

The Blue Economy

A Report to the Club of Rome 2009

**one innovative
business model
each week
for 100 weeks**

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Member of the Club of Rome

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Background on ZERI

Zero Emissions Research and Initiatives



- 1994** Design a business model without waste or emissions supported by the Japanese government (until 1997), hosted by United Nations University
- 1996** Creation of the ZERI Foundation in cooperation with UNDP
- 2000** Most popular pavilion at the World Expo in Germany
Presenting 7 innovative economic development models
- 2004** Start of 5 year research project on 100 innovations that shift the economic system towards a more competitive and sustainable model responding to needs using what we have



Background on “100 Innovations”



2005-2007

A team of researchers identified +2.200 innovations in peer group reviewed scientific literature, published in international journals

2007-2008

A team of business strategists, journalists, financiers assess the most relevant innovations based on
(1) competitive business model
(2) environmental breakthroughs, cut in energy
(3) major job generator

2008-2009

Meeting all the key scientists and entrepreneurs

2010

Book: “The Blue Economy: 100 innovations 10 years 100 million jobs.”

2010 onwards

Focus on implementation



Background on The Blue Economy



A 350 page book backed-up by 10,000 pages of documentation

A Report to the Club of Rome (2009)

Keynote presentation to UNIDO's General Assembly (December 2009)

Foreword by Achim Steiner, Executive Director UNEP and Ashok Khosla, President of IUCN. Endorsed by UNEP.

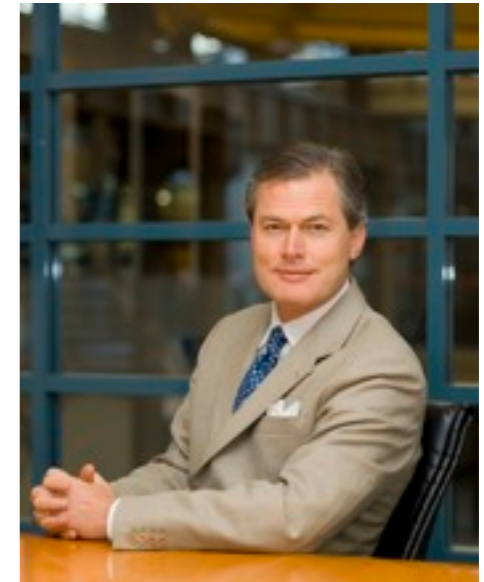
34 language editions including braille

Chinese, Russian, Arabic, Japanese, Korean, Spanish, Portuguese, Italian, Vietnamese, Ukrainian, Serbian, Turkish, Finnish, Hungarian, Romanian, French, Dutch, German, English (US, Australia, South Africa, India), ...

By mid-2011 - creation +100 enterprises inspired by The Blue Economy



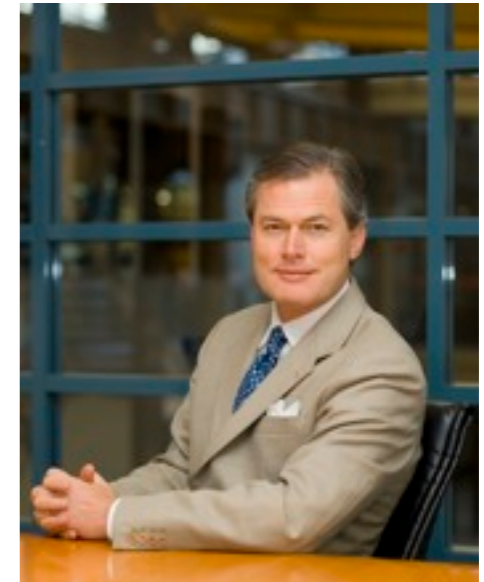
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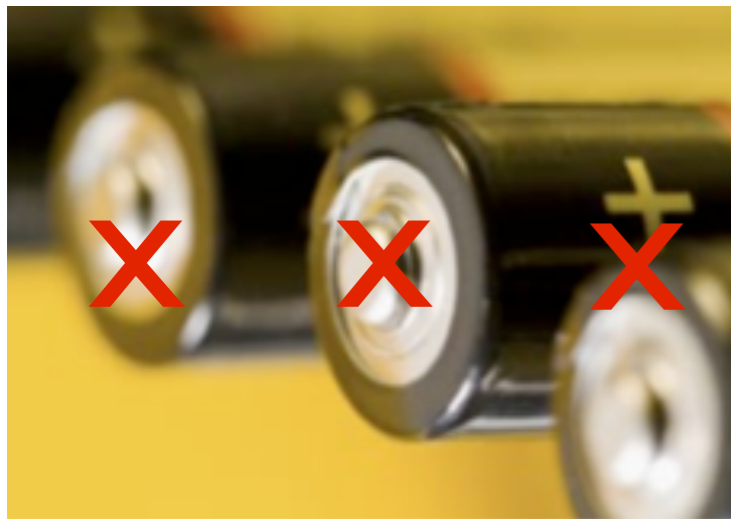
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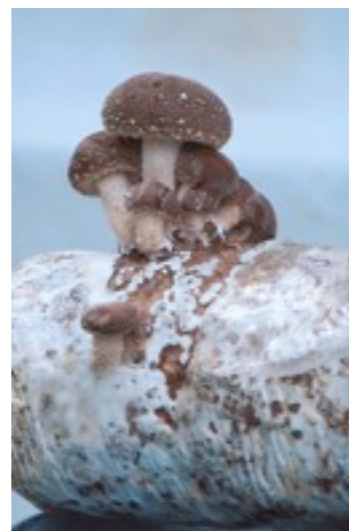
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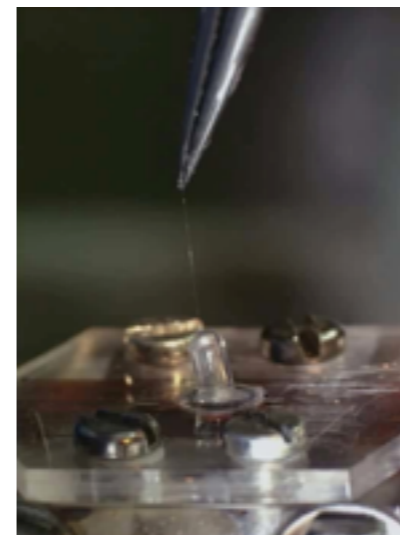
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End of Batteries



Cheap Shiitake



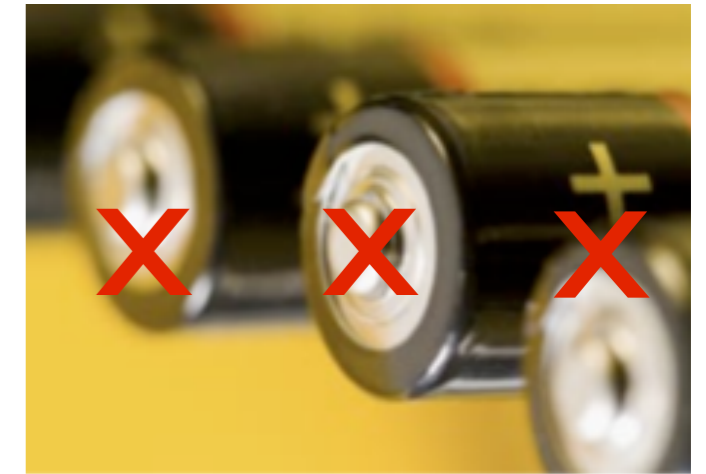
Silk Razors



Maggot health



Case Study 1



Substituting batteries with NO batteries

Fraunhofer Institute (Germany) operates the first cell phones without batteries. Dr. Jorge Reynolds (UK and Colombia) operates pacemaker without batteries. **This is the end of the green battery.**

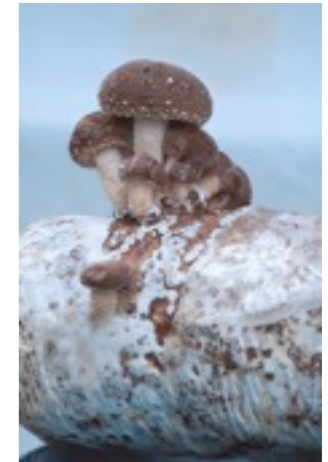
This leads to a complete redesign of all portable micro-electronic equipment from hearing aids, to MP3 players.

There is more than one technology that permits this breakthrough design, all have been scientifically proven and prototypes exist.

Implementation decreases quest for mining and smelting.



Case Study 2



Cascading Coffee Waste into Shiitake Mushrooms

The Colombia Coffee Federation demonstrated scientifically that coffee waste is ideal for farming mushrooms, and the waste substrate is great animal feed. **This is the end of the simple composting or burning agro-waste.**

This leads to the provision of food security while farming an export crop. This already generated 15,000 jobs in Colombia. Now Zimbabwe, Kenya, Ghana are following suit. Women spearhead the program.

Spent coffee from cafés in California, Berlin, Madrid, Amsterdam generate inner-city jobs, making cheap shiitake. Starbucks partners branding waste.

Widespread implementation decreases methane emissions.



Case Study 3



Silk competes with Titanium

The Silk Group of Oxford University demonstrated that silk can be reconditioned with pressure and water control making it stronger than titanium. **This is the end of metals destined for landfill.**

There are already 5 companies implementing this technology.

Time has come to expand applications to consumer products. This creates jobs and supports sustainable agriculture.

Implementation requires more silk, only obtained through more reforestation, creating top soil and sequestering carbon massively.

Case Study 4



Converting Offal into Wound Treatment

The University of Bradford (UK) demonstrated that the enzymes of maggots treat leg ulcers better than any other, even those infected by MRSA, the antibiotic resistant bacteria. **This is the end of antibiotics.**

Maggots are produced by feeding offal to flies. The enzymes, only 0.2% are extracted. The life maggots rich in protein are fed to quails and fish.

This gives value to offal, especially in Africa and generates jobs. Benin pioneers this process at industrial scale. Germany invests €100 mio.

Implementation cleans up abattoirs and offers local health treatments.

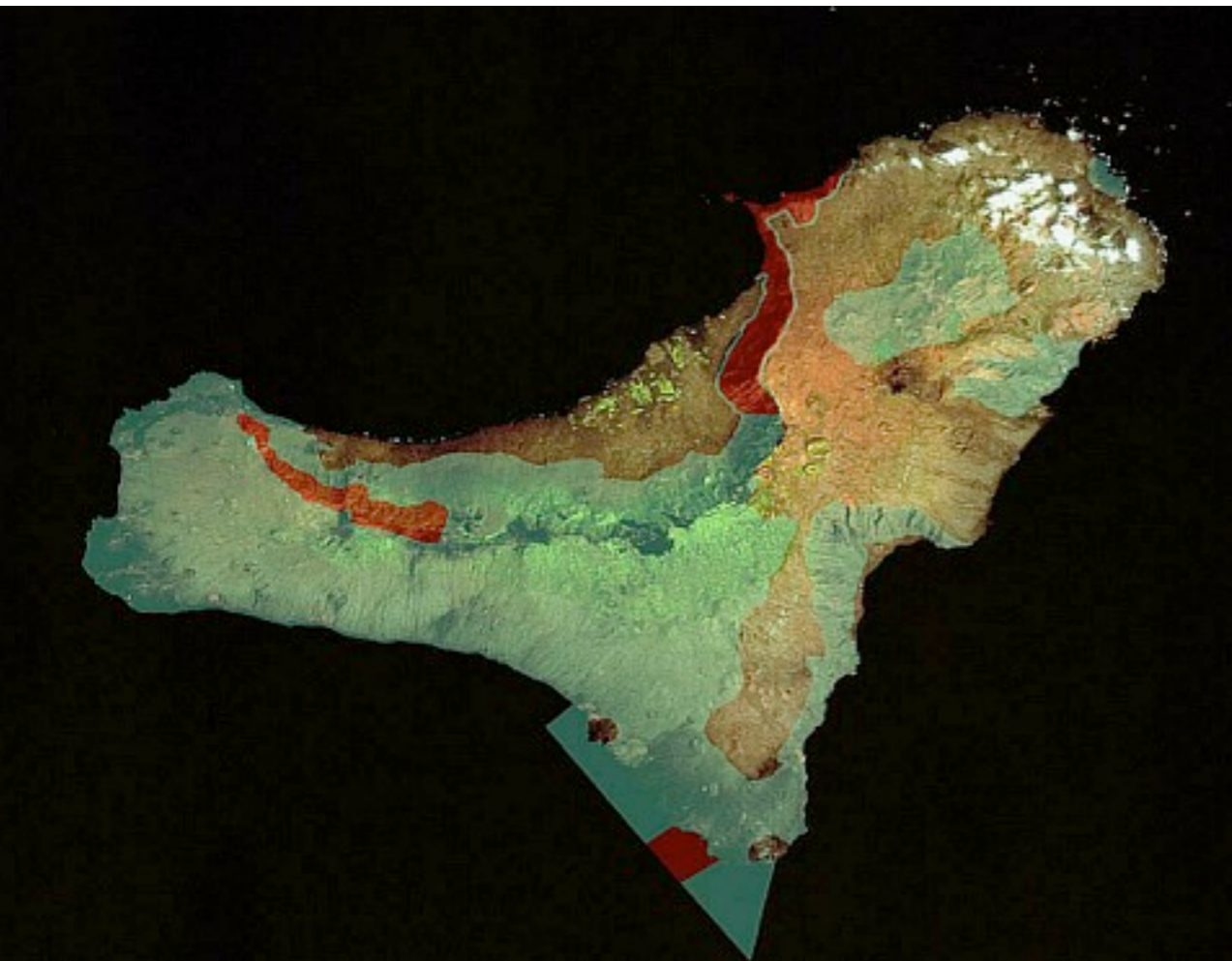
Eliminating Combustion Engines



“putting cash in the local economy”

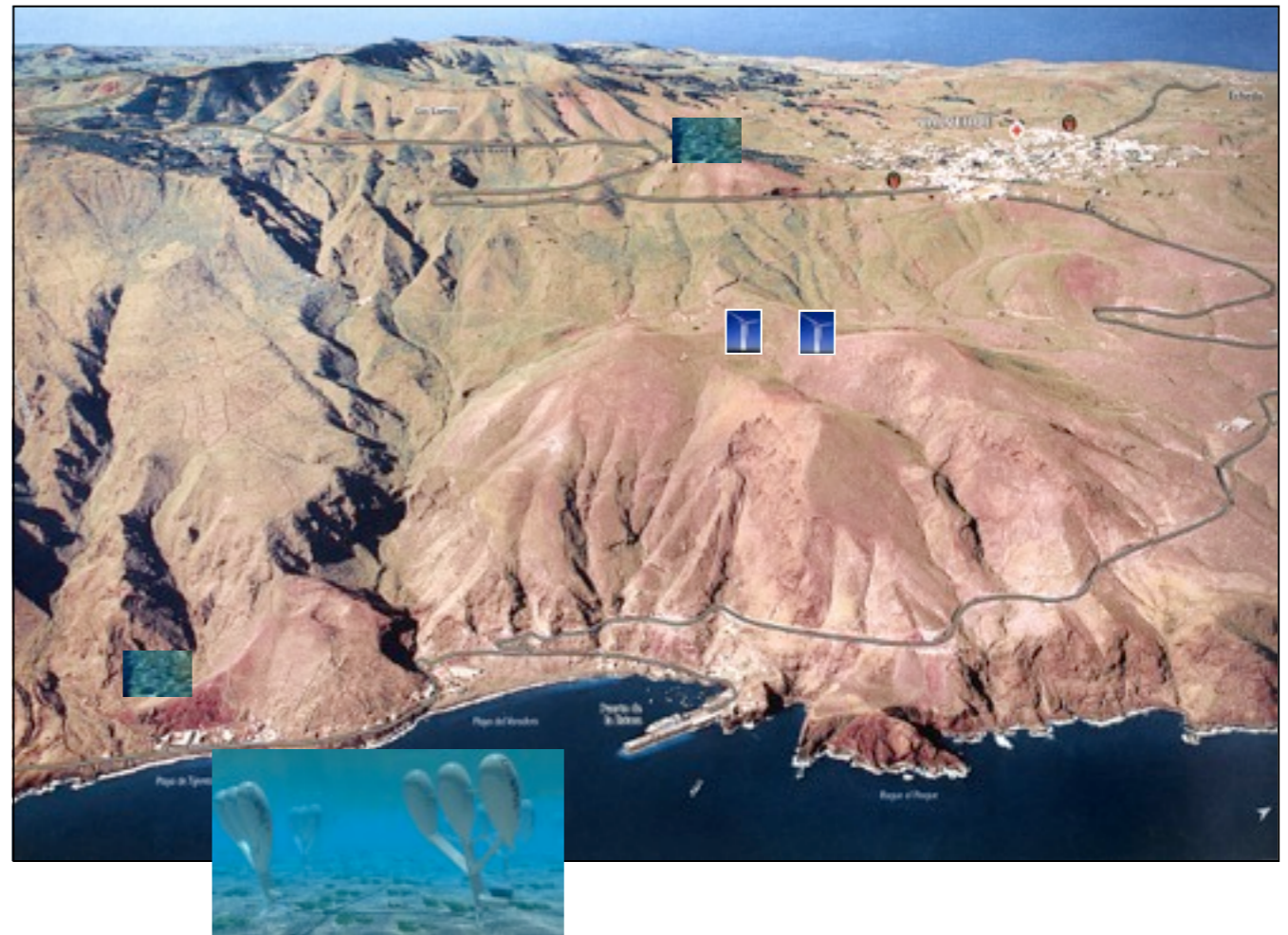


El Hierro Island in Spain



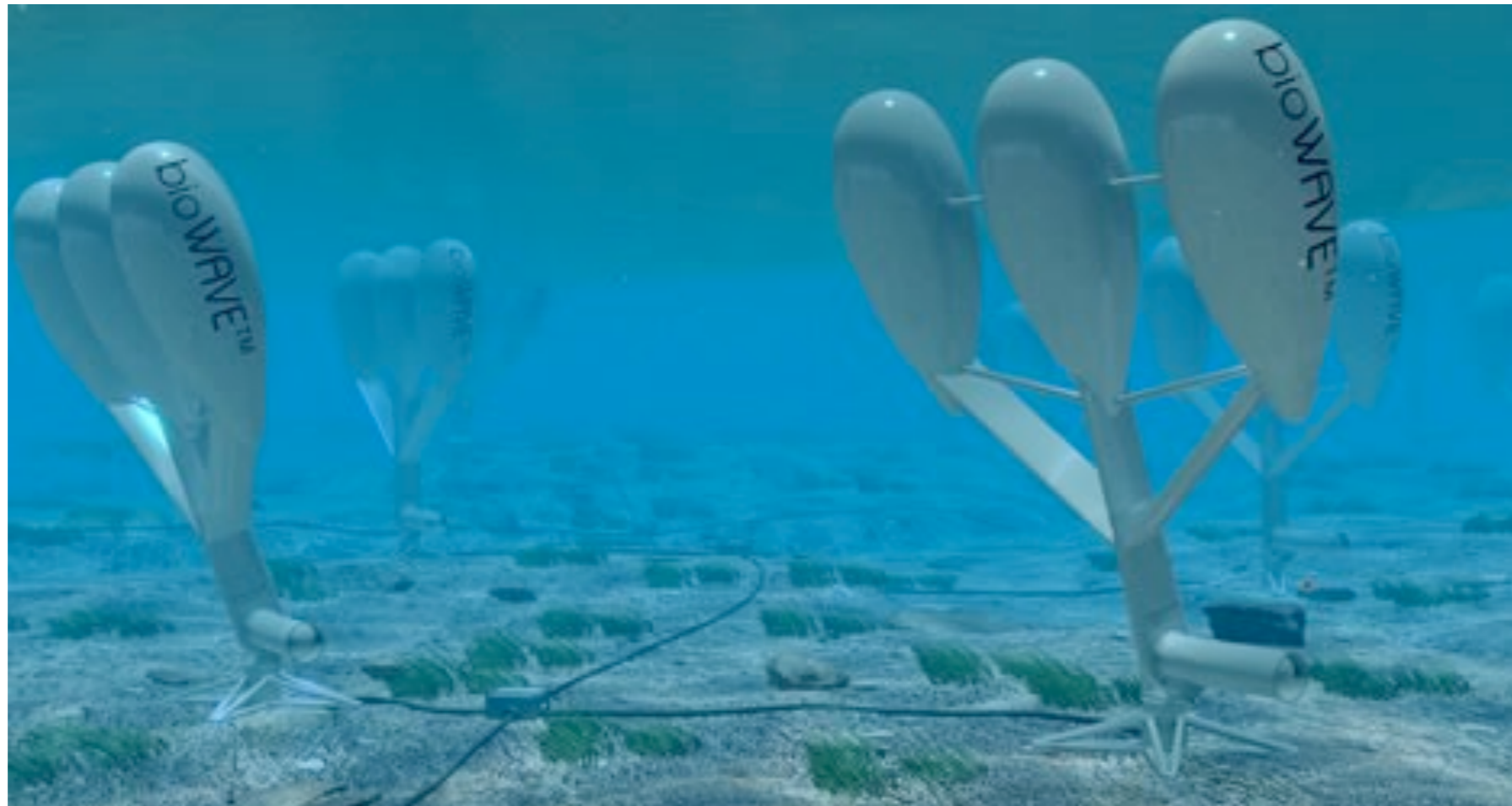
El Hierro Island in Spain

Wind, hydro and wave power





Total Capacity 12MegaWatt



Economics of Electric Vehicles

<p>batteries are leased up to 80% recharge capacity - 10 years life (ELIY Japan standard)</p>	<p>investment in recharge of batteries (4 units) €43 mio</p>	<p>generation of marine power €3.3 mio</p>
<p>electricity sold at fixed rate per week</p>	<p>€10 per week small consumer €20 per week large consumer</p>	<p>income over 7 years €58 mio</p>
<p>consumption per car 14.5 kW/hr</p>		<p>available for investments in SD €11.7 mio</p>

6,000 cars on the island	cost per car €11,000	total cost €66 mio
	paid by customer €9,000	total cost €54 mio
		subsidy €12 mio



Soichiro Honda

Some dream to escape reality
Others dream to change reality forever



Soichiro Honda

Some dream to escape reality
Others dream to change reality forever

will you change reality forever with us?

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