

---

# ***Two Scenarios for the Future of Houston: Long Boom or Soft Path?***

Andy Hines

Lecturer/Executive-in-Residence

Graduate Program in Futures Studies

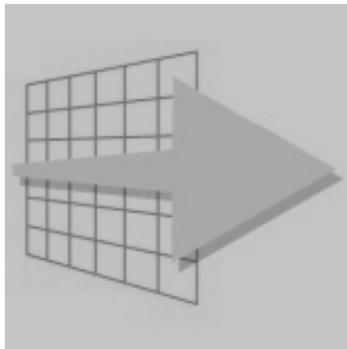
February 23, 2011

(Derived from material developed for Innovaro

[www.innovaro.com](http://www.innovaro.com))

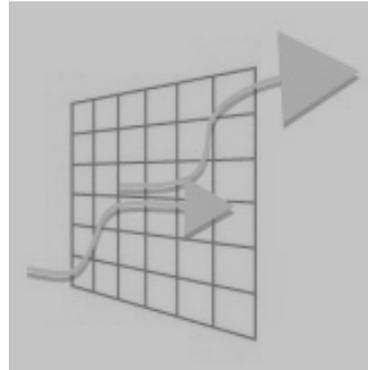
# Scenario Archetypes

---



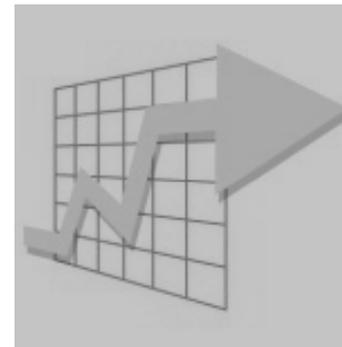
## **Continuation**

The system moves forward along its current trajectory. This is the “official future” and usually considered most likely.



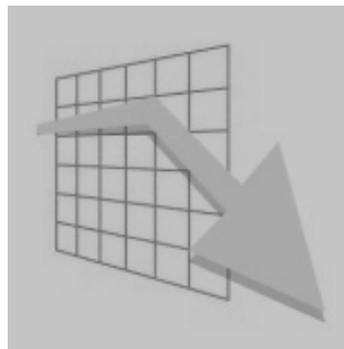
## **Transformation**

The system is discarded in favor of a new one with a new set of rules.



## **New equilibrium**

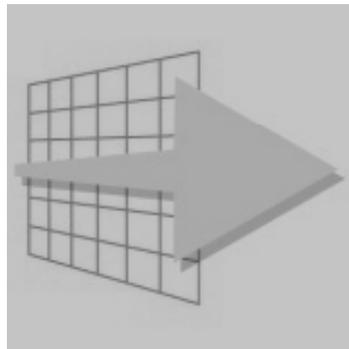
The system reaches a balance among competing forces that is significantly different from the current balance.



## **Collapse**

The system falls apart under the weight of “negative” forces.

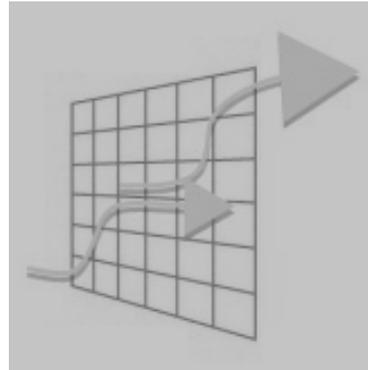
# Archetypes & the Recession



## **Continuation**

The system moves forward along its current trajectory. This is the “official future” and usually considered most likely.

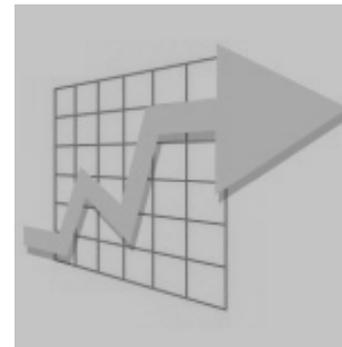
Things “go back to normal” – looking less and less likely



## **Transformation**

The system is discarded in favor of a new one with a new set of rules.

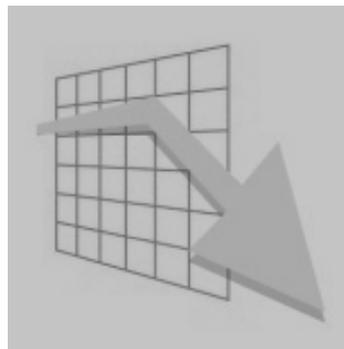
The soft path – chief competitor to the double dip



## **New equilibrium**

The system reaches a balance among competing forces that is significantly different from the current balance.

The “double dip” scenario



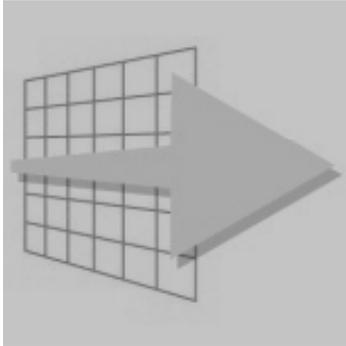
## **Collapse**

The system falls apart under the weight of “negative” forces.

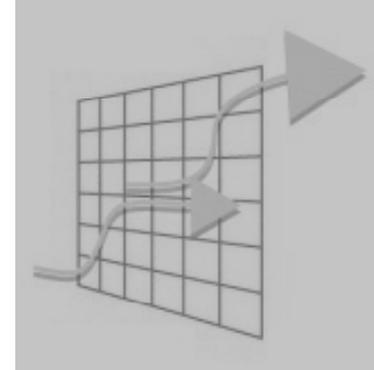
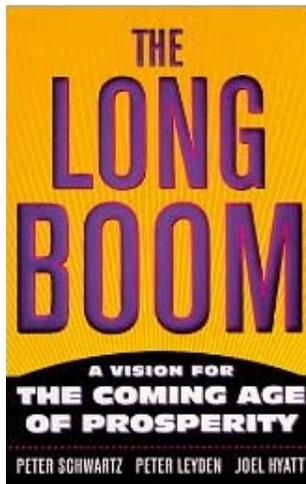
e.g., “Japan’s stagnation”

# Two “Interesting” Archetypes *RE: Houston*

---



**Continuation**  
*The Long Boom*



**Transformation**  
*The Soft Path*



Source: Hines; Innovaro ([www.innovaro.com](http://www.innovaro.com))

# Long Boom Scenario

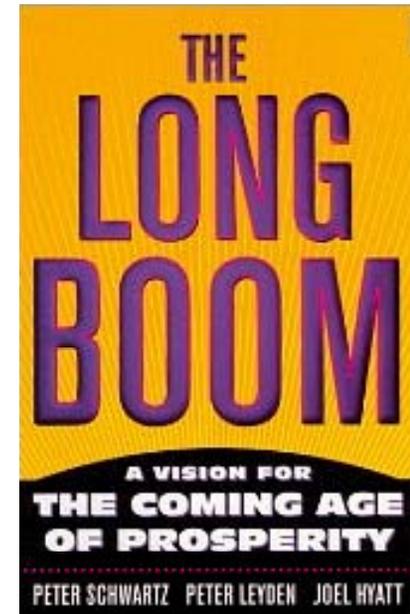
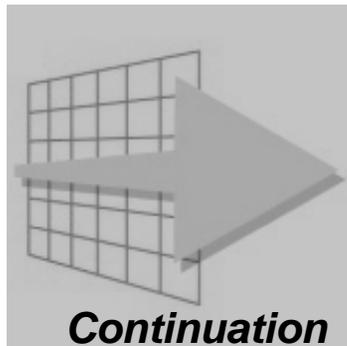
---

## ***In the Long Boom world...***

- In the midst of 25 years of prosperity, freedom, and a better environment
- Current recession just a speed bump
- Driven by five great waves of technology: (1) personal computers, (2) telecommunications, (3) biotechnology, (4) nanotechnology, and (5) alternative energy

## ***The future is more (and more) of the same:***

- ▶ Continued emphasis on economic growth & globalization
- ▶ Even greater reliance on technical solutions
- ▶ A rising tide lifts all boats (even if unequally)
- ▶ Sustainability important, but secondary to growth



# Long Boom Drivers & Values

## DRIVERS



Transparency



Ubiquitous Connection



It's All About Me



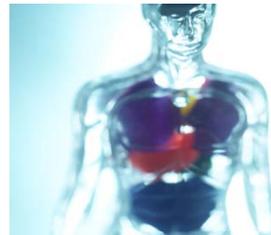
Co-creation



Diversified brand ecosystem



Richistan



Consumer Augmentation



Performance Enhancement

## [Modern] VALUES



Convenience



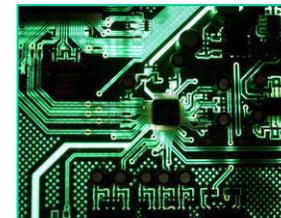
Growth



Customization



Efficiency

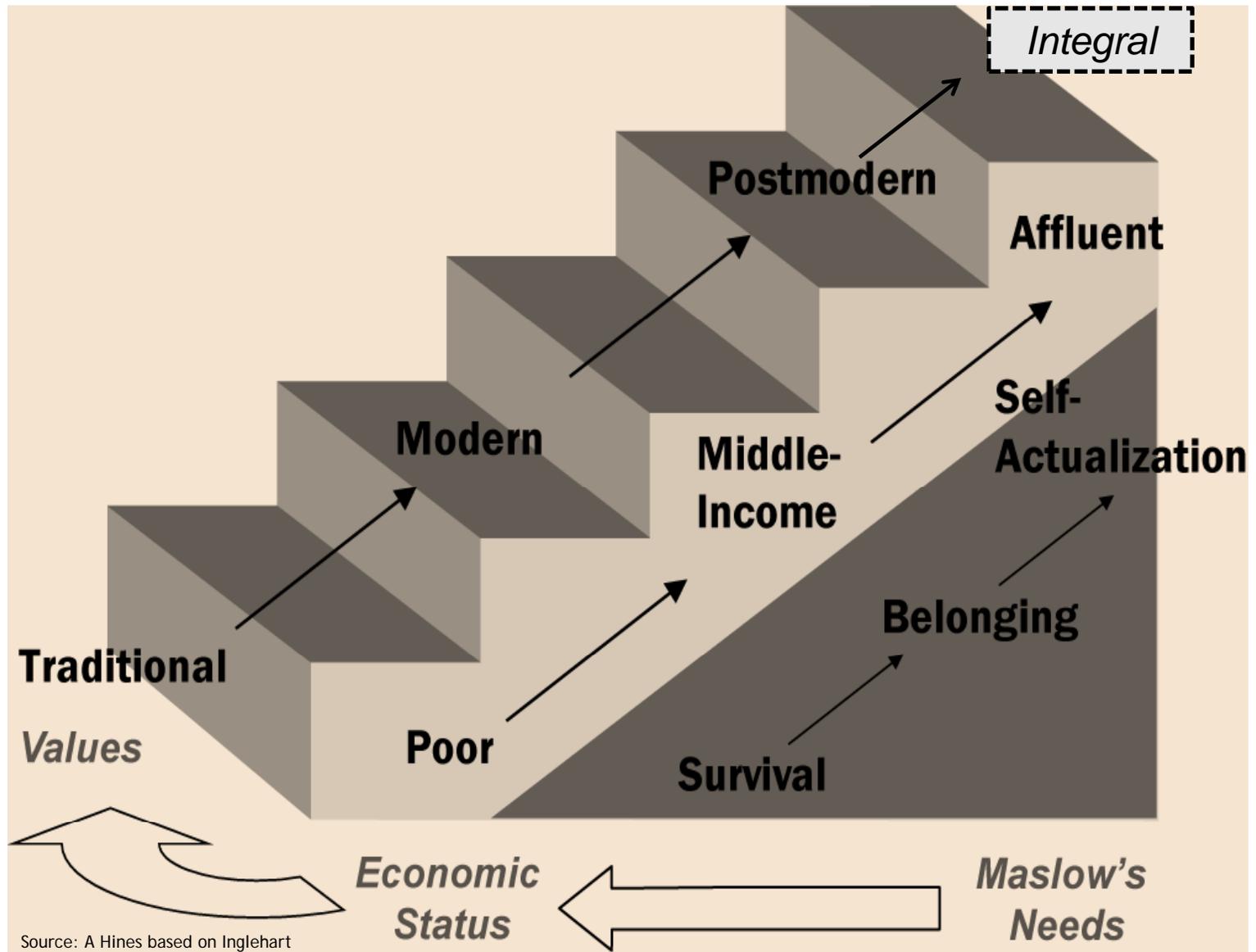


Technology orientation



Luxury

# Values Change over Time



Source: A Hines based on Inglehart

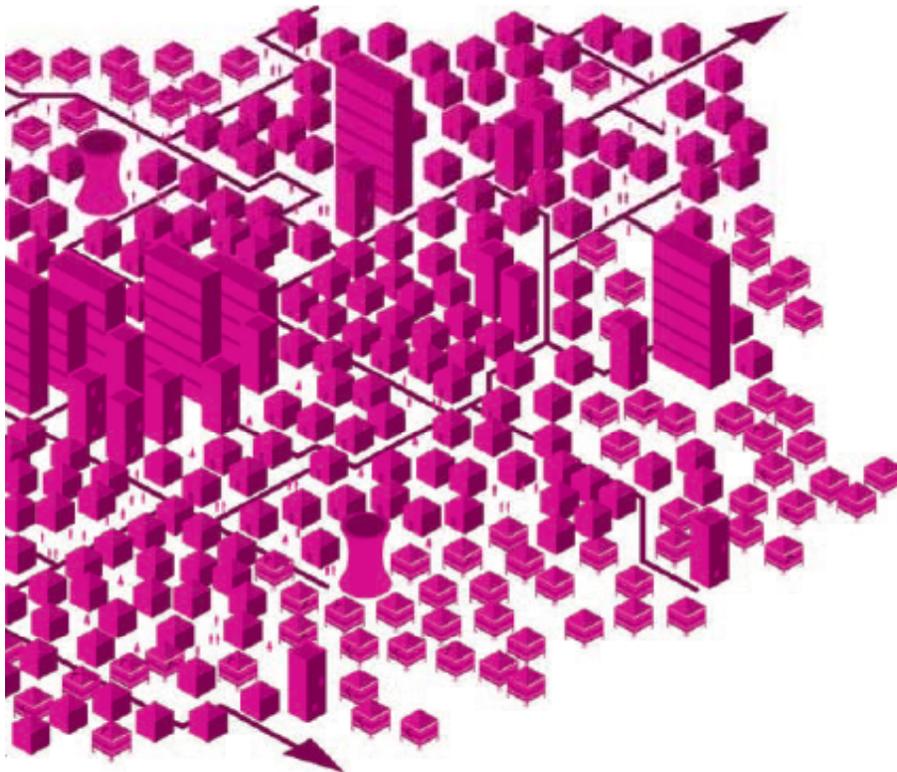
# Sample Scenario: Sprawlville

<http://vimeo.com/17079083>

## scenario summary:

### sprawl-ville

The city is dominated by fossil fuel-powered cars. The elite still gets around, but most urban dwellers face poor transport infrastructure.



## urban form

The city is a great fragmented sprawl. There are huge, low-density suburbs, freeways to connect them, and commuter jams. In the periphery of the city there are numerous 'failed' developments, built too far from public transport and therefore unaffordable to urban commuters now that oil prices are high. They either become ghetto areas for poorer people or are reborn as local communities trying to provide their own services.

## mobility

In urban areas, the car-dominant model persists, although the average personal vehicle is now an ultra-efficient hybrid or diesel car. As the poor are increasingly unable to afford the daily car commute, urban ghetto areas spread in the city core and informal paratransit<sup>5</sup> services spring up to serve community needs. People begin to alter their commute to address daily needs: nomad businessmen sit in traffic in armoured vehicles, working while moving slowly from meeting to meeting; many of the cars bought by the emerging global middle classes become driveway trophies rather than a practical means of transport, as people return to buses and bicycles.

## highlights

**Where's my car?** > Everywhere! Cars are still in favour and still the ultimate status symbol.

**Don't like the jam?** > It's a 24-hour city – of never-ending congestion.

**Fill up the tank?** > Businessmen get around in tank-like armoured cars to protect themselves.

**Energy** > Oil production peaked around 2030 but transport still uses fossil fuel – particularly gas – and focuses on efficiency.

**Resources** > Resource scarcity has lowered the quality of life for the urban masses in this elite-controlled world.

**Economy** > The global economy is stagnant, susceptible to protectionism and shrinking supply chains.

**Climate change** > Short-term thinking rules as people focus on adapting and protecting their property.

**Governance** > Cities are governed by and for the elites – they maintain just enough of the basic infrastructure to minimise public disorder.

**Social structures** > It's a less equal world where the informal economy prospers.

**Values** > Tension is growing as people lose faith in consumerism and the world is increasingly polarised into religious and ethnic extremes.

**Business** > Business is powerful – with an expanded role in society as a result of less public service provision – but it is less accountable.

**Technology** > There are efficiency gains but few major breakthroughs.

<sup>5</sup> An alternative mode of flexible passenger transportation that does not follow fixed routes or schedules. Typically mini-buses are used to provide paratransit service, but share taxis and jitneys are also important providers. For more information, see the Wikipedia entry on paratransit: <http://en.wikipedia.org/wiki/Paratransit>

# ***Long Boom Assumptions: What has to happen?***

---

- ▶ Recession ends and things “go back to normal”
- ▶ Developing markets are more “markets” than competitors
- ▶ Global shipping costs manageable
- ▶ Resource costs manageable
- ▶ Environmental issues manageable
- ▶ Technology continues to advance rapidly
- ▶ Modern values largely persist

# Soft Path Scenario

---

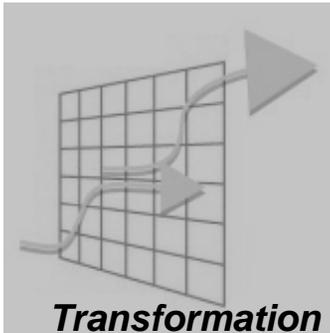
## ***In the Soft Path world...***

- Enoughness: consumers rethink consumption patterns and their lives in general
- Recognition of limits
- Sustainability a fact of life
- Grassroots change

## ***Significant differences from today include:***

- ▶ Dramatically reduced environmental impacts
- ▶ Ubiquitous sensor networks monitoring environmental impacts
- ▶ Many communities experimenting with “slow money” approaches
- ▶ “Steady-state” economic growth
- ▶ Post-materialist business models
- ▶ Alternative energy technologies flourish
- ▶ Green building standards spread; closed-loop systems emerging
- ▶ Some downtowns ban private cars .

## ***Soft Energy Paths***



Amory B. Lovins, *Soft Energy Paths: Toward a Durable Peace*,  
Penguin Books, 1977

# Soft Path Drivers & Values

## DRIVERS



Empowered Individuals



Scaling Up Green



Enoughness



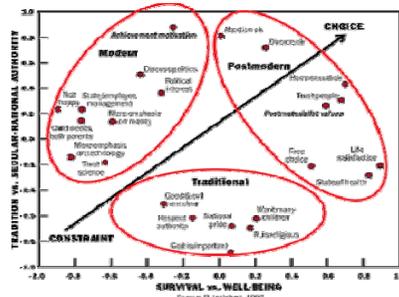
Localization



Living within Limits



Integration of Virtual & Real



Post-Materialist Models



Sharing



New Metrics for Success

## [Postmodern] VALUES



Appropriateness



Smartness



Authenticity



Spirituality



Community



Simplicity



Experiences



Sustainability

---

# SOFT PATH DESIGN PRINCIPLES

# *Sustainable*

---

Sustainability involves reducing the human footprint on the environment while maintaining quality of life. Sustainable technologies encourage reuse and recycling, and the entire life cycle of the products is considered during design.



Image: Robert Thomson (Flickr)

*Texas produces the most wind power of any US state  
Houston the fourth largest overall municipal purchaser of green power in the US*

# Efficient

---

Efficiency requires making the best possible use of all forms of resources, including natural resources, financial resources, and human resources. It also makes the best possible use of two emerging items of scarcity—consumer time and attention.



Image: John Picken (Flickr)

*Chicago's Greenway Self Park includes wind turbines for energy generation, rainwater cisterns for irrigation, energy-efficient lighting, high-efficiency glass, a bike floor, and electric car charging stations.*

# Local

---

The local design principle emphasizes the role of individual and community efforts in the Soft Path transformation. Local solutions would be tailored to local circumstances, leverage local resources, take advantage of local understanding, and build community as an integral part of enabling progress.



Image: One Laptop per Child (Flickr)

*Paul Glover is the Creator of the Ithaca HOUR, which was the 1st US bioregional currency in 1991; accepted by thousands of residents + 500 businesses*

# Transparent

The concept of transparency recognizes the trend that more can be known about people, products, and institutions more easily by more individuals. In the Soft Path scenario transparency means not only making information available, but also proactively demonstrating that a product or service conforms to various norms of responsibility.



Image: net efekt (Flickr)

*Footprinting involves tracking the emissions generated or resources used by a person, activity, event, organization, or place. In Britain, 72% of consumers favored carbon footprint labeling on food, for example.*

# Connected

The concept of connectedness involves the use of information technology to link people to people, people to intelligent objects, and intelligent objects to each other. This connectivity can enable information and resource sharing and create community.

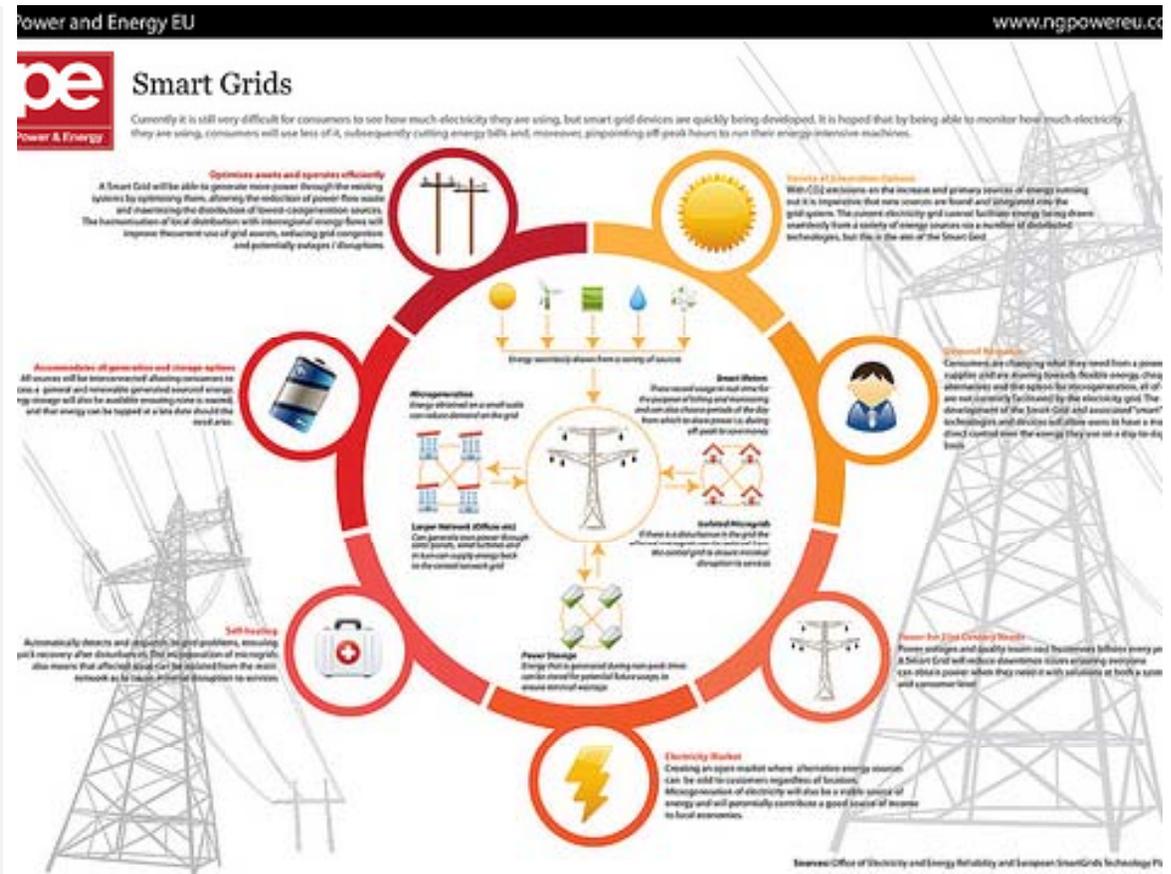


Image: GDS Digital (Flickr)

*The Green Smart Grid Initiative aims to “demonstrate that the smart grid indeed can be a major positive force in addressing climate change.”*

“The Green Smart Grid Initiative,” The Green Smart Grid Initiative, viewed June 2010, <http://www.greensmartgridinitiative.org/>

# Symbiotic

---

In the Soft Path scenario, technologies are designed to function as part of a larger technology ecosystem. They may use waste as fuel and/or contribute a waste or byproduct to another use. At the community level, Soft Path technologies consider the needs of the entire set of stakeholders.



Image: Digging For Fire (Flickr)

*The Dockside Green community in Victoria, British Columbia will be “a model for holistic, closed-loop design... - a largely self-sufficient, sustainable community where waste from one area will provide fuel for another.”*

“Overview,” Dockside Green, [viewed](#) June 2010.

# Thoughtful

---

Thoughtful technologies deliver “just enough” technology to meet the need. They aren’t faster than necessary or more complex than necessary. Thoughtful technologies are simple (usually minimal, often elegant), slow, and allow the consumer to retain control and choice over when and how the technology is used.



Image: comedy nose (Flickr)

*Targeted drug delivery systems provide the minimum amount of drug needed at the exact spot in the body where it is needed, maximizing effectiveness while minimizing the risk of undesirable side effects.*

# Accessible

---

Accessible technologies are available democratically, across boundaries of ability or economic means. Because consumers recognize that everyone has limited resources, in the Soft Path scenario, technology helps to ensure equal access to employment, transportation, energy, food, and health care.



Image: Balaji.B (Flickr)

*With the launch of the \$2,500 Tata Nano in 2009, the global market for low-cost, compact cars was born. Tata started from scratch and developed new production methods, used new materials, and developed a new power train.*

# Persistent

In the Smart Path scenario products are durable, adaptable, and reusable. When a business invests resources to manufacture a product and a consumer invests money and time to select and purchase it, both will want assurance that it will continue to be useful for a long time.

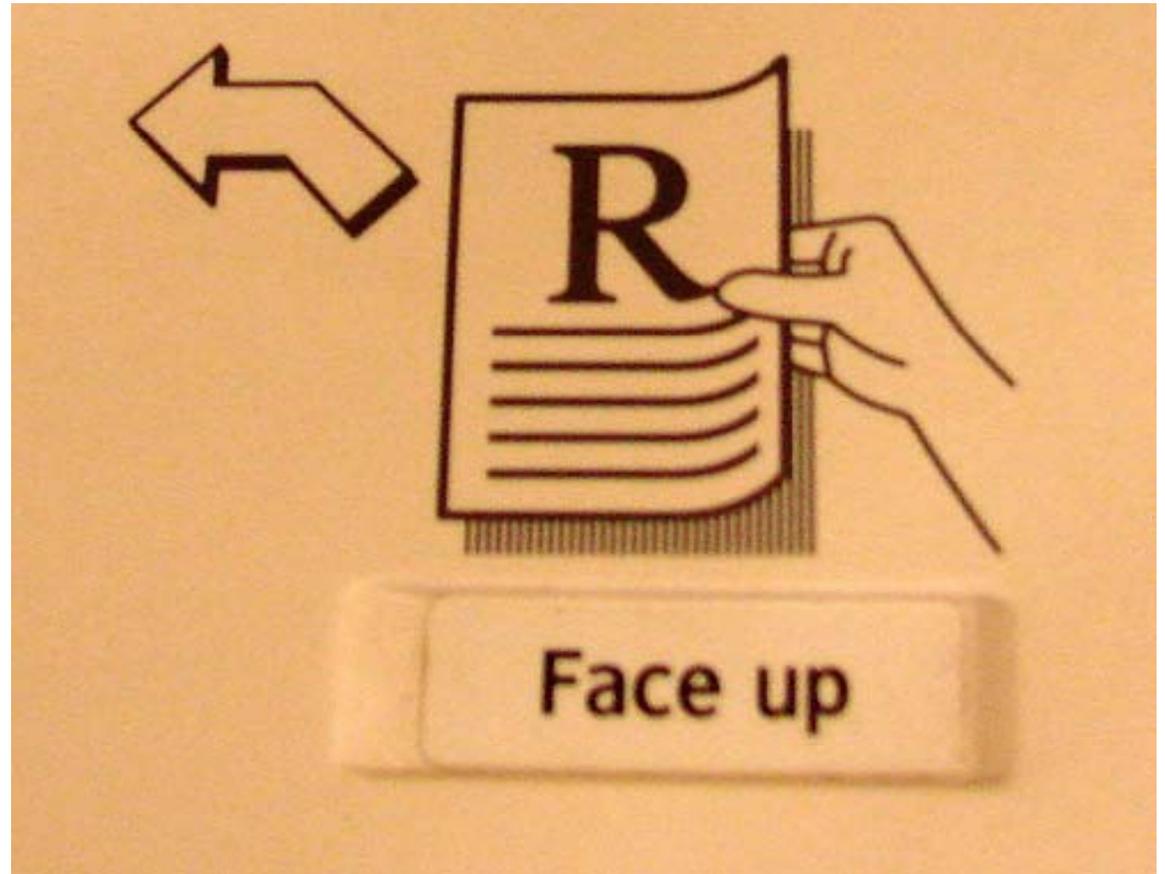


Image: krossbow (Flickr)

*Xerox, which began its Waste-free Products and Factories initiative in 1991, has achieved 90% reuse and remanufacturing of components in the office equipment it sells.*

# Smart

---

Smart technologies apply information technology to optimize the performance of a wide variety of infrastructure and other systems and minimize environmental impact.



Image: WayTru (Flickr)

*GE has prototype appliances that can receive a “price signal” when rates rise during hours of peak demand. Upon receiving that signal, the appliance can automatically enter conservation mode and reduce energy consumption.*

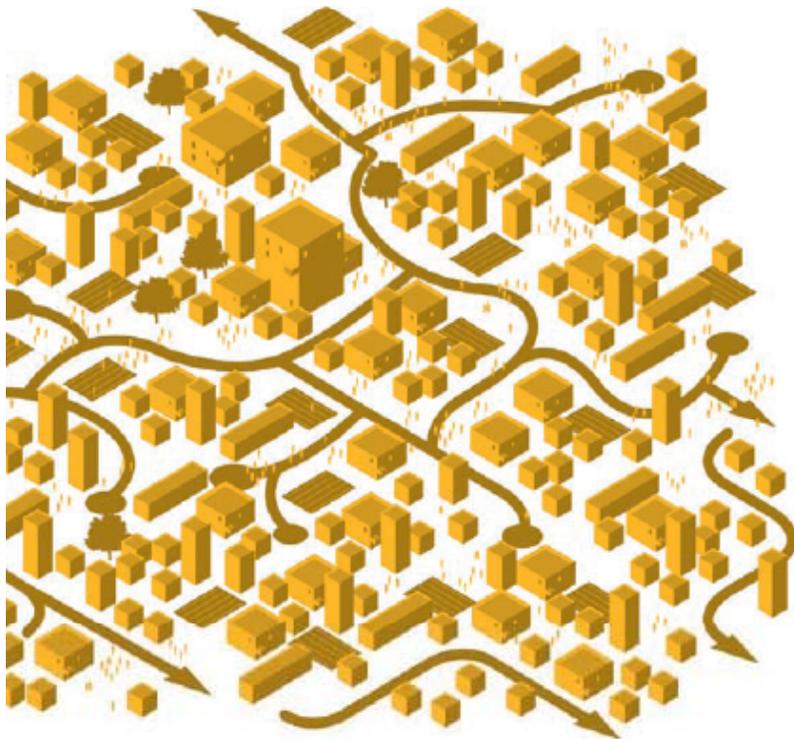
# Sample Scenario: Communi-city

<http://vimeo.com/17123084>

## scenario summary 4

### communi-city

The world has turned to alternative energy, and transport is highly personalised with a huge variety of transport modes competing for road space.



#### urban form

Power has devolved to individuals and communities; cities have become more informal and sometimes chaotic centres of creativity. For example, community-organised vertical and small-scale horticulture has flourished, with balconies, roofs and the sides of buildings given over to growing food.

#### mobility

Personal and individualised mobility is important. Modes of transport proliferate and people move about in a range of small electric vehicles – souped-up bikes, covered scooters, pod-cars and so on. Customisation is rife. Some people even build their vehicles locally from kits, using open-source designs, local materials and home-brewed biofuels. The roads look chaotic with so many vehicle types and so much personalised transport – but somehow it all works, through smart use of information technology to avoid collisions and optimise routes.

#### highlights

**Plant-powered public transport? >** 'Biobuses' are one of the most popular cheap ways to get around the city.

**DIY everything? >** 3D printers allow anyone to be a homegrown manufacturer – from furniture to fashion.

**Where did our centre go? >** There is no city centre any more, everyone has their own very different neighbourhood.

**Energy >** Local renewable energy generation and decentralised grids have superseded coal, gas and oil.

**Resources >** Cities have transformed to produce more of their own food and deal locally with waste and water.

**Economy >** Grassroots business and new technology compensate for protectionist trade and slow global growth.

**Climate change >** People and communities adapt to climate change and reduce carbon, despite weak global policy.

**Governance >** Central coordination is weak and more power resides at the community level using computer-based collaborative tools.

**Social structures >** It's a more unequal world, but full of opportunities if you're able to grab them.

**Values >** People are less consumerist and less status-driven; they look more to religion and community.

**Business >** Business is more local and decentralised, and many global brands are now extinct.

**Technology >** Rapid breakthroughs make technology an exciting area of change, and many people are involved through grassroots innovation and research.

# ***Soft Path Assumptions: What has to happen?***

---

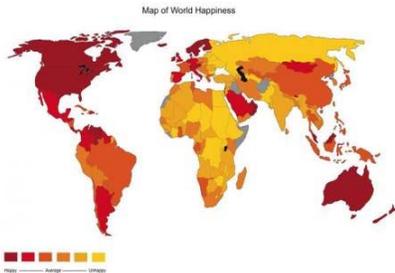
- ▶ Recession causes people to “re-think” their consumption
- ▶ Grass-roots movements and social entrepreneurship flourish
- ▶ New measures of government success at all levels of government go beyond the Triple Bottom Line
- ▶ Alternative energy investment grows and leads to significant breakthroughs
- ▶ Local products and services flourish
- ▶ Licenses-to-operate granted by some communities that require organizations to give back to the community (e.g., B corporations)
- ▶ Rise of postmodern and integral values

# Some Key Indicators

*Grass-roots movements and social entrepreneurship flourishes*



Social movements



World Happiness Map

*New measures of government success at all levels of government go beyond the Triple Bottom Line, including such factors as happiness/well-being*

*Alternative energy investment grows and leads to significant breakthroughs*



Power scavenging:  
energy from dirt

*Local products and services flourish*



*Licenses-to-operate granted by some communities that require organizations to give back to the community, i.e., to keep a certain percentage of their profits within the community*



# Implications of the Scenarios

---

	<i>Long Boom</i>	<i>Soft Path</i>
Economic prospects	Continued economic growth led by high tech industries	Steady-state “growth”
Values	Modern: growth & achievement	Postmodern: self-expression, wellness & sustainability
Transportation	Car-based	Multi-modal
Energy usage	Up steadily	Significantly reduced growth
Energy Mix	Conventional w/ some alternative	Alternatives gain significant share
Workforce	High tech elite, outsourcing, and “everyone else”	Some high tech, insourcing, and with a craft renaissance

# Soft Path Reading List

---

Note: The idea of what we're calling the Soft Path has been much anticipated. Below are books that anticipated several of the key themes making up the Soft Path

- EE Shumacher, *Small Is Beautiful: Economics As If People Mattered*, 1973.
- Amory Lovins "Energy Strategy: The Road Not Taken?" *Foreign Affairs*, 1976,
- Herman Daly, *Steady-State Economics: The Economics of Biophysical Equilibrium and Moral Growth*, San Francisco: W. H. Freeman, c1977.
- Meadows et al, *Limits to Growth*, 1974. (1972. also *The Thirty Year Update*, 2004.
- Duane Elgin, *Voluntary Simplicity*, 1981
- Hazel Henderson, *Paradigms in Progress: Life Beyond Economics*, 1991.
- Mathis Wackernagel, (1994), *Ecological Footprint and Appropriated Carrying Capacity: A Tool for Planning Toward Sustainability*. Ph.D. Thesis, School of Community and Regional Planning. The University of British Columbia. Vancouver, Canada.
- Lester Brown, *PLAN B 4.0: Mobilizing to Save Civilization*, 2009.
- Richard Slaughter, *The Biggest Wake up Call in History*, Indooroopilly, Australia: Foresight International, 2011.

# Contact Info

---

**Andy Hines**  
**U of Houston *Futures* Studies**

Lecturer/Executive-in-Residence

ahines@uh.edu

832 367 5575

[www.andyhinesight.com](http://www.andyhinesight.com)



(Material developed with Innovaro, contact Chris Carbone [chris.carbone@innovaro.com](mailto:chris.carbone@innovaro.com))