

A change of eras: a unique opportunity for Curacao

Curacao

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**we do not live in an era of change
but in a change of eras**

World in Transition

1. the fabric of our society is changing
2. the structure of our economy is changing
3. disruptive technological innovations

Tipping Point

period during which many changes take place

is rare in modern human history

example: end of 19th century

modernisation process: basis for Europe

education, health care, voting right, social structures

Economy in Transition

old economy

fossil fuels

wasteful

deriving values

linear

carbon based

new economy

renewable energy

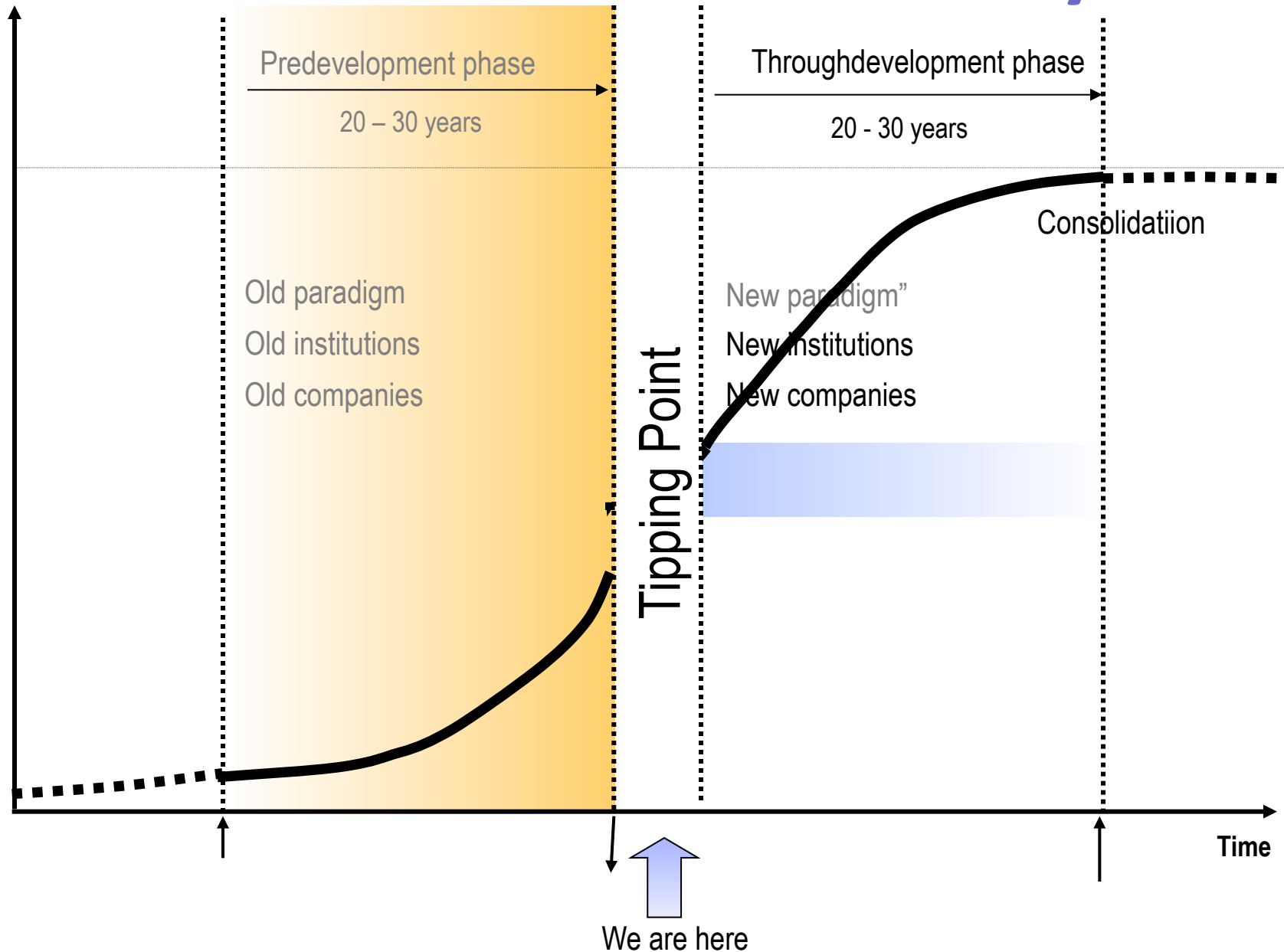
natural

creating values

circular

biobased

Transition to New Economy



Crisis from transition perspective

Current crisis is a systems crisis

financial crisis is a symptom of systems crisis

energy crisis and climate crisis yet to come

systems crisis is deeply rooted in

production & consumption

exhaustion of natural resources

only transformative change will help

Wimbledon's Tennis Ball Production Miles



Total Journey: 50,570 miles



MATERIALS

01

USA
Clay
8710 miles

02

NEW ZEALAND
Wool
11815 miles

03

UK
(STROUD)
Felt Weaving
6720 miles

04

CHINA
Petroleum
Naphthalene
2085 miles

05

SOUTH KOREA
Sulphur
1630 miles

06

JAPAN
Magnesium
Carbonate
1880 miles

07

GREECE
Silica
5960 miles

08

THAILAND
Zinc Oxide
1335 miles

09

PHILIPPINES
(BASILAN)
Glue
560 miles

10

MALAYSIA
Rubber
1505 miles

11

PHILIPPINES
(BASILAN)
Rubber
560 miles

PRODUCTION

12

PHILIPPINES
(BATAAN)

PACKAGING

13

INDONESIA
Tins
1710 miles

DESTINATION

14

WIMBLEDON
6660 miles



Raw Materials Crisis

era of easily exploitable raw materials is over

17 critical earth metals are getting scarce

scandium, neodymium, dysprosium, gadolinium, lanthanum

wind mills, electric cars, smartphones, solar cells

expected growth of these earth metals is > 1000%

97% of these critical metals is in hands of China

Concatenation of Crises

till 2020: financial-economic crisis

after 2020: ecological crises

resources & materials

energy

climate

Society in Transition

old society

top-down

vertical

centralized

government-based

individual-driven

new society

bottom-up

horizontal

decentralized

citizen-based

community-driven

Society 3.0

do it ourselves society

bottom-up society

participation society

citizen power

social do-it-self

Tipping Point Phase

energy companies in trouble

home care organizations in trouble

welfare organizations in trouble

building companies in trouble

housing corporations in trouble

Creeping Revolution

numerous entrepreneurs break through the systems

break through existing order: burglars in common order

‘do it themselves’ in collective (digital) networks

bottom-up movement from passion and inspiration

glocalisation

Where are these changes visible?

energy

from central, fossil to decentralized clean

construction

from supply & product to demand & service

health care

from effective & efficient to human-oriented

food

from global, industrialized to regional, sustainable

humans central

What is a transition?

Transition

fundamental change of structure, culture and practices in societal (sub)system

- **structure:** physical infrastructure, economic infrastructure (market, consumption, production), institutions (rules, regulations, actors)
- **culture:** collective set of values, norms, perspectives, paradigms
- **practices:** routines, behaviour, ways of handling, at the individual level

incumbent structure, culture and practices need to be broken down and new ones need to be built up

Transition is Evolutionary Revolution

evolutionary

old institutions die out, new institutions arise

labor unions, political parties versus communities and cooperations

revolutionary

process of radical, irreversible societal change

society 3.0 will become radically different: glocal, bottom-up, decentralized

Transition = Power Shift

regime: dominant structure, culture and practices with power and vested interests

niche: emerging, divergent structure, culture and practices at a small scale level

niche wants to develop power and take over incumbent regime
regime protects itself against this through absorption, assimilation or elimination of niches

transition = regime-change = power shift

Transition = Battlefield

evolutionary revolution

3 out of 5 companies will die out

not the biggest but the most adaptive will survive

Transition to a New Economy

New Economy is 'booming'

global economy around 'clean tech industry'

fastest growing industry in the world

2012: 300 billion dollar (30% growth t.o.v. 2011)

| | |
|-------------|------------|
| China | 60 billion |
| Germany | 45 billion |
| America | 40 billion |
| Italy | 17 billion |
| Netherlands | 5 billion |

New Economy in Europe

new economy of crucial importance for Europe

in potency 22 million Europeans involved

in 2013: 2-4% of total employment

in 2020: 5-10% of total employment

Germany is the frontrunner

Denmark performs well

England is improving

Netherlands is starting up and hooking on

New Economy in the Netherlands

Green Economy = ca. 4% of Total Economy (GDP)

Clean Tech = ca. 2% of Total Economy (GDP)

by now 2-4% of total economy

in 2025 11 - 21% at 15% growth per year

in 2030 22 - 43% at 15% growth per year

Investment in New Economy

every dollar invested in the new economy
yields three dollars added value in terms of:

innovation
employment
economic structure

every dollar invested in the old economy
costs society two dollars



Green Chemistry Campus

pearl of the biobased economy

campus created by petrochemical company SABIC

SABIC opens their laboratories for entrepreneurs

results in biobased radical innovations

biopolymers, biobased building materials, bio natural colours



Paper Factory Van Houtum

frontrunner in paper industry

make paper from waste paper in an efficient way

apply C2C and will become CO₂-neutral quite soon

work on radical new concept: paper from Miscanthus

circular economy: miscanthus growing on old mine hills







New Manufacturing Industry

digital revolution in manufacturing industry

fundamental change of:

how we make things and who makes it

everything can be produced on a PC

everybody becomes a producer



Consumers become Manufacturers

prosumer is pro-active and autonomous

prosumers: new power, organized in digital communities

prosumer becomes: developer, builder, manufacturer

prosumer can make own: house, furniture, car

from consumer to prosumer to manufacturer

How to stimulate the transition?

Transition Governance

organic development

Thinking Big, Acting Small

Transition Governance

provide incentives for radical innovation

create innovation spaces for radical innovation

bring together frontrunners in innovation spaces

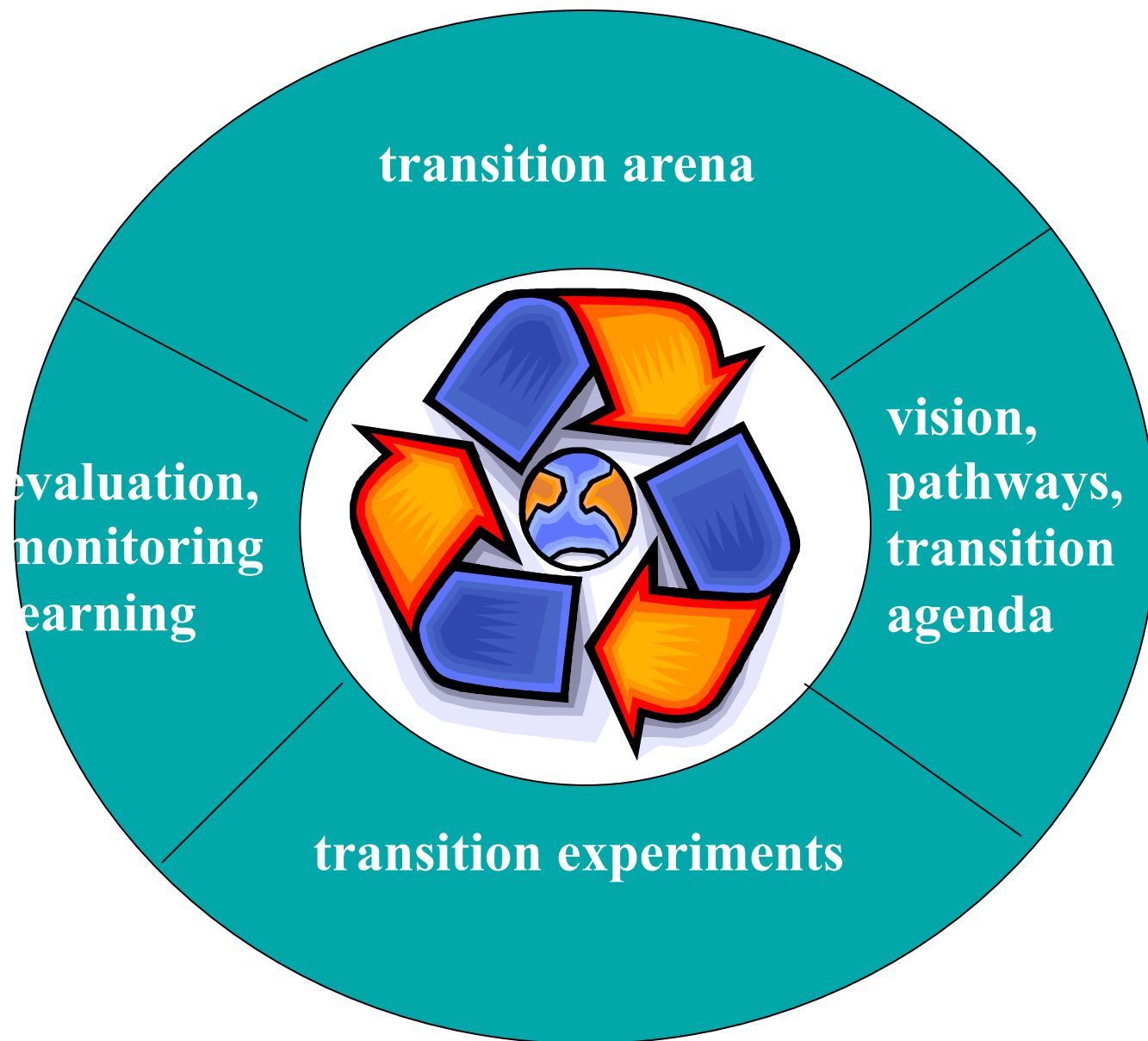
start portfolio of transition experiments

Radical Innovation

- is disruptive innovation
- is aimed at fundamental, radical change
- is complementary to incremental innovation
- arises from new combinations of businesses
- system innovation = radical innovation

three examples of radical innovation

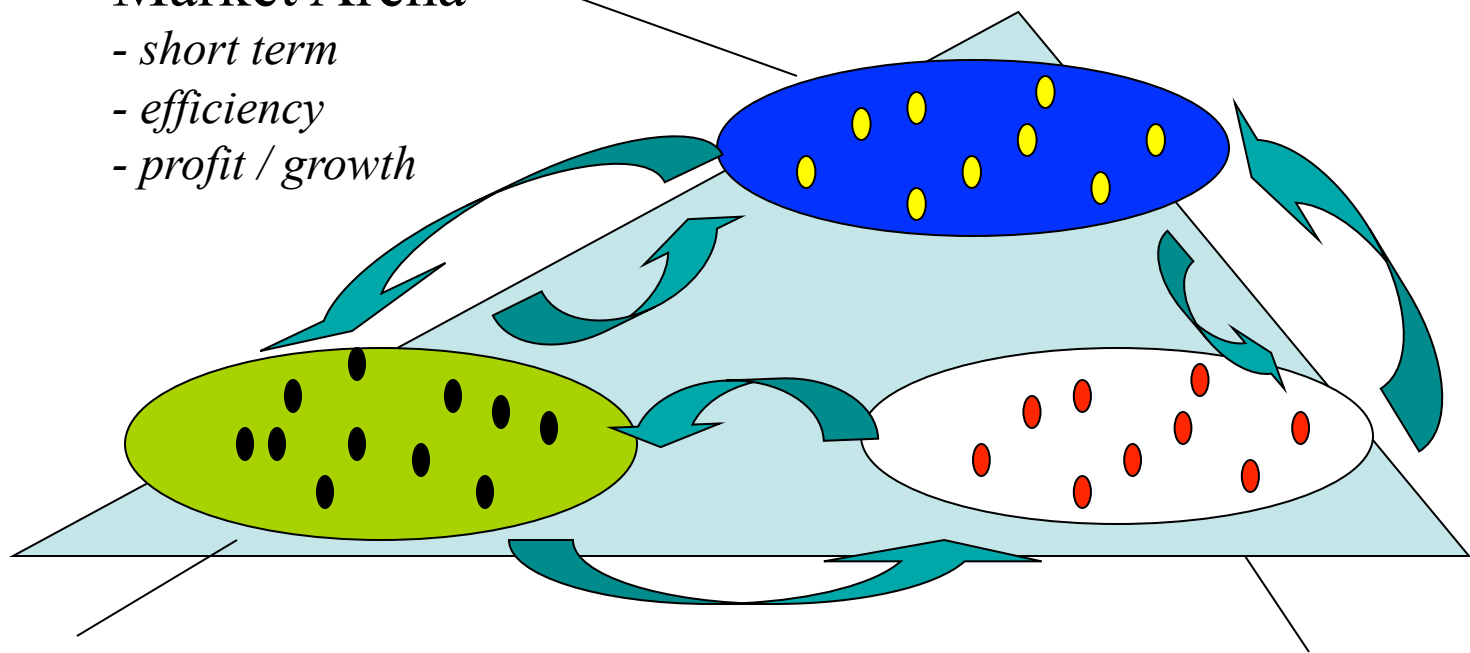
Transition Governance Cycle



Different Arenas

Market Arena

- *short term*
- *efficiency*
- *profit / growth*



Political Arena

- *short / medium term*
- *peloton*
- *incremental changes*
- *problem- and goal oriented*

Transition Arena

- *long term*
- *front runners*
- *system innovation*
- *problem / goal searching*

Transition Arena

- protected but not closed innovation network
- majority is niche players, minority is regime players
- dynamic learning network with temporary status
- 10-15 participants, frontrunners
- from society, business, government, science, NGOs

Transition Policy

facilitating role of the state

- creating radical innovation spaces
- removing barriers
- forming coalitions around frontrunners
- stimulating financial arrangements

Transition Policy

challenge market, mobilize society

phase 1 searching, learning, experimenting

phase 2 selecting, scaling up

phase 3 integrating in primary policy process

frontrunners

Silo's are Barriers

silo's are exponents of the old economy

fossil fuel industry, petrochemical industry

these silo's need to be broken down

new institutions need to be built up

New Institutions

- linking pins between different economic sectors

new economy is cross-sectoral

- connectors between education, research and industry
- facilitators of prosumers and communities
- transition managers to assist governmental bodies

Leading Role of Companies

- companies are in the driver's seat
- companies need to be servient to society
- business models of companies will change fundamentally
- sustainability needs to be core value (genes) of companies

What does this mean to Curacao?

Pillars of the New Economy

1. biobased economy
2. sustainable energy
3. new manufacturing
4. sustainable waste management
5. sustainable building

Curacao needs Transition Strategy

Plan B for Curacao

new economic motor

intelligent strategic thinking

iconic examples

New Economic Motor

not one big sector or industry

multiple sectors and industry

small is the new big

Current Strategy of Curacao

rooted in old economy (Isla / fossil fuels)

new economic structure is lacking

with innovation and jobs

economic sectors are underexploited:

fishery, harbor, tourism, clean tech



GreenTown
CURAÇAO



Conclusions

World is in transition but Curacao is not (yet)

Curacao is leaning on the old economy

this will lead to a systemic economic crisis

Curacao needs a new economic motor