



TOTO®

WRI

World Resource Institute

DC Meetings

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Focus

- Domestic sourcing versus international
 - What are the drivers
- Plant location factors
 - Raw material sourcing
 - Distribution channels
 - Talent pool
 - Infrastructure
- Balanced portfolio of supply sourcing to bridge market dynamic cyclicality

TOTO Ltd.

- World headquarters
Kokura, Japan
- World's largest plumbing
manufacturer
- Worldwide annual sales
approaching \$5 billion
- Vast portfolio of
bathroom and kitchen
products
- An engineering driven
company
 - 1,500 R&D
engineers
- Earned in excess of
68% market share in
Japan
- Number of Employees
 - 20,481(Consolidated)
 - 7,721(Nonconsolidated)

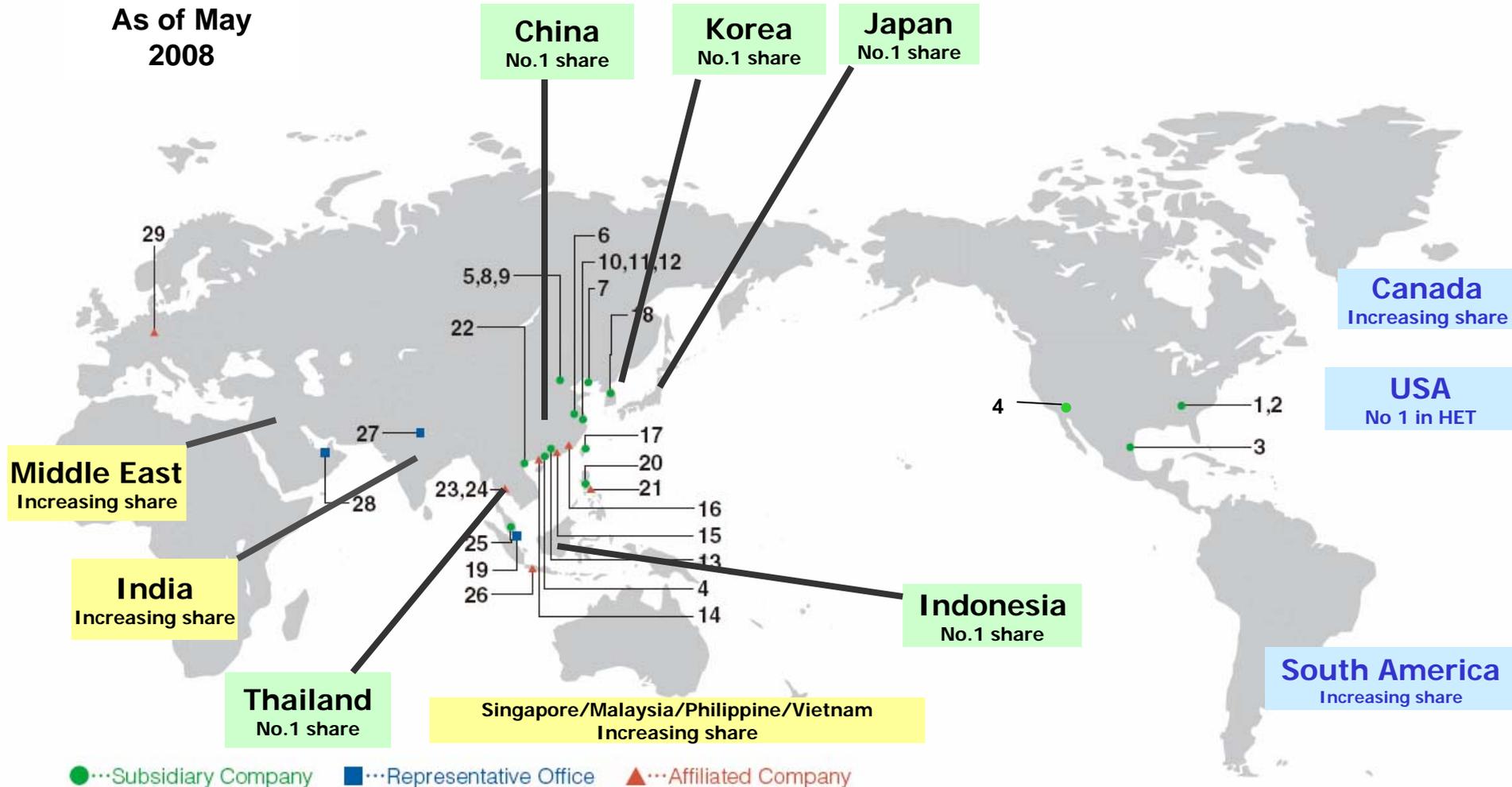
Founded in 1917



TOTO Is Global

International Network

As of May
2008



Risk Factors to China supply

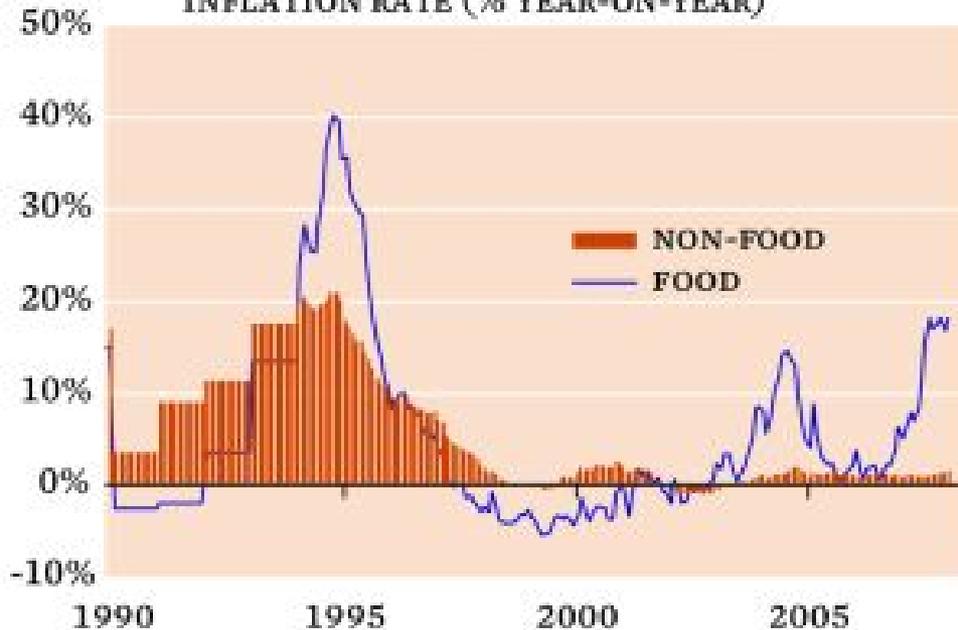
- Inflation rate
 - Food prices in Jan 08 18.2%
 - Overall inflation rates
- Wage rate for work force (from 03 to 07 wages doubled)
 - Work force transition agricultural to industrial
- Currency exchange rate
 - China is increasing interest rates to slow growth
 - Exchange rates are worsening, weak dollar, central control of Yuan
- VAT – Value Added Tax
 - Refund on Exports - changing
- Infrastructure
 - Highways – Concrete, steel
 - Electricity production and distribution – Coal fired, nuclear, copper wire, cement, steel, et.al.
 - Natural gas production and distribution
- Political ramifications
 - Political unrest
 - Domestic consumption

Back up data

GROCERY BILLS

The prices for food in China are soaring, but other prices are stable

INFLATION RATE (% YEAR-ON-YEAR)



SOURCE: UBS

LET THEM EAT RICE

The rise in China's food prices is concentrated in meat, dairy and eggs

INFLATION RATE (% YEAR-ON-YEAR)

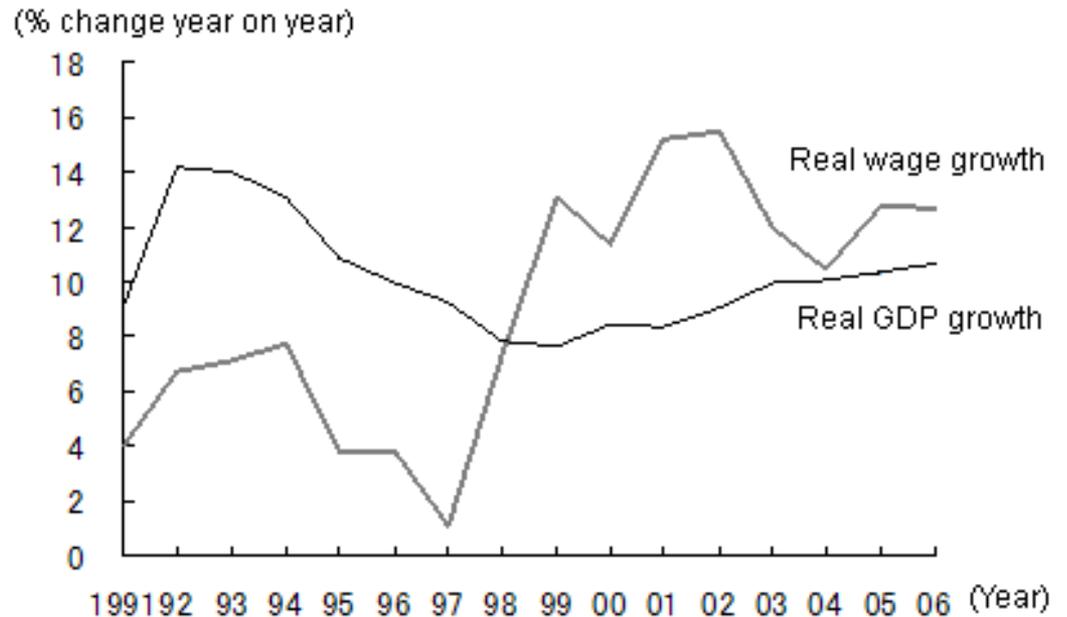


SOURCE: UBS

Wage Impact in China

- Forecast is that the Lewis effect will impact China. As industrial sector labor increases and agricultural labor surplus diminishes, wages will increase.
- This is occurring now at localized Plants within the TOTO network

Figure 1 Reversed relationship between real wage growth and GDP growth



Source: *China Statistical Abstract 2007*

TOTO

USA Operations



Morrow, Ga

Lakewood, Ga



Ontario, CA



Open in 9/07

Monterrey, Mexico



Fairburn, GA

Moving Capacity Closer Reducing Carbon Impact



121,671 lbs of Diesel Conserved per month
(20,000 gallons) (396,000 pounds of carbon)



The Process

Sustainability in Operations

Operational Innovation

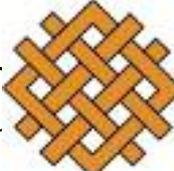


Achieve a Water Neutral impact thru greywater use, Conservation and Eco Product

2000-

Becoming a darker shade of green

GHG





Life Cycle Assessment

LCA – Life Cycle Assessment

National Institute of
Standards and Technology

NIST

...working with industry to foster innovation, trade, security and jobs

1. Environmentally Responsible
2. Additional Green points for LCA
 - A. More LEED points for LCA
3. Competitive Advantage
4. Increasing number of Green builders and Green communities
5. The only know way to replace the sometime misleading proxies in assessment system

- **Cradle-to-Cradle**

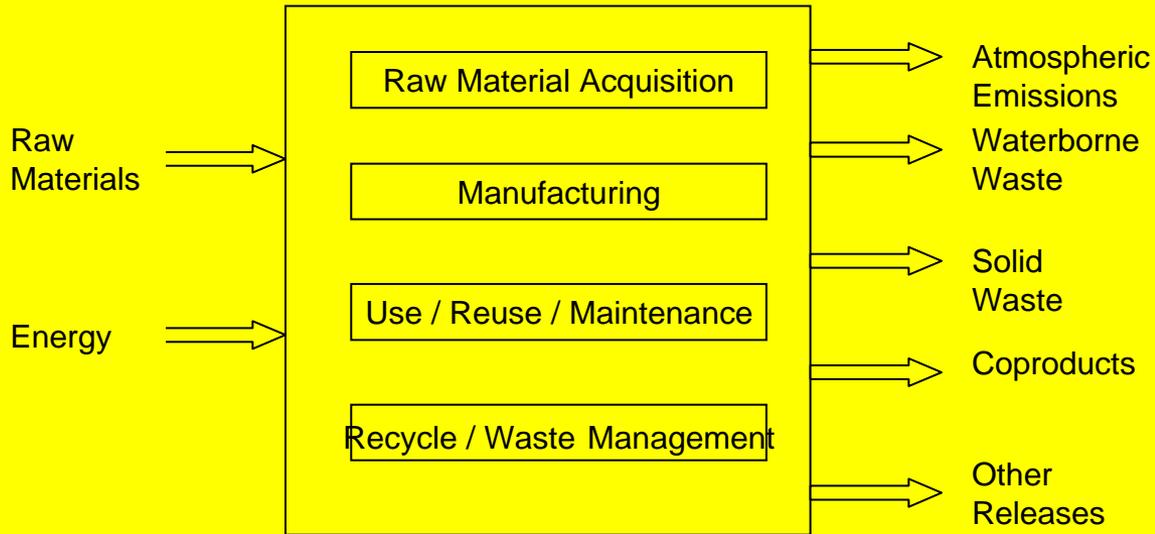
Cradle-to-cradle is a specific kind of cradle-to-grave assessment, where the end-of-life disposal step for the product is a recycling process.

- **Cradle-to-grave**

Cradle-to-grave is the full Life Cycle Assessment from manufacture ('cradle') to use phase and disposal phase ('grave').

- **Cradle-to-gate**

Cradle-to-gate is an assessment of a *partial* product life cycle from manufacture ('cradle') to the factory gate, i.e. before it is transported to the consumer.



Life Cycle Impact Indicators

- Global Warming Potential
- Stratospheric Ozone depletion
- Ground level Ozone or Smog
- Fossil fuel depletion
- Non-renewable resource use
- Nutrification/Eutrophication of water bodies
- Acidification and acid deposition
- Solid waste
- Toxic release to air, water, land

LCA Summary

- LCA is a powerful environmental assessment approach
- It is not the product, but the life-cycle of the product that determines its environmental impact
- LCA is the only know way to replace sometime misleading proxies in the assessment system
- All Green organizations are adopting LCA for Green certification
- LCA is generally a comparison between practicality and completeness
- Green Credit Shift: From **Perceptive** based To **Performance** based



Takeaways

- **Big Factor in the “as used” analysis**
- **Important to our customer base as they seek LEED Certs**
- **LCA as a Marketing tool OK, still subjective**
- **LCA as a internal metric to reduce impact is more important**



Thank You