

Which Energy Future?

November 11, 2010

Houston, TX

HARVEY
NASH

The Power of Talent

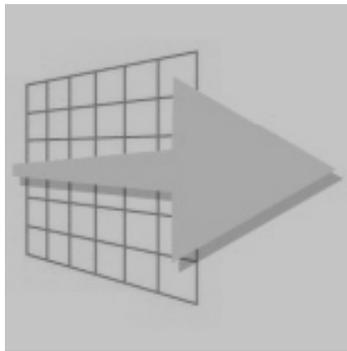
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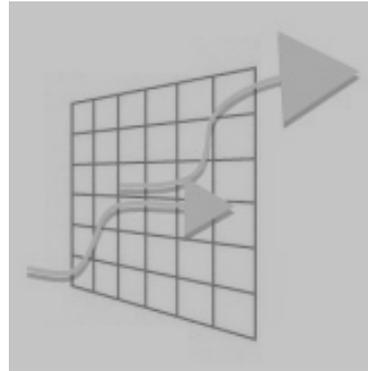
(Derived from material developed for Innovaro
www.innovaro.com)

Scenario Archetypes



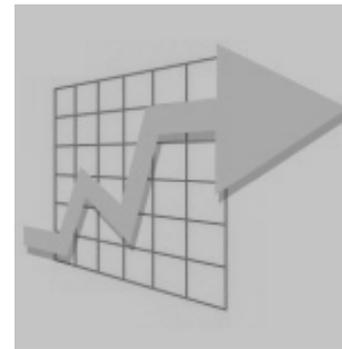
Continuation

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



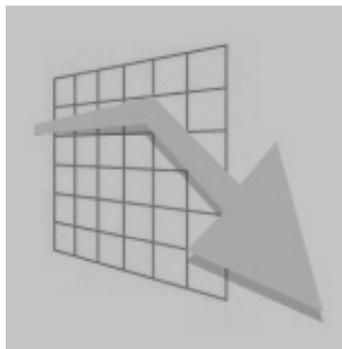
Transformation

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



New equilibrium

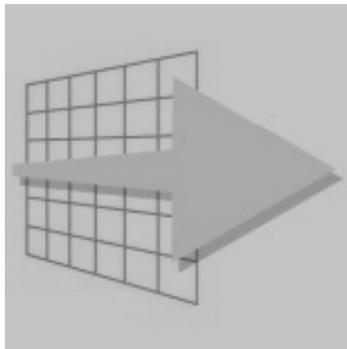
The system reaches a balance among competing forces that is significantly different from the current balance.



Collapse

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

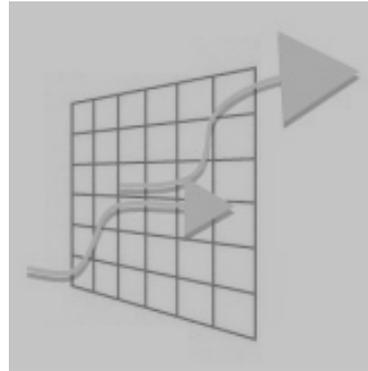
Archetypes & the Recession



Continuation

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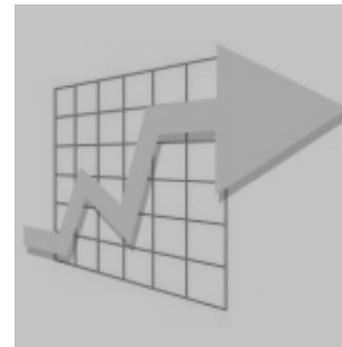
Things “go back to normal” – looking less and less likely



Transformation

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

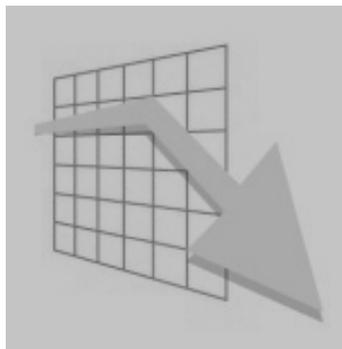
The soft path – chief competitor to the double dip



New equilibrium

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

The “double dip” scenario – or emerging market rewrite the rules

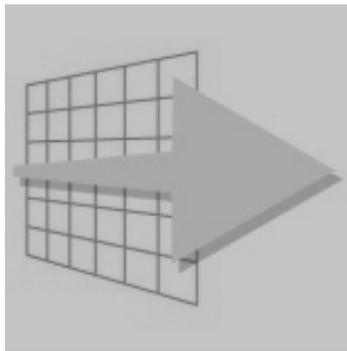


Collapse

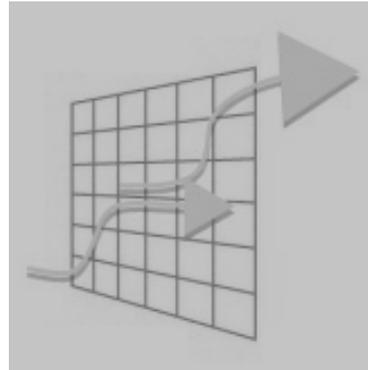
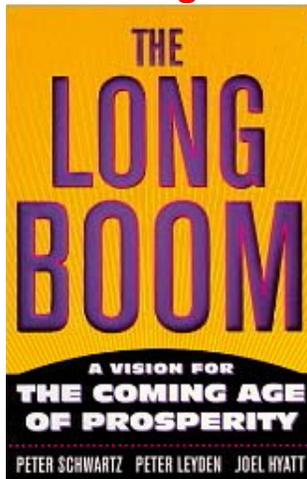
The system falls apart under the weight of “negative” forces.

It all comes apart – “Japan’s stagnation”

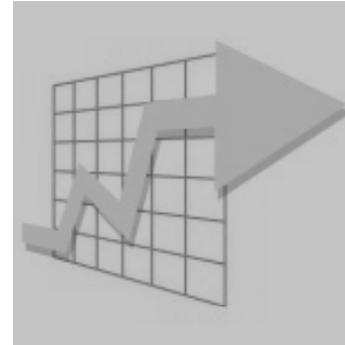
Archetypes & The Energy Future



Continuation
The Long Boom



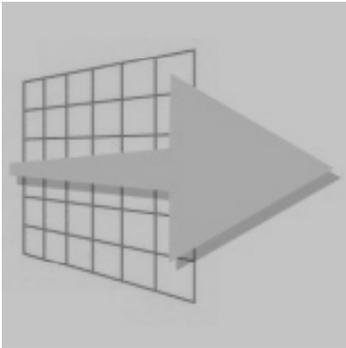
Transformation
The Soft Path



New equilibrium
Our Turn



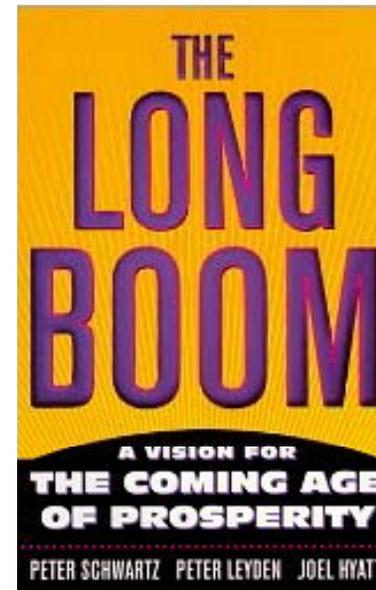
The Long Boom



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*



Long Boom Scenario Summary

In the Long Boom world...

- Is in the midst of 25 years of prosperity, freedom, and a better environment for the whole world, with the current recession just a speed bump. This sustained growth could bring increasing prosperity for - quite literally - billions of people on the planet. The basic science is now in place for five great waves of technology: (1) personal computers, (2) telecommunications, (3) biotechnology, (4) nanotechnology, and (5) alternative energy - that could rapidly grow the economy without destroying the environment.

There are not significant differences, but 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



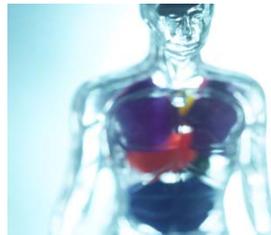
Co-creation



Diversified brand ecosystem



Richistan



Consumer Augmentation



Performance Enhancement

VALUES



Convenience



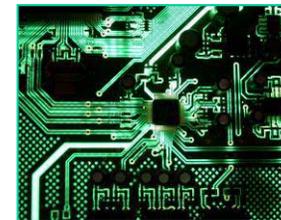
Growth



Customization



Efficiency



Technology orientation

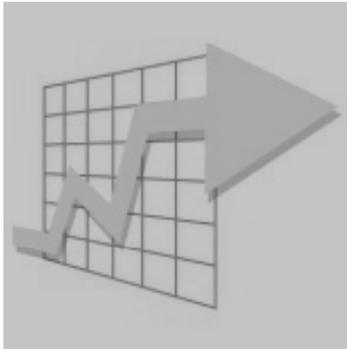


Luxury

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
- ❑ Mix of modern and postmodern values

Our Turn



New equilibrium

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



Our Turn Scenario Summary

In the Our Turn world...

- The emerging markets flex their new-found economic muscle, engaging in a massive binge of consumer, government, and military spending. An attitude of “they got theirs, now we’ll get ours” makes international cooperation on global issues increasingly difficult. Instead, a global scramble for resources occurs as the developed and developing worlds increasingly come into conflict.

Significant differences from today include:

- ⊗ Emerging markets are the engine of economic growth
- ⊗ Emerging market middle class’s are booming and consumer goods are celebrated as part of the good life
- ⊗ Emerging market consumers largely ignore environmental issues, as they can be dealt with later; they ignore pleas from the rest of the world that their consumption could overwhelm the planet’s carrying capacity
- ⊗ Developed country consumers experience a loss of confidence as their economies stagnate
- ⊗ Developed country governments may intervene against companies perceived to be contributing to environmental problems
- ⊗ There will eventually be a strong market for environmental remediation and clean-up technologies

Our Turn Drivers & Values

DRIVERS



Emerging Markets Power



The BRICs



Rise of Emerging Market Corporations



Rise of Emerging Market Knowledge Workers



Emerging Middle Class



Consumerism



Growing Environmental Concerns



China Takes to Cars

VALUES



Ambition



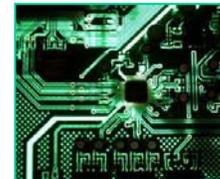
Growth



Change



Independence



Technology orientation

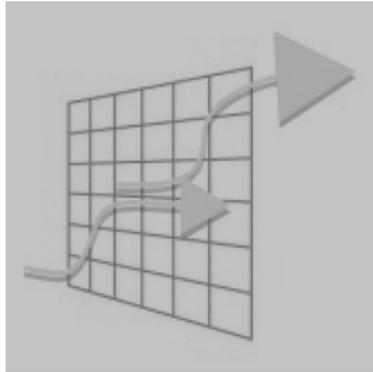


Luxury

Our Turn Assumptions: What has to happen?

- ⊗ Emerging markets lead the way out of “double dip” and continue their explosive growth
- ⊗ Reverse “brain drain” helps build emerging market knowledge workforce
- ⊗ Relations with developed world “manageable” to avoid trade wars
- ⊗ Required resources can be acquired cost-effectively
- ⊗ Environmental issues “tabled” to be dealt with later
- ⊗ Spread of Modern values

The Soft Path



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

Soft Energy Paths



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

Soft Path Scenario Summary

In the Soft Path world...

- Consumers have rethought their consumption patterns and their lives, as they recognized the unrestrained growth was running up against limits. Sustainability moved from a nice-to-have to the central factor in economic and social life. Change was driven at the grassroots, but not from the voluntary simplicity ethos often projected, but rather “enoughness,” a feeling that life had gotten out of control, and enough was enough. So, it’s about restoring balance -- from ecosystems to economies to work-life balance.

Significant differences from today include:

- ⊗ Dramatically reduced environmental impacts
- ⊗ Ubiquitous sensor networks at core of high-tech approach to monitoring environmental impacts
- ⊗ Many communities experimenting with “slow money” approaches, such as local ownership requirements for businesses based outside the community
- ⊗ “Steady-state” economic growth
- ⊗ Post-materialist business models emphasize thoughtful, ethical, and experiential consumption
- ⊗ Alternative energy technologies, such as solar, wind, hydropower, contribute more than 50% of energy needs in many local communities
- ⊗ Green building standards spread and closed-loop systems emerging
- ⊗ Many urban downtowns go beyond road pricing and ban private cars to promote public transport, biking, and walking.

Soft Path Drivers & Values

DRIVERS



Empowered Individuals



Scaling Up Green



Enoughness



Localization



Sharing



Living within Limits



Integration of Virtual & Real



New Metrics for Success

VALUES



Appropriateness



Smartness



Authenticity



Spirituality



Community



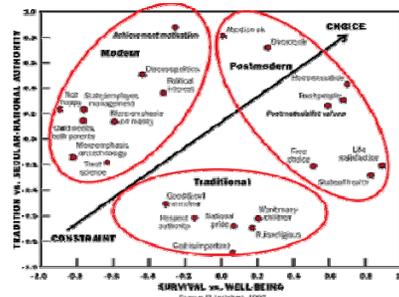
Simplicity



Experiences



Sustainability



Post-Materialist Models

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

Implications of the Scenarios

	Long Boom	Soft Path	Our Turn
Economic prospects	Developed world economies lead the way	More balanced economic prospects	Emerging markets lead the way
Globalization	Continues to increase	Globalization slows w/ shift to local emphasis	Potential “trade wars” as emerging markets assert power
Energy usage	Up steadily globally	Significantly reduced growth	Huge growth in emerging markets
Energy Mix	Conventional w/ some alternative	Alternatives gain significant share	All possible sources exploited, including nuclear push
Workforce	Knowledge worker boom in developed world drives shortages	Shift in energy mix requires new skills	Improving global reach, skills, and capabilities

Q&A

**....and now it's your turn.
What do these futures mean to you?**

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