Innovative Technologies in Chemical Industries and Trends

Convergence of Technology and Business: Engine for Inclusive Growth

Jose G. Marcalain
President,
Chemical Industries Association of the Philippines
ASEAN ECONOMIC COMMUNITY

Philippines
Vietnam
Laos
Myanmar
Brunei Darussalam
Indonesia
Singapore
Malaysia
Thailand
Cambodia

Goods
Services
Investment
Skilled Labor
APEC Chemical Dialogue First Senior Officials’ Meeting 1 (SOM1)

January 26 to February 7, 2015

Clark Freeport Zone (Clark) and Subic Bay Freeport Zone (Subic).
We’re bringing you to one of Asia’s most colorful countries. Save the date.

NOVEMBER 5 to 7, 2015
SMX CONVENTION CENTER MANILA
Chemicals

- Among the largest trade-able products in the world worth **US$ 6 trillion** in total trade.
- Chemicals touch nearly **90%** of all manufactured products

**Market sizes**
- EU – US$ 600 billion
- US – US$ 500 billion
- China – US$ 300 billion
- Belgium, France, Japan – US$ 200 billion each
Benefits of Chemistry to Society

- Enables the comforts of modern day life
- Health, Quality of life – Pharmaceutical, Cleaners, Disinfectants, Packaging
- Chlorine for Safe drinking water
- Improve food quality, increase food production Fertilizers, Pesticides, Biotech
- Chemistry to reduce CO2 emissions & enables renewable energy
Philippine Chemical Industry

- **3rd largest manufacturing sub-sector**
  - 147,000 direct workers
  - Php24 billion in direct salaries and wages
  - **Php336 billion** in revenues, 7% g.r. in last 5 years
  - 1,405 chemical manufacturers

- **Rapidly growing trade**
  - **More than US$9 Billion** in total trade
  - More than US$7 Billion in imports at 13% g.r. in last 5 years
  - Close to **US$3.5 Billion** in exports at 17% g.r. in last 5 years
  - Exporting to 177 countries

- **Highly diverse and highly regulated**
  - 55,000 chemicals registered
  - Advanced and comprehensive EHS regulations
  - Pro-active private sector regulation thru Responsible Care

Chemical Sectors & Products

**BASIC CHEMICALS**
- Resins
- Gases
- Organics
- Inorganics
- Alcohols

**CHEMICAL PRODUCTS**
- Pharmaceutical
- Soap & Detergents
- Paints, Inks
- Cosmetics
- Fertilizers
- Pesticides
- Adhesives

**RUBBER PRODUCTS**
- Tires
- Industrial products
- Re-threading

**PLASTIC PRODUCTS**
- Plastic articles
- Plastic products
- Pipes and tubings
- Industrial products
- Films, sheets
Chemical Industries Association of the Philippines
Leading Filipino Manufacturers

- Petron
- JG Summit Petrochemical Corporation
- Chemrez Technologies
- R1 Chemical Corporation
- Boyesen
- Atlas
- Republic Chemical Industries, Inc.
- Coocochem
- Philippine Phosphate Fertilizer Corporation
- Charter Chemical & Coating Corp.

Samahan sa Pilipinas ng mga Industriyang Kimika
Global MNCs Manufacturing in PH

- Dow
- DuPont
- Bayer
- Air Liquide
- Linde
- Syngenta
- Monsanto
- Sojitz
- Ecolab
- Tosoh
- Grace
- Kao
- Stepan
- 3M
- Nalco
- Orica
Cordially invites you in celebration of its

141st General Membership Meeting

THE PHILIPPINE CHEMICAL
MASTERPLAN 2012-2030
TOGETHER, LET'S BUILD OUR FUTURE

on September 18, 2012
11AM - 2PM
Dusit Thani Manila

Guest of Honor:
Atty. Adrian S. Cristobal Jr.
Undersecretary of Industry Development and Trade Policy Group
Department of Trade and Industry

Samahan sa Pilipinas ng mga
Industriyang Kimika
Philippine Chemical Masterplan

Strong Philippines 2016
- Chemical Industry Council
- Petrochem integration
- R&D 0.5% of Revenue
- US$ 5 billion exports
- 75% practice RC

Enter ASEAN+4 2022
- Domestic feedstock
- Diversification & expansion
- US$ 10 billion exports

Global Capture 2030
- 3rd largest export
- US$ 30 billion exports
## SWOT Analysis

### Strengths
- Source of chemical talent
- Long manufacturing experience and competence
- Well developed sales & marketing skills
- Product Quality
- Access to good technology
- Network capability for advocacies
- Compliance with environmental regulations
- Customer responsiveness
- Applied R&D capabilities

### Weaknesses
- Prohibitive cost structures: raw materials, transport, power
- High turnover rate of manpower
- Product differentiation
- Small local manufacturing base
- Technology for high value products
- Storage and port facilities
- Lack of standards
- Low capacity utilization
- Old machines
- Shortage of skilled manpower
- Basic R&D

### Opportunities
- Emerging markets (local and international)
- Shifts in consumer preferences for natural products, health and wellness and environmentally-friendly products
- Strong Philippine economy

### Threats
- Unscrupulous traders
- Smuggling
- Weak governance
- Trade liberalization
- Low cost competition from other Asian countries
- Negative image of the chemical industry
- Address Smuggling
- Pass Anti-smuggling bill
- Pre-shipment inspection of containerized cargo
- Expansion of NLA mechanism
- Review EO 638
- Address Tariff Distortions (Review EO 61)
- Promote Trade and Investments
- Pursue industry clustering & Integration

- Streamline business processes
- Make available required tests and test facilities
- Update product standards

- Upgrade technical skills
- Increase pool of ERDT
- Introduce and processes

- Revisit plastic ban and recycling regulations
- Fast track Life Cycle Analysis studies
- Constitute National Ecology Center

- Trade & Investment Matters
- Talent Development and Innovations
- Environmental Matters
- Ease of Doing Business
PARTNERSHIP

- Government – University – Industry
  1. TWG’s with DTI–BOI and Other Government Regulatory Agencies:
     (a) *Ease of Doing Business (Regulatory Structure)*
        - Regulation as enabler to Trade facilitation, Competitiveness, Business growth
        - Change management workshop
     
     (b) *Education, Innovation, Research & Development (Innovation Ecosystem)*
        - TESDA grant skills for Process Operator and QA/QC Lab Technician
        - UP–ERDT Scholarships, Industry internship
        - USAID– Science, Technology, Research & Innovation for Development R&D Roadmap for the Chemical Industry
        - USAID Philippine Government, University, Industry Research Roundtable

  (c) *Trade and Investment*
     - Inbound and outbound trade & investment missions
  (d) *Safety, Health and Environment* (Self regulation, Internal Compliance)
Workshop on the Ease of Doing Business for the Chemical Industry

January 14, February 04, 18 and 26, 2015
Responsible Care

Voluntary self-regulation

- Pollution Prevention Code
- Process Safety Code
- Employee Health and Safety Code
- Distribution Safety Code
- Product Stewardship Code
- Community Awareness and Emergency Response Code
- Security Code

60 Countries

In Philippines since 1995
Creating Value through Global Product Strategy
May 21-22, 2015 Holiday Inn and Suites, Makati City
Creating Value through Global Product Strategy
May 21-22, 2015 Holiday Inn and Suites, Makati City
Product Innovation and Reverse Engineering Workshop
April 27-28, 2015 Acacia Hotel, Muntinlupa City
Prof. Rigoberto C. Advincula PhD.
(Master Instructor)
Professor of Case Western Reserve University, Department of Macromolecular Science and Engineering

Product Innovation and Reverse Engineering Workshop
April 27-28, 2015 Acacia Hotel, Muntinlupa City
Strengthening RC Implementation through Responsible Care® Workshop
April 22, 2015 City Garden Hotel, Makati City
Strengthening RC Implementation through Responsible Care® Workshop
April 22, 2015 City Garden Hotel, Makati City
Seminar on Strategic Trade Management (STM) for the Philippines Chemical Industry
February 27, 2015 Dusit Thani, Makati
Seminar on Strategic Trade Management (STM) for the Philippines Chemical Industry
February 27, 2015 Dusit Thani, Makati
Concluding thoughts

- The chemical industry is a major pillar to the economic development goals and inclusive growth objectives of the Government
- Regulation enables trade facilitation and business growth
- Resurgence in Manufacturing
- Leverage chemicals with comparative advantage.
- Support the Philippine Chemical Masterplan and the vision of US$ 30 Billion exports by 2030.