

Role of Private Sector in Zero Waste Society

IPLA Global Forum 2015

Science-Policy-Business-Community Interface Towards a Resource Efficient Nation
: Minimum Landfilling and Maximum Resource Recovery
Moscow, Russia

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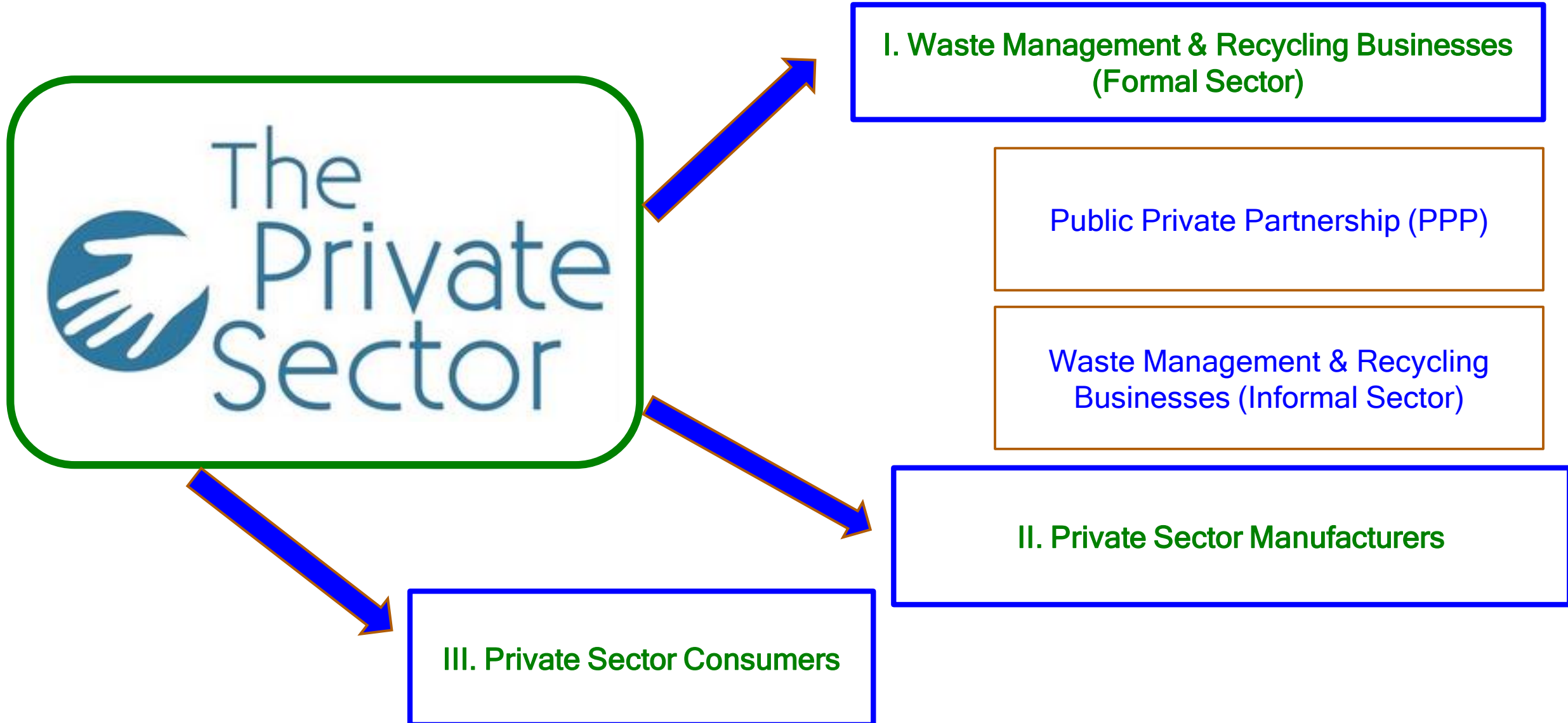
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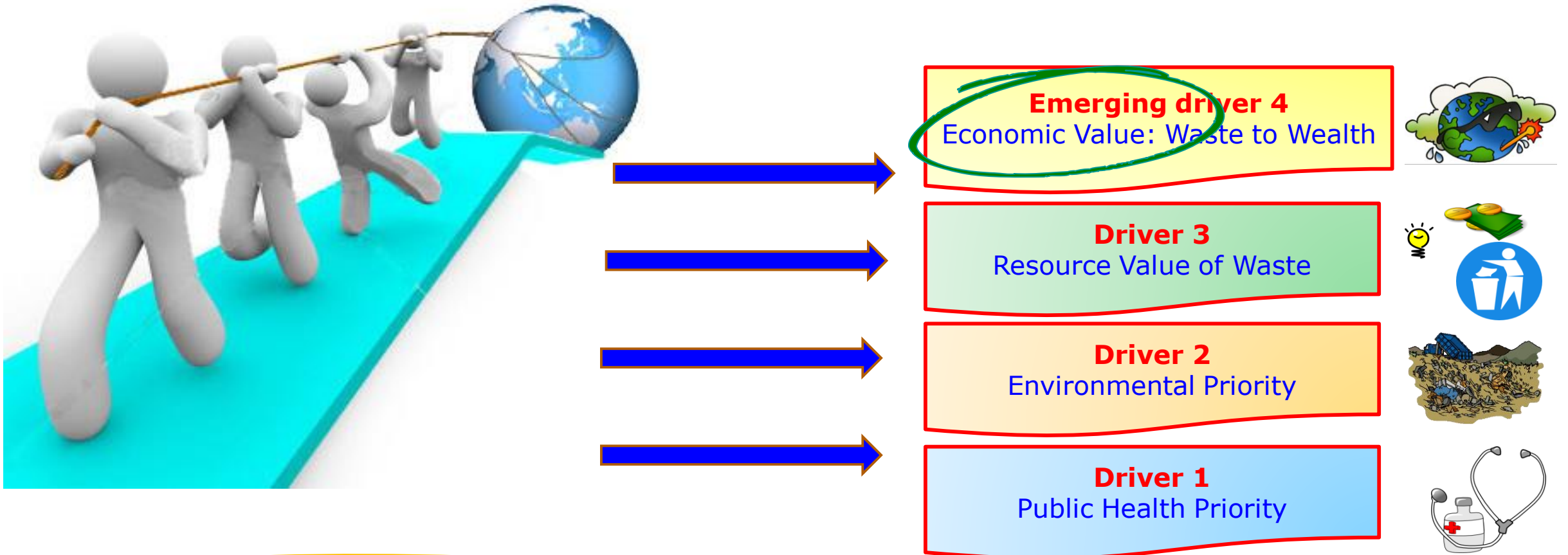
URL: <http://www.faculty.ait.ac.th/Visu/>, www.3rkh.net



Private Sector



Solid Waste Management Modernization Drivers



Moving from **Waste Management** to **Resources Management**

Waste Management Market = Money



MILLENNIUM INSTITUTE
a sustainable future for Earth is possible

Average yearly
US\$ 83 to US\$141 billion of investment to
green waste sector

2 -2.84 million additional jobs by 2050 in
formal sector

Waste to landfill to reduce from 22% to 5% by 2050

Recycling market : US\$ 160 bn
MSW market : US\$ 125 bn
Non-hazardous Industrial waste : US\$ 147 bn

World's waste market is worth US\$ 410 billion
(UNEP, 2011, Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication)

FROM WASTE TO RESOURCE
An abstract of
"2009 World Waste Survey"



 **VEOLIA**
ENVIRONMENTAL
SERVICES



Waste-to-energy (WTE) market will see global revenue of
\$13.6 billion in 2016

<http://www.navigantresearch.com/newsroom/global-waste-to-energy-systems-revenue-to-reach-13-6-billion-by-2016>

Waste Management Market = Jobs



Estimate of worldwide potential for new jobs in the circular economy: 9 to 25 million

Dumping 10,000 tons of waste in a landfill **6 Jobs**



10,000 tons of waste if recycling

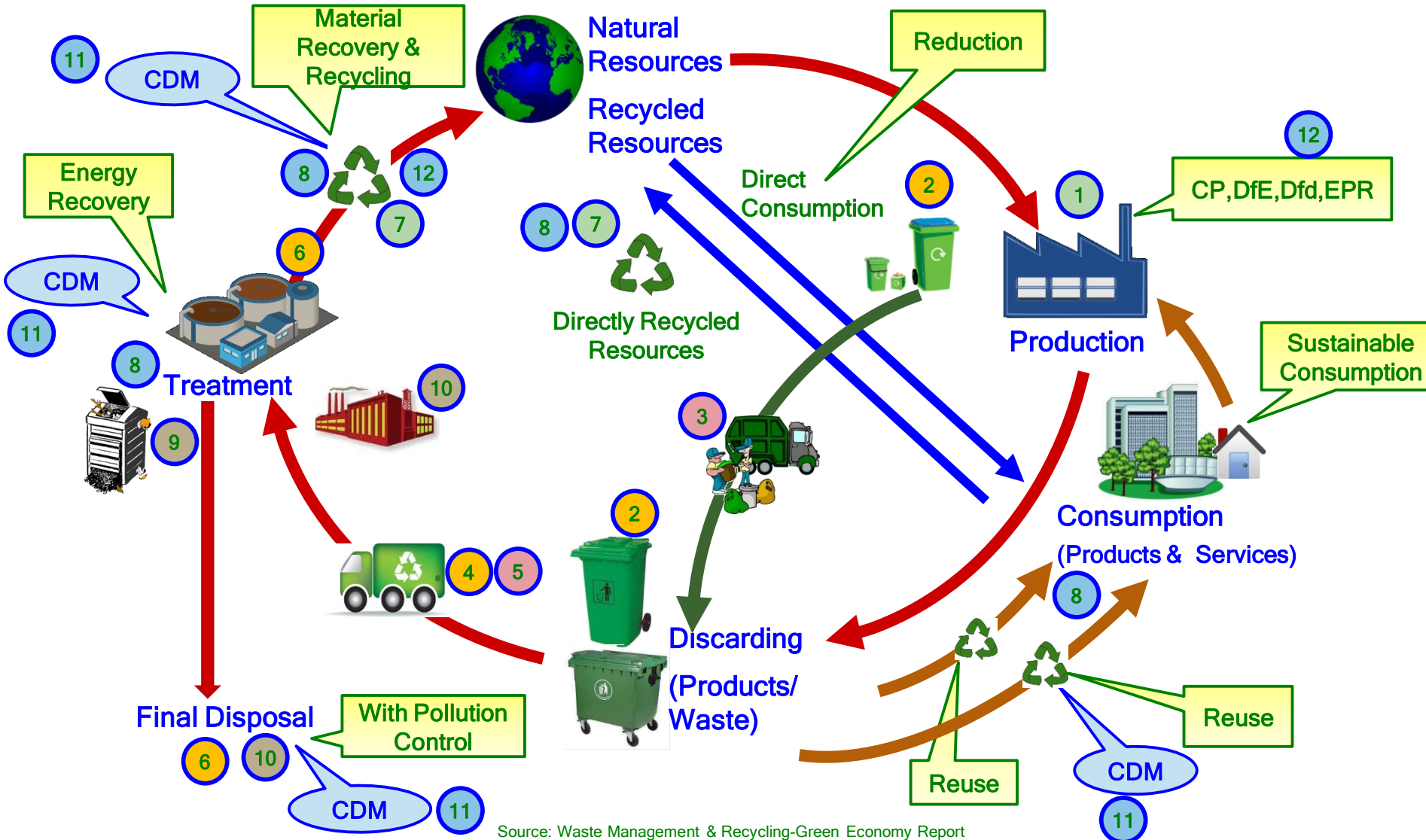
36 Jobs

According to the Institute of Self Reliance, processing and sorting recyclables alone sustains 10 times more jobs than landfilling or incineration.

Private Sector Waste Management Companies

I. Doing business for the Profit

What are the Available Business Opportunities in Waste Sector?



Source: Waste Management & Recycling-Green Economy Report

| No. | Opportunity |
|-----|---|
| A | Machinery & Equipment Supplies |
| 2 | Bin & Container suppliers |
| 4 | Automotive suppliers |
| 6 | Equipment suppliers |
| B | Waste Collection Services |
| 3 | Waste collection services |
| 5 | Waste transportation services |
| C | Others |
| 1 | Waste Mgmt & Consulting |
| 7 | NGOs and CBOs formalizing rag pickers |
| D | Recycling Business |
| 9 | Operating Composting Units |
| 10 | Operating Biogas, Incineration, landfill facilities |
| E | Economic Co benefits |
| 8 | Opportunities arising from 3R activities |
| 11 | Revenue from Carbon Credits |
| 12 | Innovative Product Designers & Resource Managers. |

Waste is Wealth: Billion Dollar WM Companies

- Businesses everywhere generate trash, but trash also generates new businesses



Market Cap \$10.9 Billion (as of May 2015)
#723 Global 2000



®

Waste Management Market Cap \$19.49 billion (As of May 2014)



€ 14.324 Billion (2014)

Fortune 500 Companies



Billionaires in Waste Sector

Estimates show recycling in China is a 14 billion Dollar Business

China has produced many billionaires from waste management business

- Zhang Yin, Founder Of Nine Dragons Paper (\$4.4 Billion) - take heaps of waste paper from the United States and Europe to China and recycle it into corrugated cardboard
- Guangbiao Chen is another controversial recycling tycoon in China
- Cheung Kong Infrastructure Holdings Ltd. run by the Asia's richest man (Li Ka-shing whose fortune is estimated by Forbes at \$30 billion) is buying New Zealand's second biggest waste disposal company (Envirowaste)

Beginning with a single garbage truck in 1968, Mr. Huizenga grew Waste Management, Inc. into an entity that would become a Fortune 500 company.

Mastagard - a waste and recycling business, sold to EnviroWaste in a half-billion-dollar deal in April 2013

Wilson Quintella - Brazil's richest garbage man



Most Influential Person of China
Most Prominent Philanthropist of China
China Moral Leader
China Earthquake Rescue Hero
Most Well-known and Beloved Chinese Role Model
China Top Ten Most Honorable Volunteer
Most Charismatic Philanthropist of China
China Low Carbon Emission
Environmental Protection Top Advocate
China's Foremost
Environmental Preservation Demolition Expert
Guangbiao Chen
CEO Recyclable Material Salvage & Reclamation Corporation
Add:Shengli Road 1,Jiangning District,Nanjing China
Postal Code:211106



Private Sector Investment



Fluorescent Tube Recycling
Philips Electronics (Thailand) Ltd.
Address: 515 Moo.4 8D, Pattana 3
Road, Bangpoo Industrial Estate,
Preakasa, Maung, Samutprakarn,
10280, Thailand
Technology Provider: Royal Philips
Electronics, The Netherlands



Windrow Composting
Vietstar Joint Stock Company
Address: Municipal Solid Waste
Treatment Complex, Cu Chi District, Ho
Chi Minh City, Vietnam
Technology Provider: Lemna
International, Inc., U.S.A.



Wongpanich Private Waste Recycling, Thailand

- Recognized as a model for recycling business in Thailand and neighboring countries
- Provides important benefits such as
 - poverty reduction
 - create job opportunities
 - market value for waste
 - educate people
 - and increase awareness within community



Wongpanich Waste Recycling Factory, Thailand



Recyclable transportation



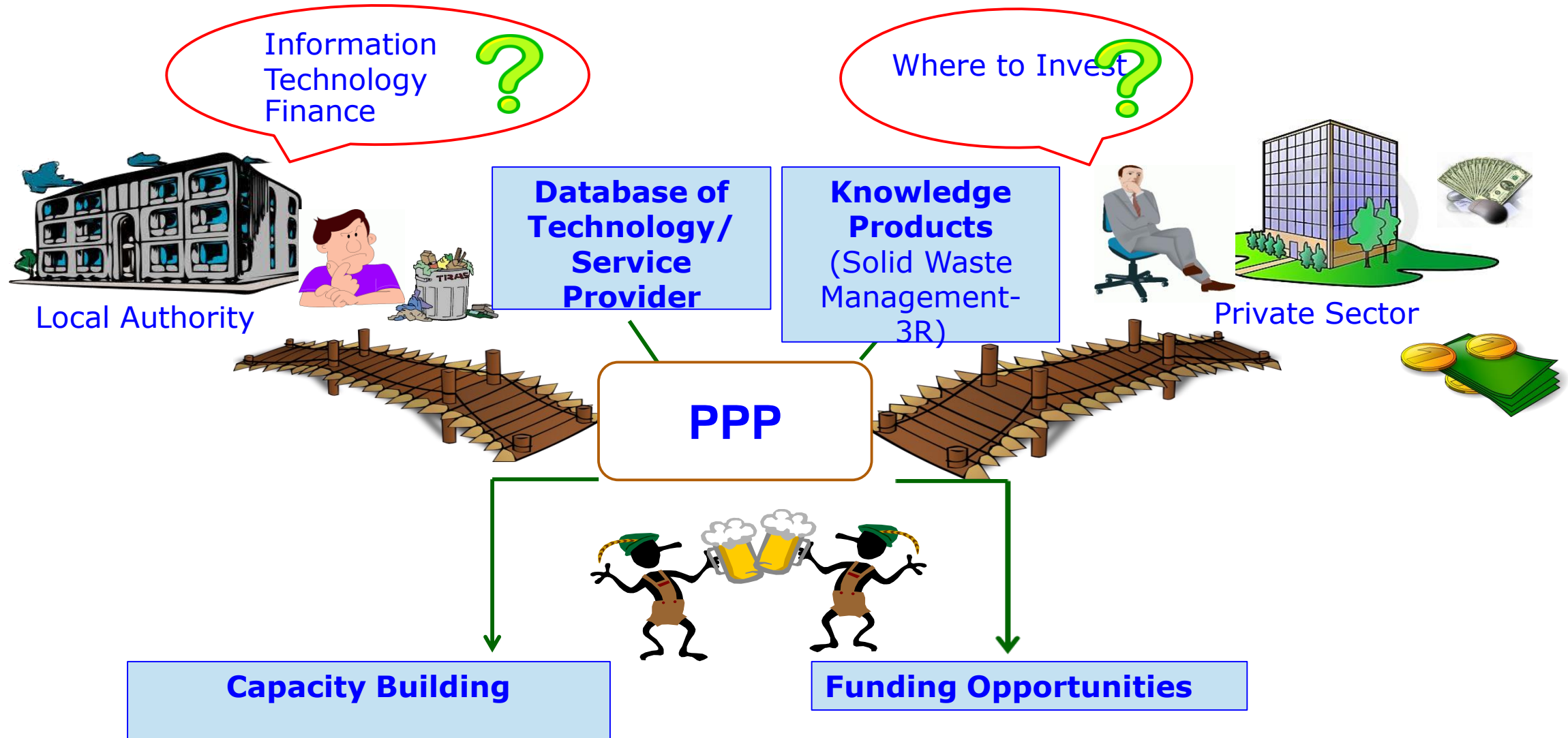
Storage of Separated & Cleaned Plastic Containers



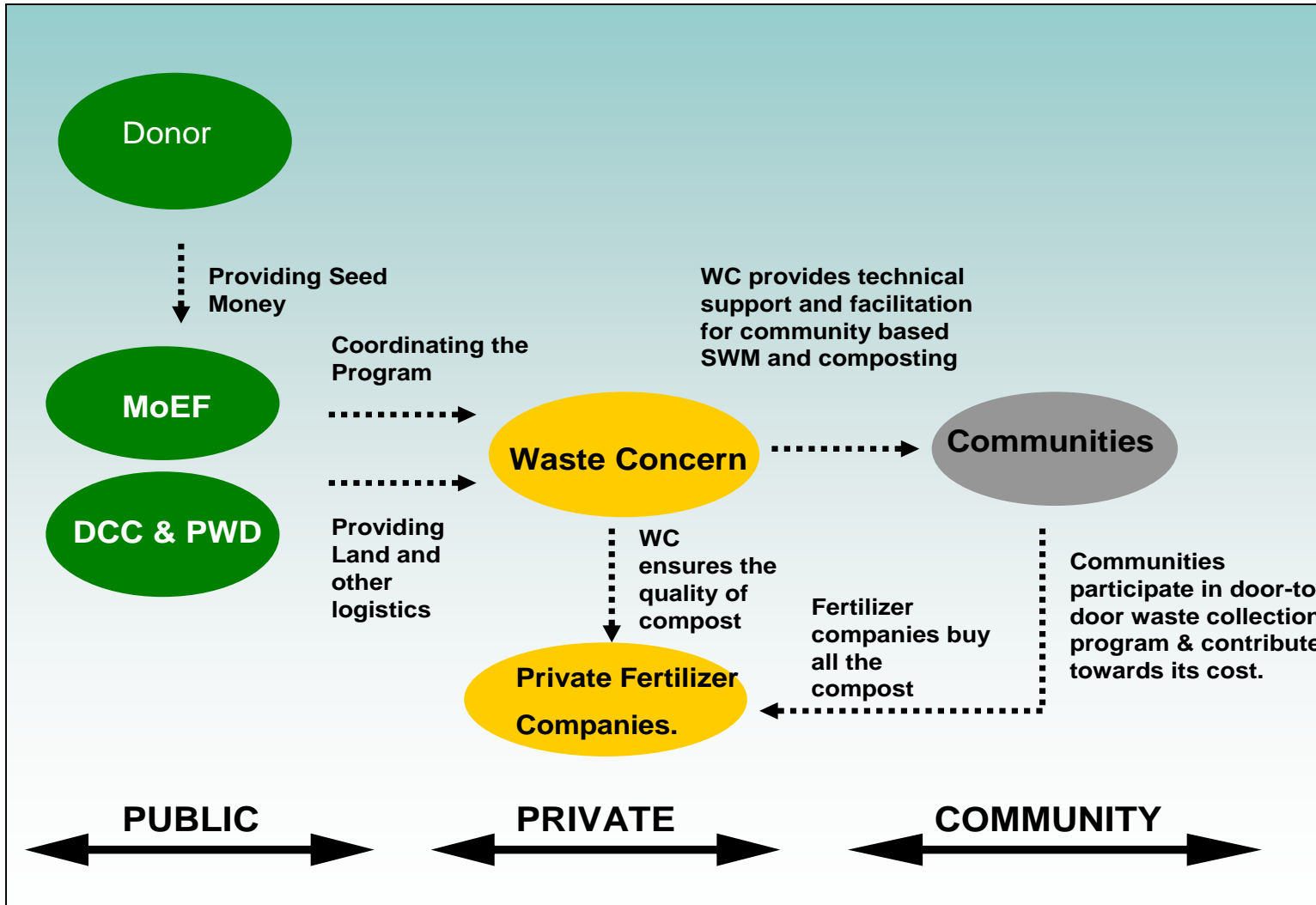
Factory Building

Public Private Participation (PPP)

PPP Facilitates Sustainable Solid Waste Management



PPP: Community Based Composting in Dhaka



- In Dhaka, Bangladesh, a program was introduced to turn organic waste into compost.
- This project created 800 jobs.
- They process 50 000 tons of compost every year.
- Workers have access to health insurance, day care, and a free meal each day.

Benefits of PPP

Government:

- Reduced public costs for waste management through private sector involvement

Private sector involvement has reduced the waste service cost by at least 25% in UK, US & Canada and at least 20% in Malaysia

Private Sector:

- Preventing waste is estimated to save business worldwide hundreds of billions of dollars each year on raw materials, energy and labour costs
- Waste Management is a profitable business



Does Informal Waste Sector Stand a Chance?

India's Dharavi Recycling Slumdog Entrepreneurs

- Dharavi- Asia's largest slums is now labelled as the recycling centre of India with an estimated 15,000 single room factories, employing around a quarter of a million people and turning over a staggering £700 million (\$US 1 billion) each year
- Most of these recycling processes take place in what is known as 'Dhavari's 13th Compound'; a place where over 80% of Mumbai's waste is given a new lease of life
- Wages in Dhavari are well above the monthly average at 3,000 to 15,000 rupees per month

<http://www.sustainablebusiness toolkit.com/dharavi-indias-recycling-slumdog-entrepreneurs/>



Waste-preneurs of Bangkok: Zero Baht Shop



- Waste Exchange Shop run by waste pickers
- Recyclables are exchanged with daily grocery items
- Conceptualized since 2001 as small community waste bank:
- Licensed as “Zero Baht Shop” in 2012
- Thailand Institute of Packaging and Recycling Management for Sustainable Environment (TIPMSE) supported and strengthened the initiative

Working Together: Integration of Informal Waste Sector



- Alliance of Indian Waste Pickers (AIW) is a national network of 35 organizations, waste pickers and/or itinerant buyers in 22 cities
- ExNora in Pune, Stree Mukti Sangathana in Mumbai, SEWA in Ahemadabad and Chintan in New Delhi
- Mumbai waste pickers involved with 'Tetra pak' for segregation and in Delhi with Coca-cola for shredding PET units
- Cities which have pioneered in PPPs in SWM include Bangalore, Chennai, Delhi, Chennai, Rajkot, Hyderabad, Ahmadabad, Surat, Guwahati, Mumbai and Jaipur

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Banda Ache Plastic Recycling, Indonesia

Workers are the registered members to the recycling association “Yayan Dawus Ulan Sampah”

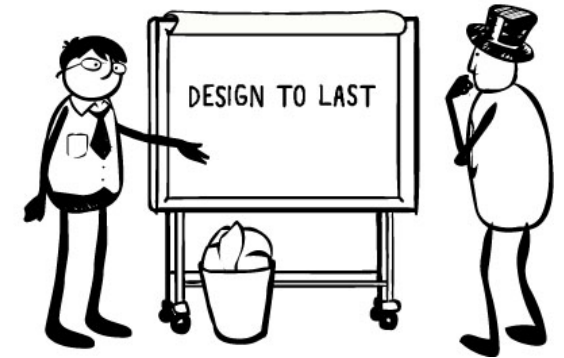
Waste pickers are employed and trained enough to identify category of plastic based on its packaging application



Role of Private Manufactures in Zero Waste Society

Promoting Environmental Sustainability Business Practices

- Design for Sustainability
- Extended Producer's Responsibility
- Closing the loop
- Moving towards Circular Economy



Dell + Goodwill = Dell Reconnect

Role of Private Sector as Consumers

- Recycling Industry survives, if there is an encouraging market for recycled materials and products
- Private Sector (manufacturers as well as service consumers) can support the recycled products through Green Purchasing Policy - “buy recycled” programs”
- By adopting environmentally preferable purchasing practices to help improve the environment



Conclusion

- Private Sectors' involvement breaks the **Investment Barriers**
 - Public-Private-Partnership (PPP) is the best approach to infuse private sector capital
 - However, weak regulatory frameworks and poor institutional capacities deter private sector investors
- Waste Management is a **billion dollar business**
 - Waste is increasing and resources are diminishing and getting costlier - recirculating the resources (circular economy) trapped in waste is an unbeatable business opportunity
- Growing environmental awareness and green consumerisms require **businesses to put environmental sustainability in the core of their manufacturing and/or service provision**
 - Reducing wastes and emissions from production
 - Buying recycled products
 - Taking back of wastes - closing the loop



Thank You!