumptions, making it a work of fiction, (much like the attached Transition Tale). Never-the-less both processes will serve to create an overview of the proportion of the necessary steps, and how long time it would take to develop them. Such overview is beneficial to answering the underlying research questions of this thesis.

Another aspect of developing a backcasting is delimitation. The aim of the following example is to ensure sustainability for Bouzovsko, in adherence with the Brundtland/ WCED 1987 definition: *„a development in which the need of the present generation are fulfilled, in such as way that the future generations will be able to meet their needs too"*. Added to this central issue are the knowledge of peaking fossile fuels as outlined in the Hirsch and IEA (International Energy Agency) reports. (Credible estimations +/- 5 years: Oil: 2008, Coal: 2025, Gas: 2025?, Uranium: 2050 according to Heinberg, 2007 and Laherrere, 2006), the need to reduce co2 emissions to below 350 parts per million of carbon dioxide, and an impeding

global shortage of drinking water, adding to the cause of clima refugees, and potential for civil unrest.

4.2. Example of Back-Casting for Bouzovsko

Desired Development	Year	Necessary steps to get there in time
All storage of bio-gas is filled, after yet another succesful week of folk music and barter festival at the Bouzov castle; the annual highlight for the many people inspired by the development of Bouzovsko and the flowering accustic music in the villages surrounding the castle.	**2025**	No advertisement necessary; it now works by word of mouth and people come in their air-powered cars, horse back or on the light rail train from the surrounding counties. The secret is simply that the Bouzov residents by now exhibit a contageous happiness for life, music and community.
The steam powered wood work incubator in the old JZD facility in Bouzovsko opens, securing yet another facility for local products, jobs and very importantly; a place to gain replacement for the many broken products of the plastic era.	**2024**	This was done by a group of local carpenters and wood workers as a local initiative, following the now popular designs of the Amish people.
Consumption of Electrical energy has been reduced and is now 100% produced within Bouzovsko, through the use of sterling motors at the 5 bio-mass plants, a couple of windmills and decentral photo-voltaics.	**2023**	 The Sterling engine is a 100 year old invention, redeveloped by among others the Technical University of Denmark. www.sterling-dk.dk
Fruit and nut trees planted on contour for alley cropping in 2011 is now giving a bountiful harvest, while preventing erosion and creating hedgerows with bio-diversity for the organic fields.	**2022**	 The main work for this was the planting, and the annual maintenance. The production of hard alcohol was down due to a lack of need for such indulgence, as well as the need to store the fruit for consumption.
The bio-gas project comes to a succesful final; all human and animal waste is now utilized in decentral bio-gas plants, and returned to the residents in the available gas pipes (installed in 2005-07 for the no longer available imported gas) for cooking. Together with the bio-mass plants, the insulation project and individual woodstoves, this means Bouzovsko is now heating and cooking on 100% renewable resources!	**2021**	For years developing agencies had been implementing these technologies in the poor countries (while ignoring their own), and the technique was readily available and well proven. The program was initiated by Transition Bouzovsko, as the authorities had not set up a back up system for the gas supply, which got discontinued in 2019 due to the disintegration of a series of international trade agreements.

We celebrate the completion of yet another community greenhouse incl. biogas digester, the last in a series completing our mission of growing 150% of the vegetable and fruit production of Bouzovsko within the area; part of this success is naturally due to the campaign for individual vegetable and fruit production, along with the ‚adopt-a-garden' program, allowing for the increasing amount of climate immigrants to manage the garden areas for those residents who's not able to it themselves.	**2020**	 This process is another result of Transition Bouzovsko, which was very well supported by the local elders, as they had a central role in teaching their skills to the younger generations.
Final completion of the insulation program for all houses in Bouzovsko; insulated with locally made cellulose/hemp fibre, as well as specially pressed and dimensioned strawbales.	**2019**	This project was spear headed by PermaLot Centre of Natural Building, which had developed into a thriving ‚folk high school', teaching future trainers how to do these essential home improvements and natural building skills.
Bouzovsko is now a national inspiration for silvo pasture, as excess meat (130% of need in bouzovsko) is grown from farming cattle, wild pigs and deer within the existing forests, while securing hardwood timber production.	**2018**	 *Photo: Arkansas Forestry Commission Landowner Manual*
A mushroom farm opens, producing edible mushrooms on innoculated logs from orchards and forests.	**2017**	Spearheaded by one of the locals who returned from abroad with the knowledge. He started small and slow, but quickly gained an interest and several co-workers, setting up a successful interprise.
Opening of the Light Rail system, operated on locally grown bio-fuel from rape, sorghum, CTT and	**2016**	The system predominantly allowed for the easy transport of goods and locals within the Bouzov area, as by now the fuel prices had sky-rocketed, preventing many from driving their cars. 
Final implementation phaze of the ‚Poplar Plant'; a natural waste water system; the plants generate biomass for the heat/energy plant in Bouzov along with wool and meat from grazing sheep.	**2015**	 This was one of the last effects of the EU funding mechanisms, as soon after EU became disintegrated due to financial problems and the need to create smaller sustainable units, rather than the centralized EU.
Restoration of the old water mill in Bouzov Jerman, converted into an oil	**2014**	Klopina a.s goes bankrupt due to a combination of emergency stop of EU

press and textile mill to process local grown hemp to fibre. Providing more local jobs, also through the attached incubator for textile production.		subsidies and investigation by the EU fraud agency. Due to new emergency legislation the land returns to the locals as ‚village commons'. The villagers decide to implement silvo-pasture and wide spread bio oil production, along with fibreous plants for textile production. [http://www.unl.edu/nac/workingtrees/wts.pdf]
Integrated rice and duck farming, alternating with wheat and vegetables, initiated in the flooded meadow between Kozov and Jerman; A superior multifunctional growing system eliminating need for pesticides/ fertilizers.	**2013**	Funding is arranged for the light rail system and due to the national de-bureacratization the permits a rapidly secured, and work commenced.
Introduction of the Bouzov local currency to animate local exchange of goods and services.	**2012**	Transition Bouzov hosts a series of well visited sessions on issues such as insulation, bio-gas production, decentral heat/power plants, mushroom growing, silvo culture, vegetable production
Initiation of the construction of 30 zero energy housing estate, made from a local insulating and abundant material: Big bales of straw PermaLot hosts the European Straw Bale gathering in Bouzov Podoli.	**2011**	-Town Hall initiates funding and permit projects for restoration of old water mill and light rail system through EU subsidies and private investors. -Klopina a.s, (agri firm), decides to plant fruit trees on contour as alley cropping, to benefit from higher agro-subsidies. [http://permalot.org/files/u2/Jensen_LE_vs_PC_29-2.pdf]. They also file for permit to initiate aqua-farming by Kozov/Jerman. [Takao Furuno: The Power of Duck, Tagari Publications 01] Students of the school in Bouzov initiates a Bouzov currency. They simply followed: [http://transitionculture.org/wp-content/uploads/Lewes-Pound-How-To-Guide.pdf]
The ‚Business Express' is introduced; a 20 seater hybrid powered minibus drives executives from bouzovsko straight to job in Olomouc, delivering kids for forest kindergarten on the return run. This initiative makes Bouzovsko attractive for green executive families, and rejuvenates the town hall.	**2010**	-The Town Hall, in cooperation with local NGO PermaLot supports a resident in applying for state-funding and help promote the service. -New Town Hall members revoke the previous support for a central bio-mechanical plant and fast-track the project/funding process for decentral ‚poplar plants'. [http://permalot.org/files/u2/Waste_to_gold_02-06.pdf] -The Town Hall and leader of the Olomouc region pursuades the Brno development company to draw up a design for eco-houses. of local materials on the property they bought near Bouzov. Helps with promotion. [http://permalot.org/files/u2/BBB1228Final.pdf] The locals gets introduced to the Transition

		concept and a large group are in favour and starts planning the 12 step of transition.

4.2.1. Summery of Back-Casting and Transition tale:

Back casting should be a participatory process, partly to involve many people (people who'll afterwards have a vested interest in aiding the development), however also to secure a diversity of opinions and perspectives. While it is clear that the above is a personal ideal, and not likely to occur when viewed in the perspective of a Dutch National Environmental Policy Plan of 2001, which claims *„the solution of big and persistent environmental problems requires "system innovations…*

[and such]… *system innovations sometimes require a social transformation process (or transition) of more than one generation."* Never-the-less it outlines a potential solution for Bouzovsko to once again become self-sustained, as it pretty much were before industrilization, while clearly displaying that such development need to be embedded; „Owned" by the local residents in order for it to happen, and actively supported by the local decision makers and predominant industry.

The attached 'Transition Tale' is much more comprehensive, as it details a time after a certain collapse of the society, as we know it. It is based on the premises that we have enjoyed the longest period of peace in Europe in recorded history (apart from devastating regional wars such as in the Balkans, and civil wars as in Ireland), and that the foundation for this peace has been joint prosperity, much of it based on the availability of the very same resources which are now about to (or did) peak. Add to this a growing population of climate refugees from countries/continents surrounding "Fortress Europe", (14,877 emigrants apparently died during their attempt to enter EU since 1988 (www.fortresseurope.blogspot.com)…and it makes it realistic to wonder how long this may last; A 'siege' of Europe can not be sustainable as long as Europe relies so heavily on imported resources and labor from other continents.

Image. 4.2.a

4.2.2. Back-casting example related to the Future scenarios/stories

The 'space' within which the back-casting operates in is strongly connected to Holmgren's 'Earth Steward' scenario, somewhat combined with the 'Lifeboats' as the development has

been progressive since 2010; noticeable the back-casting does not entail riot, gangs or warfare; which is the development described in the Green Tech scenario. Naturally it falls closest to 'The transition vision' of Chamberlain's stories. Significantly it does not fall into the 'doom and gloom' perspectives, and it blends the gradual demise of the 'top-down' approach with the evolvement of a 'bottom-up' force. –The 'Transition Tale', on the other hand is located more towards the 'Mad Max' corner, with it's emphasis on defensive measures of Bouzovsko, and past unrest, however the underlying 'glue' for the development is clearly the positive community spirit. The effect of this identification of identification within the 'space', is that it is clear that the major instrument of change in the back-casting and tale is that of the local population, initially supported by the local town hall. The prospective of that happening will be viewed through the other previously introduced methodologies.

4.3. Over-all comparison of case stories

The following is diverging slightly from the aim of this thesis to analyze the potential of implementing the transition steps in Bouzovsko, however it is included as it serves to give a visual relation of the empirical cases including Bouzovsko.

It is important to emphasize a large disclaimer for the comparison: All figures are based on a personal estimation of the individual areas, based on my experience of having lived in the region of all apart from TCLocal (minimum 2 years each place), along with visit and conversation with key players of the initiatives. In other words; the figures are arbitrary, however function as an overall index, outlining the differences in transition development/potential of the areas:

Cases	*Estimation of Degree of Fulfillment of Technology Recipient*					
	1. Interest	**2. Power**	**3. Organization**	**4. Information**	**5. Access**	**6. Knowledge**
Ashland	60%	60%	50%	70%	100%	30%
Willits	40%	40%	70%	60%	100%	40%
Norway	2%	1%	0%	30%	100%	50%
LCLocal	50%	40%	60%	70%	100%	40%
Bouzovsko	1%	0%	2%	30%	100%	60%

Notes: The table outlines my personal estimate of the potential:
1. Positive interest in the particular population for the Transition approach.
2. Potential influence within the power structures of the area.
3. Degree of organization (achievements) of Transitioning within the area
4. Easy access by the general by the general population of the area to information about transitioning.
5. I'm not aware of any legal or financial obstructions preventing any area from transitioning.

6. I refer here to the knowledge of the transition technology, which for a large part is based on traditional resilience skills; strong in Norway and Bouzovsko and generally not in USA, however other skills such as creation of alternative currencies are better known in USA, indeed existing in both Willits and Tompkins County (TCLocal).

4.4. Transition Bouzovsko related to social carriers of technology (and related) methodology

Regretfully I did not execute any surveys of the local residents of Bouzovsko, nor do I have a series of representative interviews to scientifically analyze the possibilities of successful "Degree of fulfillment of technological receiver", should the implementation of the back casting be an option.
I am basing the following statements on my subjective opinion, after a series of experiences of managing a Local Agenda21 based NGO in Bouzovsko the previous 11 years, along with excessive interaction with the Czech local, regional and national administration, as outlined in previous studies (Please refer to page 2; all projects available on www.permalot.org).

It should be clear from both the back-casting example and the 'transition tale', that point 4,5 and 6 of the relative measurement of 'Social Carrier of Technology' is to a certain extend available for the recipients; the residents in Bouzovsko, though hampered by the dominating lack of language skills. The Czech information exists, but is easily over-looked, especially if the interest is lacking. As mentioned in chapter 2.2., this is likely the biggest factor undermining the acceptance of 'Transition Bouzovsko'; The first three factors*; interest, power and organization.*

During the past months research into the transition concept, including conversations and correspondence with several very skilled and involved 'transitioners', I've repeatedly been offered advice of how it might be possible to engage the rural population through a variety of approaches, from asking them to demonstrate their particular skills, interviewing them about Bouzovsko in the past, encourage them to reflect upon why they are active in the volunteer fire brigade, and transpose this into transitioning, introduce it through the pubs and draw parallels to the resilience which many favor as seen in their gardening, or husbandry…
Never the less, I don't believe it would be successful in generating a 'transition-interest' among the locals.

The reason for this stance is likely due to what I generally refer to as *"Post-Socialism Stress Disorder"*, which has deep roots in the local Moravian population, if not in the country (and surrounding countries?) in general. This is exemplified with an intuitive counter approach to most things of a 'social' or 'community' nature by large parts of the population. Even among the fraction who search for such issue is it clear that there's a block: Throughout numerous attempts during the past 20 years, there's still no established eco-village or co-housing community in The Czech Republic.
In the example of Bouzouvsko, we're significantly dealing with the part of the population who didn't leave. That is; the majority of residents who were ambitious, creative or seeking have left during the past 20 years in their quest to fulfill their needs. The remaining population moves slow, (the whole region ('Hana') is somewhat known for this within Moravia), and in general the village folks of Eastern Europe are quite a different breed than that of N. Western Europe or the other receptive transition areas.

This is not to say that a given concept could not gain approval/respect, however the approach would have to be from someone allied with the local authorities, with a proven local track record of a considerable enterprise. The person would need to be male, more than 40 years old, (preferably slightly overweight!) be good at establishing 'camaraderie' in the pub and drive a respectable car… Even so this would lead to approval/respect, not necessarily a public involvement, and not the non-person fixated development which is so central for the Transition movement; it's even part of first step of the transition ladder: *"Set up a steering group* ***and design its demise from the outset****."*.

The biggest obstacle is somewhat related to the experience we had in Norway, which may further explain the similar hardship for transitioning in Norway: In Bouzovsko the typical villagers are already set up to take care of themselves. Perhaps they now have adapted to the new gas heating, however it wouldn't take much to switch back to the wood heating (however the central village of Bouzov is heated by a modern biomass plant). Majority takes care of their own supply of potatoes, onions etc, along with eggs and rabbit meat. Informal local direct exchange systems are in place already; this is the central function of the pub talks, however it is on a very person-to-person level (it has so far been impossible to introduce effective LETS systems in Czech and Slovakia due to this background). The houses rely on private wells, and the fundamental living situation under the soviet regime is not more than 20 years away, so the rural people have not forgotten the basic skills necessary to maintain life;

securing heat, providing food, maintaining shelter; perhaps this also explain a resistance towards romanticizing them?
The locals can be described as quite skeptical and in a way so grounded so they have become the definition of complacent*; "self-satisfied, usually in an unreflective way and without being aware of possible dangers"*. (Encarta World English Dictionary, 1999). From personal conversations it is evident that an awareness of the depletion of resources and climate changes exist among some, however the majority have an inherited feeling that changes can't come from the bottom (part of the socialist legacy, though a contradiction in terms!), others have the opinion that either there's no crises, as their president claims, or that technological fixes will take care of it all. I have not encountered anyone with confidence that the issues will be solved politically. -On a national level a poll of 1260 Czechs during start of December 2009, claims that 80% of Czechs believe global warming exists and 75 percent of them believe the change is due to human behaviour.

This lack of interest relates to point two of the *'Social Carrier of Technology'*: **Power.**
As outlined in chapter 2.3, the local power is constituted by the town hall, which for better or worse represents the inhabitants. Throughout the past 10 years the town hall has been administrated by the same Mayor, who with an inner chamber of 4 of the 15 town hall members in effect rules everything, frequently ignoring laws and regulations, and often according to the directions of the large agro-company Klopina a.s. (Which traditionally employed 100's of locals and supported the area's culture and infrastructure, however now only employs about 15 locals full time, and due to mergers operations have moved 30 km away).
Though a biomass heating plant was constructed some 8 years ago to heat the household in the central village of Bouzov, any other 'green' measures from the town hall are very unlikely under the present management.
…Which again induce an obstacle living up to point three; **Organization.** Majority of the infrastructure is outlined within the transition manual, however as mentioned above the concept of locals organizing around a concept seem quite unlikely to me, and as outlined in the back-casting, the initial support of the town hall would be very beneficial.

4.5. Radical Technological Change

During the introduction to the concept of 'Radical Technological Change', it was illustrated how transitioning would evoke changes to all of the 5 components, making it a class 1 'Radical Technological Change'. It was also highlighted that the solution for implementing such changes necessitate the: *"construction of new organizations having a new set of regulative, normative and cognitive institutions".* In other words a revolution!?
I believe I safely can assure that there is no revolution looming on the horizon in Bouzovsko, which is very unfortunate for the introduction of Transitioning in Bouzovsko.

4.6. Partial conclusion

The exercise of 'back-casting', enabled us to highlight the need for participatory involvement by the residents of Bouzovsko, preferably supported by the town hall, in case the outlined positive and sustainable end result should be achieved. By relating those parameters to the methodology of the relative measurement of *'Social Carrier of Technology'* and the parameters for *'Radical Technological Change'*, it became clear that a seemingly insurmountable dilemma occurs, as it all falls back on the interest of the local population; the central cause of this thesis as expressed in the sub-headline of this thesis: *'socially/culturally less responsive areas'*.

5. Conclusion

„If there's no action before 2012, that's too late. What we will do in the next two to three years will deteremine our future. This is the defining moment."
Rajendra Pachauri
(head of IPCC)

The Transition approach is unique in the positive bottom-up approach, which is what is causing the extremely rapid growth throughout the world. The aim of this thesis was to review and analyse if such approach also is possible in areas where the residents due to a dfference of social/cultural background are less apted to welcome such foreign community approach of conscientious down-scaling. As a case example such approach in regards to the rural population of Bouzovsko was considered.

In lieu of the outlined possibilities for a transition development, as presented in the back-casting, and Transition tale, weighed with international scenarios of future development, chosen scientific methodology and compared to four different case stories abroad, this report must conclude to the 1st research question, that: *„**No**, the Transition approach **is not** applicable in socially/culturally less favorable areas"***.** Due to the current lack of interest among the locals, combined with the historic social/cultural background of not organizing societal changes from the grassroots, as outlined in Chapter 4.4.

Scenarios were presented to answer the 2.nd research question: "*How can Bouzovsko again become sustainable?"* As examined in the thesis these technology changes constitute radical changes and naturally other avenues are possible; much of this is determined by the speed and extend changes need to happen. The parameters of the outlined changes was to achieve close to 100% autonomy for the area during the next 15 years; quite strict parameters compared to the 10-30% Co2 reductions being negotiated at COP15 at the time of writing this thesis. The cause of this approach was best articulated by UK's Premier Minister Brown at COP15, where he pointed out that science has clearly proven that without action the increase in temperatures will lead to catastrophes as typhoons, floods, hurricanes and desert: *"Without communal*

action we'll create a new generation of poor climate refugees who has been expelled from their home" (Brown, 2009). It is noteworthy that in essence the COP15 is a fractionalized conference and view, as it does not take into effect the peaking fossil fuels. The negotiation about financial contributions have little relevance, if the foundation behind all financial activities increase with 300%, as experienced during the price increase of crude oil during summer of 2008. The scenarios for Bouzovsko includes this element, which is why the aim is autonomy as rapid as possible, in essence learning from the Cuban example of 1989, where total system failure occurred during a matter of months, due to the reliance of external resources (from Soviet in '89 and emphasized by the US embargo of 90'). (Wright, 2009), Unfortunately the above conclusion of not being able to utilize the transition approach in Bouzovsko, severely hampers the suggested solution for this 2nd research question. Perhaps the best solution is the one articulated in chapter 4.5, in effect echoed by Venezuela's President Hugo Chavez at the COP 16, who referred to the signs of the NGO's saying: *"Don't change the Climate; Change the system"*(Chavez, 2009).

This radical statement brings us to the third research question: *"How may the Transition concept best be applied in Bouzovsko?"*. The outcome of the thesis points quite clearly that what's necessary is *a right solution at the right time*, with the significant emphasis that the right time is *when the population is ready for it,* i.e. is aware of a vested interest in a solution. One solution to this dilemma is the approach outlined by the TCLocal initiative (chapter 3.2.3. and appendix), where a small group of concerned residents (with sufficient expertise) join efforts and develop a 'life-boat' plan for a sustainable development for the area, in order to have such plan of action in place as an alternative 'shock therapy' once the surrounding residents wake up to the realization of the need. -Much like what economist Milton Friedman taught and Jeffrey Sachs implemented for the change from socialism to capitalism for the Eastern European countries after 1989, (Times, 1992) and brought to world attention by Naomi Klein (Klein, 2007), however with the social/economic/environmental sustainable approach as seen in Cuba after 1989 (Wright, 2009), which is widely known as the only real example of full-fledged peak-oil impact of agriculture and food security in the world.
Such solution should not be viewed as an underground conspiracy by a reclusive group, more as a transparent lobbying effort (as clear from the web site of the TCLocal), which builds understanding and trust among the decision makers as part of gaining the data for their research, ensuring that the decision makers are aware of their plan, once the situation is ready for it.

Concluding the thesis, this is the solution I advocate for a historically socially and culturally less responsive area as Bouzovsko, as well as areas with similar dilemmas towards implementation of the Transition approach.

Going a little further than the aim of this thesis, it may be suitable to ask; "Is the Transition methodology universal applicable?". For instance it is based on using the technique of „Open Space", but is the time right for such approach in far east Asia, in Russia...? It is even 'breaking news' for majority of Czechs. It is the same dilemma with various participatory village planning events. Four years ago I suggested using one and was told by a Mayor that it would never work. Last month a workshop was organized for community organizations about it; It may start in a year or two. In brief; many societies are simply not ready for such participatory events, as this development appear strongly connected to the phenomenon which might be called „open society" combined with 'Post-consumerism'.

Allow me to illustrate the over-all point of the conclusion with the following story by John Michael Greer from 2004:

"Imagine that you're on an ocean liner that's headed straight for a well marked shoal of rocks. Half the crew is dead drunk, and the other half has already responded to your attempts to alert them by telling you that you obviously don't know the first thing about navigation, and everything will be all right. At a certain point, you know, the ship will be so close to the rocks that its momentum will carry it onto them no matter what evasive actions the helmsman tries to make. You're not sure, but it looks as though that point is already well past.

What do you do? You can keep on pounding on the door to the bridge, trying to convince the crew of the approaching danger. You can join the prayer group down in the galley; they're convinced that if they pray fervently enough, God will save them from shipwreck. You can decide that everyone's doomed and go get roaring drunk. Or you can go around quietly to the other passengers, and encourage those people who have noticed the situation (or are willing to notice it) to break out the life jackets, assemble near the lifeboats, take care of people who need help, and otherwise deal with the approaching wreck in a way that will salvage as much as possible.

Me, I suggest the latter. Life jackets, anyone?"

6. Recommendations for further research

Throughout this process it seems that every time I open a new door, it leads into a corridor filled with more doors! The potential for further studies are numerous, these simply stick out in accordance with my perspectives:

1) Economic influence of climate change: As mentioned initially, last years financial crises caused a 10% Co2 emission cut in USA. When China matures, a large part of their heavy industry will be altered/stopped as they upgrade into a service industry; Bjorn Lomborg claims this to be a 40% Co2 emission cut (Lomborg, 2009). Never mind the notorious lack of scientic fact from the statitician, the point is that peaking will inevidently change rate of emissions. This would lead to a series of different parameters which constitute the background for the Transition Initiatives.

2) Unfortunately I first became aware very late of the methodology developed by Social Scientist Ronald Inglehart to analyse post-materialistic influences. It would be very interesting to use this to analyse a similar dilemma as the one posed in this thesis.

7. Potentials for Improvement of Thesis

The thesis could have been greatly improved with a questionaire or interview survey of a qualitative amount of local inhabitants of Bouzovsko; Optimally also with a similar size reference group of residents in some of the few advances ‚green pockets' in Czech Republic, such as Jindrichovice pod Smrkem or Hostetin. -It could further prove the issue of how those places became ‚green', and how deep does it stick? –It is generally known that in bother cases it is connected to a charismatic Mayor, and in the case of Hostetin; the immense amount of outside funding to implement a series of green issues. Question is; how does the ‚old-timers' in the village perceive it?

Another approach would have been to have attempted to arrange some of the transition steps, and then analysed how it went. How many locals turned up? Interviews with both those who did, and some who didn't.

In many aspects of writing this thesis I've had to repeatedly ask myself; Am I simply recommending the TCLocal approach due to a fear of facing the locals directly?

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Index of figures and images, credits

Attachment 1:

TCLocal Research Topics

Last revised 7 December 2009: TCLocal Research Outline 4

Key: The heads in ***bold italics*** are upper-level "subjects" and those in roman are lower-level "topics."

Basic assumption: Global oil production will peak or plateau sometime in the next few years, after which prices will continue to increase for the foreseeable future. Consequences will include supply chain contraction and reduced mobility.

Scope: The decade following the peak of production. This puts the focus on the economic consequences of steeply rising fuel costs, but actual shortages may also be in the picture.

Participation: Persons wishing to take ownership of a particular topic not already assigned should contact the TCLocal editor, Jon Bosak (bosak@pinax.com).

People transportation

Public transportation (buses) — *Simon St.Laurent*
Emergency services — *Simon St.Laurent*
School transportation
Transportation by water (ferries, etc.)

Freight transportation

Local trucking
Rail transport
Barge transport

Transportation infrastructure

Roads, bridges, rails, etc. — *Simon St.Laurent;* ***published March 2008***

Health care

Definition of baseline public health care services — *Bethany Schroeder*
Distribution and delivery of health care services — *Bethany Schroeder;* ***part 1 published October 2008; part 2 published December 2009***
Paying for basic health care services — *Bethany Schroeder*

Education

Definition of baseline public education (e.g., eighth grade)
Developing curricula to prepare for anticipated local employment
Distribution and delivery of educational services
TCLocal Research Outline 1 7 December 2009

Water at the community level

Analysis of local water outlook (including climate change)
Water catchment at the community level
Distribution of water at the community level
Water quality at the community level
(Position on City WTP decision ***published May 2008***)

Land use

Optimal balance of farming, grazing, and timber production

Urban design

Urban density and redesign for low energy use — *Josh Dolan;* ***parts 1 and 2 published July 2008***

Building community

Neighborhood based strategies: self-help through mutual aid
Building social networks through community organizations

Local agriculture and local food supply

- Overview: Food production systems — *Karl North;* ***series in progress***
- Baseline human nutritional requirements expressed in terms of food products
- Foodsheds (was: Carrying capacity of current and potential county agriculture) — *Chris Peters;* ***published March 2009***
- Local soils and their regeneration (cover crops, composting, etc.)
- Local subsistence farming
- Fruit trees — *Angelika St. Laurent;* ***published January 2008***
- Small-scale livestock — *Angelika St. Laurent;* ***published December 2008***
- Local food distribution
- Food processing — *Seph Doliner;* ***published February 2009***

Local agriculture as an industry

- Defining the local agricultural mix
- Commercial crop production
- Commercial forage and silage production
- Commercial tree crops
- Commercial dairying
- Commercial meat production
- Commercial poultry production
- Commercial food processing and preservation
- Commercial winter food production
- Agricultural employment
- Training for agriculture
- Subsidizing local agricultural redevelopment
- TCLocal Research Outline 2 7 December 2009

Local hunting (seasons, licensing, training, butchering, storage)

Local aquaculture

- Current status of local aquaculture
- Lake Cayuga as a source of food
- Local fisheries
- Local ponds
- Creating new supplies
- Training for aquaculture

Local manufacturing

- Defining the local manufacturing mix
- Local manufacturing production
- Local manufacturing employment
- Training for local manufacturing
- Subsidizing local manufacturing

Repair as a local industry

- Training for re-use
- Training for repair
- Building a local repair industry
- Subsidizing a local repair industry

Retail trade

- Re-establishing the local reseller network
- Distribution of retail goods
- Clothing (local fashion, recycling)
- Buying local

Energy production

- Milliken Station/AES Cayuga

Alternative energy at the county level (wind, microhydro, solar)
Biomass options **— *Krys Cail; overview published November 2009***
Local biofuel production
Local wood heat **—** *Tony Nekut; scheduled for January 2010*

Waste disposal — *Tom Shelley;* ***published January 2009***

Garbage disposal/composting
Human waste disposal/composting
Runoff disposal/municipal water catchment
Trash disposal
TCLocal Research Outline 3 7 December 2009

Household preparation

Overview published 2008, *but the individual topics are still open*

Energy inspection
Insulation
Water catchment for households
Alternative energy for households
Winter food supply and preservation for households
Emergency provisioning

Social and psychological adjustment

Risk communication & change theory: opportunity and/or crisis
Dislocation & shifting ideologies: creating paradigms that work, identifying those that don't
Individual psychosocial adjustment
Peak oil and the family
Role of the community & local identity
The peak oil experience across the age spectrum: children, youth, middle years, the elderly
Special needs: physical, emotional and mental disabilities
Globalism in a relocalized world
Post peak leisure & recreation
The arts & cultural expression

Information infrastructure

Local libraries
Local radio
Local printing
Local phone service
Local web service
Schools as distribution points

Impressions from a travel to Bouzovsko *17.09.2026*

…It is such a lovely landscape around Bouzovsko, thought William Easton, as he looked out the windows of the light carbon[1] mono rail[2] cart, which drove him the last stretch of the journey from Moravske Trebova to Bouzov Podoli. He enjoyed watching the well-managed fish/duck/rice paddocks[3] after the stop by the ol' wood mill in Kozov. The paddocks stretched as far as to the regions pride; the bio-mass generating poplar waste water re-use[4] station between Jerman and Doly.

Will hadn't been in Bouzovsko the past many years, and even though news were hard to come by these days, (the few remaining internet servers[5] were long overdue for renewal) he had received sporadic mails from his friends in the region and thus had been able to follow the development somewhat… He had heard about the success of the steam turbine by the bio-mass plant in 2015, which were able to drive quite a large central crankshaft, powering a sizeable wooden horse wagon industry, situated in the old buildings of the JZD; another of the quality local products which Bouzovsko were well known for in the wider region; Well, 'sizeable' and 'industry' are terms which should be considered in perspective with the After-Peak[6] development: Naturally it meant that everything were handmade on the steam powered lathe, wood cut on the table- and band saws powered by same system and so on. None-the-less it occupied some 50 people, including the people driving the final products down to the light rail terminal, situated after the restored watermill in Jerman[7] (where also the horse-pulled barges docked for shipping food and products to Olomouc and even further beyond on the Morava river) [8].
…But yes, thoughts were going astray; here it is; the 'Poplar plant' as it commonly was known. Off course, now-a-days almost all surviving rural areas has one, however this was a significant poplar plant as it was the first in what used to be called 'The Czech Republic' (back in 2010 when it first was made). It now seemed odd to think that people could ever conceive of using energy to get rid of something as useful as wastewater, but then again; most of what happened in the pre-peak years didn't make much sense to anyone anymore! The concept was very simple; to canalize all effluents from households into a holding/settlement tank and gradually let all of the liquids irrigate the poplar plantation, which in turn were coppiced and chipped for the bio-mass plant. Simple and effective; didn't even require a liner. Back in those days it had been used in Hungary and Denmark, however it was only due to that peculiar 'villager-revolt' back in 2009 that it actually happened here in Bouzovsko…

Poplar and irrigation ditches; sheep grazing the extra grasses. This Hungarian NWWTP provides biomass, wool, meat and employment and aesthetic qualities, while serving its cleaning function.[1]

[1] 50% lighter than steel and requires much less energy for production : BMW Group 2001/2002.

[2] Rail constructed 1 meter above ground. Train is powered by stable old diesel motor using biodiesel.

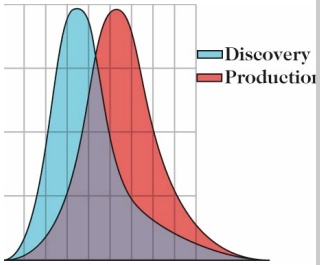
[3] Integrated rice and duck farming, alternating with wheat and vegetables: A superior multifunctional growing system eliminating need for pesticides/ fertilizers.
Takao Furuno: The Power of Duck, Tagari Publications 01

[4] Poplar plantation in Aparhant, Hungary treats waste water from 1200 P.E – 80m3.d. It provides 30–55 t/year on 1,6 hectare
Bodik, et al: Sustainable Sanitation In EE, Nitra,'07

[5, 6] "Peak Oil refers to the maximum rate of the production of oil in any area under consideration, recognising that it is a finite natural resource, subject to depletion."
--Colin Campbel
The development described in this letter follows the theory that once hydrocarbons are gone, we will be forced to resort to a simpler lifestyle, The state will no longer exist as a meaningful entity, interdependence will be unsustainable, security will be handled by individuals or your community. Hence the international communication systems has broken down in during years of wars and looting.

[7] The mill was renovated in 2015 to make biodiesel from local produced crops

Lets see; how did the story go? Yes, it was after the winter in '09 where Russia had closed of for the gas pipes to Ukraine[9], causing several countries to declare a state of emergency. In Bouzovsko at that time there were talks of making a new regional plan, and at the meetings the villagers from villages around Bouzov vented their dissatisfaction: It didn't seem right that it only was the central village of Bouzov which could rely on central heating from local bio-mass, while all surrounding villages were at the political whims of business managers or presidents in Russia/Ukraine. There were even talk that it could have connection to the fact that a majority of the town-hall members lived in Bouzov[10]…(!). At the meetings it became clear that an enlargement of the bio-mass plant would naturally require more bio-mass and expense for piping, but as simultaneously plans were made for waste water canalization, it was decided to press to make a pilot project where both type of pipes would be installed at same time, and the mechanized waste water treatment center would be replaced by a virtually 0 energy natural system growing biomass.[11] –It was a surprise to many locals that the ones who stood up the strongest was a group of tenants who lived in the renovated school in Podoli. The reason was simple: They had unified as they realized their children were getting chronically ill from living in the fungi infected un-insulated building, while paying fortunes to heat up the building with gas during winters, and suffering under the poorly designed Velux green house effect in the summer![12]



Now, it's clear these changes wouldn't have happened if it wasn't because the present Heitman[13] was about to relocate to Bouzov, and he could see a possibility to gain a green image here. He had been hearing how the production of oil was peaking back in 2008; in other words that the half point of all known oil deposits had been found, and that from now on there would only be less and less oil available and for much higher costs. He was also aware that the same was calculated to happen for uranium, gas and coal within 20-30 years,[14] and as he were interested in retiring in comfort, he figured he might as well pull some weight in the development of Bouzovsko!

He did it quite effectively. After having received nationwide media coverage for the double solution regional waste and heating system, he came up with a new triple solution; As tourism were on increase (which meant more cars in his retirement heaven), and almost everyone were commuting out of Bouzovsko for work, he came up with the idea of the light-rail system; the train were driven by 99% bio-fuel grown in Bouzovsko (rape, sorghum, CTT, sunflower)[15]:
1) It was a virtual tourist magnet for the few years where significant tourism still existed,
2) As the benzin prices kept climbing, a majority of the Bouzov commuters enjoyed the comfortable ride to Moravske Trebova, Mohelnice or Litovel…
3) The initiative made the new housing development in the outskirts of Bouzov attractive to the 'eco-executives'; the various well educated families in managerial positions who also knew what were happening with peak-oil, and were interested in a sustainable solution. They got together with the Heitman, altered the approved housing project to be a demonstration model for a 0-energy housing estate, made from a local insulating and abundant material: Big bales of straw! – Again: Well known in other countries, but this was a first in The Czech Republic, and then a whole subdivision: Bouzov gradually became known as being progressive!

[8] Not many people are left in the cities anymore, as there were little possibility to grow food and essentials, especially as the surrounding farmland had been turned into suburbs, hypermarkets and factories

[9] For the sake of this story, it is assumed that C.R. experienced the same as Bulgaria, Croatia etc. during January '09

[10] For years this was the case and many of them colleagues, neighbours and friends: all major investments were centralized in Bouzov.

[11] Detailed in study report "From waste to gold" , available a Bouzov O.U. Jensen, 2008.

[12] The school was renovated by Bouzov O.U in 2005. Visit and see/hear complaints for yourself.

[13] Martin Tesarik.

[14] See note 5 and 6 for oil. The other finite resources are calculated to peak between '22 and '30, but may be earlier if demand increases as rapid as likely. http://www.energybulletin.net/node/29919

[15] By 2026 this was normal in most of the remaining societies, though priority was given to growing food crops. This has also limited the amount of grazing land to a minimum reserved for workhorses and oxen, which ploughed some of the fields.

…Suddenly things started happening fast, as now it was a group of progressive executives, and not just individual disgruntled villagers and a solo politician.

History perspective: 2011-2014
The world was now in a difficult period, as blackouts[16] were happening more and more frequently in many countries due to lack of fossil fuel and lack of replacement systems. The financial crises which appeared in 2008 seemed endless, as all the bare necessities raised in price due to the constant climbing oil price; Everyone realized clearly how much oil actually goes into making fertilizers, agro-chemicals, tractor mileage in large scale agriculture and the transport to the supermarkets[17]. Simultaneously it seemed that a 'rust' was killing off more and more wheat and soy[18], which led to scarcity of the basics foods as well as sky rocketed meat prices (as soy were used to for animal feed). Poaching was the 'name of the game'; The previously so numerous deer and wild pig population around Bouzovsko had dwindled to a minimum…

Well, back to reality now, Will thought, as he had to change monorail in Jerman. It was nice to see how the docks and transfer station had life, hear the splashing from the mill wheel in the back as it powered the oil press and thrashing machine for the hemp[19] fibers; another precious Bouzov product which first of all were used by the about 5000 inhabitants of Bouzovsko, but some were also used for what jokingly were referred to as 'foreign trade'; with the neighboring regions, or the occasional traders allowed to enter Bouzovsko by the townsfolk on guard at the time: This was still considered a necessary risk as certain items still were necessary to import, but the traders were always carefully watched and never allowed to see the interior of Bouzovsko...
…But to look at the brighter side: the oil harvest looked promising this year and it was a delight to see and listen to the many people in the field, as they were singing while some were turning the hay with horses and others on another field tying bunches of wheat: It reminded of the folklore culture of 100 years ago, which also was part of what had caused the positive transition[20] change in Bouzovsko: Not many remembered, but it had originated with the funny habit of the Heitman to be wearing traditional clothing whenever he was in Bouzov. As the media focus grew,

wearing parts of traditional clothes became a way for people to signalize that they part of the 'movers and shakers' in the community. It also again became usual to have un-amplified traditional music for Maja and harvest celebrations, and to gather during the winter to sew the clothes, or simply chat while knitting socks. This again had the effect that more people were attracted to Bouzovsko, as it provided a feeling of a quality lifestyle, that many people were missing in the age of PC's, Ipod's and mobiles, where most communicating had grow to be through something called 'sms'. Little did the people in the field know that the dress, which now was made locally out of necessity (as it no longer was possible to get cotton, acryl, rayon and all the other 'exotic' textiles), actually had been a trend some 10-15 years ago!

The monorail direction Bori, Bila Lhota, Rimice, Litovel, was now leaving with Podoli[21] as 2nd stop after the forest work station stop in the valley; this was another bustling scene, with logs being pulled by strong horses to a ramp which would unload them to a freight rail wagon, which would drive them to the (water powered). Kozov saw mill. There were also a shack with people making wooden shingles; an item much in demand as the once popular asphalt roofs installed in the

start of the millennium

[16] Blackouts: These longer periods without power were known in USA from 2005-2008, however also became normal in Europe, Australia,Japan etc after 2010, due to lack of electricity at time of peak demand.

[17] Modern agriculture were based on a very high degree of kilojoule input; At times the 'organic' agriculture even had used more Kj per kilo food on the table. As the energy were based on oil, the entire agriculture system collapsed during a few years.

[18] Black stem rust Puccinia graminis, first surfaced in Uganda and spread to Kenya and Ethiopia, with both countries experiencing serious crop yield losses and subsequent civil unrest due to food shortages. In 2007, FAO confirmed that a more virulent strain was found in Yemen and Iran. Similar issue for a soy rust. http://www.un.org/apps/news/story.asp?NewsID=25859&Cr=cereal&Cr1=

[19] Technical hemp was re-introduced to Bouzovsko in 2007, and ever since became more and more valuable to the local area. Naturally after "The Fall", noone would use the valuable fibre for biomass; all were utilized for clothing, building or insulation material, and the seeds were valuable for nutrition or medicinal properties.

[20] The 'Transition movement' was initiated in UK in 2006, and spread rapidly throughout the world. The simple concept was for citizens concerned about the society's reliance of fossile fuels, to join and make local action plans for a transition to a more sustainable solution.

[21] Part of the success of the monorail was that, unlike the roads, it actually traveled the most direct way towards where most people were commuting, at the time of construction: It cut across from Jerman to Podoli following the contour, and from Podoli over 'U Bori' and down to Rimice to join parallel the highway to Olomouc. This made as fast and more effective than

now already were wearing out and hard to repair with the available materials. Some of the workers here were busy tending inoculated mushroom logs[21]; an important source of protein, now where the typical diet had become predominantly vegan, apart from the occasional ration of fish, duck or sheep; It was even rare that people had rabbits now, as everyone were aware of the waste of kilo-joule in rearing animals for meat consumption…

As the train appeared from the forest to the food forest surrounding Podoli, Will were delighted to see how the small trees he had helped plant in rows on contour on the vast hills North of Podoli now were tall and bore a bountiful fruit harvest: The lines of trees had 20 meters between them and there were never two trees alike next to each other. In the rows between the trees were various berry bushes. Will noticed that it likely were last time they would be intercropping grains between the rows, as the tree crowns now had matured and out-shaded most of the area. In any case the area could now serve well as foraging for chickens and to grow winter crops of kale. This method of farming had proven to provide 30x more yield than that of the previous monoculture, while preventing erosion, self fertilize along with providing a natural immune system for pests. [23]

As he came closer to the village he could see a group of youth being trained in horseback archery by a young rider with long blond hair; he smiled as he saw her string, aim and shoot 5 arrows to a target on one pass of the target; the last arrow was shot in an almost impossible backwards twist of the body while maintaining full gallop! [25] No wonder the defense system of Bouzovsko was well respected with girls like that around!

A group of locals by the station in Podoli looked cautiously at Will as he got off the monorail. Strangers was not a frequent sign, and always a cause for worry, as there still were gangs of out-laws preying in the countryside; Most of the survivors had relaxed since the initial years of civil unrest which slowly started in 2012, and let to the what was know as the 'The Fall' (of civilization as it was known) in the great civil war of 2014[26], however you never knew with strangers in the interior of Bouzovko: were they spying to plan a larger attack?
The atmosphere cleared as the blonde rider appeared by the station in gallop. She made a hair rising stunt as she slowed the horse, suddenly stood up on the rump of it and made a backwards salto, landing on the ground not far from Will, still with her bow in hand. [25]
"Hi Uncle Will!" she cheered in English with a big smile on her face.
Will, (who had literally jumped a meter backwards during the maneuver, and was considerable paler than a few seconds before), suddenly realized that it was Johanne, the daughter of her friends; a daughter he last had seen back in 2014 when she was 7 years old.
"Jo! What kind of greeting is that? Trying to kill me from a heart attack before I get to meet your parents?", he shockingly exclaimed. *"Don't you realize I could have killed you if I hadn't*

[22] Mushrooms

[23] Intercropping

[24] The art of horse archery goes back to Djengis Kahn, and is now a popular discipline internationally; it is almost a national sport in Hungary.

[25] A world champion in horse acrobatic comes from Pavlov Radnice, and together with Hana Sramkova of Podoli, they started teaching local youth their acrobatic and control of ponies. During the civil war these skills, along with the small agile ponies in the forested terrain, turned out to be essential for winning several of the battles of Bouzov

[26] Civil war of 2014

recognized you?" he said, trying to gain some self esteem among the crowd of locals around him: It didn't work much, as they now changed from a discreet snicker into an obvious laughter: Not only were his weapons safeguarded by the guards at the Bouzovsko perimeter[27], but it was very clear that he had been closer to wetting his pants, than to launch an attack…
Jo laughed along, stepped closer, gave him a big hug, before she whistled for her horse which now had returned to the gathering of people. She laughingly replied: *"Ah, I just thought you'd be happy to see some of the horse acrobatics we're so known for here in the valley, uncle Will? Come on, if you can pull your self together a little, I'll help you with your luggage. My folks have a mean cider*[28] *ready for you which should help you get some color back in your cheeks!".*

The locals were now well aware that this was the old friend who had been expected to arrive this season, and none the least a friend who had helped out during the initial 'Transition Bouzovsko' period. One of them took a stepped forward, offered his hand for a handshake and expressed in poor English; "*Thank you Will. Back in '11 I didn't think much of all of that transition stuff, but now I'm mighty happy for what ya all did. You know if it wasn't for the transitioning to alley cropping we'd all be dead from starvation by now; even if we had we managed to survive the war"*. Will was touched, shook his hand, looked the man in the eyes and simply said: "It was nothing". He was happy for the distraction of handing Jo his backpack, and started walking away towards his friend's house. He hadn't walked far before the voices of the locals reached them, as they sang out a song describing the transition changes and the bounty of the harvest as a tribute to him. –Choir singing had gained a considerable revival in the after-war years. It served as a communal bonding in times where community was a necessity for survival. It also served to keep up a rhythm and spirit while working manually together, and none-the-least it was one of the best ways to keep up the communal history, in an era where almost all media had gone by. –Paper was a very scarce article, electricity much to precious to use on such entertainment, and the various radio and TV stations had long seized to exist, as the infrastructure of cities turned out to be completely unsustainable and prone to riot, rape, pillage, hunger and virus as history more or less had replayed the story of the fall of the Roman Empire: Only this time at a record speed, as the civilization had become far more dependent on resources from afar; a resource flow which initially became sporadic due to the unrest in the Mid-Eastern oil producing countries, and which utterly failed due to the nuclear war in the mid East which hit the oil fields in 2013, completely stopping 90% of the Worlds source for oil. This again had let to an international breakdown as all countries were forced to look after themselves: Russia stopped exporting gas, Norway and UK reserved their last remaining North sea oil for themselves and so on, adding to the 'The Fall' of civilization, much as what previously had happened for the Roman Empire, the Inka's, Mesopotamia and Easter island, as they all awoke to the consequences of depleted resources.

[27] Despite 12 years of relative peace, it was still necessary to have 4 groups of horsemen patrolling the perimeters, and the only gates by Kozov, Vltice, Bori, Slavotin and Kaderin each had their permanent citizen guards which generally did not allow entrance. Reluctantly a fair amount of the electricity capacity of Bouzovsko powered cameras and infrared alarm systems along the fences and moats surrounding Bouzovsko, Naturally this was not 100% effective, but it had minimized the attacks by sporadic survivors, and even helped warn about some more serious attacks by organized militant groups.

[28] As the age of cheap energy had gone by everyone had to consider Kj input (embodied energy), which also had meant a change from producing hard alcohol as Slivovice, to less wasteful products such as juice and hard cider. The possibility of being called to arms at any moment had also served to 'sober' up the Bouzovsko area. Those who had failed to be aware and able to defend themselves and the community were simply no longer alive.

[29] The initial transition groups had seen the absurdity of lack of local food production in such a bountiful area as Bouzovsko as well as the erosion issues, and had been successful in establishing systems such as the alley cropping, duck farming, but none-the-least implemented systems for local storage, production and distribution

[30] Back in 2008-9, a large part of the oil reserves calculations and strategies, were based on figures given by the oil producing countries. It had come to a shock to many that the figures were over-inflated (due to OPEC rules), and that in fact the Saudi figures were only one 1/3 of reality. This had caused the US to stop protecting the region, as they no longer were able to export enough oil to power the military investment.

[31] With the USA out of the Mid-East, the region started a series of escalating terror events which escalated into a limited nuclear war