



Learning by Sharing of AUO

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Topics

- AUO in Brief
- AUO vs CDP
- AUO's Experience in Response to CDP
- AUO's Feedbacks

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AUO in Brief



History:

Established

12 Aug 1996

Taiwan IPO (TAIEX: 2409)

8 Sep 2000

NYSE IPO (NYSE: AUO)

23 May 2002

Operation Status:

Workforce

38,000
(as of Jan. 2009)

Technology

TFT- LCD, LTPS,
OLED, Solar PV

Products

TFT-LCD (1.5" ~ 65")
LTPS (1.5" ~ 6.5")
TV Total Solutions (19" ~ 52")

Financial Status:

Market Value

NT\$ 210.09 B
(US\$ 6.41B)
(31 Dec 2008)

Equity

NT\$ 299.26 B
(US\$ 9.13 B)
(31 Dec 2008)

Revenue

FY06: NT\$ 293B (US\$ 9.0B)
FY07: NT\$ 480B (US\$ 14.8B)
FY08: NT\$ 424B (US\$ 13.6B)

AUO Proprietary & Confidential



Milestones of AUO



1996

ADT
Established



2001

- Taiwan 1st G4 Fab
- Combined with Unipac, renamed as AUO
- WW 3rd largest TFT-LCD maker
- Revenue > US\$1B



2003

- Taiwan 1st G5 Fab
- Revenue > US\$3B



2006

- Taiwan 1st G7.5 Fab
- Merged Quanta Display
- WW 2nd largest TFT-LCD maker
- Revenue ~ US\$ 9B



2008

- Announced “Green Solutions”
- Module Plant MP in Czech Republic



1999

- Taiwan 1st G3.5 Fab



2002

- NYSE Listed
- Module Plant MP in Suzhou, China
- Revenue > US\$2B



2005

- Taiwan 1st G6 Fab
- Revenue > US\$ 6B



2007

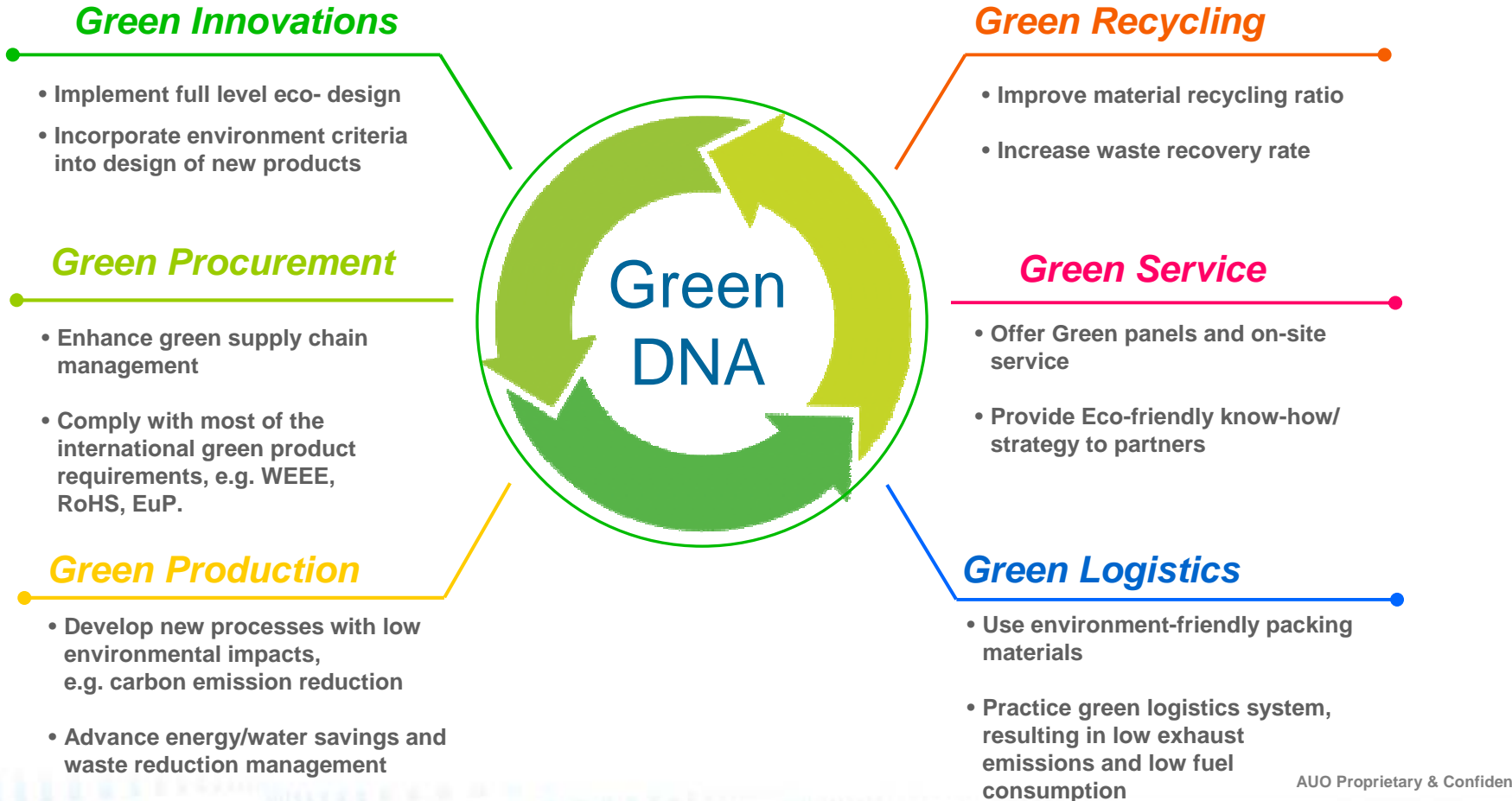
- Module Plant MP in Xiamen, China
- Revenue > US\$ 14B



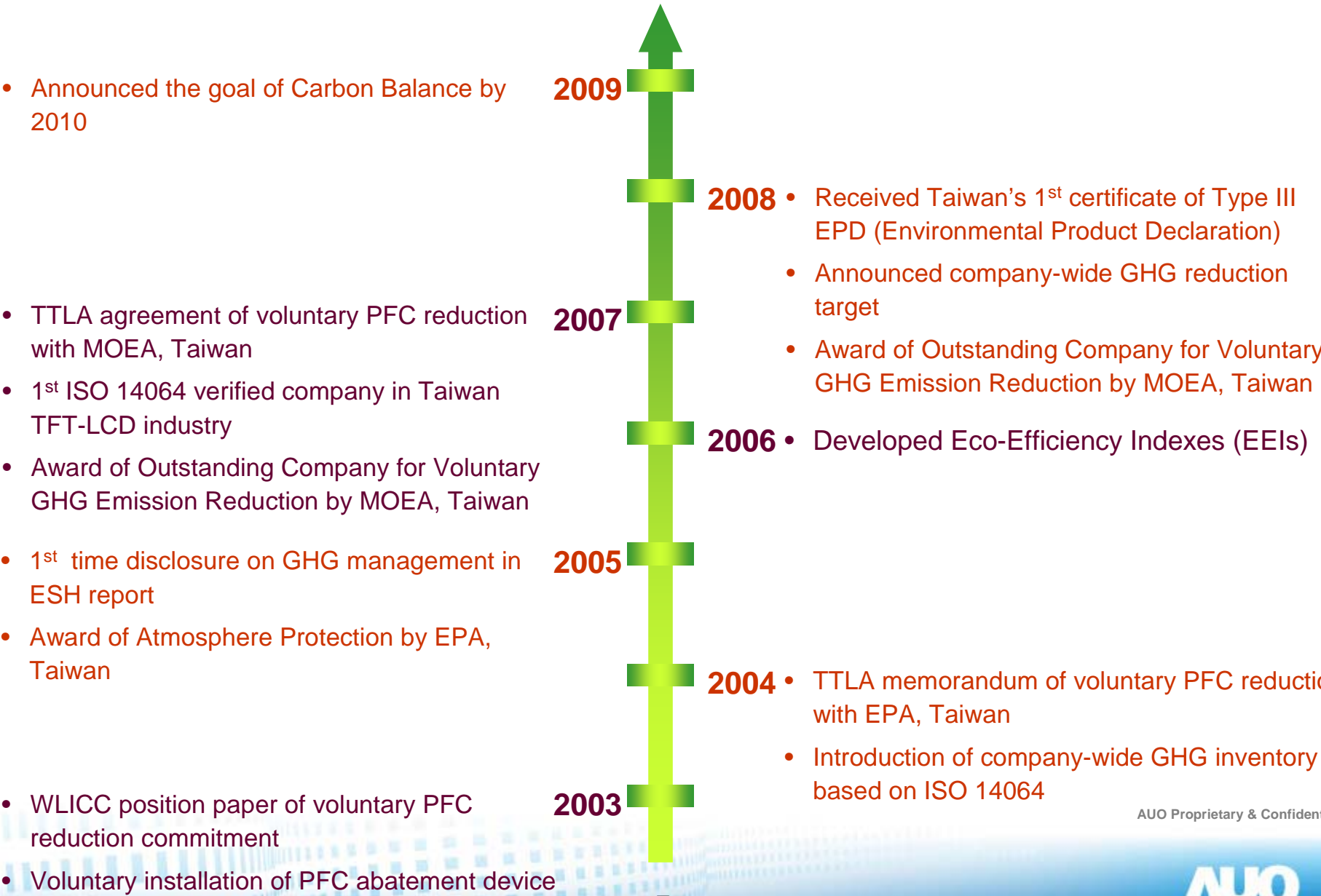
2009

- The World's First LEED Gold-Certified TFT-LCD Facility

Company-wide Green Initiative announced in 2008.02



Milestones of AUO's GHG Management



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Global Channel for Carbon Communication

- A uniform communication channel to a variety of stakeholders

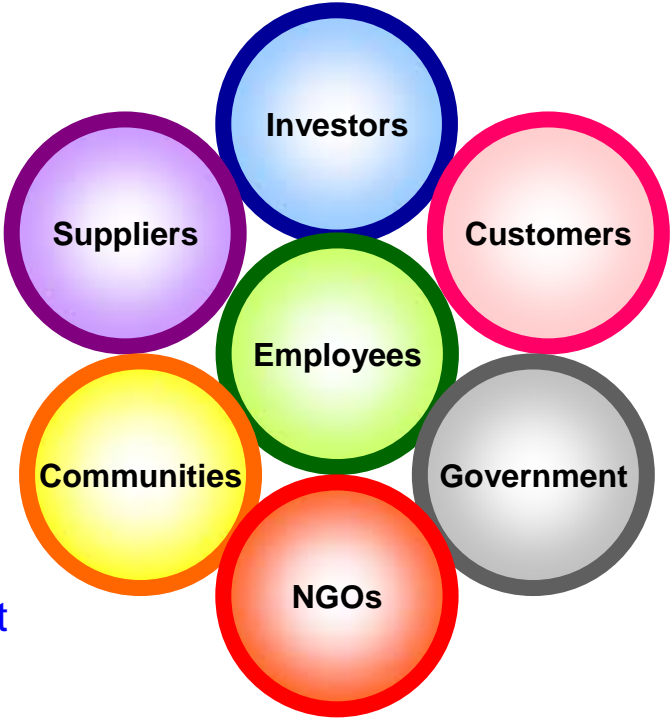
- Strategy
- Governance
- Emission accounting



CARBON DISCLOSURE PROJECT



- Expectation for improvement
- Collaboration



AUO's Stakeholders

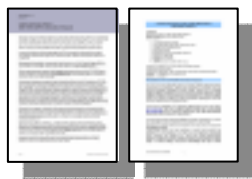


Guidance for Carbon Management

- **Comprehensive aspects on carbon management**

- Green strategy
- Risk & opportunity identification
- GHG emission inventory & verification
- Reduction plan
- Role & Responsibility
- Renewable energy
- Emission trading
- Communication
- Interaction with supply chain

Questionnaire + Reporting Guidance



Online Responding Results



CDP Reports



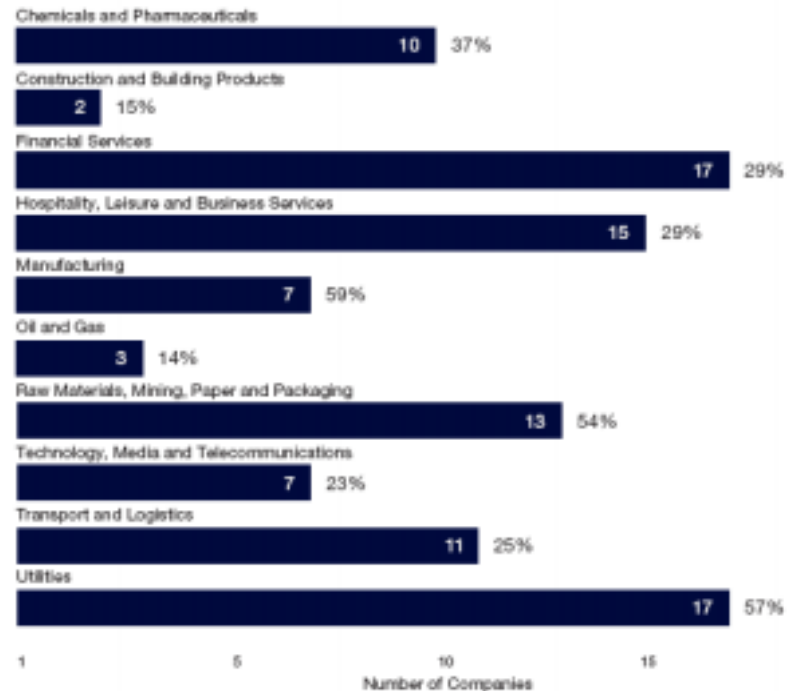
Carbon Management Guidance to AUO

Benchmark for Continuous Improvement

- **Uniform framework for carbon disclosure**
- **Companies' online-viewable responses are applied for comparison & learning**
- **Examples for benchmark application**
 - *CDLI: Direction for continuous improvement on carbon management.
 - Model Response: Fine examples for carbon disclosure.
 - Self-developed benchmark indexes, such as reduction plan, responsibility...etc.

*CDLI: Carbon Disclosure Leadership Index

Fig. 9: Number of Companies with Emission Reduction Targets



Discovery of Business Opportunity

- Guide AUO to uncover our potential business opportunity.
- Mutually lead AUO and our business partners to discover collaboration with each other, from companies' online-viewable responses as a pool of business opportunity.





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- **AUO's Experience in Response to CDP**
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Milestones of AUO's Response to CDP

2009/CDP7

- Continuously and Proactively consult CDP
- Qualitative and Quantitative answers

AU Optronics

by business level

Country: Taiwan Sector: Diversified Industrial

CDP Responses

You are logged in as Jenny.Hsiung@auo.com. To clear your session [Click here](#)

2008 (CDP6) - Answered questionnaire online - [View Response](#)

2007 (CDP5) - Answered questionnaire online - [View Response](#)

2006 (CDP4) -

2005 (CDP3) -

2004 (CDP2) -

2003 (CDP1) -

Publicly Available Online!

C Pilot & SCLC08

2007/CDP5

- **First time** received invitation from CDP
- Responded to CDP (deadline missed)
- Qualitative answers only

*SCLC: Supply Chain Leadership Collaboration

& Confidential

AUO's Response to *SCLC vs CDP

- **AUO responded to SCLC Pilot & SCLC08 when initiated in 2008**
- **Scope 1&2 emission split by business division**
 - AUO preformed emission breakdown by categories for purpose of management, starting from 2006.
 - SCLC Pilot & SCLC 08 revealed the inquiry for disclosure on emission split by business division.
 - AUO's meets the requests of SCLC as well as CDP7.
- **Engagement with Suppliers**
 - AUO started to plan on providing GHG inventory training to our suppliers in 2007.
 - AUO will request our suppliers to report their emissions and encourages them to acquire ISO 14064 verification.
 - AUO matches with the inquires of SCLC Pilot & SCLC08.

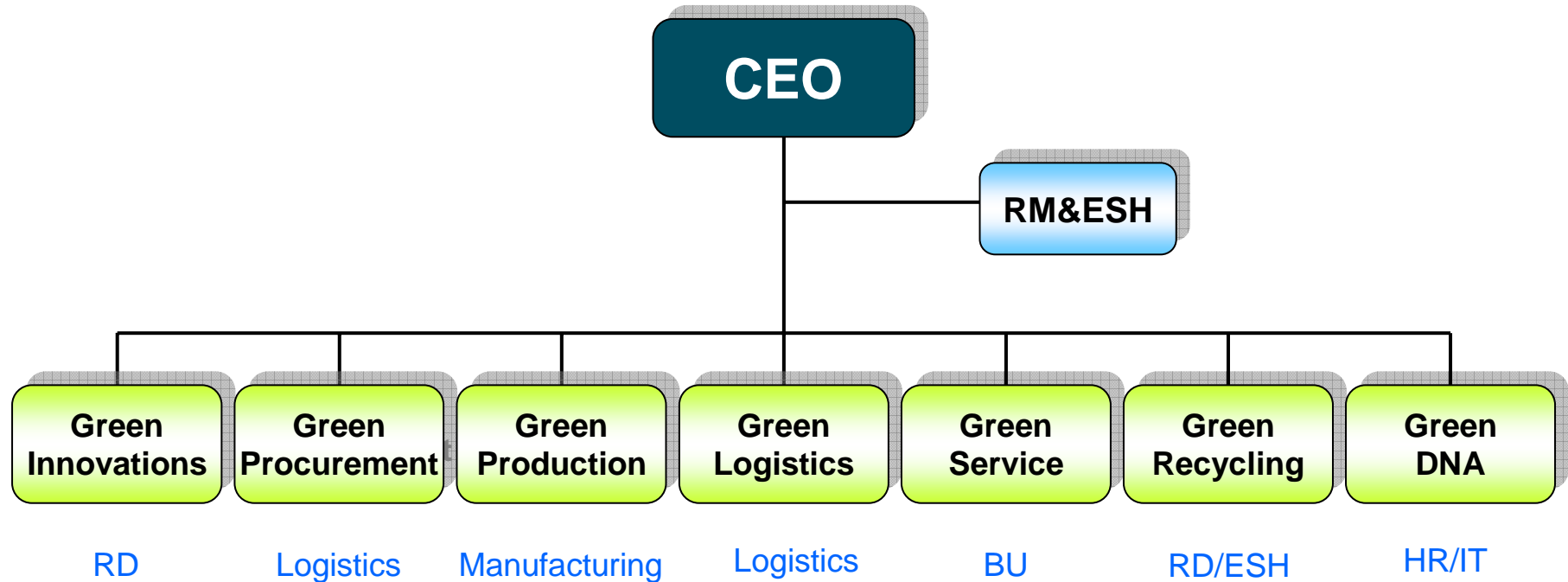
AUO's Annual Schedule of Carbon Disclosure

- Timeline of GHG Inventory & Verification is set in a way to meet the deadline of CDP
- CSR Report is published upon the completion of CDP

AUO's example

	Jan	Feb	Mar	Apr	May	Jun
GHG Inventory & Internal Verification						
GHG External Verification						
Launch of New CDP Questionnaire						
Preparation for CDP						
Official Response to CDP with Verified Data						
Publication of CSR Report						

Governance of Carbon Management



- Committee is chaired by director or above
- 7 committees set each of their GHG reduction plan and target
- Regular meetings are conducted on monthly, quarterly and yearly bases

GHG Emission Accounting

- All GHG emission data are verified by 3rd party
- The first ISO 14064-1 verified company in Taiwan TFT-LCD industry
- A variety of **data categorization**
 - By Country
 - By Manufacturing Site
 - By Factory
 - By Business Unit
 - By Product Group



GHG Emission Accounting

- **Accounting**

- Including factories in Taiwan, China and Europe, as well as overseas sales offices
- Quantitative accounting for Scope 1 & Scope 2
- Qualitative accounting for Scope 3

- **Future Plan**

- Emissions from manufacturing site of supply chain
- Employees business travel
- Transportation of AUO's products to customers

Performance

- **Emission Intensity**
 - **AUO develops 5 Eco-Efficiency Indexes (EEI) as internal environmental performance indicators**
 - **GHG emission per substrate size: kg CO₂e/m²**
 - Process energy consumption per substrate: KWH/m²
 - Process water consumption per substrate size: m³/m²
 - Waste generated per substrate size: kg/m²
 - Waste recovery rate: %
 - **Every factory sets its own GHG reduction target in terms of EEI**
 - **EEI is reviewed on a monthly basis**
- **Company-wide GHG Reduction Target:** officially announced in 2008.02
 - Target: **70%**
 - Unit: greenhouse gas emissions per substrate size (kg CO₂e/m²)
 - Baseline year: 2004
 - Target year: 2010

Communication to Public

- **Voluntary disclosure through CSR Report**
 - Public disclosure on CDP
 - Risk & opportunity
 - GHG emission inventory
 - External verification
 - PFC emission reduction actions
 - Company-wide GHG emission reduction target



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AUO's Feedbacks to CDP

- ***CDLI for Other Sample Groups**

- Set CDLI for other groups as the encouragement for voluntary carbon disclosure, such as Asia 80.

- **Model Response in Each Industry Sector**

- For benchmarking, provide model response of each Industry sector, such as computer hardware, semiconductor...etc.

- **Standardized Definition of Industry Sector**

- For scoring and benchmarking, standardized definition of industry sector is necessary.
- An example of contradictory classification:

Company	Industry Sector
AU Optronics	Diversified Industrial
Chi Mei Optoelectronics Corporation	Electrical Equipment
LG Display	Electronic Equipment & Instruments

AUO

Innovating Life

