
Indonesia
TELECOMMUNICATION
GOING
green
On Roadmap & Regulation
Dr. Riant Nugroho
Commissioner/Board Member Indonesia Telecommunication Regulatory Authority

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SBY to Push for Consensus in Copenhagen

DUBAI – President Susilo Bambang Yudhoyono said on Sunday Indonesia must be able to be part of a solution if the ongoing UN climate change talks in Copenhagen come to a standstill.



"I have written to the Danish prime minister informing him of the Indonesian proposal and to offer an alternative in case of a deadlock. And he has given a positive response," Yudhoyono said aboard a plane before making a stopover in Dubai en route to Brussels, Antara reported yesterday.

It is likely the Copenhagen meeting will be difficult with participating countries getting ing with European Union President Manuel Durao Barroso, has expressed his hoped that the EU would lift its ban on all Indonesian airline flights in 2010.

"I appreciate the fact that the ban on four Indonesian airlines has already been lifted in 2009. I hope the lifting can apply to more airlines in 2010," the president said at the EU headquarters on Monday morning local time.

The head of state said that the flight ban was one of the issues



National Vision on Green Business

- In 2009, President Yudhoyono pledged to cut Indonesia's greenhouse gas emission by 26 percent from business as usual levels by 2020, and by 41 percent with international assistance.

- President Susilo Bambang Yudhoyono has signed Presidential Decree No. 61/2001 on September 20, 2011 on National Action Plan to reduce Greenhouses Gas emission (refer as RAN-GRK).



The Jakarta Post

SBY brings hope to Copenhagen from the developing world

Jonathan Woodliff | Life | Tue, December 15 2009, 10:38 AM

Susilo Bambang Yudhoyono | Bambang Yudhoyono

Life News

Balancing the here and there

Internet rolls into Bangladesh villages on a bike

Engaging

President Susilo Bambang Yudhoyono's 11,000-kilometer journey to Copenhagen this week, where he will attend the UN climate change summit, is certainly among the most important international visits of his political career.

It's freezing on the streets of the Danish capital, but temperatures will *be far higher inside of the Bella Centre where over 20,000 are*

developing countries to support measures for a new global agreement.

With significant rifts emerging between rich and poor countries threatening to sabotage progress, SBY takes to Europe some much-welcomed enthusiasm for combating the global climate change crisis.

"Remember: We can negotiate about the climate, but we cannot negotiate with the climate. We cannot ask the climate for more time," the President passionately told the UN.

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National Roadmap

Each sector included in RAN-GRK were given a proportion on their contribution to the overall GHG emission reduction target of 26%/41%, as follows:

1. Agriculture: 0.008 Gigatonnes CO2e (26%) and 0.011 Gigatonnes CO2e (41%)
2. Forestry Sector and Peatlands: 0.672 Gigatonnes CO2e (26%) and 1.039 Gigatonnes CO2e (41%)
3. Energy and Transport: 0.038 Gigatonnes CO2e (26%) and 0.056 Gigatonnes CO2e (41%)
4. **Industry: 0.001 Gigatonnes CO2e (26%) and 0.005 Gigatonnes CO2e (41%)**
5. Waste Management Field: 0.048 Gigatonnes CO2e (26%) and 0.078 Gigatonnes CO2e (41%)



SUSTAINABILITY

Conference calls on ITC firms to go green

The Jakarta Post
JAKARTA

Telecommunications companies should apply environmentally friendly programs to preserve nature and reduce the effects of climate change, according to a conference on information and communication technology (ICT) on Monday.

The keynote speaker at the ICT for Green Asia Summit, Information and Communication Minister Tifatul Sembiring, said that ICT industries played a major role in accelerating awareness on global warming and lifestyle effects on the environment.

"Green ICT is an accelerator toward green everything. When ICT industries are aware of environmental effects, they can start creating ways or new technology to help other industries reduce industrial effects on the environment," he said.

Global e-Sustainability Initiative (GeSI) chairman Luis Neves cited GeSI's report, "SMART 2020: Enabling a low-carbon economy in the information age", which showed that the ICT sector contributed around 2 percent of all global emissions.

However, he said, ICT solutions could enable global carbon reductions of up to 15 percent, create up to 15 million green jobs globally by 2020 and become a powerful economic driver.

"In Indonesia alone, it is estimated that a 10 percent increase in broadband and mobile penetration may boost national gross domestic product by 2 percent," he said.

Despite that potential, there are only 5.1 fixed broadband users per 100 people in the Asia Pacific region compared to 23.8 per 100 users in Europe, said International Telecommunication Union (ITU) telecommunication standardization bureau director Malcolm Johnson.

Besides broadband penetration, Johnson said that electronic waste was one of many great concerns in developing a greener ICT industry.

Johnson pointed to ITU's breakthrough in reducing electronic waste by offering ITU's standardized universal mobile charger.

"No longer will you need to buy a charger with every mobile phone. It is estimated that this alone will reduce e-waste by 82,000 tons a year," he said.

Anindya Novyan Bakrie, president director of PT Bakrie Telecom (BTEL), which hosted the conference, stated that his company was the first mobile network operator in Indonesia to launch a green handset collection and recycling initiative.

Anindya said BTEL implemented various environmentally friendly policies including reducing the amount of materials used in talk time vouchers, standardized handset chargers, providing ambient cooling for its base stations and designating 64 percent of its capital expenditures to environmentally friendly vendors.

BTEL expected a total savings of more than Rp 20 billion (US$2.23 million) throughout 2011 after the policies were implemented.

Research and Technology Minister Gusti Muhammad Hatta, who also attended the conference, said ICT was crucial to help people function better, faster and cheaper.

"If Indonesia has the second-most Facebook users, the third-most Twitter users and the third-most-used language on Google and Yahoo, then Indonesians know how Facebook, Twitter, Google and Yahoo can improve their technology and services, including how to be greener and more profitable," Gusti said.



Sector (Telco/ICT) Vision (and therefore commitment)

Conference on information and communication technology (ICT) on Monday, 31 Oct 2011

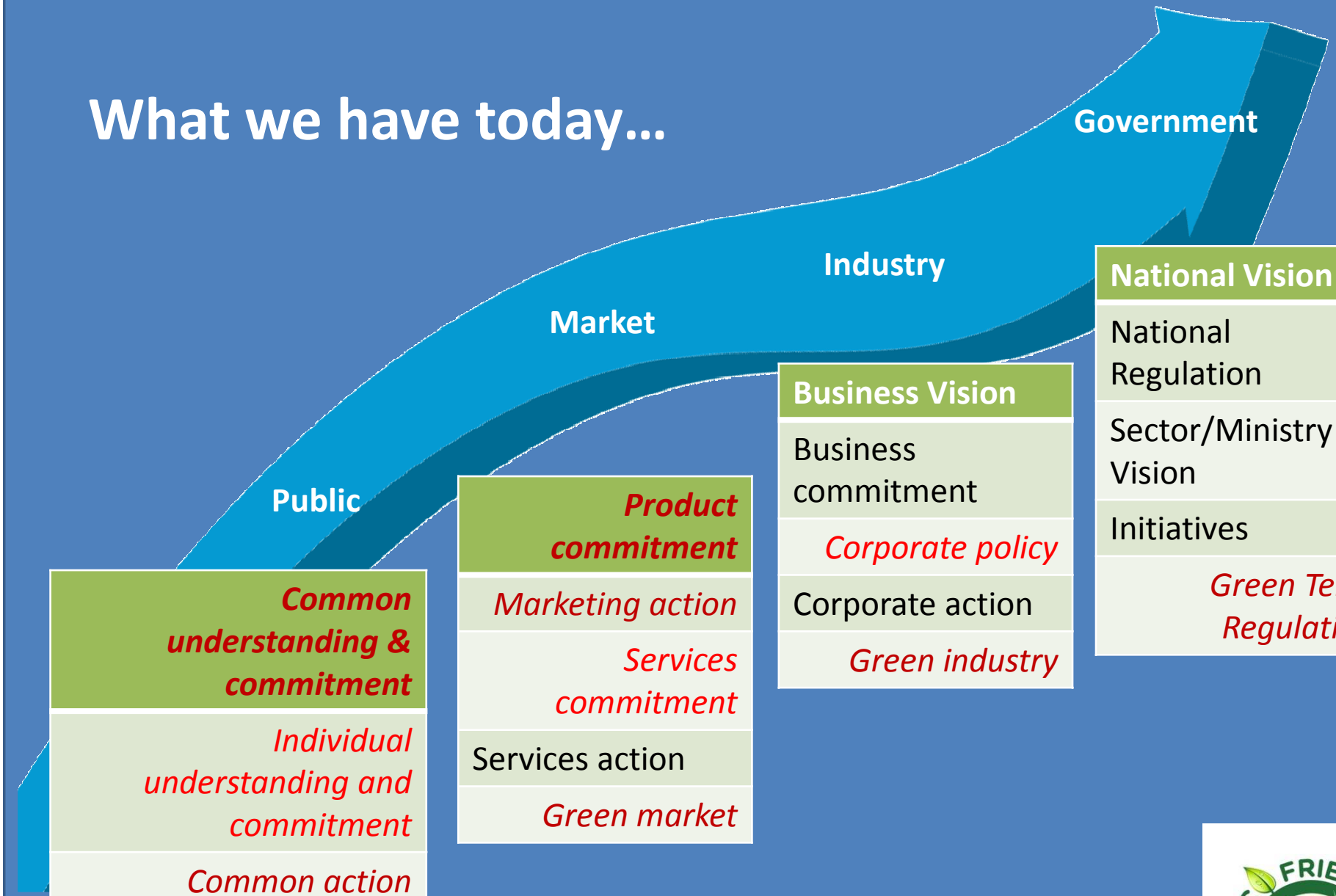
- **Telecommunications companies should apply environmentally friendly programs to preserve nature and reduce the effects of climate change**. ICT industries played a major role in accelerating awareness on global warming and lifestyle effects on the environment.



"Green ICT is an accelerator toward green everything. When ICT industries are aware of environmental effects, they can start creating ways or new technology to help other industries reduce industrial effects on the environment."



What we have today…



Case : Telkomsel Green Powered BTS

- **Solar**

Region	1	2	3	4	5	6	7	8	9	10	Total Site
Installed	14	19	1	-	1	2	18	23	18	36	132
On Going	2	-	-	-	-	-	4	12	8	2	38

Total capacity (installed): **1,148,645** Watts peak (Macro BTS)
Total capacity (installed): **426,640** Watts peak (Micro BTS in *USO Project*)
Total capacity (on going) : **352,600** Watts peak (PO 2009)

- **Micro hydro**

Telkomsel is installing microhydro power generation as pilot project in :
1.Suoh – Lampung,
Potential capacity : **16** kilowatts
2. Teluk Wondama – Papua,
Potential capacity : **14** kilowatts



Telkomsel Green Powered BTS

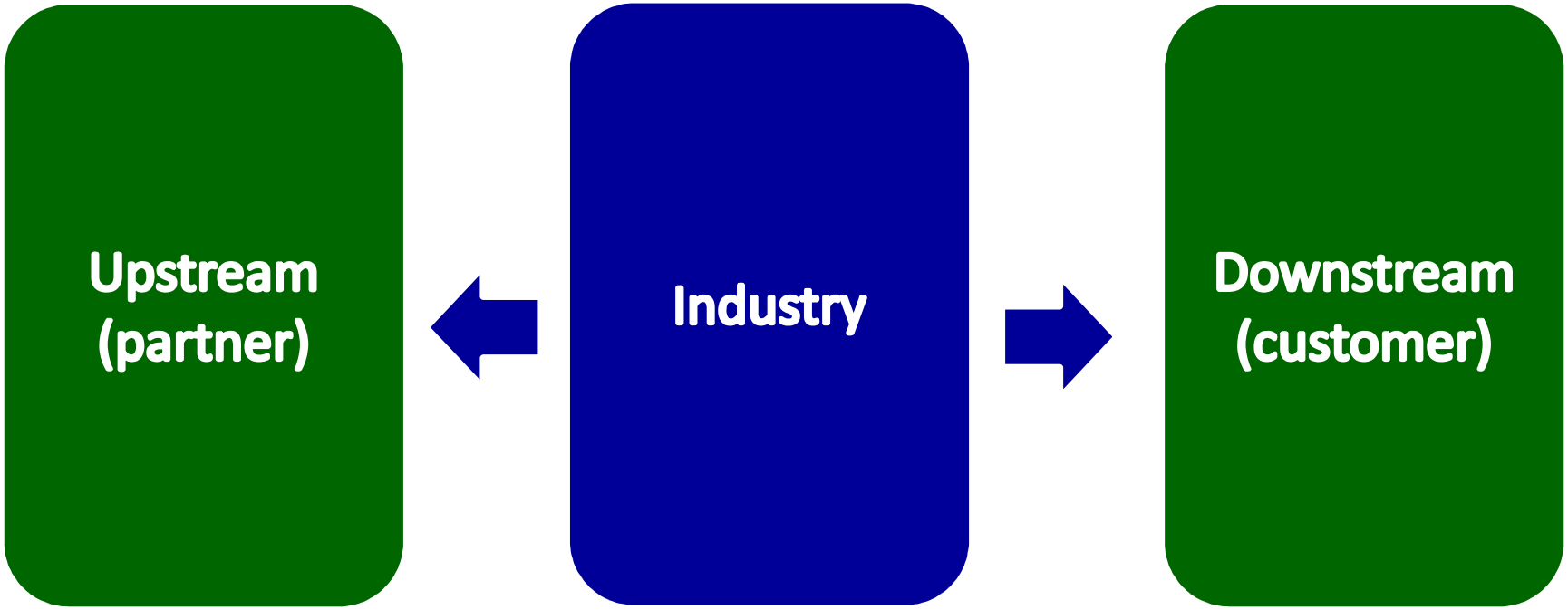
- **Hydrogen (Fuel cell)**

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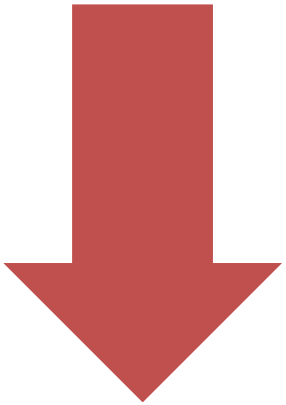


Telco 2.0 : Two Sided Business



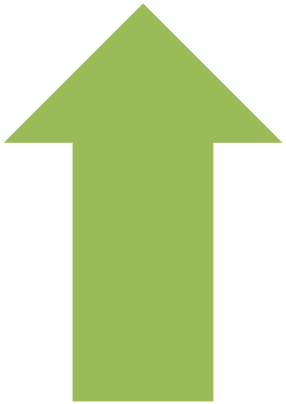
Telkom Indonesia's TIME = Telecommunication, Information, Media and Edutainment

Telco 2.0 : Two Sided Business..consequences



Increasing service and product

Reducing Business Costs (*Capex* and *Opex*)



Agenda : How to put "green telco business approach, policy, and practices" on the "telco 2.0 platform"

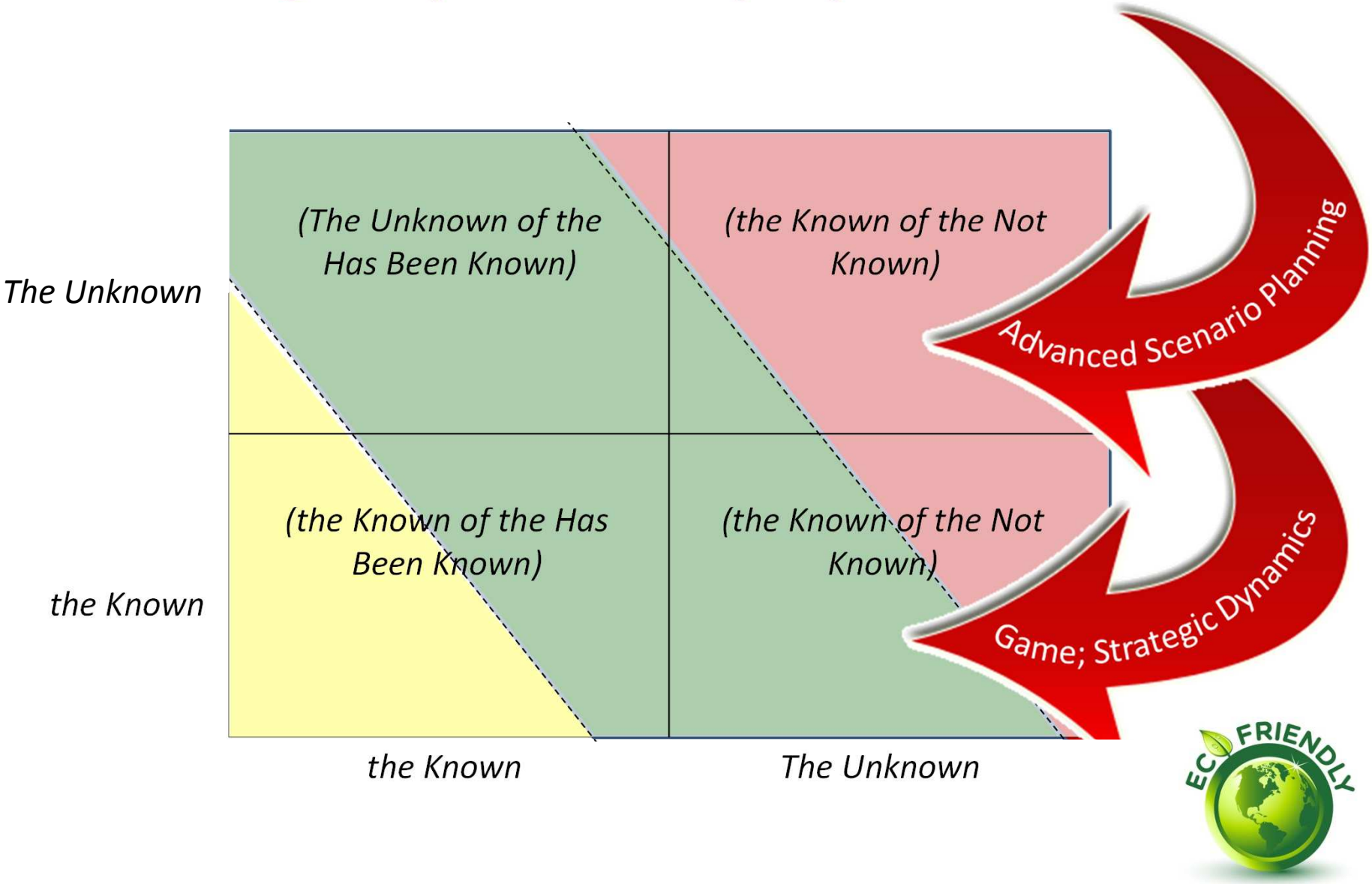


10 Notes from the future

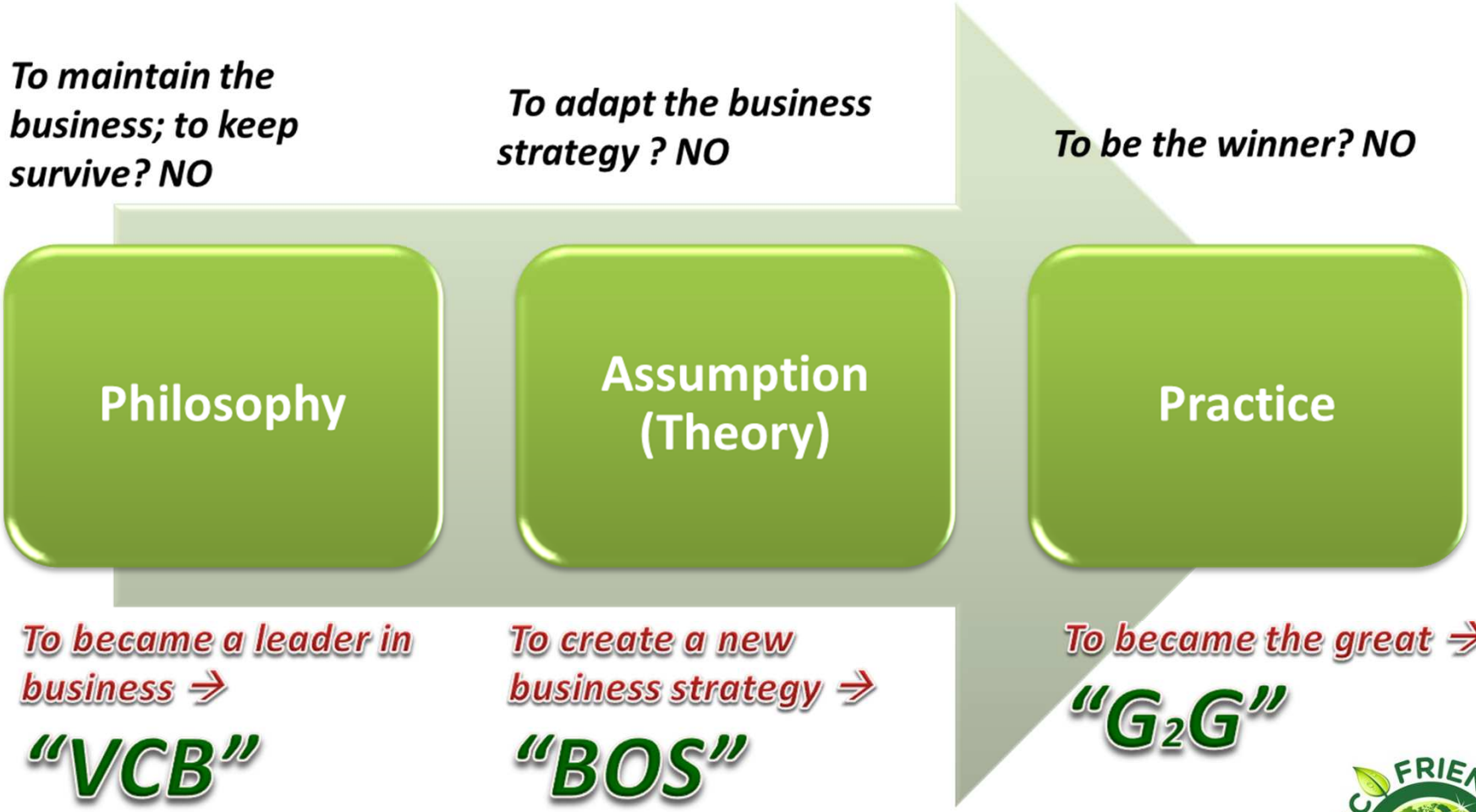
1. **People obsessed to bustle-an anti-social society**, as there will be a hyper-social-networked society
2. **Technology driven civilization** –and telco-internet-television at the forefront
3. **Virtual memory**. In 2020, human brain can be downloaded: a) human being, 2) improved human being (Ian Person, BT Futurology, UK)
4. **Fast is more important than accurate** – as there are multitasking generation
5. **Free economy** –content; network will be "public good"
6. After virtual memory, then ***virtual bank***: they are *wall mart, apple, google, toyota…. Telkomsel.*
7. **Supermarket will have more attendants** than Disneyland
8. **Car owner will pay 5 times**: car and its services, tax, fuel, carbon emission, and road-tax
9. **Youth behavior.** In 2017, 80% - 90% online trading by youth (15-19) through cellphones, and 75% of researches will be conducted online from cellphone
10. **Digital economy.** In 2020 : 10% cash transaction, and up to 90% will be digital. Cellphone will be the most favorite wallet (AC Nielsen)



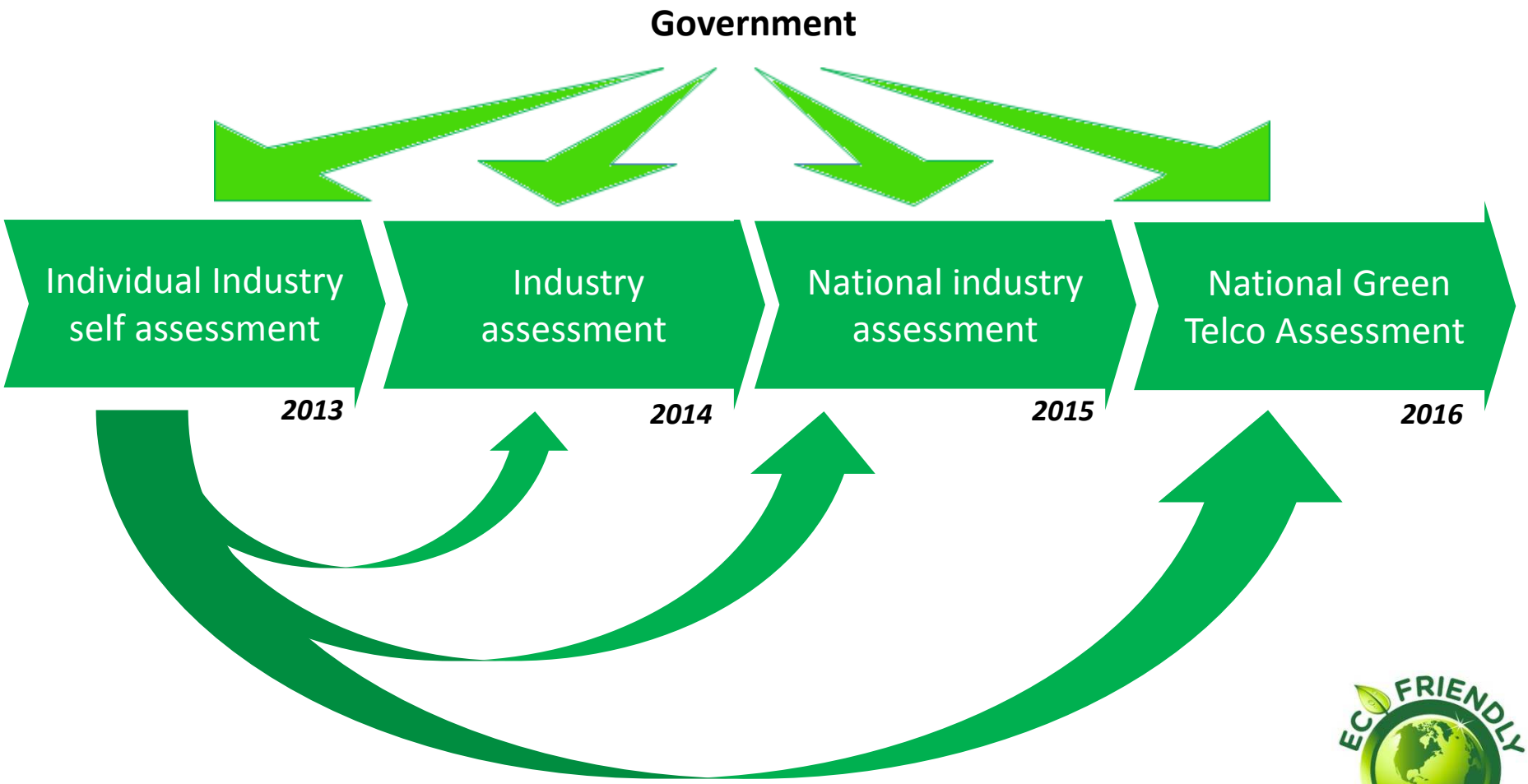
Rethinking the future and far future



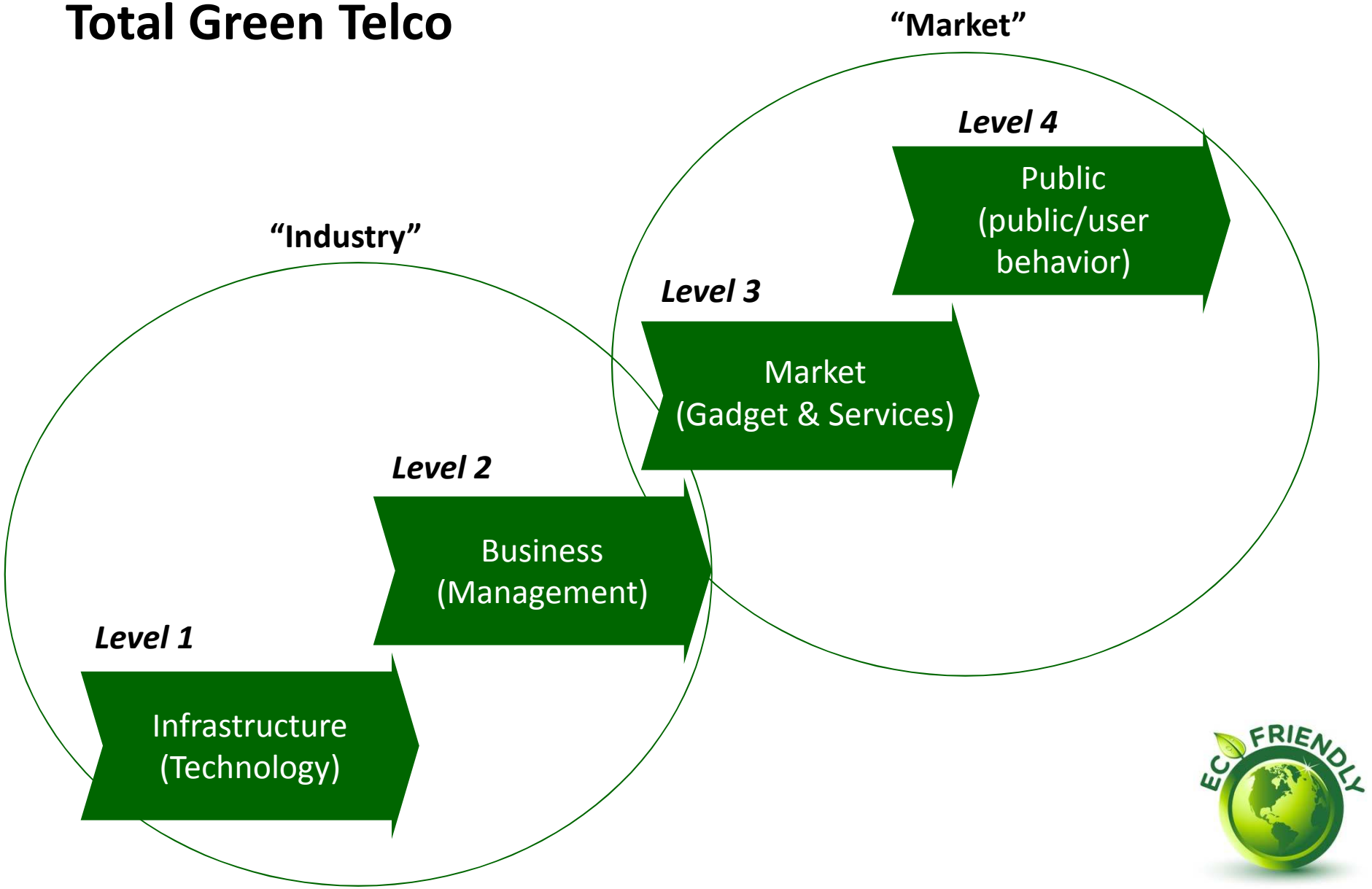
Developing "Telco Green Business"



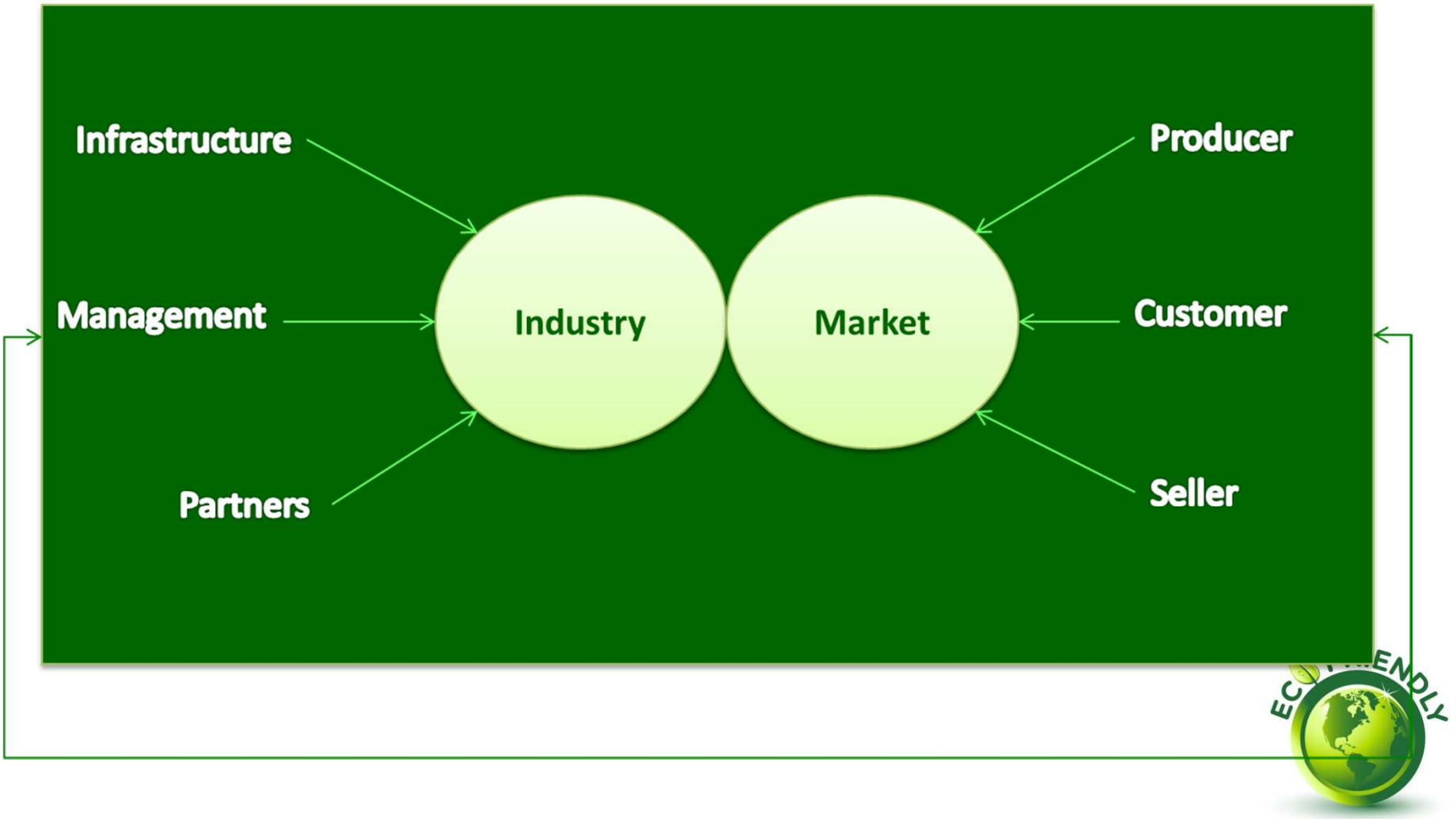
Indonesia green telco in action : roadmap



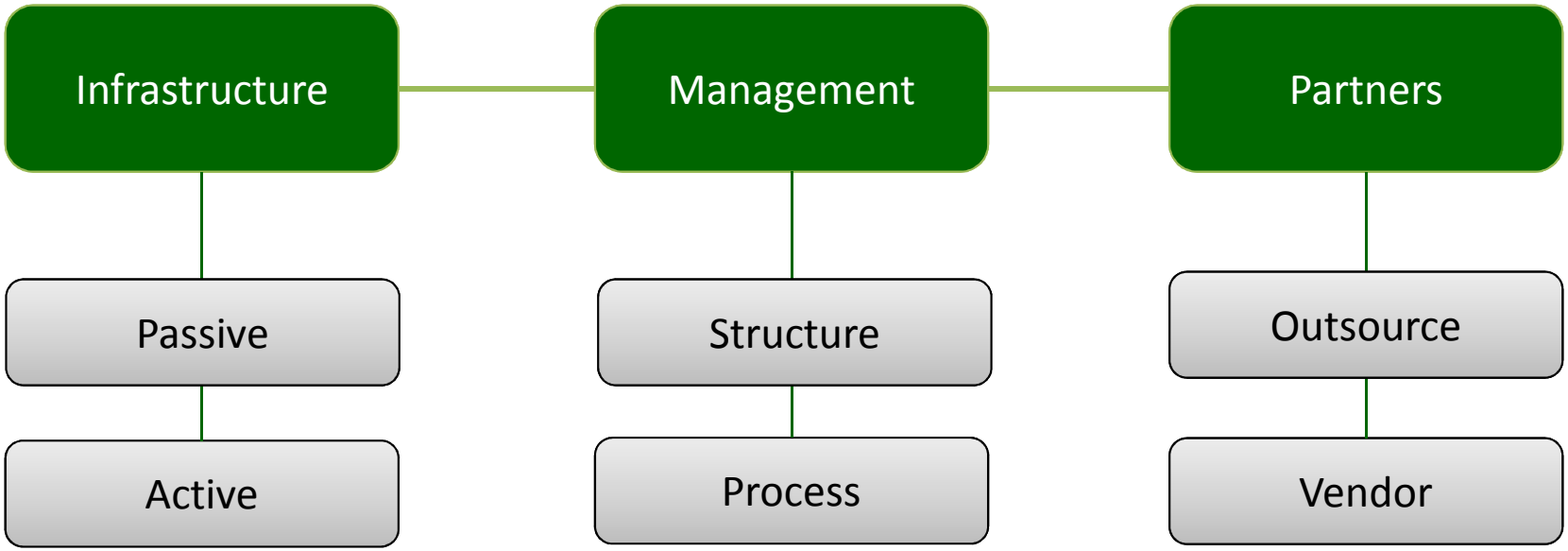
Four Dimension (and therefore “level”) of National Total Green Telco



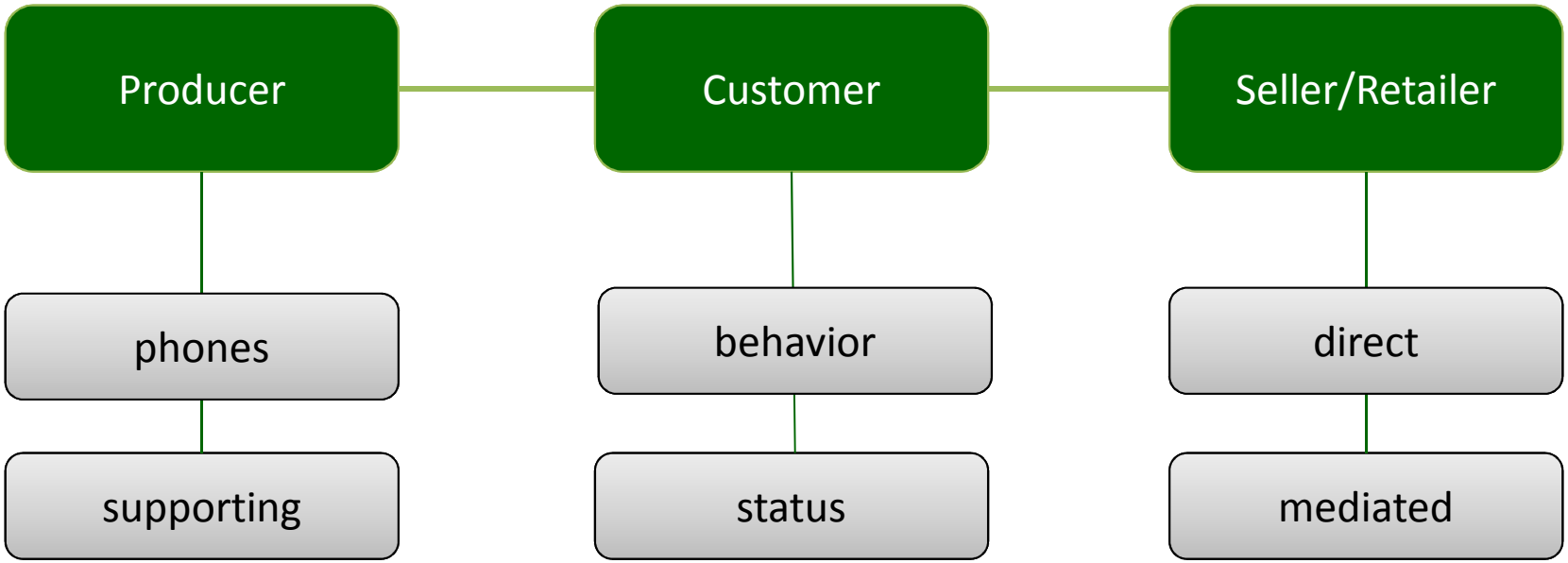
Telco Business



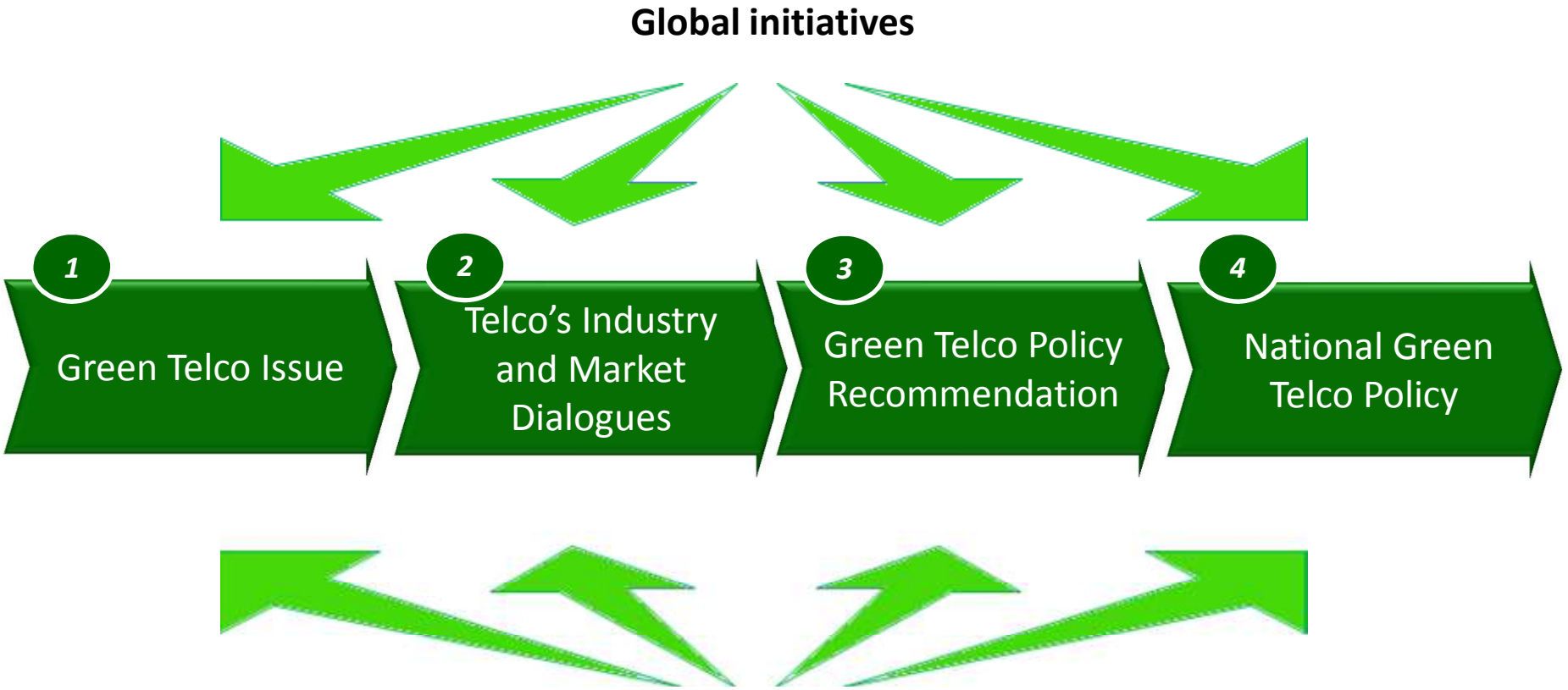
Industry's (carbon) footprint



Market's (carbon) footprint



Deliberative policy development : “player’s driven policy”

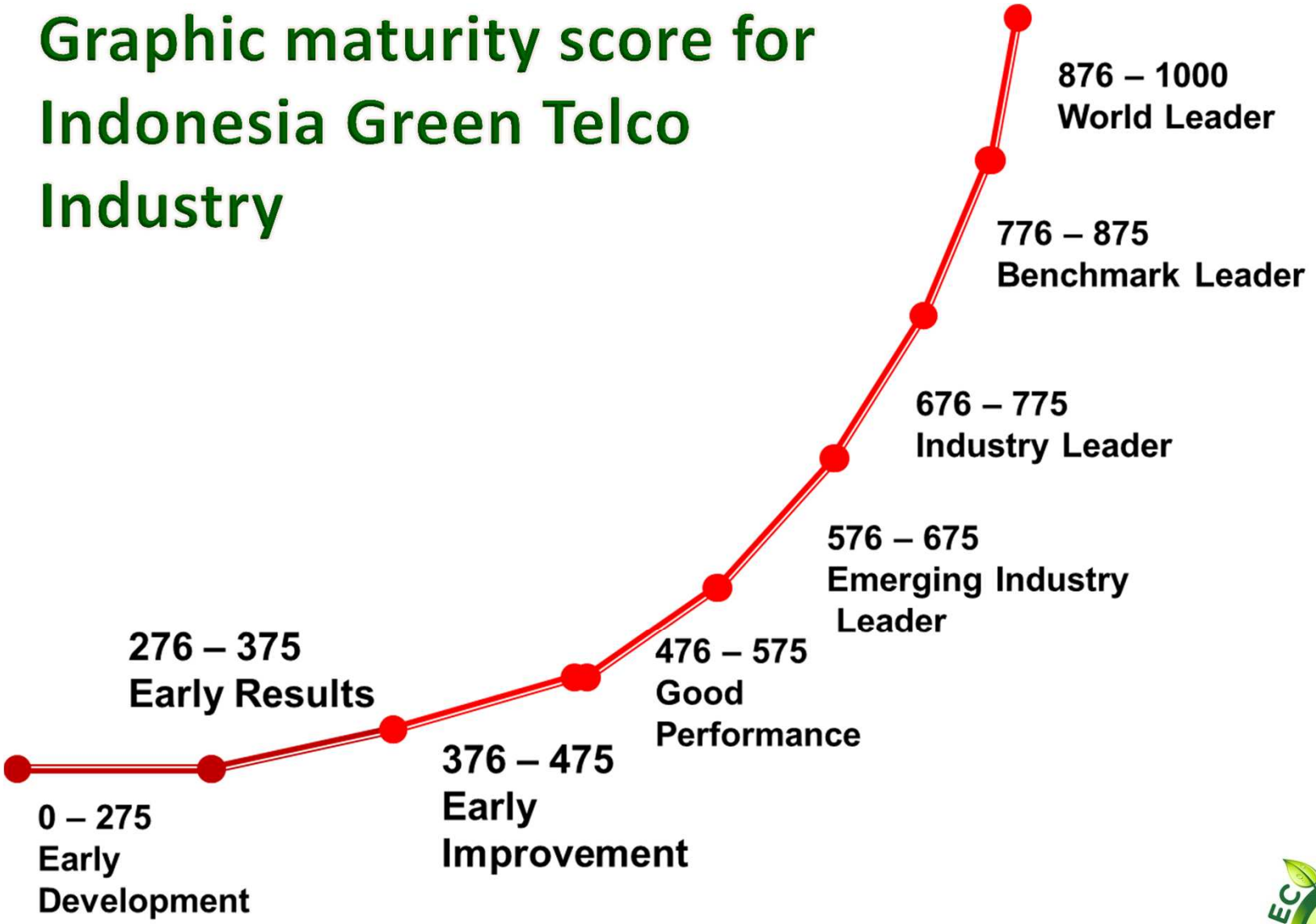


What Indonesia Regulatory doing now is…

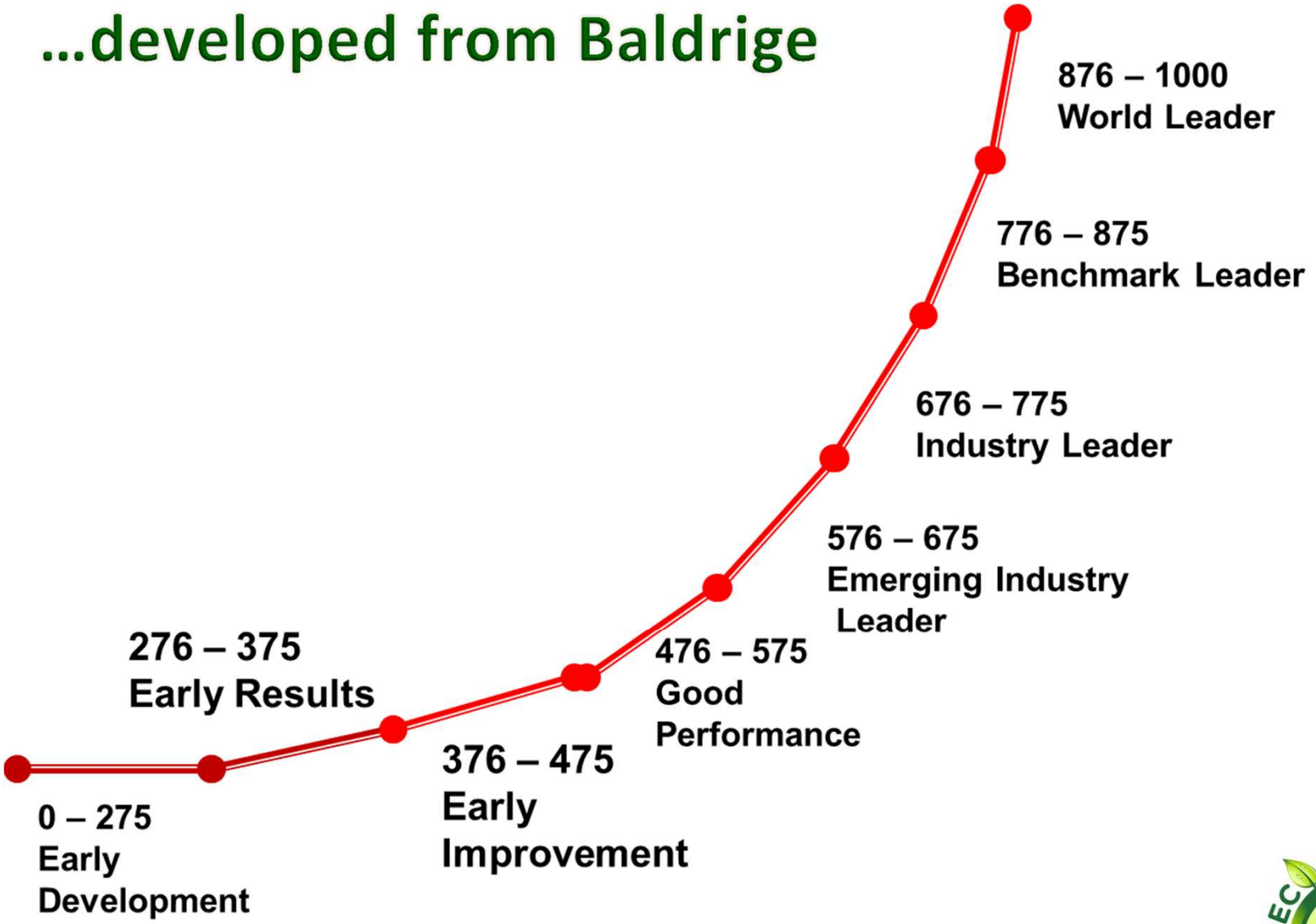
- …developing the method for “evaluating the green telco business” in Indonesia



Graphic maturity score for Indonesia Green Telco Industry



…developed from Baldrige





The green telco regulation in Indonesia

- **“In the making process”**

Developing the relevant regulation

- **Green Telco Promoting Regulation**
- **“Convergence policy : Telco, Broadcast/Media, IT/Internet”**
- **“Business synergy –from infrastructure sharing to Industries consolidation”**

Encouraging the business sector

- **“self regulated”**
- **“competing for green business”**



Efforts

1. Infrastructure sharing
   - Backbone and Backhaul
   - Tower Sharing
   - National Roaming
2. Alternative Energy – less carbon



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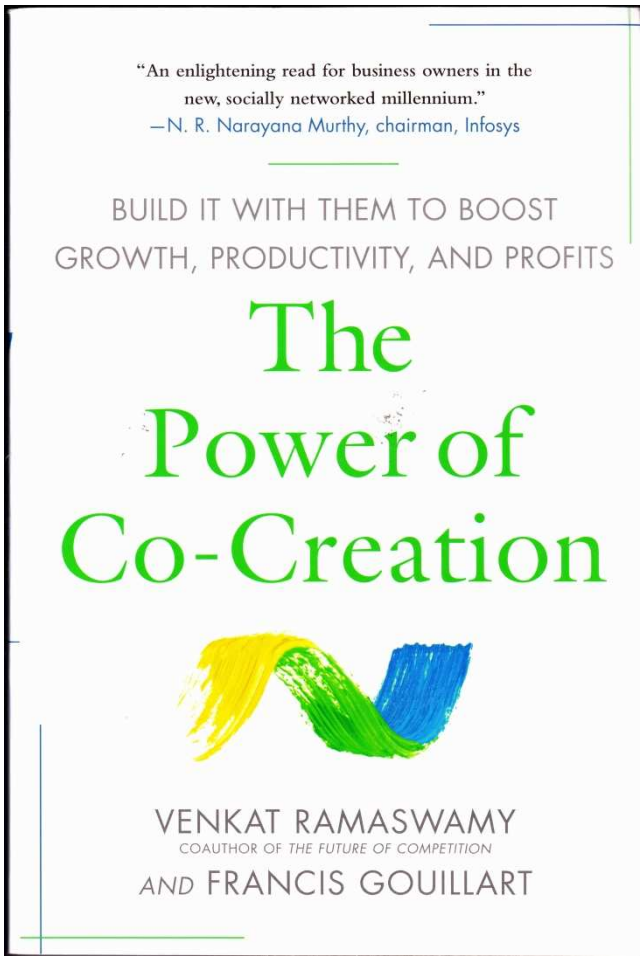
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It is not “what to do”, but “how to do”



The regulation will be….



Who doing what? …Green Business Award (and, surely, incentives)



Policy modeling, ideal exercise

Issue	Target	Policy	Market	Incentives
Industry	Business process reengineering: efficient & green	Regulation for business efficiency and service standard	Competing toward best business process and its services	Disincentives and incentives
	Industries consolidation	Regulation on merger & acquisition	Competing toward best value business	Support
	Economy of green innovation	Regulation on business innovation; regulation on convergence	Competing toward innovative service and product	Support, incentives
Market	Green product	Regulation on promoting eco-friendly product	From green cellphone to green content	Support
	Green business chain	Regulation on promoting eco-friendly business chain at local, national, and global level	Green telco-business ecology	Support

Conclusion, and therefore challenges…

1. The **winning business in the future** will only be the green business, it is in telco indeed
2. How **corporates respond to the definite future** by developing a green business platform
3. How **government respond to the definite future** by providing the supporting policy
4. How the **global institution** –ITU-- build the **strong global alliance** toward green business telco




THANK
YOU