1992 - Built the First Ecofactory in Europe
1992 - Built the First Ecofactory in Europe
1992 - Built the First Ecofactory in Europe
Biodegradation is not Sustainability
Design a Competitive Business Model
Design a Competitive Business Model

Sustainability is the capacity to respond to the basic needs of all ...
Design a Competitive Business Model

Sustainability is the capacity to respond to the basic needs of all ...

with what we have
Design a Competitive Business Model

Sustainability is the capacity to respond to the basic needs of all ...

with what we have
(that is how ecosystems work)
The Red Economy
The Red Economy

The Plan Economy did not work
The Red Economy

The Plan Economy did not work

We cannot expect to achieve ever lower marginal cost prices through economies of scale.
The Plan Economy did not work

An Economy based on what we do not have

We cannot expect to achieve ever lower marginal cost prices through economies of scale
The Red Economy

The Plan Economy did not work

We cannot expect to achieve ever lower marginal cost prices through economies of scale

Failed

An Economy based on what we do not have
The Green Economy

Singapore

13th of November  2009
The Green Economy

Requires to

Save some

Payback over time

Friday, November 13, 2009
The Green Economy

Requires to
Invest more
Save some
Payback over time
The Green Economy

Requires to
Invest more
Save some
Payback over time

only works for the rich
The Green Economy

Requires to
Invest more
Save some
Payback over time

only works for the rich
The Blue Economy
The Blue Economy

Invest less
innovate more
generate multiple cash flow
create jobs
build up social capital
stimulate entrepreneurship
THE BLUE ECONOMY

10 YEARS
100 INNOVATIONS
100 000 000 JOBS

Report to the Club of Rome
Gunter Pauli

Singapore 13th of November 2009
How to stimulate entrepreneurship to create competitive and sustainable society at times of crisis?
How to stimulate entrepreneurship to create competitive and sustainable society at times of crisis?

**FIRST** Think Positive
How to stimulate entrepreneurship to create competitive and sustainable society at times of crisis?

FIRST Think Positive
SECOND Creative Learning
How to stimulate entrepreneurship to create competitive and sustainable society at times of crisis?

FIRST Think Positive
SECOND Creative Learning
THIRD Make it Happen
How to stimulate entrepreneurship to create competitive and sustainable society at times of crisis?

FIRST Think Positive
SECOND Creative Learning
THIRD Make it Happen

This requires innovations in the business model
Converting CO2 into Cash Flow
Converting CO2 into Cash Flow

“Food Security and Climate”
Convert flue gas/CO$_2$ into probiotic food and biodiesel and jobs
children evolve from malnourished to healthy
Thanks to coal fire power stations
The economy shifts from scarcity to abundance

children evolve from malnourished to healthy
Thanks to coal fire power stations
The economy shifts from scarcity to abundance

children evolve from malnourished to healthy

Then excess of spirulina converted to biofuels
Thanks to coal fire power stations
The economy shifts from scarcity to abundance

children evolve from malnourished to healthy

Then excess of spirulina converted to biofuels

The left-overs into esters and polyesters
Thanks to coal fire power stations
The economy shifts from scarcity to abundance

children evolve from malnourished to healthy

Then excess of spirulina converted to biofuels

The left-overs into esters and polyesters

35 Masters and 7 doctorates
Production of Polymers

“Evolving like an Ecosystem”
Natural systems produce polymers
Natural systems produce polymers
Amino Acids
Converted to silk by ants, bees, moths and spiders
Natural systems produce polymers
Amino Acids
Converted to silk by ants, bees, moths and spiders

NOT from petroleum or corn starch
Silk can outcompete Titanium in price and performance
Silk can outcompete Titanium in price and performance
Silk geometry is the basis for product development
Spinning like the spider with pressure and water changing the geometry at the nanoscale.
Spinning like the spider with pressure and water changing the geometry at the nanoscale
Replace stainless steel and titanium with silk at half the cost per pound managing the geometry at the nanoscale prototype project
NO metals NO petroleum NO landfill

Replace stainless steel and titanium
with silk at half the cost per pound
managing the geometry at the nanoscale
prototype project
The real value of the silk worm
The real value of the silk worm

1 ton raw silk per year
1/3 is carbon fixed

9 tons of fertilizer
recovering top soil

Singapore
13th of November 2009
The Chinese pioneered ways to regenerate top soil 5,000 years ago.
The Chinese pioneered ways to regenerate top soil 5,000 years ago.

The mulberry tree was the best option: silk was the by-product.
Now we can combine natural silk polymers with the regeneration of top soil creating millions of jobs.
Now we can combine natural silk polymers with the regeneration of top soil creating millions of jobs. Insert maggot enzymes into silk for slow delivery of wound care.
100,000 tons of silk
100,000 tons of silk

250,000 HA
100,000 tons of silk

250,000 HA

3,000 abattoirs
100,000 tons of silk

250,000 HA

3,000 abattoirs

2,000,000 jobs

Friday, November 13, 2009
The Awaking Power of Coffee

“Cascading all Nutrients and Energy”
Natural systems never send organic waste to landfills or incinerators
Natural systems never send organic waste to landfills or incinerators

Waste of one is food for another belonging to another kingdom
Natural systems never send organic waste to landfills or incinerators

Waste of one is food for another belonging to another kingdom (mad cow disease)
Is there a crisis in the coffee market?

123.6 million bags of 60 kg
Is there a crisis in the coffee market?

123.6 million bags of 60 kg
Is there a crisis in the coffee market?
123.6 million bags of 60 kg

Singapore
13th of November 2009
Is there a crisis in the coffee market?

123.6 million bags of 60 kg
only 0.2% has value

Is there a crisis in the coffee market?
123.6 million bags of 60 kg
Is there a crisis in the coffee market?

123.6 million bags of 60 kg

only 0.2% has value

0.2%  →  100%

POTENTIAL IS X 500

Singapore

13th of November 2009
producing shiitake at one tenth of the cost
Women pioneers converting pulp to protein

Chido Govero
Zimbabwe

Ivanka Milenkovic
Serbia

Carmenza Jaramillo
Colombia

Friday, November 13, 2009
Shifting the Business Model from Production to Consumption

Coffee processing in Chipinge, Zimbabwe
Women empowerment in Chipinge, Zimbabwe
Women empowerment in Chipinge, Zimbabwe
Chido’s Blend™ Supports One Woman’s Hope for the Future

Chido’s Blend supports the work of the ZERI Foundation and its “pulp to protein” program in Africa, which turns coffee production waste into high-quality food. Led by Chido Govero, a dynamic young woman from Zimbabwe, this ingenious program supports self-sufficiency by using coffee pulp and other wastes as a growing medium for nutritious edible mushrooms, and the spent mushroom compost as feed for goats and other animals. Chido and ZERI recently won the “Sustainability Award” at the Specialty Coffee conference.

You can make a difference.
Tell your friends about the great work Chido and the ZERI Foundation are doing to empower girls at risk in Africa, and how they can support her efforts with an order of Chido’s Blend.

Chido’s Blend™
Zimbabwe, Rwanda and Kenya —
A blend of spice, wood, floral and fruit notes
13th of November 2009
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**Visit ZERI’s website at:**
www.zeri.org
Zimbabwe, Rwanda and Kenya — A blend of spice, wood, floral and fruit notes

Chido’s Blend™

Chido’s Blend™ Supports One Woman’s Hope for the Future

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Seen in this issue:
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www.zeri.org

Relaunch
Export from Zimbabwe
Cash crop
Basis for Food Security
Food Security eliminates abuse
Save girls from sex trade

That is the real power of your purchasing power

NO waste NO hunger NO abuse NO sex trade

Singapore

13th of November 2009
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The same with prunings from orchards left-over from sea, corn cobs ....
The same with prunings from orchards left-over from sea, corn cobs ....

50 million rural jobs
The same with prunings from orchards left-over from sea, corn cobs ....

50 million rural jobs

How much food can we generate?

Singapore

13th of November 2009
The same with prunings from orchards left-over from sea, corn cobs ...

How much food can we generate?

50 million rural jobs
16 million tons of food

How much food can we generate?
The village that could save the planet
How two men plan to extend the ecological miracle that is Gaviotas, Colombia, across the Third World.
Las Gaviotas en el Vichada
Savannah  Forest

War  Peace

Unemployment  Jobs

Infertile land  Soil

Bad water  Drinking Water

No credits  Carbon credits

Lack of biodiversity  Biodiversity

Fossil fuels  Biofuels

Hunger  Food

Lack of technologies  Eco-technologies

Poverty  Social capital

Lack of medicine  Preventive Medicine

Homenaje al Dr. Paolo Lugari

Singapore  13th of November 2009
2009
25 years

Savannah

Forest

War
Unemployment
Infertile land

Bad water
No credits

Lack of biodiversity
Fossil fuels
Hunger

Lack of technologies

Poverty
Lack of medicine

Peace
Jobs
Soil

Drinking water
Carbon credits

Biodiversity
Biofuels
Food

Eco-technologies

Social capital
Preventive medicine

Homenaje al Dr. Paolo Lugari

Singapore

13th of November 2009
if you tank gas with biofuels from Las Gaviotas for the next 25 years
Finance the regeneration of 8 HA of rain forest

if you tank gas with biofuels from Las Gaviotas for the next 25 years
if you tank gas with biofuels from Las Gaviotas for the next 25 years

Finance the regeneration of 8 HA of rain forest
Generate 200 tons of wood for paper, furniture, housing and/or energy once
Finance the regeneration of 8 HA of rain forest

Generate 200 tons of wood for paper, furniture, housing and/or energy once

Fix 144 tons of CO2 per year

if you tank gas with biofuels from Las Gaviotas for the next 25 years
Finance the regeneration of 8 HA of rain forest

Generate 200 tons of wood for paper, furniture, housing and/or energy once

Fix 144 tons of CO2 per year

After 3 years each year 1,200 gallons of biofuel

if you tank gas with biofuels from Las Gaviotas for the next 25 years
if you tank gas with biofuels from Las Gaviotas for the next 25 years

Finance the regeneration of 8 HA of rain forest

Generate 200 tons of wood for paper, furniture, housing and/or energy once

Fix 144 tons of CO2 per year

After 3 years each year 1,200 gallons of biofuel

Create 2 full time jobs
Finance the regeneration of 8 HA of rain forest
Generate 200 tons of wood for paper, furniture, housing and/or energy once
Fix 144 tons of CO2 per year
After 3 years each year 1,200 gallons of biofuel
Create 2 full time jobs

What more do you want?
Finance the regeneration of 8 HA of rain forest
Generate 200 tons of wood for paper, furniture, housing and/or energy once
Fix 144 tons of CO2 per year
After 3 years each year 1,200 gallons of biofuel
Create 2 full time jobs
Offer water for free to the local population
What more do you want?

if you tank gas with biofuels from Las Gaviotas for the next 25 years

Singapore

13th of November 2009
What more do you want?
Cost of land: US$ 1/acre

What more do you want?
Cost of land: US$ 1/acre

Value 25 years later: $3,000/acre

What more do you want?
Cost of land: 
US$ 1/acre

Value 25 years later: 
$3,000/acre

Better than an investment in Microsoft

What more do you want?
How viable is this new business model?

Some dream to escape reality
How viable is this new business model?

Some dream to escape reality
Others dream to change reality forever

Soichiro Honda
12 language editions including Chinese, Arabic, Russian, Korean, Japanese not yet in Dutch

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As of February 2010 each week for 2 years one systemic business model in cooperation with the business media AIESEC and YES Campaign

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