

November 4th, 2007

Japan Consortium for Sustainable Urban Development

The Intercontinental Hotel
Abu Dhabi, The United Arab Emirates

Planet in Peril:

Nation with Clear Vision as a New Global Leader of Sustainable
Urban Development, Abu Dhabi and the United Arab Emirates

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Excellencies, Honorable Guests and Ladies and Gentlemen:

We, homo sapiens, have enjoyed a steady and remarkable economic growth, wellness, and wealth over centuries. Since the industrial revolution, however, the progress has gained a tremendous speed with ever increasing energy spending, from woods, to coal, to oil, and even to nuclear. The key has been both technological revolutions and the progresses in science and technology which led to new paradigm of economic growth and social reform.

This incremental progress with sudden surges of new technological revolutions, changes in economic paradigm and social transformation reflects the very nature of human being, eg, intuition, curiosity and creativity, knowledge and progress: they lead, in this last century, for example, at least in many affluent nations and societies, to a longer life expectancy from 40 to 80 years. Thus, human population increased dramatically from 1.6 to 6.5 billion in the last 100 years, and many of us in affluent countries and societies

enjoyed the way of life as we recognize as such, today.

I will show here, a thesis by Professor Freeman of the University of Sussex, of UK, with one of his disciples, Carlota Perez, which clearly identifies a 'big ban' or a pivotal technological revolution which led for subsequent economic growth and social change (Table 1).

Table 1: Technological Revolution and Techno-Economic Paradigm,
by C Freeman and C Perez

- First: Industrial Revolution: from UK; 1771–1830
- Second: Age of Steam and Railway: from UK; 1829–1873
- Third: Age of Steel, Electricity, and Heavy Engineering:
from US and Germany to Euro; 1875–1918
- Fourth: Age of Oil, Automobiles and Mass Production:
from US to Euro: 1908–1974
- Fifth: Age of Information and Telecommunication:
from US to Euro and Asia; 1971–20??

In brief, they proposed that industrial revolution that began in EU, when steam engine was invented in 1669, was the first of the kind of the pivotal technological revolution, and it spread to Europe. This triggered subsequent economic growth with accompanying social change enhancing the labor efficiency from manual labor to machines and expanding the range of trade and travel thru waterways.

Each of such paradigm lasts about 50 years reaching its maturity penetrating wide range of society, thus becomes social infrastructure, and will bring less profit as the engine of economic growth, Then, a new technological revolution serves as another 'big ban' that leads a new driving engine of economic growth with better profitability for investment of financial capital.

The second paradigm was triggered by Iron and Railways, again from UK and spread to Europe; then it was followed by the third paradigm of steel, railways, big construction structure triggered by Bessemer in Germany and Carnegie in US, then spread to Europe.

We, who gathered here today, lived most of the 20th century in the fourth paradigm which began 1908 by T-Ford, which is a hallmark of motorization, mass production, standardization, and consumerism, which we take for granted in our daily living and business. This is supported by oil, then cheap, and combustion engine, with expanding network of roads and highways; accompanied with various technological advances in information and finances. Airplane emerged and since then it become faster, bigger and everywhere.

However, this paradigm has imposed adverse impacts unknown until then, to our society, as warned by Dr Rachael Carson in her 'Silent Spring' in 1962, a warning to environmental pollution by industrialized economy. Yes, Japan which was rapidly developing then, suffered in a major way, to chemical and other industrial pollution.

In 1972, Club of Rome published a report, Limit to Growth, and in 1987, the United Nations delivered a so-called Brundtland Report entitled 'Sustainable Development: our Common Future'. The report is a clear warning that our pursuit of this pattern of economic growth is not tenable any more, but the voice has not captured sufficient public support for international political power in the height of the Cold War.

Now at the dawn of the new century, this paradigm of 20th century, the 4th technological revolution and economic paradigm, has clearly come to its limit in 1973, by 'oil shock'. Since then, oil has become not a cheap commodity nor an unlimited resource to serve as the major source of energy.

Yes, Japan, which depended and still depends, its energy, to a large part, import of oil, again struggled for a series of innovations. Since then the energy efficiency in every sector of industry in Japan has become the best practice of the world. Indeed, secondary energy used in industry emit less CO₂, or the ratios of energy use to CO₂ emission, of Japanese industry is twice as effective to US and other major developed countries, and more than 5–10 times effective than many developing countries. Thus, Japan now can provide best clean technology in energy efficiency. Such clean and efficient energy technology led by innovative Japanese corporate sector include solar panel, hybrid engines, various electric appliances, from refrigerator, air-conditioners, washing machines, and on and on.

Now, the magnitude and threat of global warming and climate change have been widely recognized based on scientific analyses as shown in IPCC (Intergovernmental Panel on Climate Change), and also felt and visibly so, as exemplified in a movie 'Inconvenient Truth' by Mr Al Gore, former Vice President of US. Indeed, the Nobel Piece Prize this year went jointly to IPCC and Mr Albert Gore.

Now, many new regions and nations are economically growing fast as exemplified in BRICs (Brazil, Russia, India and China), thus total global CO₂ emission is rapidly increasing. Their economic growth with their size exerts adverse effects on environment, deforestation, pollution, and urbanization with mobility of people, and deplete scarce natural resources. Energy security has become a major political issue adding the issue of security of global as well as on individual levels. New types of conflicts and instability have emerged with many deplorable human sufferings. We are seeing the world over the last decade that while more people came out of extreme poverty and miseries, absolutely an welcome move, the state of the world has gone into more fragile.

How to negotiate continuing economic growth while alleviating global warming and other global issues as shown in Table 2, is the challenge and the collective responsibility to the future generations to

all of us who live today. We must take actions for the long future because the impacts of global warming though very slow, will have long lasting and irreversible impacts over centuries.

Table 2: Constraints of Continuing Economic Growth

- Climate change/climate crisis
- Environment deterioration, pollution
- Water and foods and other natural resources
- Perception by the general public of wide North–South disparity
- Sense of inequity, frustration, identify and violence, etc. etc.
- Growing human population

Thus, the question is ‘Is Our Society Sustainable?’

The Kyoto Protocol, our promise to be delivered. At the Summit of this year in Heiligendamm, Germany, G8 heads of States agreed on the Initiative by Japan ‘Cool Earth 50’, which you will see briefly in the video and panels later in this conference.

Leaders in any society, corporate, organization, cannot deliver promises, and then re–promises and again and again; but unless these promises are delivered, they are just words not accompanied with actions, then leaders will eventually lose the trust of the people and the credibility.

Here we see a nation, though may be small in size, with a clear vision of the leaders and the commitment to what they promise. The nation is the United Arab Emirates. The nation has been a wonder of the world growing rapidly in the last decade or so, in very arid environment and we wonder why.

First is the change in the technological revolution which underlies the economic growth and social paradigm of the 5th paradigm per Prof Freeman and Perez. When was the time so many of us use mobile phone? How about email? How about internet? What you recognize today as world-wide-web or WWW began in 1992; Yahoo, Amazon, Netscape were all founded in 1994, and Windows 95 in 1995, and Google was founded in 1997. Just over a decade, the world has changed so dramatically, Thomas Friedman call this world as 'flat' in his book 'The World is Flat' published in 2005. and a concept of 'Web 2.0' is recognized worldwide.

This rapid change in information and communication technology through computers and internet has been recognized as the most important technological revolution since industrial revolution of 1769. This technology certainly has served well for the dramatic rise of the United Arab Emirates to one of the global leaders.

But another very important factor lies in the recognition and awareness of the leader on the sustainable development. I believe His Highness Honorable Sheikh Zāyid bin Sultān Āl Nuhayyān, former President of the nation, who took a leadership role in creating and led the nation of the United Arab Emirates as we see today. He led Abu Dhabi to become green, even in this arid environment by planting trees and grasses, and led its development as contemporary urbanization with eco-friendly city. With his legacy as visionary leader. Abu Dhabi has grown to one of the most attractive places of the world to visit, work, live and invest. I have learned Abu Dhabi now has taken a historic and daunting project called 'The MASDAR Initiative.' As the first major hydrocarbon-producing nation to take such a step, it has established its leadership position by launching this project, a global cooperative platform for open engagement in the search for solutions to some of mankind's most pressing issues: energy security, climate change and truly sustainable human development, embracing renewable and sustainable energy and other environment technologies.

With the historical background of Japan as overcoming industrial pollution, energy efficient and clean energy technologies, and water and other environment technologies, Japan could serve as the best partner to collaborate with the MASDAR and other future projects of the Abu Dhabi and the United Arab Emirates.

Through such joint-adventures sharing a clear and shared vision of the leadership in one hand, and most advanced technologies and their future potentials on the other, our partnership will bring the nation as the champion of the issues the mankind face today as most imminent, that is, sustainable development, in particular a model cities of the age of urbanization.

The world will envy and will further be attracted to this place as the Champion and the flagship model of the future, providing high quality environment for life and living, wide spectrum of business and investment while enjoying the recognition as the leadership of the region and of the world. This will carry the legacy of the late President of the nation, and will make the United Arab Emirates as the Visionary Nation Challenging and Realizing Sustainable Urban Development.

Thank you for your attention and, please, enjoy our presentation and a brief video show.

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