Why Korea?

Business and Investment Opportunities for Australia
COUNTRY PROFILE
Republic of Korea
ECONOMIC PROFILE: REPUBLIC OF KOREA

- Population: 50.8 million
- GDP: US$ 1.41 trillion
- GDP per capita: US$27,538
- Sector strengths: Electronics, telecommunications, automobile production, chemicals, shipbuilding, steel

Source: World Bank 2016, South Korea Fact Sheet 2016, DFAT, Korea Customs Office 2016
KEY ECONOMIC AND SOCIAL CHALLENGES

- Inflexible labour market
- Heavy reliance on exports – comprises about half of GDP
- Import dependent on energy and raw materials
- Social polarisation
- Environmental degradation – Air pollution, water management
- OECD’s fastest ageing population
- OECD’s lowest birth rate
KOREA:
The World's 11th Largest Economy

GDP (US$ trillion)
of the top 12 economies (2015)

<table>
<thead>
<tr>
<th>Country</th>
<th>GDP (US$ trillion)</th>
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<tbody>
<tr>
<td>USA</td>
<td>17.9</td>
</tr>
<tr>
<td>China</td>
<td>10.9</td>
</tr>
<tr>
<td>Japan</td>
<td>4.1</td>
</tr>
<tr>
<td>Germany</td>
<td>3.4</td>
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<td>UK</td>
<td>2.8</td>
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<td>France</td>
<td>2.4</td>
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<td>India</td>
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<td>Italy</td>
<td>1.8</td>
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<tr>
<td>Brazil</td>
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<tr>
<td>Canada</td>
<td>1.6</td>
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<tr>
<td>Korea, Rep.</td>
<td>1.4</td>
</tr>
<tr>
<td>Australia</td>
<td>1.3</td>
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</tbody>
</table>

Source: World Development Indicators database, World Bank, 11 October 2016
DRIVERS OF ECONOMIC GROWTH

Global expansion of large corporates – “chaebol”

Account for over 80% of Korean economy
Drivers of Economic Growth: Telecommunication Technology

- **Smartphone users**: 91% of population
- **4G penetration in Korea**: 97% network coverage on LTE
- **4G average download speed**: 120Mbps
- **Download time of 800MB movie**:
  - 3G: 2 min 25 sec
  - 4G: 7 sec
AUSTRALIA-KOREA RELATIONS
Potential to grow
Australia’s top ten two-way trading partners for 2016 (A$ billion)

<table>
<thead>
<tr>
<th>Partner</th>
<th>Exports to Republic of Korea A$18.1bn</th>
<th>Imports from Republic of Korea A$11bn</th>
</tr>
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<tbody>
<tr>
<td>China</td>
<td>155.1</td>
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<tr>
<td>United States</td>
<td>64.3</td>
<td></td>
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<tr>
<td>Japan</td>
<td>61.0</td>
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<tr>
<td>Korea</td>
<td>32.1</td>
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<tr>
<td>UK</td>
<td>29.1</td>
<td></td>
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<tr>
<td>New Zealand</td>
<td>24.8</td>
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<tr>
<td>Singapore</td>
<td>22.7</td>
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<tr>
<td>Thailand</td>
<td>21.2</td>
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<tr>
<td>India</td>
<td>20.7</td>
<td></td>
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<tr>
<td>Germany</td>
<td>20.2</td>
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</tbody>
</table>

Source: Composition of Trade Australia 2016, published June 2017
MAJOR AUSTRALIAN TRADE ITEMS WITH KOREA

Major Australian Exports to Korea
- Coal A$4.7bn
- Iron Ores A$3.3bn
- Beef A$1.4bn
- Aluminum A$1.0bn

Major Australian Imports from Korea
- Refined petroleum A$3.9bn
- Passenger cars A$2.5bn
- Heating & cooling parts A$0.5bn
- Monitors, Projectors & TV A$0.2bn

Source: DFAT Country Profile 2017
Korean Investment in Australian stock (A$mn)

Source: Australian Bureau of Statistics 2016 International Investment Position, all units AUD Million

Korean investment in Australia
(Percentage of equity stake)

POSCO 12.5% in Roy Hill
Mirae Asset 100% in Four Seasons Hotel in Sydney
KOGAS 15% in Santos’ GLNG Project
10% in Prelude FLNG Project

Korean Investment in Korean stock (A$mn)
KOREA
Startup Ecosystems
South Korea strives to become the next Asian tech hub to drive public and private investment into the start-up economy are at record highs.

Creation of the Ministry of SMEs and Start-ups (MSS) investing A$783 million (KRW 870 billion) to its Fund of Funds.

South Korea’s Ministry of Small Business and Venture Business, angel investors’ investment in start-ups totalled $184 million in 2017.

Among the companies that attracted investment, nearly half 49.4% were early stage start-ups with less than three years of business.

- ICT services (21%)
- Electric/mechanic/infrastructure (12%)
- Videos/entertainment/music (13.3%)
- Retail and services (15.7%)
- Biotechnology/medical services (15.5%)
- Games (6%)
- Chemical/materials (6%)
- ICT manufacturing (4.4%)
Seoul Bio Hub

Run by the Korea Health Industry Development Institute to support startup companies, with innovative ideas and digital technologies in biomedical industry through Bio Start up Challenge Programme.

Future Play Accelerator

Accelerator focused on investment and supporting Health Tech start ups in partnership with Korean conglomerates companies such as LG, SK-Planet and Naver.
KOREAN CONGLOMERATE ACCELERATORS WITH DIGITAL HEALTH TECH FOCUS

<table>
<thead>
<tr>
<th>Accelerator</th>
<th>Focus areas</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Amore Pacific</strong></td>
<td>Health, Digital Tech related to beauty, health cosmetics and life style</td>
<td>Amore Pacific Ventures Future Play Accelerator responsible of Amore Pacific Tech us Plus programme.</td>
</tr>
<tr>
<td>Beauty Tech</td>
<td></td>
<td>The Program is open to international startups interested in funding and opportunity to supply to Amore Pacific supply chain.</td>
</tr>
<tr>
<td>Health Cosmetics Tech</td>
<td></td>
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<tr>
<td>Life Style Tech conglomerate</td>
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<tr>
<td>Amore pacific in Korea Seoul.</td>
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<tr>
<td><strong>KT</strong></td>
<td>IoT Digital Health VR</td>
<td>Korea Telecom (KT) Interest in startups with digital health technologies in IoT, VR.</td>
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<tr>
<td>Korea Telecom (KT)</td>
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<td>one the major Telecom companies in Korea.</td>
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<tr>
<td><strong>Future Play</strong></td>
<td>Digital Health</td>
<td>SK Planet Amore Pacific Investment/ Funding available SeedA to Pre series</td>
</tr>
<tr>
<td>Private accelerator funded by SK (Telecom company), Samsung and Amore Pacific.</td>
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SUPPORT TO DIGITAL HEALTH STARTUPS IN KOREA

Seoul Bio Fund $400 million to Health / Bio Startups in collaboration with the Osong, Daegu, Wonju Bio Cluster for early stage health startups

HUGEL Korea – “Hugel Open Innovation” recruitment and support to health tech startups for collaboration and product development.

Bayer Korea- “Bayer Grants4Apps” programme to recruit and support digital health tech start-ups through collaboration with Bayer in Korea.

Softbank Venture Capital investment of $30 million to Health startup in collaboration with Hanmi Pharma Korean major pharmaceutical company.
KOREA CONGLOMERATES INTEREST IN AUSTRALIAN STARTUPS

M3DICINE
Australian medical device startup with offices in Brisbane, Boston and Seoul. They have developed 'Stethee' the world's first wireless AI stethoscope. Currently working with Korea Telecom (KT) one of the major Telecom companies in Korea.

ELASTAGEN
Start up Elastagen in NSW investment from Korean venture capital to advance their commercialization and product development for Korean market. Further investment developed from Korea conglomerate Amore Pacific, the biggest cosmetic company in Korea.
KOREA
Health & Life Sciences

Objective
Promote Australia’s biotech and R&D capabilities and increase awareness of Australian healthcare capabilities in Industry 4.0

Activities
• Biotech mission exchange to AusBiotech, Oct 2017 and to BioKorea, May 2018 (in collaboration with KHIDI and AusBiotech)
• Partnerships in Regenerative Medicine sector among Australia and Korea, on-going
• Partnerships with Australian technology companies and Korea health startup ecosystems to provide international solutions, on-going
<table>
<thead>
<tr>
<th>MedTech Innovation Showcase</th>
<th>AusBiotech 2016</th>
<th>BioKorea 2017</th>
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<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
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KOREA
Health & Life Science
DOING BUSINESS IN KOREA
KOREAN BUSINESS CULTURE AND MEETING ETIQUETTE

Confucianism: High emphasis on hierarchy, age, educational background

Personal connection: Intermediaries can be helpful in establishing business connections

3 major national holidays: Lunar New Year, Chuseok (Thanksgiving), Christmas

Recommended meeting time: Monday to Friday, 10am–5pm

Business Cards: Exchanged at beginning of meetings. Korean cards are highly regarded. Do not use Japanese or Chinese.

To ensure you are understood: Speak slowly and clearly. Repeat points you want to emphasize.
Pursue relationships with patience.
Decisions can take time. Sometimes Koreans will make quick decisions if required and favourable to their business.

Building relationships; developed through informal social gatherings.

Identify the right contact; decision making is hierarchical.

Find right partners, undertake due diligence.

Any response is appreciated.

Revise your price and offering to be competitive and suit the market.

Leverage Austrade’s networks and expertise.

KEY SUCCESS FACTORS/TIPS ON DOING BUSINESS
HOW CAN AUSTRADE SEOUL HELP?
AUSTRADE SEOUL
SERVICES AND EXPERTISE

Market trends and statistics, identify market barriers and regulations and assess market potential

Visits to Korea:
Tailored meeting programs and visit program support providing cultural, business and language guidance

Provide information about Korean commercial practices and requirements

Exhibitions and conferences

Identify business partners, new customers and opportunities through our business networks

Targeted trade missions
For more information

Email: seoul@austrade.gov.au

Address: 18th Floor, Kyobo Building, 1 Jongro, Jongro-gu, Seoul South Korea 03154

Tel: +82 2 398 2800
Fax: +82 2 734 5085

To contact the Australian Trade and Investment Commission (Austrade) in Australia, please call 13 28 78 (Australia only)
Digital Healthcare in Korea

2018. 2. 19.
Healthcare system in Korea

1. Components

- Social insurance, public assistance, social welfare service

**Social Insurance**
- Health Insurance, Long-term care Insurance
- Pension Insurance
- Unemployment Insurance
- Industrial Accident Compensation Insurance

**Public Assistance**
- Basic Livelihood Protection
- Medical Aid

**Social Welfare Service**
- Welfare for the Elderly
- Welfare for the Disabled
- Welfare for Children
- Welfare for Woman
- Medical or Psychosocial Business
Healthcare system in Korea

- National Health Insurance Program

As a compulsory social insurance, the Korean health insurance covers the whole population living in the country (Korea).

Major sources of financing are contributions from the insured and government subsidy.

- Health Care Institutions
  - Ask(Claim) NHIS to pay for health care service cost, (corporation's share)
  - Ask(Claim) the corporation to pay for care benefit expense, (corporation's share)

- The Insured
  - Co-payment
  - Health Care Service

- NHIS
  - The Insured
  - Contribution
  - Medical Insurance Card
  - NHIS
  - Apply a policy
  - Announce review results.

- Ministry of Health and Welfare
  - Manage qualifications.
  - Impose and collect contributions.
  - Pay health care service costs.

- Health Insurance Review & Assessment Service
  - Review and apply health care service costs.
  - Evaluate the adequacy of health care service costs.

- Evaluation Standards
  - Health Care Service Costs
  - Benefit Management
  - Health Checkup
# Healthcare system in Korea

## Status of Healthcare System

### Public Health Security
- Number of the Insured by NHI: 50.7 million (2016)
- Number of Medical Aid Recipients: 1.5 million (2016)

### Health Expenditure
- National Health Expenditure: 110.6 trillion won (≈ 92.2 billion dollar, 2015)
- Health Expenditure by NHI: 64.6 million (≈ 53.8 billion dollar, 2016)

### Health Resources
- Medical manpower (employed): 97,713 doctors, 179,989 nurses (2016)
- Medical Institutions: 321 General hospitals, 2,740 Hospitals, 30,689 clinics
  
  (Proportion of private medical institutions: 99.7%)
Healthcare status in Korea

1. High level of Health, Relatively low medical expense

- Korea has improved the level of health such as life expectancy, healthy span consistently and therefore shows high level of health outcome among OECD countries.
- Health expenditure is lower than the average one of OECD countries (65~80%), so the health outcome is good compared to the medical expense.

Korea’s health outcome compared to OECD (2015)

Life expectancy with health expenditure per person

\[ y = 3.1021 \ln(x) + 55.464 \]
\[ R^2 = 0.4688 \]

OECD                   Korea

Korea 69.4
OECD 68.7
Korea 85.5
OECD 83.3
Korea 74.0
OECD 72.2
Korea 79.0
OECD 77.9

Death rate of infant R
Korea 3.00
OECD 4.00
Issues of Healthcare Services

Financial sustainability threatened by Aging and New normal

’17 Aged society (the aged 14%), ’26 Post-aged society (20%)

Aged society for 10 years from now, the shortest period expected for the aged society

Health expenditure for adults over 70

Potential growth rate decrease due to working population decrease

4.6% 4.0% 2.7% 1.8% 1.4%

'06-'10 '21-'30 '31-'40 '41-'50 '60-
Rapid increase of national health expenditure due to chronic disease

National health expenditure (110.6 trillion won e, ’15. 7.2% of GDP), the fastest increase in OECD countries

Progress of people’s medical expense by year

Comparison of people’s medical expense increase rate
Trend of Digital Healthcare Policies in Korea

I. Healthcare Big Data
II. Precision Medicine
III. Telehealth
IV. Health Information Exchange
Massive and various data accumulated from the activities for health improvement and protection

Evidence-based policy improvement and medical research in whole area of health and medical treatment

1. Medical expense saving through improving people's health and preventing disease
2. Promoting public researches for improving policies and medical technology

1. Introduction of big data platform of healthcare information

**Principle**
- Public purpose
- Discussion system based on expertise with citizen participation
- Enhancing privacy

**Link data (plan)**
- NHIS (Whole nation joining, qualification, screening, one million cohort)
- HIRA (Whole nation claim, prescription, 1.5 million sampling DB)
- CDC (250 thousand cohort)
- NCC (1.5 million cancer registration and screening)

2. Diagram of platform system
**Precision Medicine**

**Development of precision medicine technology for personalized**

- Genetic information analysis of 10,000 patients with 3 metastatic cancer (lung, stomach, colorectal)
- Development of cancer diagnosis & treatment through precision medicine anticancer clinical test
  - Selecting subject of clinical test among 10,000 cancer patients with genome information.

**Precision medicine hospital information system**
(MOHW∙MSIT)

- Cloud basis hospital information system (P-HIS) useful for link between hospitals
  - (P-HIS) ‘Post’, ‘Precision’, ‘Personalized’ Health Information System

**System establishment**
- Standard
- Certification
- Security

**Cloud HIS**
- Clinical data
- Clinical support
- Claim data
- Mobile EMR
- HIE platform

**Precision medicine analysis service**
- Precision medicine analysis of cancer
  - Guide for cardiovascular patient
- At baseline recommendation of antibiotics
- Early warning for serious patients
- Status information of emergency patients

**Commer-cialization**
- Supply and promotion of P-HIS in domestic market
- Overseas export

**Establishment of big data for precision medicine**
- Clinical Data
- Genomic Data
- Life Log Data

**Analysis of genome of 10,000 patients**
- 3 cases of medicine & treatment
- 20 cases of clinical test

**Domestic and global promotion**
- 3 cases of field application
Telehealth is mainly used for rural areas and vulnerable groups

- Telehealth is a kind of medical technology useful in healthcare system
- Using telehealth for improving accessibility, equity and enhancing public sector
Health information exchange between Base medical institution - Cooperation hospitals and clinics

Self directed health care service platform: Establishment of portal for managing health information

- Medical treatment information exchange networking system (NCIA)
- Treatment information
- Test information
- Prescription information

- Treatment record
- Test record
- Prescription record
- Disease record

Healthcare Information portal
### Further Issues

<table>
<thead>
<tr>
<th>Acceptance of medical provider</th>
<th>Acceptance of consumer</th>
</tr>
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<tbody>
<tr>
<td>Diversification of medical service provider (institution, staff)</td>
<td>Use of self information</td>
</tr>
<tr>
<td>Partial replacement of medical personnel role → expansion</td>
<td>Wide range of available medical information</td>
</tr>
<tr>
<td>Advanced medical device, new medical technology</td>
<td>Propriety, equity and accessibility (geographical, economical) in terms of patient’s expense</td>
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<tr>
<td>Compensation system in changed health and medical treatment environment</td>
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<thead>
<tr>
<th>Introduction of new technology and Sustainability of Healthcare service</th>
<th>Ownership of information, privacy policy</th>
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<tbody>
<tr>
<td>Cost effective medical treatment</td>
<td>Deep review of limit, purpose and agreement way of personal information</td>
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<tr>
<td>Possibility of securing investment for new technology and payback, profit</td>
<td>Guarantee of information ownership in the process of using patient’s information</td>
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<td></td>
<td>Social agreement on usage and protection of personal information</td>
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Thank you