## APBO 2017 Country Outlook: South Korea





- South Korea Overview
- II. U.S. Korea Trade
- III. KORUS FTA
- IV. Key Industry Sectors
- V. 2018 PyeongChang Olympics
- VI. Commercial Service Korea

## Miracle on the Han River

1953 2017





#### South Korea at a Glance



- Population: 51.4 million (Feb 2017)
- Area: 84,610 sq mi (the geographic size of Indiana)
- GDP per capita: \$27,633 (as of Oct 2016)

11th Largest Economy in the World (IMF) 3rd Largest Economy in East Asia 7th Largest Export Market for the U.S. (\$42.3 billion in goods exports/\$21.6 billion in services exports)

- World Bank EODB: 5
- Innovation Index: 1 -11
- WEF Competitiveness Index: 26

#### South Korea's Potential Growth Rate

| Period      | Potential Growth Rate (%) |
|-------------|---------------------------|
| 1981 - 1990 | 9.1                       |
| 1991 - 2000 | 6.5                       |
| 2001 - 2010 | 4.3                       |
| 2011 - 2015 | 3.2                       |
| 2016 - 2020 | 2.7                       |
| 2021 - 2025 | 2.3                       |
| 2026 - 2030 | 2.0                       |



Source: Hyundai Research Institute, 2016

# Domestic Economy and Challenges

- Conglomerates Dominate Economy
- Export Dependent Economy/ 47% of GDP
- Export Engines Declining: Shipbuilding, Steel
- Autos, IT/Electronics moving offshore
- Some Manufacturing costs higher than US
- Domestic demand slow: household debt, stagnant service sector productivity and struggling SMEs
- Low Productivity: 55% of OECD leaders
- Demographic Cliff: Aging society/low birth rate
- 2016 2020 2.7 2021 2025 2.3

#### Current Economic Trends

- 2017 Economic Growth Projection: 2.6% from 3% (tepid domestic consumption and weak exports)
- Decline in value of both Exports and Imports
  - Impact of China slowdown and weak global economy
- Consumer spending expected to decrease in 2017
- Reluctance to invest ahead of uncertainty in election this year
- FDI into Korea from 2013-2016: \$65 billion

#### Economic Concerns and Priorities

- Korea is an export led economy, with 47% of GDP in exports
- Decline of Traditional Growth Sectors
  - Shipbuilding, steel, autos, IT/electronics (rise of competition from China)



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- Investment moves offshore in ICT, Autos
- Manufacturing costs are high, labor productivity 55% of OECD
- Domestic demand slow: household debt, stagnant service sector productivity and struggling SMEs
- Demographic Cliff: Aging society/low birth rate
- $2016 2020 \quad 2.7 \quad 2021 2025 \quad 2.3$

## Chaebols in South Korea's Economy

| Rank | Enterprise Groups      | # of Companies |
|------|------------------------|----------------|
| 1    | Samsung                | 67             |
| 2    | Hyundai Motors         | 51             |
| 3    | SK                     | 82             |
| 4    | LG                     | 63             |
| 5    | Lotte                  | 80             |
| 6    | GS                     | 79             |
| 7    | Hyundai Heavy Industry | 27             |
| 8    | Hanjin                 | 46             |
| 9    | Hanhwa                 | 52             |
| 10   | Doosan                 | 22             |











# **Labor Productivity**

|         | High<br>School<br>Graduation | Tertiary<br>Education<br>(Ages 25-<br>64) | Hours<br>Worked | GDP per<br>Hour<br>Worked<br>USD | Compensa-<br>tion<br>USD/hour | Labor<br>Productivity<br>Growth Rate |
|---------|------------------------------|---|-----------------|----------------------------------|-------------------------------|--------------------------------------|
| Korea   | 97 %                         | 42%                                       | 2,163           | 28.9                             | 16.8                          | 3.4%                                 |
| USA     | 88 %                         | 44 %                                      | 1,789           | 64.1                             | 36.2                          | 1.3%                                 |
| Japan   | 94%                          | 48 %                                      | 1,745           | 40.1                             |                               | 1.7%                                 |
| Germany |                              | 29 %                                      | 1,393           | 58.3                             | 34.3                          | 1.4%                                 |

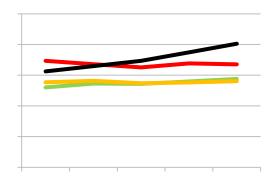
Source: OECD (2012)

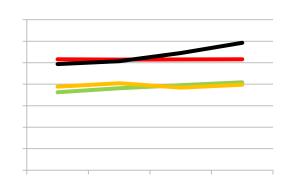
## Trends in R&D

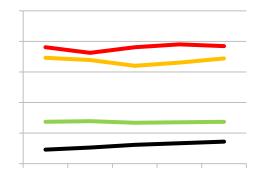
R&D as % of GDP

Researchers (per million people)

**Triadic Patents** 







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Source: OECD, World Bank

## Korea is hungry for technology

- Fast Follower Model: the fastest route to development but coming to an end in some sectors. Innovation and invention-now a priority for the entire economy
- Korean large firms are investing in R&D as never before, and acquiring foreign firms for technology, eg, Samsung buys LoopPay to compete with ApplePay, 2017 buys Harman Industries for \$8 billion
- Korean firms seek opportunities to acquire, partner with or license technology; offers alternative business model for tech firms

## Where will new growth come from?

- Korea is looking to pivot their economy in new directions and find next generators of growth as heavy industries decline
- Drive for New Engines of Economic Growth Healthcare; ICT-IoT, Advance Materials, ET/Green Innovation
- Increase investment in R&D to upgrade technological capabilities
- Highest percentage of GDP going into R&D: 4.29% in 2016
- Reforming labor sector, big political issue in Korea
- Korea is a great place to license technology, growth of 40% since FTA went into effect
- Korea is a global leader in electronics, focusing more on R&D
- Seeks opportunities to acquire, partner with or license technology

#### Political Situation





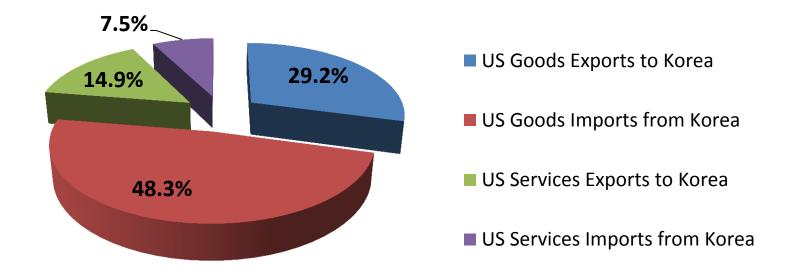


- In December, parliament voted to impeach President Park Geunhye over a corruption and influence-peddling scandal
- On March 10, the Korean Constitutional Court ruled to uphold the motion to impeach Park
- Park is the first South Korean President to be impeached
- Election for her replacement will be held on May 9
- Despite instability, Korea has maintained a stable national security posture, amid tension with North Korea

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#### 2016 U.S.-Korea Trade Balance

Total 2016 Bilateral Trade = USD 144.6 billion (2015: USD 150 billion)



Source: Bureau of Economic Analysis

#### 2011-2016 U.S.-Korea Trade Balance

In millions of dollars

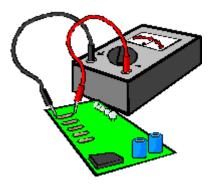
|         | 2011    | 2012    | 2013    | 2014    | 2015    | 2016    |
|---------|---------|---------|---------|---------|---------|---------|
| Exports | 61,883  | 62,322  | 64,408  | 66,503  | 64,907  | 63,937  |
| Imports | 67,322  | 70,012  | 73,731  | 81,406  | 83,557  | 81,399  |
| Total   | 129,205 | 132,334 | 138,139 | 147,909 | 148,464 | 145,336 |

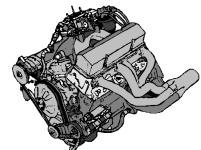
Source: U.S. Census Bureau

- Following the implementation of KORUS FTA, bilateral trade between the U.S. and Korea has increased \$16 billion from 2011 to 2016
- Under KORUS FTA, U.S. auto exports to Korea have nearly quadrupled over the past five years, from 14,000 vehicles to 60,000 units
- U.S. services exports to Korea have increased three times faster than services exports to the rest of the world
- Korea is a top market for U.S. agricultural products, including meat, almonds, cherries, and fresh cheese

## Top 10 U.S. Exports to Korea

| Transportation Equipment Manufacturing          | 19.49 |
|---|-------|
| Computer and Electronic Product Manufacturing   | 14.57 |
| Chemical/Manufacturing                          | 14.29 |
| Machinery / Manufacturing                       | 12.37 |
| Food/ Manufacturing                             | 7.94  |
| Agri Commodities                                | 6.02  |
| Electrical Equipment. Appliance & Component Mfg | 3.23  |
| Fabricated Metal Product Manufacturing          | 2.76  |
| Miscellaneous Manufacturing                     | 2.51  |
| Oil and Gas Extraction                          | 2.44  |





Source: Foreign Trade division, US Census Bureau

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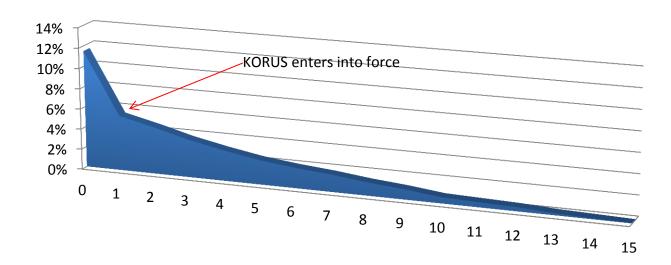
## Korea-U.S. Free Trade Agreement (KORUS FTA)

- Implementation in March 2012, 5 year anniversary
- Total trade growth: 2011 \$126 B to 2016 \$145 B
- Before KORUS, only 14% of all imports duty free, and the average duty assessed was 11.5%



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- As of March 2017, 91.7% of U.S. products enter Korea duty-free
- On day "one" of KORUS, two-thirds of products went to zero duty. By 2022, 99% of U.S. products will pay zero duty.



## Some KORUS Success Stories

#### Goods

|                                    | 2011              | 2016             | % Increase |
|------------------------------------|-------------------|------------------|------------|
| Passenger<br>Vehicles              | \$418 million     | \$1.587 billion  | 278%       |
| Crude Oil                          | \$108<br>thousand | \$181<br>million | 16449%     |
| Aircraft,<br>Spacecraft &<br>Parts | \$2.6<br>billion  | \$5.2 billion    | 101%       |

#### Agriculture

|   | 2011             | 2016             | % Increase |
|---|------------------|------------------|------------|
| Edible Fruit & Nuts;<br>Citrus Fruit or Melon<br>Peel   | \$494<br>million | \$713<br>million | 44.20%     |
| Coffee; Tea; Mate &<br>Spices                           | \$38<br>million  | \$63<br>million  | 66.45%     |
| Prep Vegetables; Fruit;<br>Nuts or Other Plant<br>Parts | \$148<br>million | \$237<br>million | 58.56%     |

#### Services

|  | 2011    | 2016    | % Increase |
|--|---------|---------|------------|
| Travel Services                        | \$5.9   | \$8     |            |
| Traver Services                        | billion | billion | 35.59%     |
|  | \$4.5   | \$6     |            |
| IPR                                    | billion | billion | 33.33%     |
| Professional and Management Consulting | \$697   | \$854   |            |
| Services                               | million | million | 22.53%     |

## What's My Tariff?

FTA Tariff tool: http://export.gov/FTA/FTATariffTool/



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- Detailed Background Information: http://export.gov/FTA/korea/index.asp
- USTR website: http://www.ustr.gov/trade-agreements/free-trade-agreements/korusfta/final-text
- ITA website: http://export.gov/FTA/korea/
- **US Customs website:** http://www.cbp.gov/xp/cgov/trade/trade\_programs/international\_agreemen ts/free trade/

### Korean FDI in the USA (in USD millions)

|                | 2011     | 2012     | 2013     | 2014     | 2015     |
|----------------|----------|----------|----------|----------|----------|
| Position (UBO) | \$19,737 | \$25,131 | \$30,936 | \$37,846 | \$38,174 |
| Flow           | \$4,798  | \$6,185  | \$6,601  | \$9,028  | \$1,062  |

- South Korea was the fifth fastest growing source of FDI in the United States in 2015 (by UBO)
- Korean FDI in the U.S. has nearly doubled since 2011
- Over 45,000 U.S. workers are employed by U.S. affiliates of Korean-owned firms
- \$1.3 billion was spent by U.S. affiliates of Korean-owned firms on R&D in 2014
- Total contribution to U.S. goods exports by Korean-owned firms operating in the United States in 2014 was \$24.8 billion

Source: Bureau of Economic Analysis (latest available as of September 12, 2016)

### Korean FDI Boom into US

2014 Largest Sources of FDI in the United States (by UBO)

| Rank | Market          | 2014 Position<br>in USD millions | Share<br>of total |
|------|-----------------|----------------------------------|-------------------|
| 1    | United Kingdom  | \$465,795                        | 16.1%             |
| 2    | Japan           | \$374,720                        | 12.9%             |
| 3    | Germany         | \$312,898                        | 10.8%             |
| 4    | Canada          | \$311,383                        | 10.7%             |
| 5    | France          | \$240,212                        | 8.3%              |
| 6    | The Netherlands | \$185,053                        | 6.4%              |
| 7    | Ireland         | \$159,515                        | 5.5%              |
| 8    | Switzerland     | \$151,721                        | 5.2%              |
| 9    | Spain           | \$54,745                         | 1.9%              |
| 10   | Australia       | \$53,058                         | 1.8%              |
| 11   | Sweden          | \$48,085                         | 1.7%              |
| 12   | Belgium         | \$36,460                         | 1.3%              |
| 13   | South Korea     | \$34,821                         | 1.2%              |
| 14   | Norway          | \$31,701                         | 1.1%              |
| 15   | Mexico          | \$31,448                         | 1.1%              |

2015 Largest Sources of FDI in the United States (by UBO)

| Rank | Market          | 2015 Position<br>in USD millions | Share<br>of total |
|------|-----------------|----------------------------------|-------------------|
| 1    | United Kingdom  | \$568,948                        | 18.2%             |
| 2    | Japan           | \$414,007                        | 13.2%             |
| 3    | Canada          | \$341,948                        | 10.9%             |
| 4    | Germany         | \$318,988                        | 10.2%             |
| 5    | France          | \$251,375                        | 8.0%              |
| 6    | Ireland         | \$200,502                        | 6.4%              |
| 7    | Switzerland     | \$143,534                        | 4.6%              |
| 8    | The Netherlands | \$137,406                        | 4.4%              |
| 9    | Spain           | \$61,378                         | 2.0%              |
| 10   | Sweden          | \$50,875                         | 1.6%              |
| 11   | Italy           | \$47,049                         | 1.5%              |
| 12   | Australia       | \$44,925                         | 1.4%              |
| 13   | Belgium         | \$43,335                         | 1.4%              |
| 14   | South Korea     | \$38,174                         | 1.2%              |
| 15   | Mexico          | \$35,516                         | 1.1%              |

#### Korea FDI Boom into US

# 2014 Fastest-Growing Sources of FDI in the United States (by UBO)

| Rank | Market               | 2014 Position<br>in USD millions | CAGR<br>2009-14 |
|------|----------------------|----------------------------------|-----------------|
| 1    | China                | \$10,169                         | 38.5%           |
| 2    | Luxembourg           | \$23,822                         | 26.8%           |
| 3    | Brazil               | \$22,404                         | 25.2%           |
| 4    | India                | \$10,706                         | 22.1%           |
| 5    | Malaysia             | \$1,587                          | 19.6%           |
| 6    | South Korea          | \$34,821                         | 19.4%           |
| 7    | Switzerland          | \$151,721                        | 18.2%           |
| 8    | United Arab Emirates | \$27,618                         | 18.1%           |
| 9    | Colombia             | \$2,517                          | 16.5%           |
| 10   | Norway               | \$31,701                         | 16.5%           |
| 11   | Venezuela            | \$5,537                          | 13.8%           |
| 12   | Chile                | \$1,154                          | 13.0%           |
| 13   | Denmark              | \$12,544                         | 12.0%           |
| 14   | Hong Kong            | \$19,582                         | 11.9%           |
| 15   | South Africa         | \$3,697                          | 11.6%           |

# 2015 Fastest-Growing Sources of FDI in the United States (by UBO)

| Rank | Market               | 2015 Position<br>in USD millions | 2010-15 |
|------|----------------------|----------------------------------|---------|
| 1    | Argentina            | \$3,771                          | 38.9%   |
| 2    | Chile                | \$2,475                          | 36.9%   |
| 3    | China                | \$20,765                         | 30.8%   |
| 4    | Malaysia             | \$1,613                          | 20.5%   |
| 5    | South Korea          | \$38,174                         | 17.3%   |
| 6    | Norway               | \$29,600                         | 14.9%   |
| 7    | United Arab Emirates | \$27,480                         | 14.2%   |
| 8    | Colombia             | \$2,468                          | 14.0%   |
| 9    | India                | \$11,345                         | 13.6%   |
| 10   | Ireland              | \$200,502                        | 12.8%   |
| 11   | Bermuda              | \$27,585                         | 11.7%   |
| 12   | Brazil               | \$23,685                         | 11.7%   |
| 13   | Hong Kong            | \$14,525                         | 11.4%   |
| 14   | Japan                | \$414,007                        | 9.8%    |
| 15   | Finland              | \$13,278                         | 9.8%    |

### Lotte Chemical Investment in Lake Charles, Louisiana



In 2015, Lotte Chemical Corporation and its U.S.-based joint venture partner Axiall Corporation announced a new ethane cracker that will be built in Lake Charles, Louisiana. Adjacent to the new facility, Lotte Chemical will separately build a monoethylene glycol plant. The total capital investment for the two new chemical manufacturing plants is \$3 billion. The projects will create more than 2,100 new jobs in Louisiana.

## Samsung Investment in Austin, Texas



Source: Samsung

Samsung has invested over \$16 billion in its semiconductor facility in Texas, representing the largest single FDI in the United States, as well as employing over 15,000 people in nearly every state. In June 2016, Samsung Electronics announced that it will invest \$1.2 billion in the United States over four years to boost technologies aimed at the internet of things. It also announced in November 2016 that it will invest more than \$1 billion by the end of June to boost production of system chips at its Austin, Texas facility, thereby creating 3,000 new jobs.

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## Best Prospect Exports Sectors, 2017-2018

Aerospace/Defense

**Automotive** 

Chemicals

Cosmetics

E-commerce

Energy

Information and Communications Technology

Manufacturing Technology

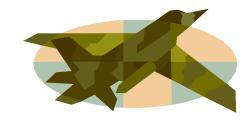
Medical Equipment and Devices

**Smart City Initiatives** 

**Travel and Tourism** 

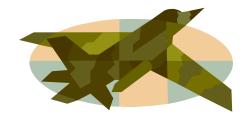
Agricultural Products

## Korea's Aerospace / Defense Market



- Korea is the 11th largest market for U.S. aerospace exports and has been a major defense/security ally of the U.S. as 28,500 U.S. military personnel are on the peninsula
- Korea has the 6th largest military and the defense budget is around \$35 billion including \$10.55 billion for the 'force improvement plan' (2017)
- Over 91% of aerospace imports are for commercial & military aircraft and their parts and components. US constitutes about 70% of Korea's total aerospace imports (2016)
- Korea had procured \$900 million US defense items in 2015. US constitutes about 47% of Korea total defense imports (2011-2015) average)

## Korea's Aerospace / Defense Market



#### **Opportunities**

Sub-Sector Prospects & Opportunities include advanced aircrafts and naval platform, C4ISR, avionics, maritime defense electronics and systems, antiterrorism & cyber terror systems and equipment, aircraft upgrade (fighters, multirole airlift aircraft), asymmetric warfare/littoral/coastal surveillance and patrol, and support for combat equipment

#### Challenges

- Korea's strong push on various indigenous technology development programs including Korean helicopter, fighter jet, cruise missile, destroyer ship, and various sized-UAVs and growing preference to purchase part of the system/product, not whole/finished items
- Strict US export control policies and aggressive marketing from Europe and Israel
- Korea's demanding offset policy is one important factor that foreign suppliers need to consider: Defense contracts values at over \$10 million will have an offset obligation

#### **ADEX-Seoul Airshow 2017**



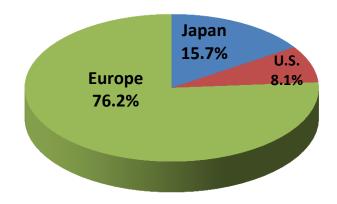
- Time/Venue: Oct. 17-22, 2017 / Seoul Airport
- The fastest growing aerospace & defense exhibition in the Asia-Pacific region: 2015 show hosted over 380 exhibitors from 32 nations and over 40 US companies participated in the US Pavilion
- ADEX-Seoul Airshow 2017 is a U.S. DOC certified exhibition and Kallman Worldwide is organizing the US Pavilion and CS Korea is fully supporting the show
- In 2017, Pavilion exhibitors will benefit from a prominent, high-traffic hall location, access to publicand private-sector VIPs and influencers, exclusive business intelligence from industry thought-leaders and operatives and exclusive networking events



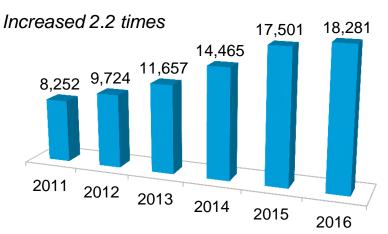




#### Korea's Automobile Market



Share of foreign passenger cars in Korea Source: Korea Automobile Importers and Distributors Association (KAIDA)



Growth of U.S. passenger cars in Korea Source: KAIDA

- Korea is ranked as the fifth largest auto producer in the world
- After KORUS FTA implementation, Korea cut tariffs on U.S. auto imports by half from 8% to 4%, and fully eliminated the 4% tariff in year five, 2016
- Benefitting from the KORUS FTA, from 2011 to 2016, imports of autos increased nearly 2.2 times

#### Korea Automobile Market

#### Best prospects and Opportunities



- Automotive Parts & Accessories
  - In 2016, there were approximately 21 million vehicles in operation in Korea. Given Korea's domestic auto production and rise in foreign cars, opportunities exist in electronic control systems, audio systems, replacement parts for imported vehicles, etc.
- Electric Vehicles (EV)
  - Korea's EV deployment target: 250,000 EVs by 2020
  - National and local governments provide EV purchase subsidies from \$11,000-\$17,000
- Self-Driving, Autonomous Vehicles
  - Korea expects to commercialize autonomous vehicles by 2020

## Tesla's Entry into Korea

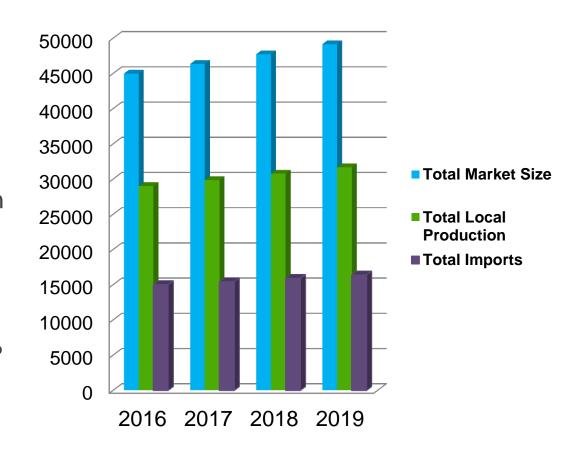




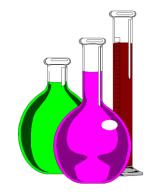
- On March 17, Tesla opened its flagship store in Gangnam
- Currently collaborating with Korea's Shinsegae Group to build more infrastructure in charging stations

## Korea's Specialty Chemical Industry

- Total Market Size(2016): \$45 billion
- Total Imports: \$15 billion
- U.S. Imports: \$3.5 billion
- Annual Growth Rate: 3%



## Korea's Specialty Chemicals Market



#### Best prospects:

- Raw and intermediate chemical substances for medical/pharmaceutical and cosmetics industries
- High molecular new materials for electronics & IT industries

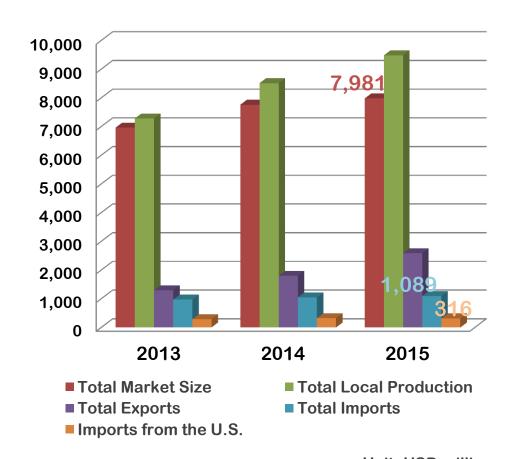
#### Challenges:

- Local and third country competition is intense, but highly innovative chemical substances from the U.S. have a market in this mature economy.
- Both K-REACH and Chemical Control Act are seen by industry as highly burdensome, extremely costly and dangerous with respect to IPR.

### Cosmetics Industry



- Market size in 2015: USD 8 billion
- Total imports in 2015: USD 1 billion
- Imports from the U.S. in 2015: USD 316 million
- Annual Growth Rate: 6.7%



Unit: USD million Source: Korea Cosmetic Association, Korea Pharmaceutical Traders Association

### Cosmetics Industry



#### Opportunities:

- South Korea is the 10<sup>th</sup> largest cosmetics market in the world.
- Imported cosmetics hold a 40% market share
- U.S. products dominate the import market, followed by France and Japan
- Best prospect include cosmeceutical convergence products, crossover/multi-functional products, functional cosmetics - especially anti-aging and anti-oxidation, natural/organic skincare products

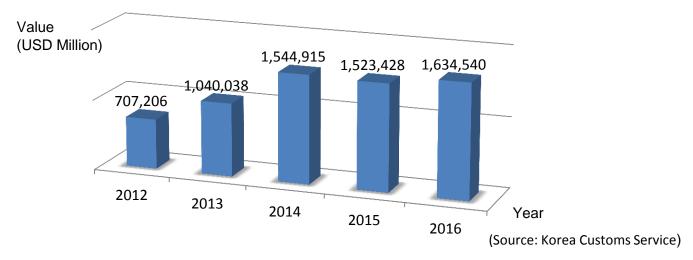
#### Challenges:

- Two South Korean companies, Amore Pacific and LG Household & Healthcare, dominate the local market (41% market share)
- Establishing brand recognition without a market presence
- Growth of online shopping has increased direct purchasing from abroad

#### Cross-border e-Commerce

http://www.willemisbrucker.com/wpcontent/uploads/2015/11/Online-Ecommerce-Customer-Small.png

#### Cross-border e-Commerce Market size



- Even though there was a -1% growth in 2015, cross border e-Commerce has been growing at 23.3% (CAGR). Main drivers to increase the cross border ecommerce are:
  - Economical consumer goods' prices at overseas' online markets
  - Diversified consumer tastes
- Easy items to export to Korea via e-Commerce are personal-use items under \$200 or 'made-in the U.S. items' under \$1k, thanks to KORUS FTA

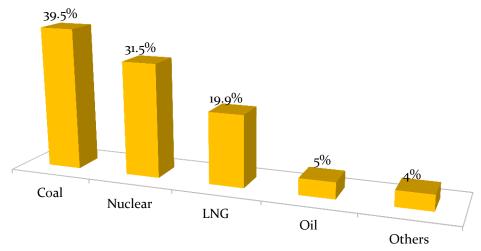
#### Cross-border e-Commerce



http://www.willemisbrucker.com/wpcontent/uploads/2015/11/Online-Ecommerce-Customer-Small.png

- Best Prospects for U.S. e-Commerce
  - Among \$1.6 billion spent by Korean consumers at overseas online retail platforms in 2016, 65% was purchased from U.S online retailers
  - Amazon.com and eBay are the most frequently used e-Commerce platforms by Koreans
- Popularly sourced items from U.S. are:
  - dietary supplements (27%),
  - apparel (14%), and
  - food products (12%)
- Challenges for U.S. e-Commerce
  - U.S. Market share (73% in 2014  $\rightarrow$ 65% in 2016) is continuously decreasing due to the expanded purchasing channels to E.U. and China
  - Cosmetics and electronics are not as much sourced as other goods from the U.S. but from E.U. and China

### Korea's Energy Industry



**Total Electricity Generation in Korea (by energy source)** 

- In Korea, coal and nuclear represent the largest portion of energy sources used in electricity generation
- In January, SK E&S took delivery of its first LNG cargo of 66,000 tons from Cheniere's Sabine Pass terminal.
- KOGAS will also import 2.8 million tons a year of LNG from Cheniere under a 20-year supply deal starting in 2017
- These deliveries come as the Korean government encourages more imports from U.S. oil and gas projects

### **Energy Industry**

#### **Best prospects and Opportunities**



- Civil Nuclear Plant Decommissioning
  - A number of Korean nuclear plants, such as Kori Unit 1, are expected for permanent shut down starting this year
- Nuclear Seismic Risk Analysis and Consulting
  - Interest in earthquake risk management following a number of recent earthquakes and tremors in Korea
- **Energy Efficiency Demand Response** 
  - Increased participation in Demand Response from energy consumers, such as industrial companies, universities, etc.

### **Energy Industry**

- U.S. Commercial Service in Action
- Energy Industry Working Group







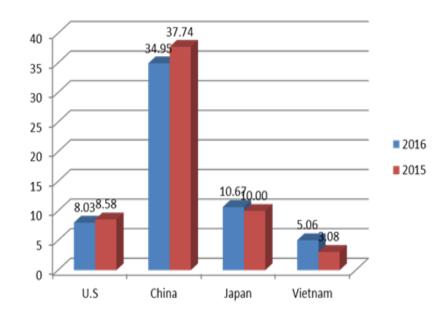
At the first U.S.-Korea Energy Industry Working Group, U.S. Under Secretary of Commerce for International Trade Stefan Selig and U.S. Ambassador Mark Lippert met with energy executives and Korean government officials to discuss the opportunities in the oil sector. The conclusion was that Korean oil companies need to diversify oil suppliers, including those from the U.S.

At the second U.S.-Republic of Korea Energy Industry Working Group meeting, Chairman of the U.S. Nuclear Regulatory Commission (NRC) Stephen Burns met with energy executives and Korean government officials to discuss opportunities for collaborating on the decommissioning of nuclear reactors.

U.S. and Korean energy company executives and government officials convened the third U.S.-Republic of Korea Energy Industry Working Group (EIWG) to discuss opportunities for collaboration in technologies and solutions related to the power generation industry.

### Information and Communication Technology Industry

- Market Size in 2016: USD 28 billion
- Total imports in 2016: USD 89 billion
- Imports from the U.S. in 2016: USD 8 billion
- Top suppliers to Korea of ICT products include China (- 7.4%), Vietnam (+63.5% due to finished smart phone import), Japan (+6.6%), and United States (- 6.6%)



Source: Ministry of Science, ICT and Future Planning; Unit: USD Billion

### Information and Communication Technology Industry

#### Opportunities:

- Mobile subscription penetration in South Korea is 110%
- Technologies that required 5G data services, including virtual reality (VR) and augmented reality (AR)
- Internet of Things (IoT) market is expected to grow 38.5% (CAGR) through 2020
- Cloud computing market grew 55 percent to USD 996 million in 2016 and is expected to reach USD 1.7 billion by 2018
- Information security market expected to grow 10.3% through 2018

### Challenges

- Price disadvantage when competing against local vendors
- Local regulations/standards for key ICT product categories (e.g. ARIA, Korean CC, KCMVO, network separation, etc.)
- Localizing product/service (language, renewal, partner programs, homepage, after sales service)

### Information and Communication Technology Industry



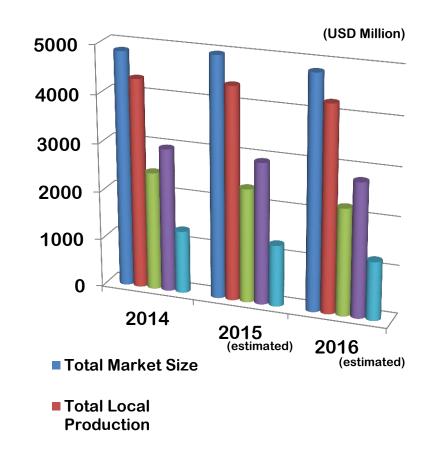
#### San Francisco-based Darktrace signs distribution agreement with Samsung SDS

Darktrace participated in a U.S. Department of Commerce business development mission to Asia in May 2016. The visit to Seoul included a policy and business exchange. Over 70 pre-scheduled one-on-one business meetings were conducted between U.S. firms and potential South Korean business partners and end-users.

### Medical Devices Industry



- Total market size in 2016: USD 4.8 billion
- Estimated annual growth rate for the next three years: 5-10%
- Total imports in 2016: USD 2.8 billion
- U.S. market share in 2016 : USD 1.2 billion (45% of total imports)



### Medical Devices Industry

#### Opportunities:

- Growing elderly population
- Doctors educated in the U.S. and Europe are accustomed to using advanced medical devices from overseas
- Best prospects include: stents, soft contact lens, sight corrective ophthalmic lens, dialyzers for hemodialysis, knee joint prosthesis, MRI devices, analyzing products, intravascular catheters, CT systems, and IVD reagents for clinical immunochemistry

### Challenges:

- Reimbursement pricing environment
- New Healthcare Technology Assessment



### Medical Devices Industry



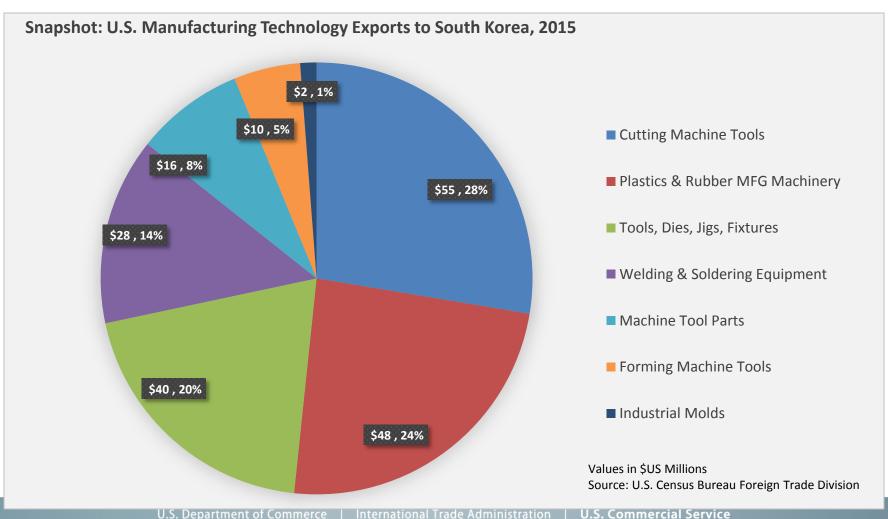
#### New York-based Medidata Solutions advances in the South Korean market

Medidata participated in a U.S. Department of Commerce business development mission to South Korea in October 2014. Commercial Service arranged one-onone meetings for Medidata with executives from South Korea's leading healthcare The company made immediate sales. Medidata's revenue has increased 300% over the past two and a half years.

# **Industrial Equipment - Snapshots**

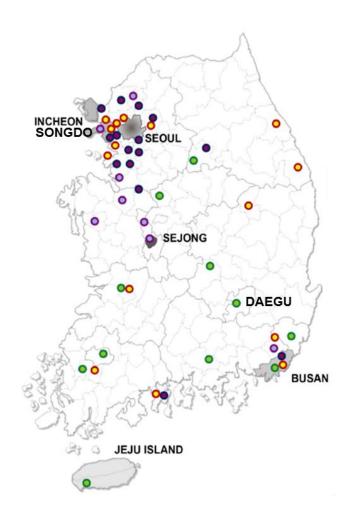
- South Korea ranks 6<sup>th</sup> overall in Manufacturing Technology Top Market Study by ITA
- Korea has a highly developed manufacturing economy, and U.S. exporters face virtually zero market access barriers as a result of the KORUS FTA.
- ITA expects U.S. manufacturing technology exports to Korea will continue to grow through 2017 → Exports to Korea increased by 14.6 % between 2014 and 2015.
- Korea was the 6<sup>th</sup> largest export market for U.S. welding and soldering equipment in 2015: accounting for \$28 million in exports
- Korea was the 9<sup>th</sup> largest market for U.S. cutting and metal forming machine tools. Cutting-machine tools accounted over one quarter of U.S. manufacturing machinery exports to Korea in 2015.
- Korea has been volatile in recent years but Korea's machine tool imports in 2015 increased by 4% year-on-year to \$1.5 billion.
- The Manufacturing Innovation 3.0 strategy of the Korean government aims to transform manufacturing premises into smart factories that can create customized products with minimum cost and time.
- Best Prospects: pumps, compressors, valves, machine tools, energy equipment, mining machinery, piston engines and engine parts, plastics and rubber working equipment, jigs and fixtures

# **Industrial Equipment**



### **Smart City Initiatives**

- K-Smart City Initiative launched in 2016 is one of nine South Korean National Strategic **Projects**
- Budget Estimated: USD 200 mil. 290 mil.
- Focused on Exporting Model to the Middle East Asia and South America: Kuwait (2016), Sri Lanka (2016)
- Major Smart Cities: Songdo City and Seoul



### **Smart City Initiatives**



#### Opportunities:

- World leader in internet connectivity: South Korea has the world's fastest average internet connection speed and up to 97% of South Korea's population had broadband internet access in 2016.
- Best prospect products include: smart city design and consulting ex.1) IBM's Smarter City Challenge for City of Cheongju, Jaeju, ` Pyeongchang for smarter transportation strategies ex.2) CISCO partnering with Korea Telecom on "Smart Space project"
- Technical alliance for developing cybersecurity solutions (encyption for network access, end-to-end detection, intrusion prevention systems, firewalls and smart device identification), demand response energy

#### Challenges:

- Korea's emphasis on developing its own indigenous Smart City standard and technologies (i.e. smart town/city, energy, water utility, transportation, ICT solutions)
- Strong competitive environment: LG CNS, Posco ICT, SK Telecom, Samsung Electronics, etc

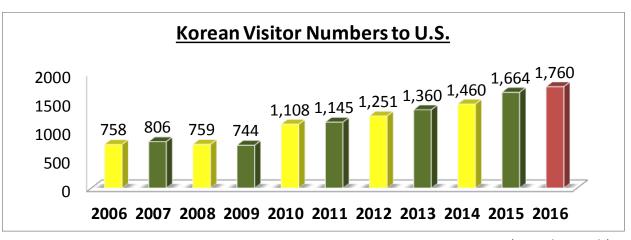
### **Smart City Initiatives**



**Daegu Smart City Construction Site** 

Commercial Service Korea officials visited Daegu on October 20, 2015, to collect information on the city's Suseong Medical District, which is currently under construction as South Korea's next smart city. The complex will employ numerous IoT and digital health technologies, to improve patient health and wellness. Daegu was one four cities highlighted by South Korea's ICT ministry at the Smart Cities Innovation Summit in Austin last June. South Korea is one of 18 countries that participates in the Global City Teams Challenge.

### Travel & Tourism Industry





(Unit: Thousands)

- Koreans are frequent travelers to the U.S.
- Korea joined the Visa Waiver Program in 2008
- In 2015, total of 1.76 million visitors to the U.S.  $\rightarrow$  increase of 21%
- In 2015, generated \$8.8 billion in tourism revenue → increase of 13 %
- Korea ranks 8<sup>th</sup> in the world in visitors to the U.S.
- With repeat visits to the U.S., Koreans seek sophisticated visits for excursions in culinary or education tourism, or outdoor activities not available in Korea

### Korea's Agriculture Market

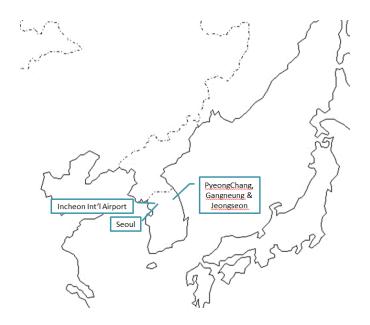


- Korea is the 5<sup>th</sup> largest export market for US Agriculture exports
- The U.S. is the biggest exporter to Korean agriculture market
- Demand for cheese and curd, almonds & walnuts & pistachio, citrus fruit, cherries, corn, margarine & shortening, sausages, cereal products, tomatoes, other vegetables (prepared/frozen), fruit juices, spirits & whiskies, and cotton have been large
- Products that offer good value, high quality, health/nutritional benefits, new and diversified tastes and convenience are expected to grow
- Korean consumers are receptive to imported food products from the U.S.

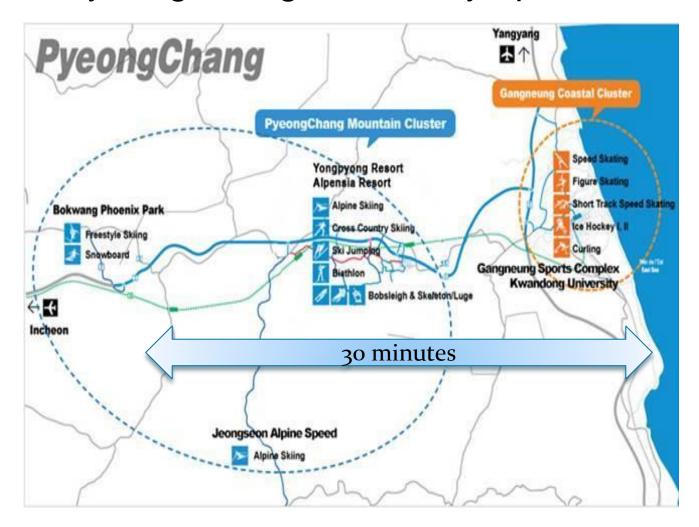
- South Korea Overview
- II. U.S. Korea Trade
- III. KORUS FTA
- IV. Key Industry Sectors
- V. 2018 PyeongChang Olympics
- VI. Commercial Service Korea

### 2018 PyeongChang Winter Olympics





### 2018 PyeongChang Winter Olympics



### **CS Korea Support for US Companies**

- Website Resources
   (http://www.export.gov/southkorea/
   pyeongchangolympics/index.asp )
  - Video Market Briefing
  - Links to procurement lists
  - Webinar downloads
  - CS Office contacts
- Newsletter
  - Quarterly distribution
  - Includes procurement updates, market information, etc
- Commercial Service Programs
  - Partner Search
  - Counseling
  - Market Research



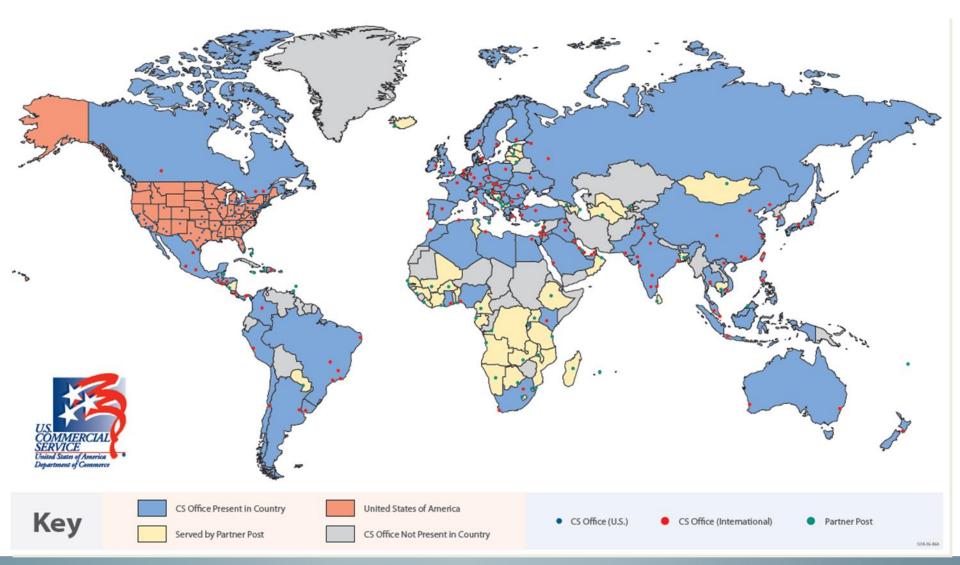
### Winter Sports USA magazine



- Is to introduce U.S. Winter Sports related businesses in the Korean market through feature Articles, Advertisements, and a Company **Directory**
- Published in full color and in Korean-language for Korean readers.
  - Hard copies (3,500 + copies)
    - Mailing 1,000 + copies to:
      - Tier 1~3 tour agencies (250 +)
      - Ski/outdoor equipment & apparel importers (250+)
      - Ski/outdoor specialty shops & rental shops (450 +)
      - Government, associations, media & more (100 +)
    - Distributing 2,500 copies at Embassy, AMCHAM & other events, and related trade shows
  - Soft copies (PDF)
    - E-mailing and posting on the websites and SNSs of the CS Korea, AMCHAM, and other partners
- Distributed before and after the 2018 Olympics

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### Connect with your local Trade Specialists and Commercial Service in the US and 80 Countries!

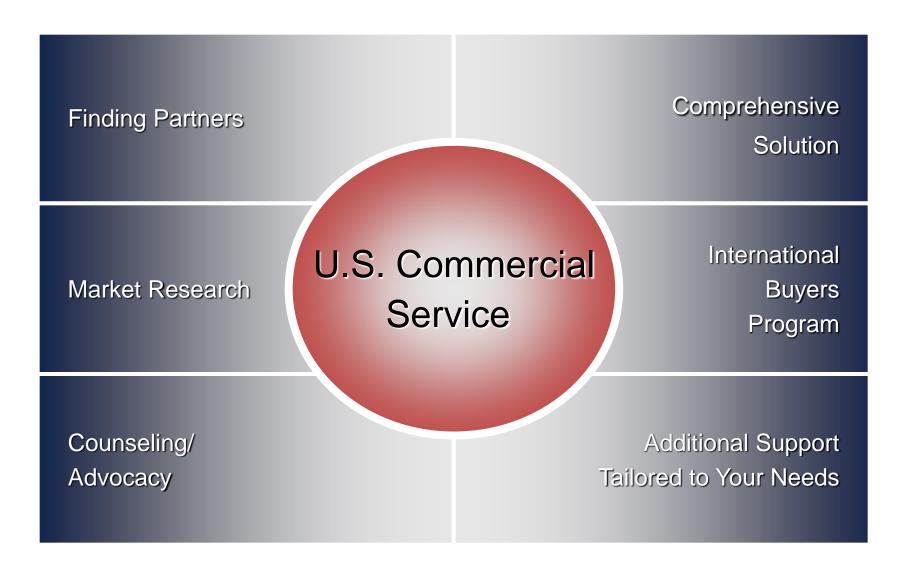


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Web Page: <a href="http://www.export.gov/southkorea">http://www.export.gov/southkorea</a>

Email: Office.Seoul@trade.gov

# Thank You! 감사합니다!

