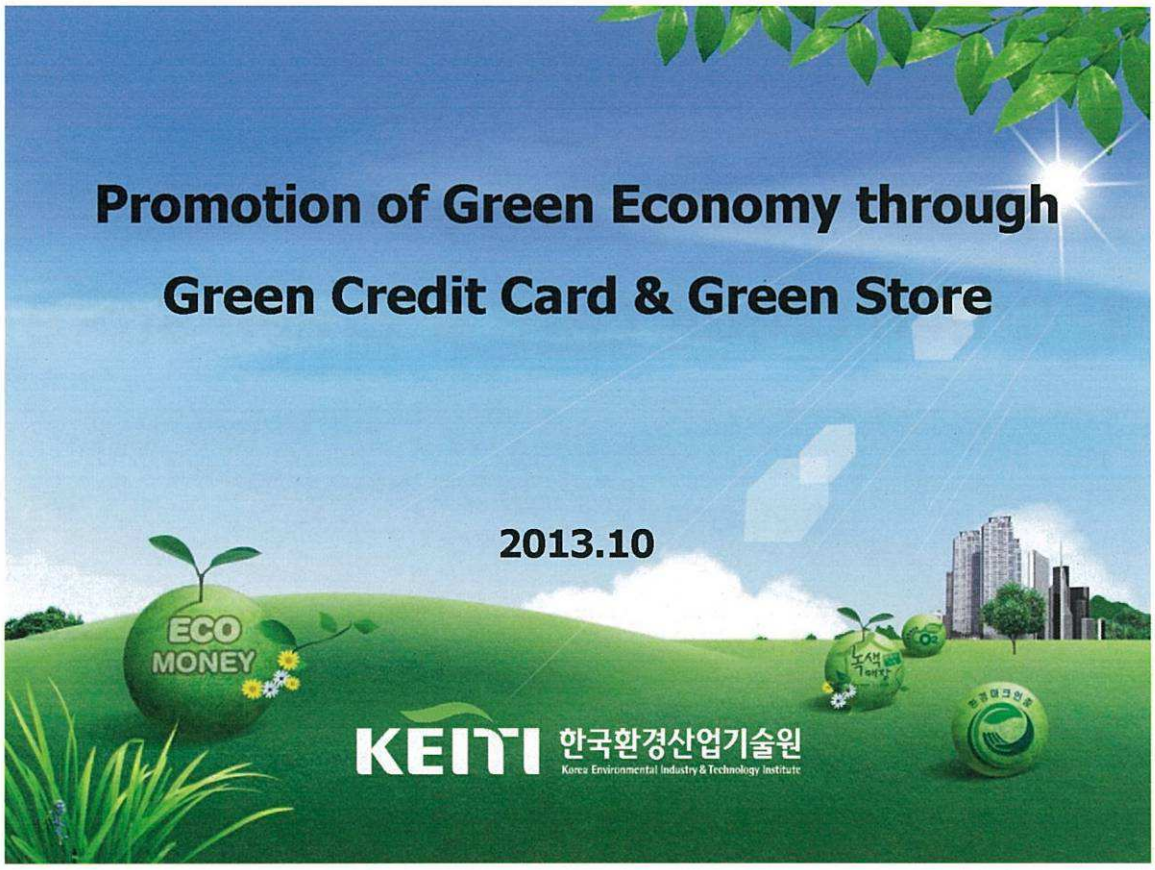
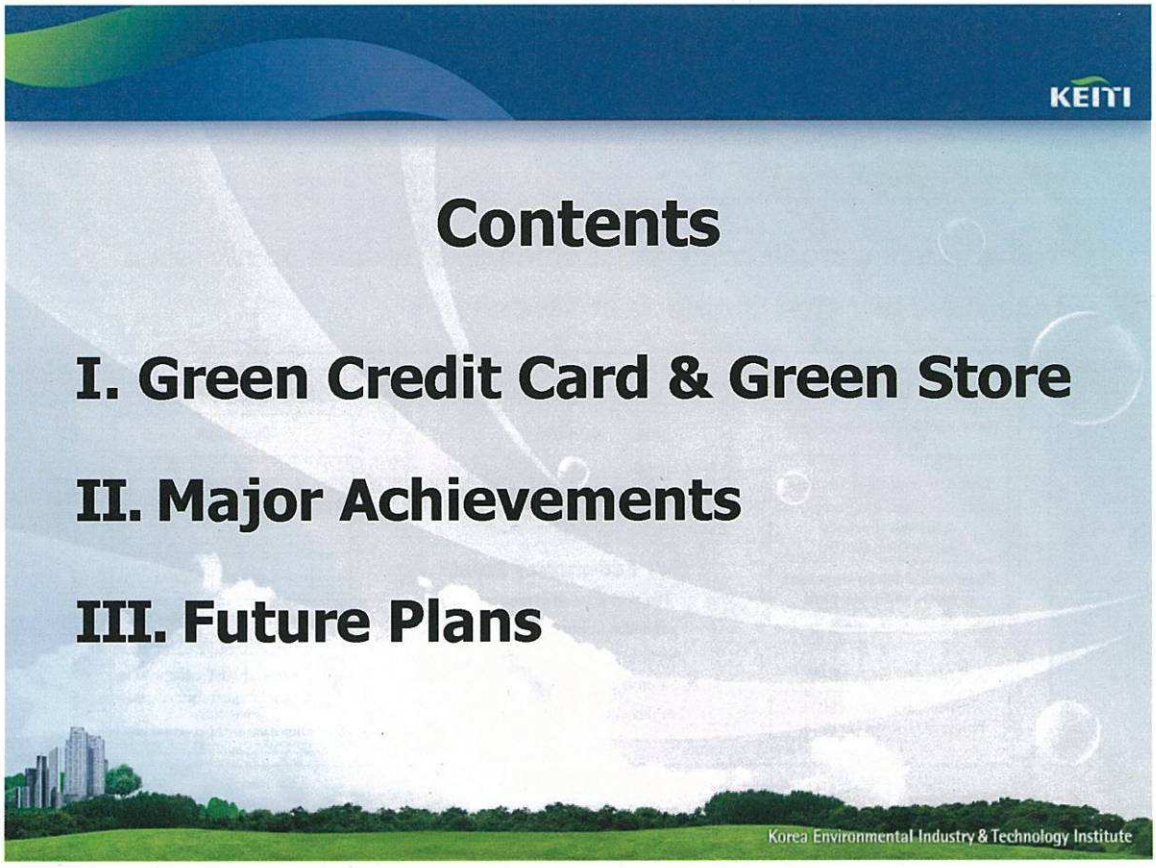
附錄 1

韓國藉由綠色信用卡及綠色商店推動綠色經濟情形簡報資料


Promotion of Green Economy through
Green Credit Card & Green Store
2013.10
ECO
MONEY
KEITI 한국환경산업기술원
Korea Environmental Industry & Technology Institute


KEITI
Contents
I. Green Credit Card & Green Store
II. Major Achievements
III. Future Plans
Korea Environmental Industry & Technology Institute

I. Green Credit Card & Green Store

Green Credit Card Program

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Green Credit Card

✓ **Utilize existing credit cards' point platform to reward points when consumers buy green products or save energy**

How to Gain Points

- Save electricity/water/gas at home
- Buy eco-friendly products
- Additional points at partner stores
- Base points when payment is made with the card

Special Benefits

- Discount at local cultural/sports facilities

Eco-money Point?

The points are rewarded for GHG reduction at home, green product purchase and Green Credit Card use. Buy a product with an eco-money sticker or pay with the Green Credit Card at partner stores.

How to Use Points

- Cashback
- Point Swap
- Use as cash at partner stores
- Buy a green product
- Pay public transportation fares and local taxes
- Pay phone or APT utility bills
- Donation (for environmental causes, etc.)

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Green Credit Card Program

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Green Credit Card Benefits

✓**Consumers are entitled to incentives worth over USD 200 when practicing green living with the Green Credit Card**

Category	Main Benefits	Amount	Provider
1. Carbon point	Point rewards for household energy savings	USD 70~100/yr	Government
2. Green consumption	Points are rewarded for green consumption	3~17% of price	Government Manufacturer Retailers
3. Cultural facilities	Free or discounted entry to facilities run by local government or public agencies	18 agencies, 568 facilities	Government
4. Public transportation use & credit card service	- Points are rewarded for public transportation use - Up to 0.8% of card bill is rewarded	Points are rewarded for each use	Card Issuer(Bank)
5. Partner Companies	Points are rewarded for products bought at eco-money partner stores	1~2% of paid amount	20 partners

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Green Credit Card Program

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Operator

- Propose guidelines, encourage local governments to advocate the card
- Link with ecolabeiing certification, seek more participating companies, etc.

Agency

- Green POS, website, Point system development/operation
- Seek partners, membership promotion and marketing

Manufacturer & Retailer

- Eco-money points for green product and service
- Provide space, promotion and incentives for green products

Issuer

- Green Credit Card product development
- Credit/debit card issuance & promotion/marketing

The network of various stakeholders provides a market-friendly incentive model and advocates green consumption.

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Green Credit Card Program

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Cultural facilities

- ✓ **607 facilities**
  - **National parks**
  - **Recreational forests**
  - **Museums & Galleries**

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Green Credit Card Program

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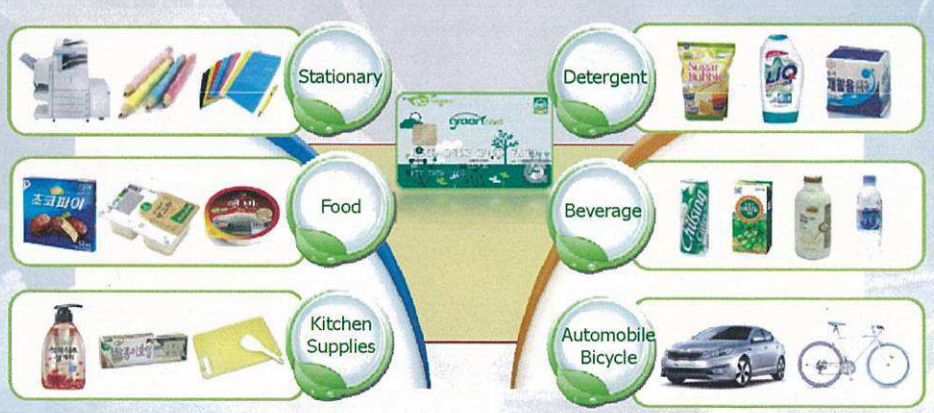
Partners of Green Credit Card

- ✓ **1,082 products of 114 manufacturing companies**
- ✓ **Credit, Debit and Membership cards are issued at 15 financial companies**



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Green Credit Card Program

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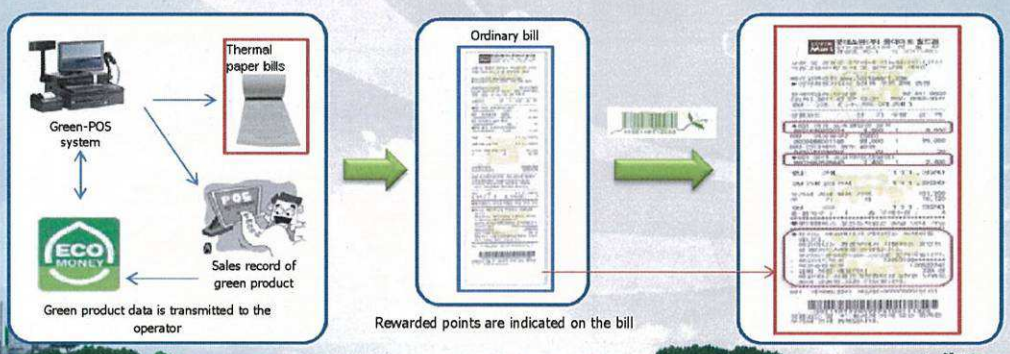
Features

- ✓ **Green POS*system enables payment by the GCC across the nation**
- ✓ **Install more Green POS system at nationwide stores of all sizes**
  - **18,959 stores (2012)→ 22,005 stores (2013)**

* Green POS(Point Of Sales) system automatically recognizes a green product and reward eco-money points when payment is made by the Green Credit Card



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Green Credit Card Program

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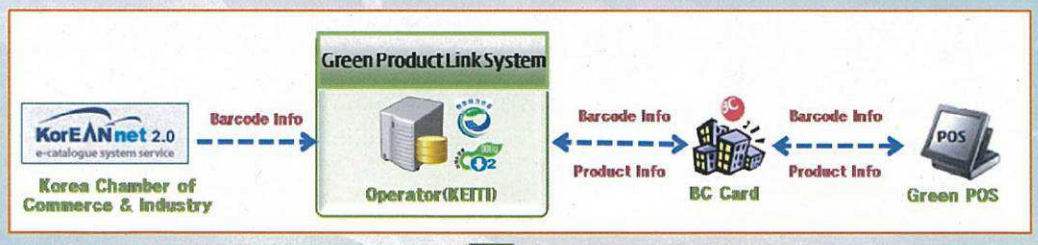
Features

- ✓ **An automatic green product link system for effective operation**



Improve operation efficiency	**Use Green Product Link system to send and receive green product information in real time**
Maximize customer satisfaction	**Save cost and time through real-time link system, while retailers provide sales records and consumer behavior patterns**

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Green Credit Card Program

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Promotion

TV CF/Animation

Homepage

http://www.greencard.or.kr/

Green card Blog

Newsletter (monthly)

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Green Credit Card Program

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Promotion (at store)

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Green Store Designation Program

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Green Store program

- ✓ Established the Act on Encouragement of Purchase of Green Product in 2011 and introduced the green store designation program in Oct.
- ✓ Program is expected to encourage distributors to voluntarily seek and sell quality green products and adopt green management practices
- ✓ 119 stores of 8 retailers have been designated(July 2013)

Signboard

Ecolabeled products at Green Stores

Green Store Designation Program

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Green Store

- ✓ Stores can earn the designation when the following conditions are met

i) Promotion activities are implemented to encourage for consumers to buy Green products

ii) Eco-friendly materials are used in construction and operation

iii) Energy is saved

iv) A logistics process that curbs air pollution is adopted

v) Less packaging and disposable materials are used

Green Store Designation Program

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Designation Standards

Hypermarkets

Biz Management System	Biz Management Activities	Environmental Improvement Performance
- Environment Management - Supply of Green product - Management for buildings and facilities - Administration of Physical Distribution - Environment Management for Cooperative companies	- Green Product Sales and PR - Environmental Load Reduction in Store Operation - Customer Awareness Improvement and Participation	- Energy Consumption and greenhouse gas exhaustion - Resource Use and Waste Generation - Green Product Purchase

Small to mid-sized retail stores

Biz Management System	Biz Management Activities	Environmental Improvement Performance
- Environment Management	- Green Product Sales and PR - Environmental Load Reduction in Store Operation -Customer Awareness Improvement and Participation	- Energy Consumption - Green Product Purchase

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Green Store Designation Program

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Designation Standards

대분류	중분류	Evaluation items	marks
경영 시스템 (95)	환경경영	환경방침 수립, 환경경영조직 및 권한 책정	11
		환경목표(에너지, 용수, 폐기물) 수립	12
		환경정보 공유 내부 시스템 구축, 제도마련운영	14
	녹색제품 보급	지역사회 환경 개선	3
		녹색제품 품목 확대	5
		녹색구매 계획 도입, 공시지 녹색제품 사용	10
	건물 및 시설관리	매장 및 주차장 실내 공기질 개선	4
		CO_2 제어 시스템, 대기오염물질 저감	9
		조경면적 비율, 지열 · 에너지 절약	7
	물류관리	물류 연비 절감, 물류 폐기물 감축	10
	협력사	협력사 협력지침 수립, 상품포장 감축	10
경영 활동 (55)	녹색제품 판매 홍보	녹색제품의 매장 내 식별	10
		녹색제품의 환경적 특성 홍보	4
		녹색제품 판매 시 마일리지 적립	5
		감축유통으로 녹색제품 및 마일리지 제공	6
	매장운영 환경부하 저감	판촉활동에 따른 종이류 보틀 감축	4
		상품 간이포장 비닐백, 트레이의 녹색제품 제공	4
		친환경 소재가 사용	2
	고객의식 제고	고객과의 환경의사소통 채널 구축, 환경강좌	7
		폐기물 회수, 일회용품 사용억제, 소포장 장려	9
		경기 이동 장려	4
환경 개선 실적 (50)	온실가스	에너지 사용량 및 온실가스 배출량	30
	폐기물발생	용수 사용량, 폐기물 발생량	15
	녹색제품 보급	녹색제품 구매비율	5
		녹색제품 판매품목 수	10
총 계			200

- Increasing sales of eco-labelled products — 5
- Displaying eco-labelled products prominently in a store — 10
- Rewarding points when consumers purchase green products — 5
- Gifting green products as sales promotion — 6
- The GP No. of Stock-Keeping-Units(SKUs) in a green store — 10

✓ **36 points out of 200 are allotted to Green Credit Card program**

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II. Major Achievements

Major Achievements

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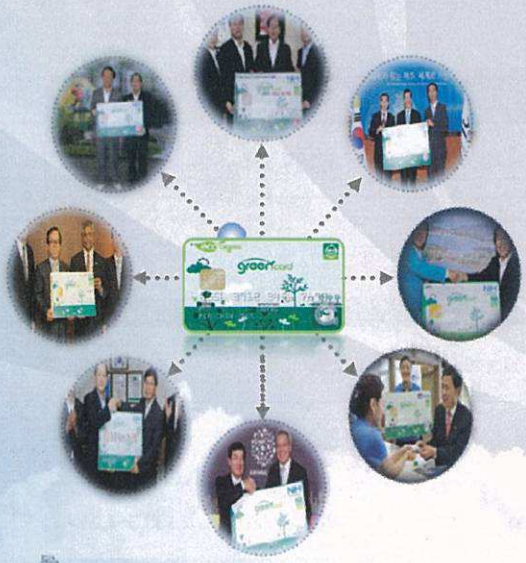

- The card has been issued to former President, Prime Minister and other major public figures in Korea
- patent registration on Green card model
- Best practice case in green growth (Prime Minister's office),
- Best Credit Card Award (Korea Financial Supervisory Service)
- Plans to go global : International Patent application is being considered

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Major Achievements

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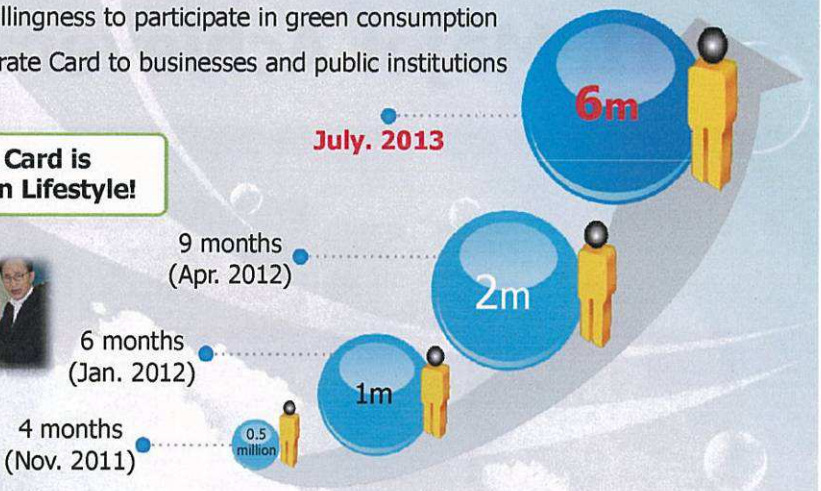
Green Credit Card

✓**Over 6 million cards have been issued**

- Stimulate public willingness to participate in green consumption
- Issue Green Corporate Card to businesses and public institutions

Green Credit Card is an icon of Green Lifestyle!



Major Achievements

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Sales (KRW / millions)

Total	2011	2012	2013		
			subtotal	1st quarter	2nd quarter
5,597,064	140,881	2,959,778	2,496,405	1,189,355	1,307,050

Reward Points

Category	Total	2011	2012	Jun 2013
Green Consumption	**107,871,000 (1.4%)**	113,000	62,550,000	45,228,000
Public Transportation Use	**1,051,944,000 (13.9%)**	59,312,000	580,213,000	412,419,000
Credit Card Service	**6,403,756,000 (84.7%)**	330,359,000	3,540,029,000	2,533,368,000

Major Achievements

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Promotion (at store)

Major Achievements

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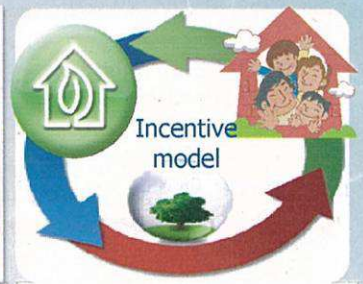
Expected Impact

- 1.6 million tons of CO_2 emissions reduction over the 2yrs
- 140 million in economic savings over the 2 yrs

→ It has the same effect as planting 584 million pine trees every year

Spread the culture of green consumption and expand green purchasing power

Create a green value chain that consists of green consumption, distribution and production



- Market-friendly incentive model for green consumption
- Operate an inclusive point program that involves central/local governments, manufacturers, retailers and financial companies

→ Ensure policy effectiveness by raising public awareness and encouraging public participation

III. Future Plans

Future Plans

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Green Credit Card Program

Green Card Issuers
[15→17]

► Jeonbuk Bank etc.

economy-providing products
[1,081→1,200]

► Electronics goods, food & beverage, Living necessities

Flagship Icon of Green Consumption

Green POS
[21,005→22,000]

► Nonghyup, convenience stores, markets, online malls

aggressive marketing

► TV, ad boards & displays, newspaper, SNS, etc.

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Future Plans

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Green-CRM

Integrated Operation System for Green Credit Card

- **Collective Green POS Data :** prioritizing consumers' green credit card relationships
- **(Future Plan)**
  The application of actual database for cultivating greeen consumers

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Future Plans

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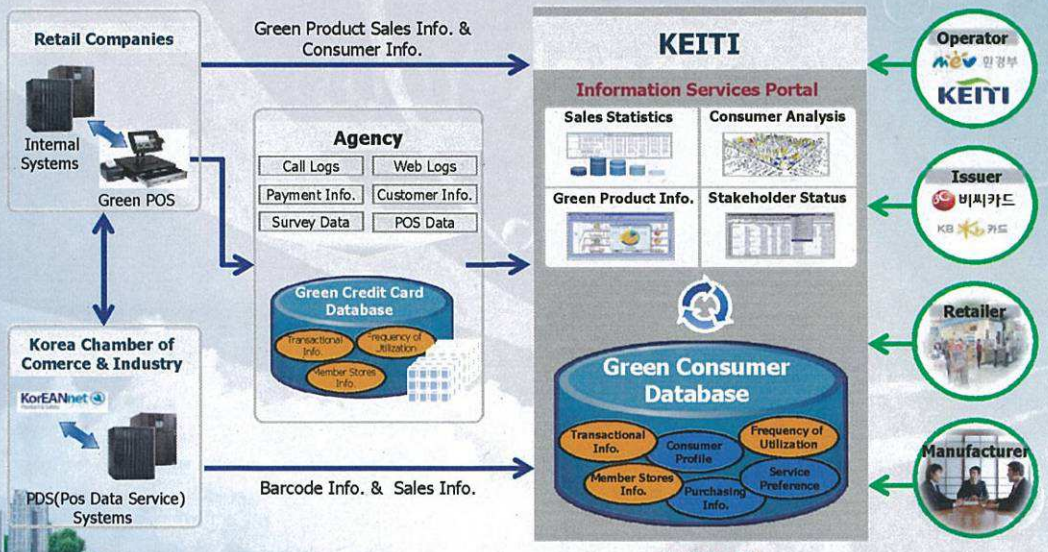
Green-CRM



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Future Plans

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Target Marketing

Profile Analysis

Correlating factors

- Dividing groups based on demographic variables such as age, gender, occupation & education level
  - Subsets of consumers who have interest in green products
  - Promoting green public relations

Green Consumers

ehavior Analysis

Adaptive Push Targeting

- Mobile & SMS Text Message Advertising
  - Customer response management

Activie ased Recommendation

- Categorizing consumer interests
  - Recommendation of eco-labelled products

Real-time Log System

- Analysis on the flow-path-pattern of customers
  - Focus on main Green Products

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Thank You!

Mr. Kim, Dongkeun
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KEITI 한국환경산업기술원
Korea Environmental Industry & Technology Institute

附錄 2

韓國綠卡平台系統簡報資料

Introduction on Green CARD Platform

October 2013

BC CARD Corporation

jump

Contents

About BC Card

Green CARD Platform

Contents

About BC Card

Green CARD Platform

What We Do

Avails all-round payment services to meet various needs of our client banks

Acquiring Service	Domestic Processing Service	Risk Management	Issuer BPO	CRM	New Product & Service Development	Marketing Service

Acquiring ⟷ Issuing

- Merchant Acquisition & Management
- Terminal Development/ Deployment /Maintenance
- Terminal Management Service
- Merchant Settlement
- Sales Draft Collection
- Merchant Loyalty Program

- Card Authorization Processing & STIP
- Clearing & Settlement
- Back office Processing
- Fraud Risk Management (Cardholder/Merchant)

- Card Personalization
- Card Mailing
- Direct Mail
- Billing
- Customer Service – Call Center/Web

- CRM
- Cardholder Loyalty Program
- Credit Bureau
- Cross-selling
- Brand Management
- Product/Service Development
- Sales Promotion

Whom We Serve

BC Card serves a wide clientele base - client banks, retail consumers, corporate clients and government offices, providing end-to-end payment services and running actual operations for the members/clients

19 Client Banks

우리카드, NH, IBK, Shinhan Bank, citibank, Standard Chartered, HanaSKCard, KB, Daegu Bank, Busan Bank, Kyongnam Bank, Jeonbuk Bank, KJB 광주은행, Korea Federation of Savings Banks, Jeju Bank, KDB, 中国银行, Korean Federation of Community Credit Cooperatives, SUHYUP

Merchant Acceptance

- 3.4 million merchants
- 102K ATMs

LOTTE, Starbucks Coffee, NIKE, TESCO, JW Marriott, Pizza Hut, Louis Vuitton, Apple, natural story THEFACESHOP, ebay, 7-Eleven

Card Transaction

- Credit Card
- Debit Card
- Pre-paid Card
- Mobile Payment
- e-Commerce
- Closed-loop Payments (Gov't Subsidy, B2B Purchase)

International Networks

- 52.3 million cards issued

VISA, MasterCard Worldwide, DISCOVER, UnionPay, Diners Club International, JCB, PLUS, Cirrus, STAR, pulse, Maestro

Statistical Highlights

Number 1 in Korea

A. Number of cardholders (thousands)

Consumer	Corporate	Total
37,220	2,322	39,542

B. Number of cards issued by brands (thousands)

Brand	BC	VISA	MasterCard	UnionPay	JCB	Total
#	25,755	13,462	11,000	2,096	27	52,340
%	49.2	25.7	21.0	4.0	0.1	100

C. Volume

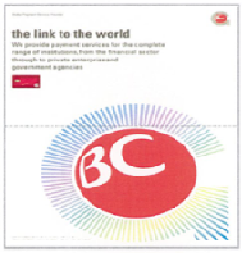
Classification	Card Sales Volume (billions, USD)	Transaction Count (millions)
Retail Sales	105.6	2,316.9
Cash Advance	14.6	28.5
Total	120.2	2,345.4

Note: cards/cardholders as of Dec/12, volume : 2012 1~4Q

FX Rate: USD1=KRW 1,100

Our Global Services

<Global Network Alliance>



Objectives

- Expand card acceptance network to enhance convenience of our consumers and economic benefits for our member banks

Effectiveness

- Network alliance with other local and International Network accelerating → Bilateral becoming multilateral
- Reduces the cost of cross-border transactions

<Bank Mandiri Consulting Project>

- Strategy Consulting for Acquiring Business (Oct 2011-Jan 2012)
- Process Innovation for Acquiring Processing (Apr 2012-Jun 2012)
  - won over two consulting projects from Indonesia's biggest state-owned bank, Bank Mandiri, (over the period of two years)
  - Based on, decades of experience and operation know-how in payment business
  - Assist, Bank Mandiri to innovate its acquiring business and processing operations

Contents

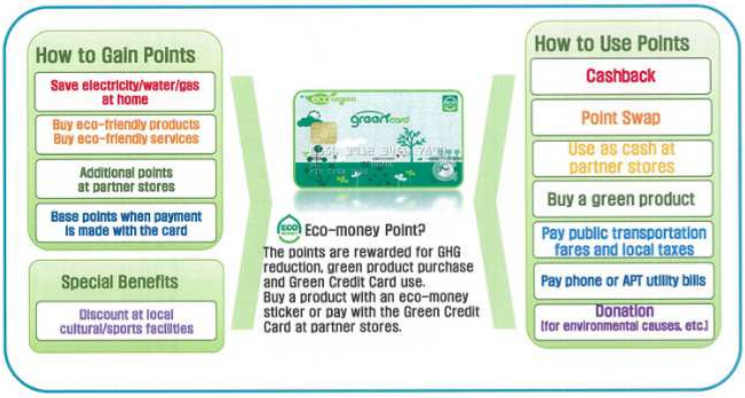
About BC Card

Green CARD Platform

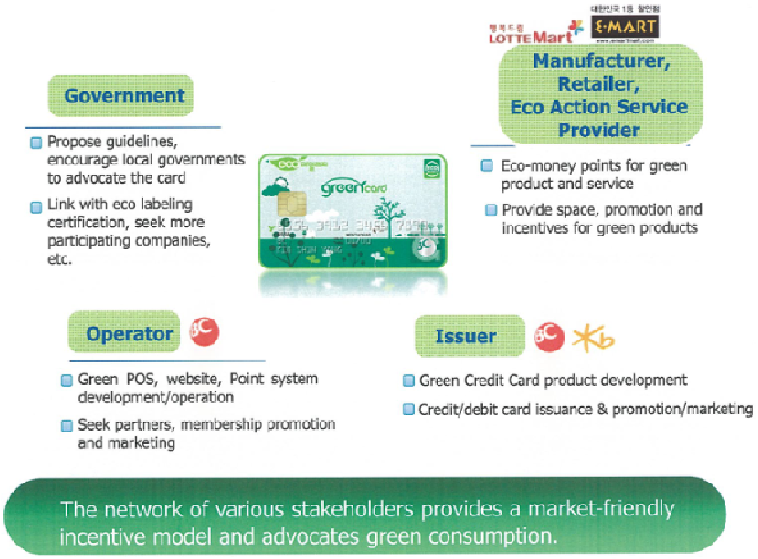
Green Card Service Structure

- Utilize existing credit cards' point platform to reward points when consumers buy green products or save energy or use mass transportation.

< Green Credit Card >

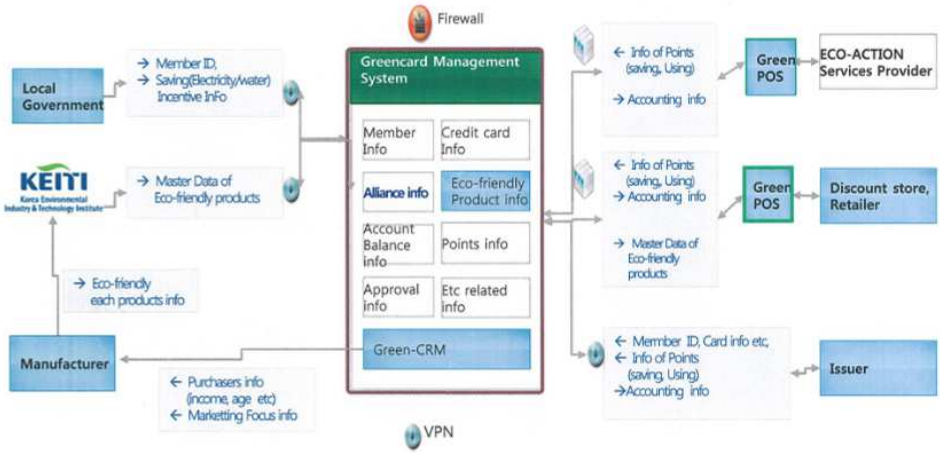


Green Card Platform



The network of various stakeholders provides a market-friendly incentive model and advocates green consumption.

Green Card System



Green POS

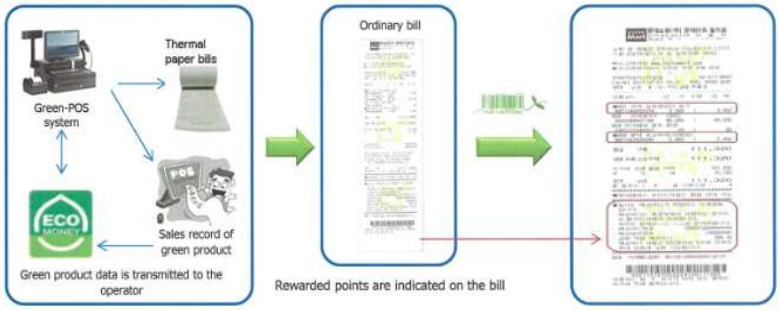
- An automatic green product link system for effective operation

Improve operation efficiency	Use the well-connected system to send and receive green product information in real time.
Maximize customer satisfaction	Save cost and time through real-time link system, while retailers provide sales records and consumer behavior patterns.

Green POS

- Green POS*system enables payment by the Green Credit Card across the nation.

* Green POS(Point Of Sales) system automatically recognizes a green product and reward eco-money points when payment is made by the Green Credit Card



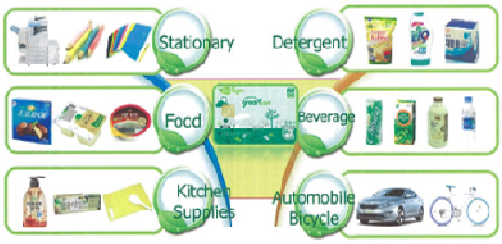
Partners of Green Card

- Manufacturers : 850 products of 103 companies

  Participation of Green Pos Network : over 20,000 distribution Stores(discout, convenience)

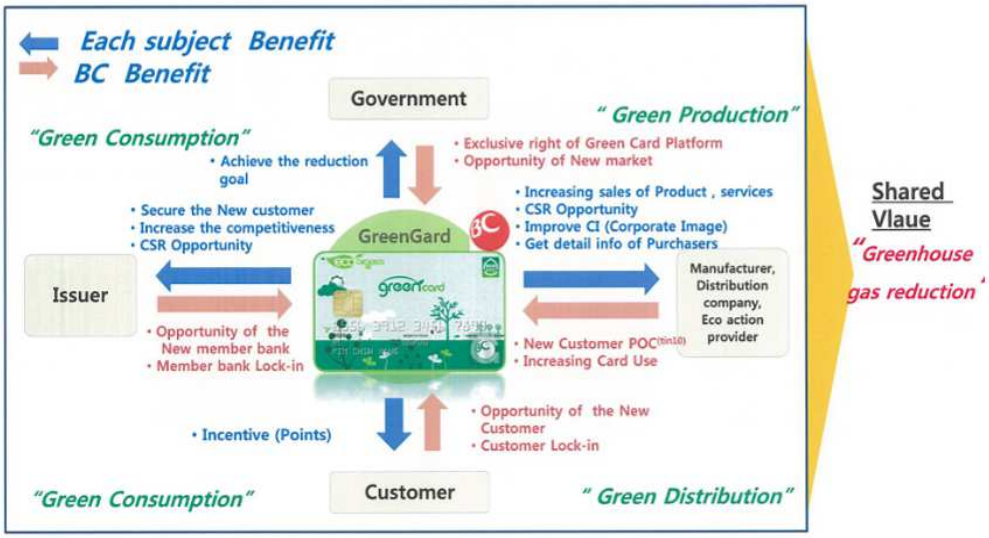
  Eco Action service Provider : 16 companies (Lotte cinema, kt rent car etc)

  Members : Credit, debit and membership cards are issued at 12 financial companies



What is the Benefit

- As the Green card Platform, Each subject could gain the benefit
- create the share value " Greenhouse gas Reduction"
- With Green Consumption, distribution and Production



(Tin10) POC (Point of Contact)

附錄 3

臺灣推動碳足跡與碳標籤現況簡報資料

1st Asia Carbon Footprint Network Meeting

Chi Hua, Lee, Taiwan EPA
Allen H. Hu*, National Taipei University of Technology (Taipei Tech)
Gaia Lu, Industrial Technology Research Institute (ITRI)
Jet Wu, Taiwan Environmental Management Association (TEMA)

* presenter

National Programme and Plan on Carbon Footprint

1. Product Category Rules for CFP
2. CFP Labeling System
3. Cloud-based Carbon Footprint Calculation System
4. CEP emission factor database in Taiwan

2

Taiwan Carbon Footprint Labeling

--History of "Taiwan Carbon Footprint Label"

- established the specifications for application, review, use and management of Carbon Footprint Labels
- set up the web site for Carbon Footprint Label

2009/07
- Taiwan EPA commissioned a feasibility project for Taiwan Carbon Footprint Label

2009/12
- Launched the "Taiwan Carbon Footprint Labels" pilot study

2010/01
- Set up the Product Carbon Footprint Labeling Review and Promotion Committee

2010/02
- Announced the "Guideline for Calculating Carbon Footprint"

2010/05

2010/05/15
Started accepting the application for Taiwan's Carbon Footprint Label (CFL)

As of Oct. 2013, there are 49 B2C PCRs have been approved by EPA and 168 products obtained CFL.

3

Product Carbon Footprint Labeling Review and Promotion Committee

Convener- Vice Minister of the EPA

Executive Secretary, Vice Executive Secretary

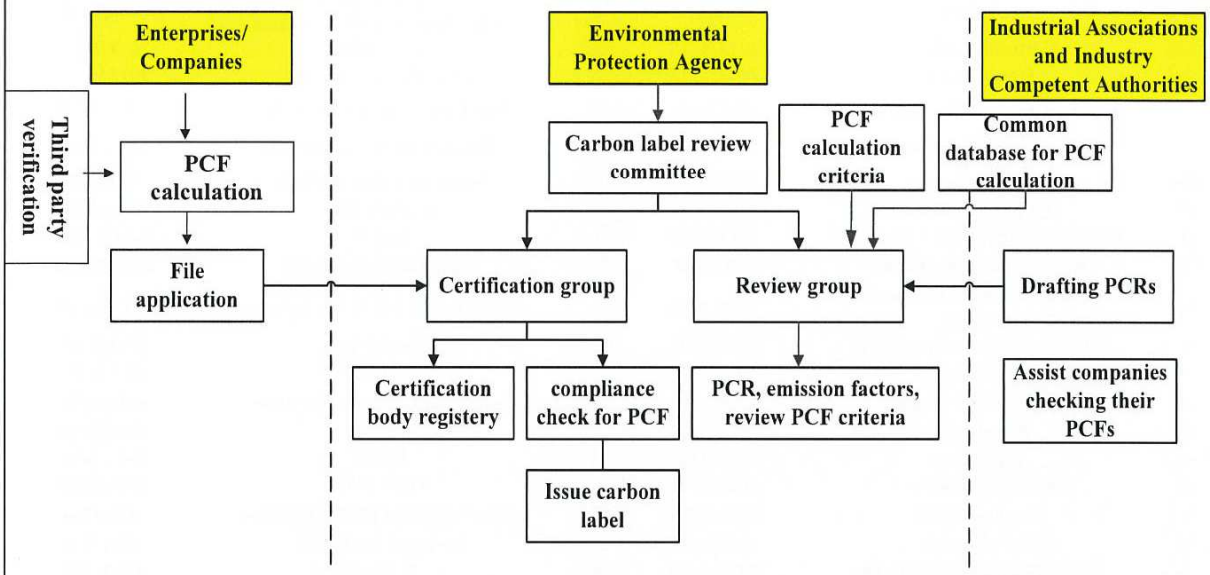
Totally 23 members, including EPA(x3), MoEdu, ABRI, IDB, BOE, DOC, BSMI (all belong to MOEA), COA, DOH, Consumer Protection Commission (CPC), Environmental and consumer groups (x2), Industrial and commercial groups(x2) and scholars (x6)。

- Technical Subcommittee (8)
- Review Subcommittee (13)
- Promotion Subcommittee (6)

■ The Product Carbon Footprint Labeling Review and Promotion Committee was established in Jan. 2010 and first meeting was held in March 2010.

4

Implementation Framework



5

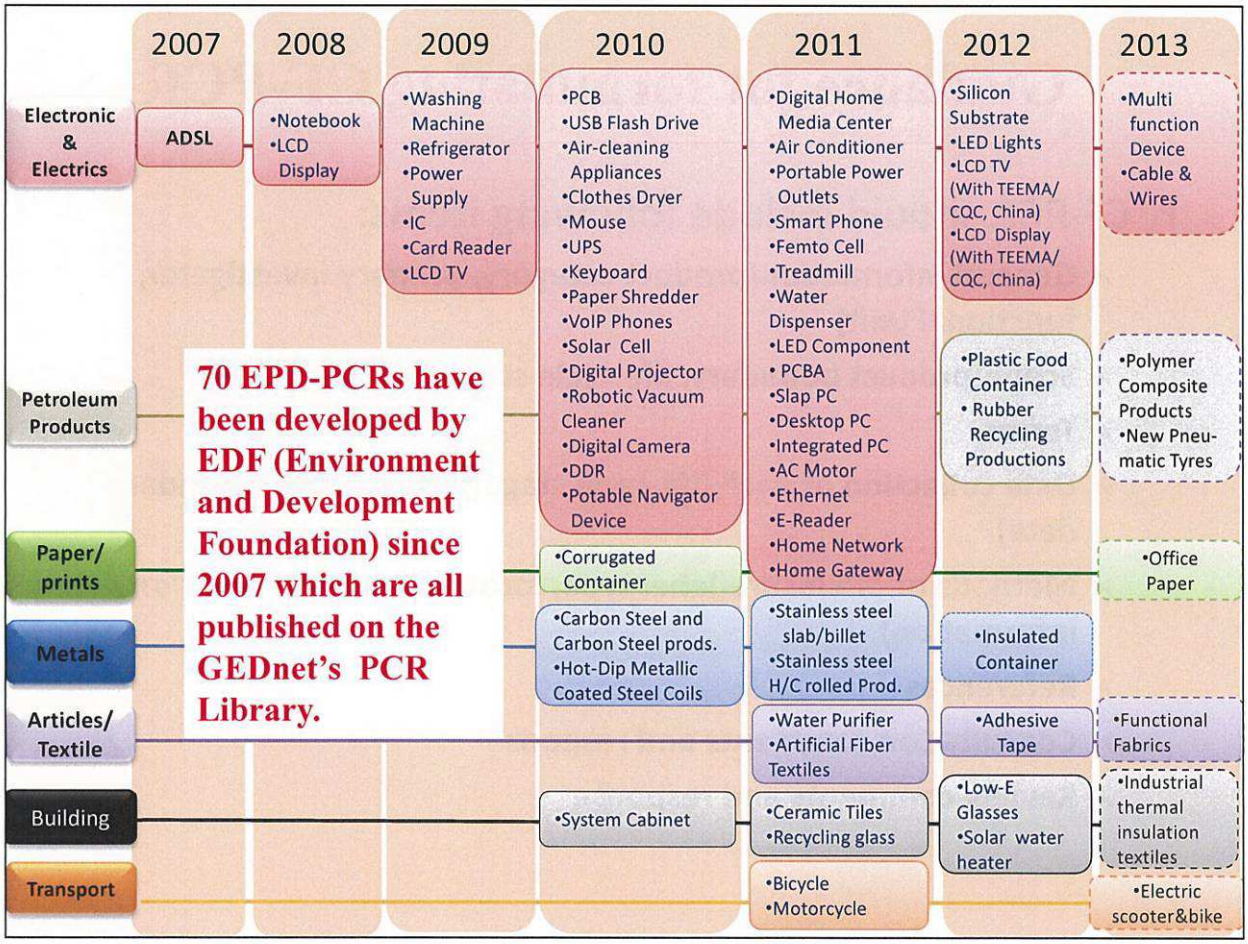
Guidance for formulating CF-PCR

- **CF-PCR should include following items:**
  - General information(product category, primary investigator, functional unit)
  - Scope(product boundary, life cycle stages)
  - Terms
  - Data collection of each life cycle stage(primary and secondary data)
  - Methods of disclosure(label type, location, size and additional information)
  - References
  - Consultation comments and response
  - Review comments and response

6

B2C CF-PCR Approved by TEPA (as of Oct, 2013)

	CF-PCR	Date of approved		CF-PCR	Date of approved
1	Adhesive Tape	2013/10/23	26	Paints	2012/10/16
2	Facility Cultivated Plant (Ornamental Plant)	2013/10/23	27	Rice	2012/10/16
3	Vegetables	2013/8/27	28	Meatballs	2012/8/28
4	Geotextile	2013/8/27	29	Rice Sticks	2012/8/28
5	Adhesives	2013/8/5	30	Dish-washing detergents, Laundry detergents, and Skin cleansers	2012/6/20
6	Electronic Cookers	2013/4/15	31	Packed Meal	2012/5/16
7	Rice Cookers	2013/4/15	32	Concrete Paving Units	2012/5/16
8	Refilled Toner Cartridges	2013/4/8	33	Handbags of textile materials	2012/2/22
9	Integrated Computer	2013/3/21	34	Blankets of textile materials	2012/2/22
10	Shampoo	2013/3/21	35	Direction Indicator Lights	2012/2/22
11	Bottled Water	2013/3/21	36	Ceramic Tiles	2012/2/22
12	Processed Sweet Potato Products	2013/3/18	37	Bicycle	2011/12/21
13	Heat Pump Water Heater	2013/3/8	38	Stuffed Cake and Pastry	2011/12/21
14	Charcoalization products of wood and bamboo	2013/2/25	39	Packed Grains and Beans Beverage	2011/12/21
15	Hot Cathode Fluorescent Lamp	2013/2/21	40	Prepared Eggs	2011/11/2
16	Liquid Crystal Display (LCD)	2013/1/24	41	Shell Eggs	2011/11/2
17	Printed of Paper Products	2013/1/18	42	Store-prepared Sweet Potatoes	2011/9/29
18	Fruit Juices	2013/1/18	43	Pudding	2011/9/29
19	LED Lights	2013/1/18	44	Bread	2011/9/29
20	Spunlace Nonwoven	2013/1/18	45	Fresh Milk	2011/9/29
21	Uncoated Paper	2013/1/18	46	Instant Noodles (Frying Process)	2011/7/4
22	Aerated Water	2013/1/18	47	Packaged Tea Drinks	2011/7/4
23	Needle Punched Nonwoven	2013/1/18	48	Markers	2011/7/4
24	Hair Conditioner	2013/1/18	49	Component Cabinet	2011/7/4
25	Household Paper	2013/1/8			



B2B & B2C EPD-PCR Announced by TEEMA

(as of October, 2013)

No.	Name of PCR	No.	Name of PCR	No.	Name of PCR
1	Power Supply PCR	16	Memory PCR	31	Printed Circuit Board PCR
2	TFT-LCD Display PCR	17	Keyboard PCR	32	Printed Circuit Board Assembly PCR
3	Household Washing Machines PCR	18	Mouse PCR	33	Slate- Tablet PC PCR
4	Refrigerators PCR	19	System Cabinet PCR	34	Desktop Computer PCR
5	IC PCR	20	VoIP Phone PCR	35	Portable Power Outlets - Extension cords, Smart Energy Efficiency Devices, Adapter PCR
6	Card Reader PCR	21	USB Flash Drive PCR	36	Air conditioner PCR
7	TFT-LCD Televisions PCR	22	Clothes Drier PCR	37	Water Dispenser PCR
8	AC Motor PCR	23	Digital Still-picture Camera PCR	38	Digital Home Media Center PCR
9	Personal Navigation Device (PND) PCR	24	Paper Shredder PCR	39	SmartPhone PCR
10	Notebook Computer PCR	25	Corrugated Container PCR	40	Femto Cell PCR
11	Home Gateways PCR	26	Robotic Vacuum Cleaner PCR	41	LED Fixture For General Lighting PCR
12	Home Network Infrastructure Devices (HNID) PCR	27	Digital Projector PCR	42	Liquid Crystal Display (LCD) PCR
13	Optoelectronic Semiconductor PCR	28	Air-Cleaning appliances PCR	43	TFT-LCD Televisions PCR
14	Integrated Computer PCR	29	Uninterruptible Power Supply PCR	44	Liquid Crystal Display (LCD) PCR(CF)
15	e-Reader PCR	30	Crystalline Silicon Solar Cells PCR		All electric and electronics products related

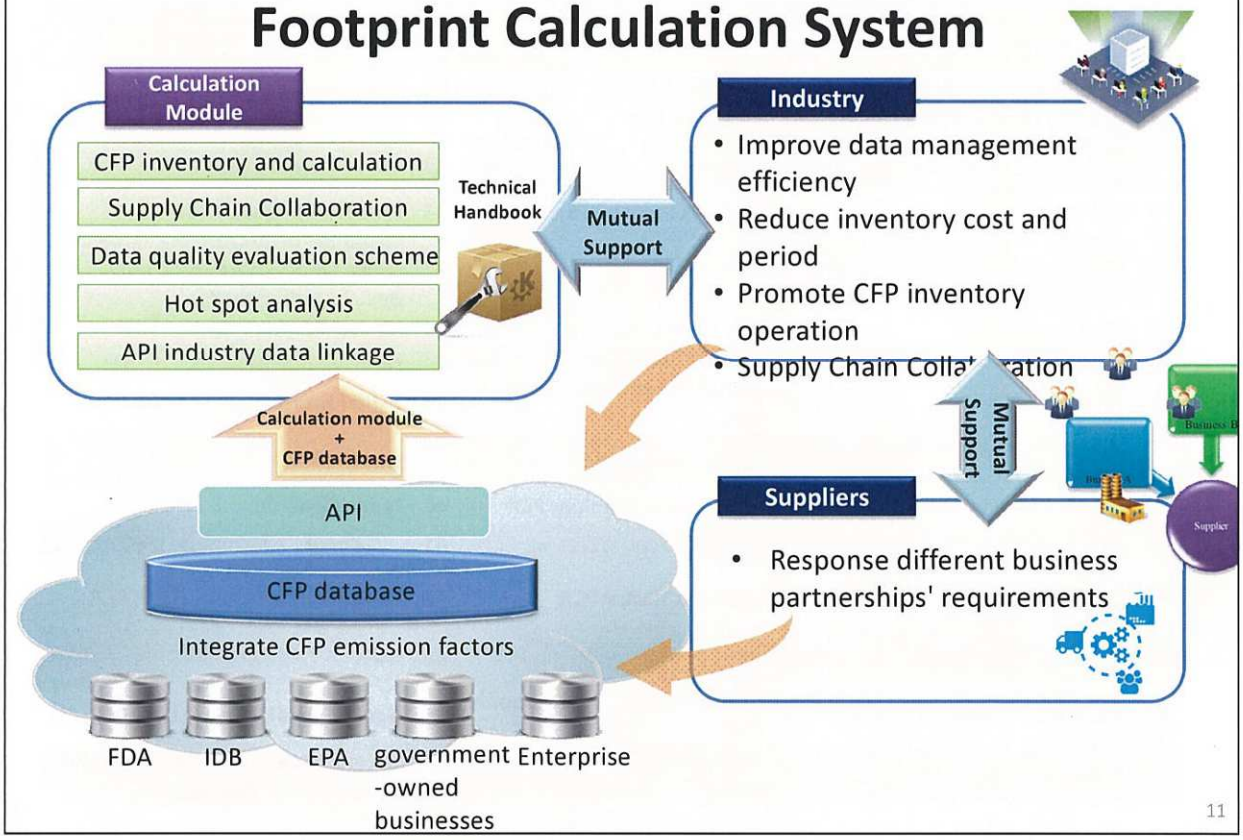
9

Promotion of Product Carbon Footprint Labeling Scheme

- Established product carbon labeling review and promotion subcommittees;
- Encouraging label application through industrial trade associations- 168 products awarded carbon label (as of Oct 2013)
- Initiated "Discover Carbon Label Campaign" to improve public awareness
- Collaborated with Carbon Trust in conducting product carbon training
- Seeking labeling recognition with Carbon Trust- first year feasibility study is undergoing.

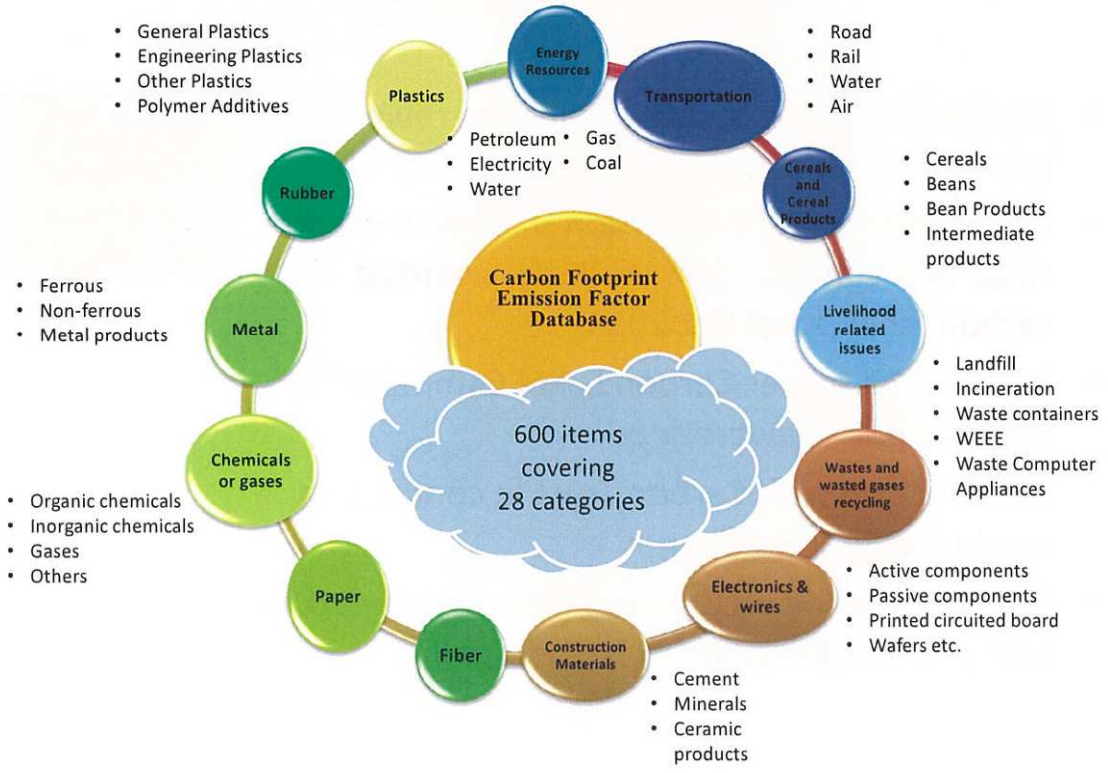
10

Structure of the Cloud-based Carbon Footprint Calculation System



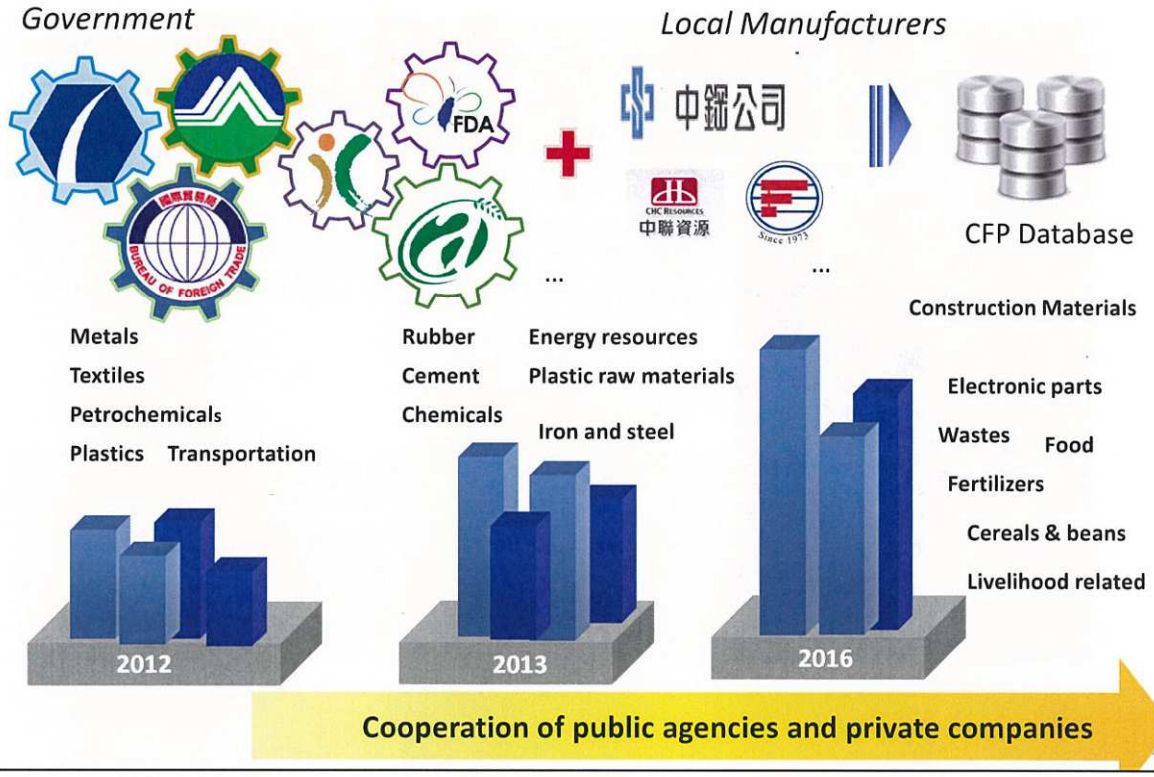
11

Carbon Footprint Emission Factors Database in Taiwan

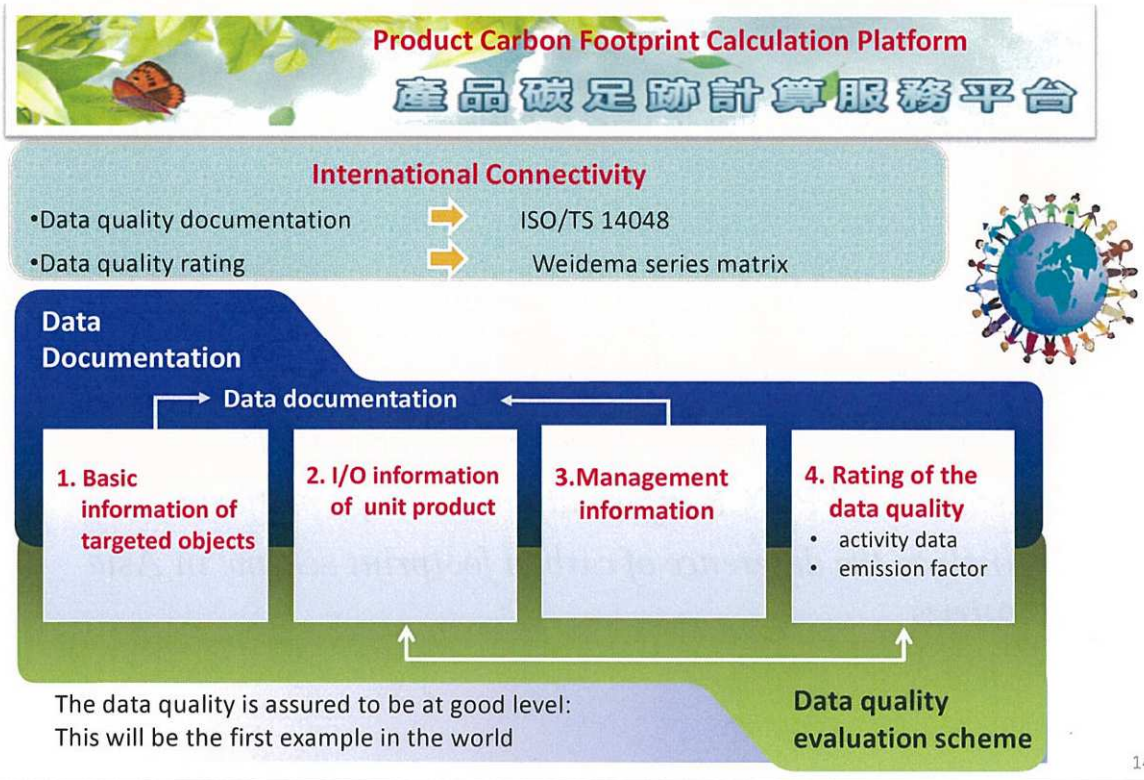


12

Current Status of the CEP Emission Factor Database in Taiwan



Carbon Footprint Data Quality evaluation scheme



[your views on the activity area of collaborative research]

	Prioritize by importance and urgency	Specify actions required and methodologies
Product Category Rules (PCR)	2	
Uncertainty Analysis	3	
Carbon Emission Factors and Life Cycle Inventory (LCI)	1	

15

Any request for capacity building programme

Any suggestion for the ACFN

- *Establish CFP emission factor exchange platform*
- *Establish CFP-PCR information exchange platform*
- *Analyze the difference of carbon footprint scheme in Asia countries*

16