

Corporate Vision on Business with Japan

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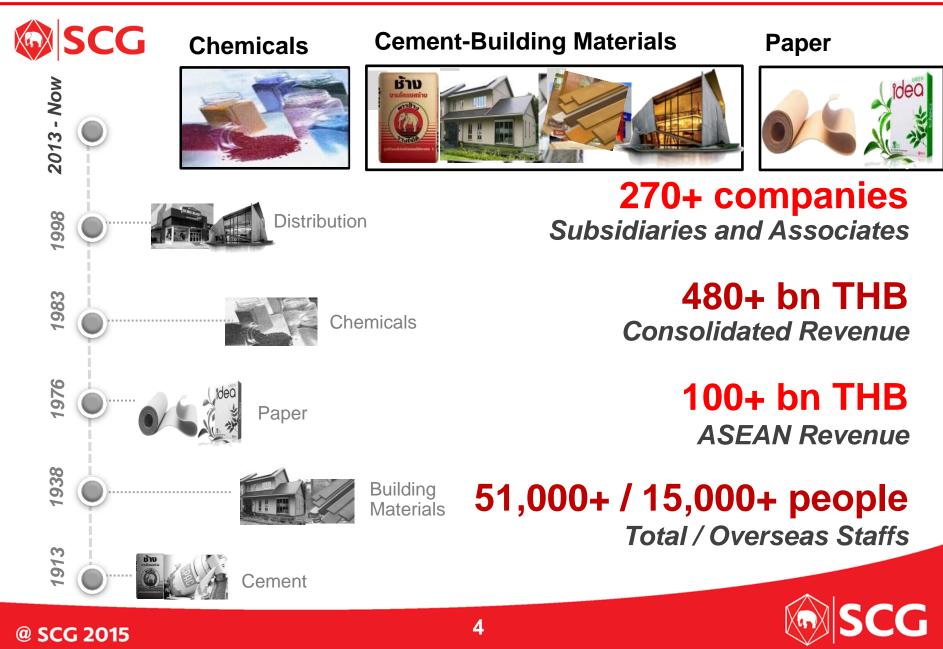








SCG Snapshot



SCG's Vision & Strategies

GoRegional





Population of 650 M

- ✓ GDP growth 5-6%
- Familiar market
- Low capita consumption of basic products

HighValueAdded HVA Products & Services

Commitment in R&D

- Increase customer satisfaction
- Differentiate from the competitors
- Compete on Value to Customers, not price
- Focus on commercialization

SCG's Vision: To become ASEAN Sustainable Business Leader

"By the year 2015, SCG will be well recognized as an

innovative workplace of choice,

and a role model in

corporate governance and

sustainable development...."



Go Regional

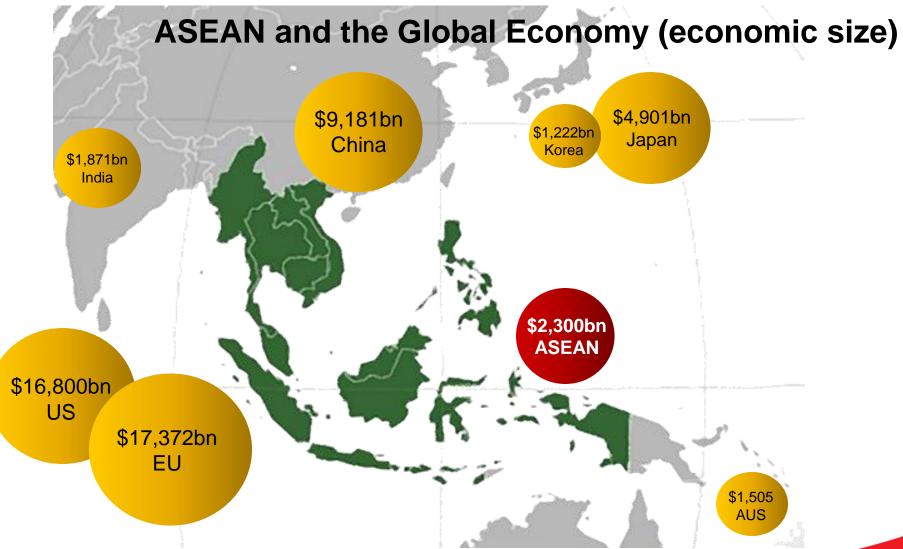


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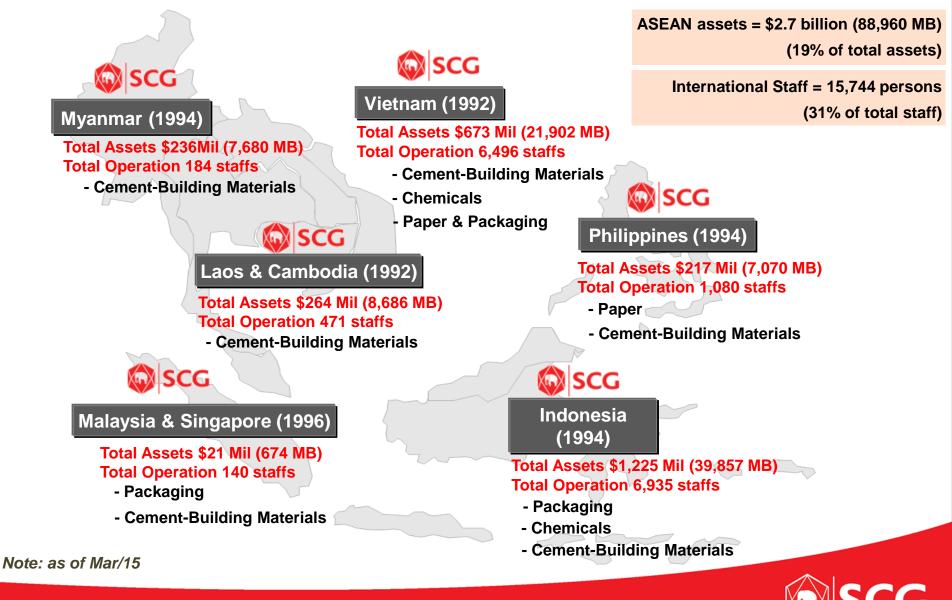
ASEAN Attractiveness



Source: IMF World Economic Outlook, April 2014



Current update of SCG Presence in ASEAN



ASEAN is becoming more important to SCG





SCG Current Workforce

SCG Manpower: 51,100* persons

(Regional staff: 30% of total staff)



SCG Staff in Overseas Operations: <u>15,437 persons</u>

SCG International Staff: <u>307 persons</u> (2% of OV Operations)

R&D and Product Design Team : 1,519 persons (PhD 104)

Indonesia	6,935	Philippines	1,080	Myanmar	184
Vietnam	6,496	Cambodia	440	Others	302



**Included Norner, Norway (SCG Chemicals)* Norner Employee are 50 persons (45 R&D related persons with PhD 10 Persons)

As of Mar 2015 *Consolidated basis



@ SCG 2015

High Value Added HVA Products & Services

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HVA: gearing toward more value to customer

HVA = High value added products and services

- 5-10% higher margin
- Performance, Solution Provider, Service & Design, and Branding

Chemicals









" Lightweight packaging solution"

"Less paper-Same strength" "Up to 25% lighter"

Cement & Building Materials



Large format ceramics

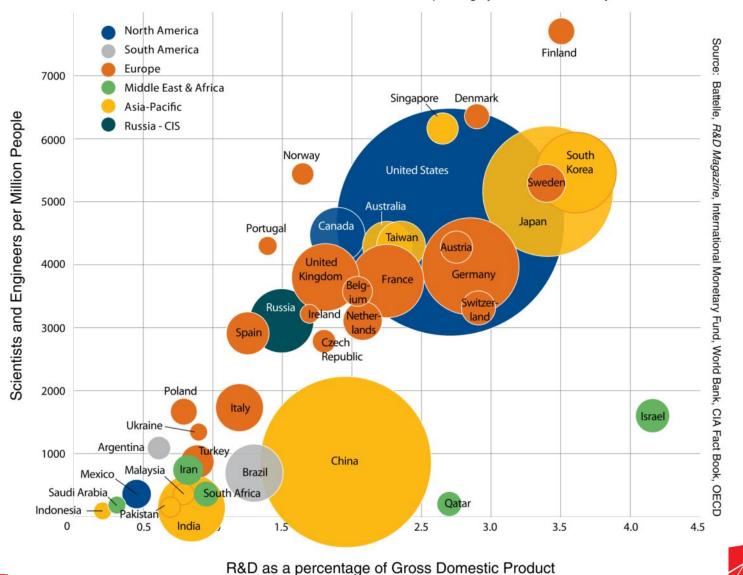


[&]quot;Roofing solution"



R&D and Innovation: R&D Spending by Countries

Size of circle reflects the relative amount of annual R&D spending by the indicated country

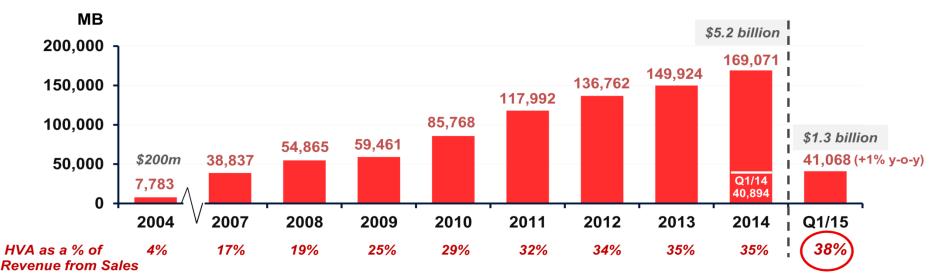


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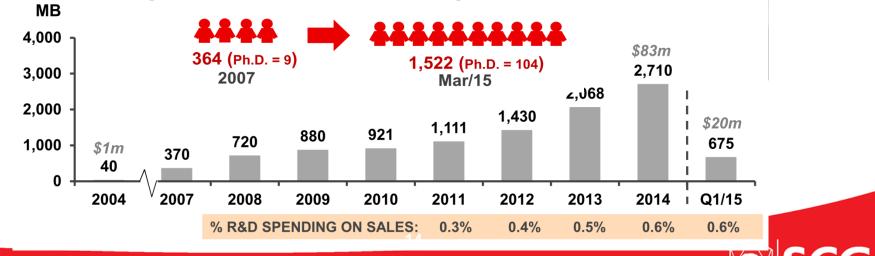
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Moving toward HVA, especially in Thailand

1. HVA's Revenue from Sales



2. R&D Spending, 3. R&D product and design team



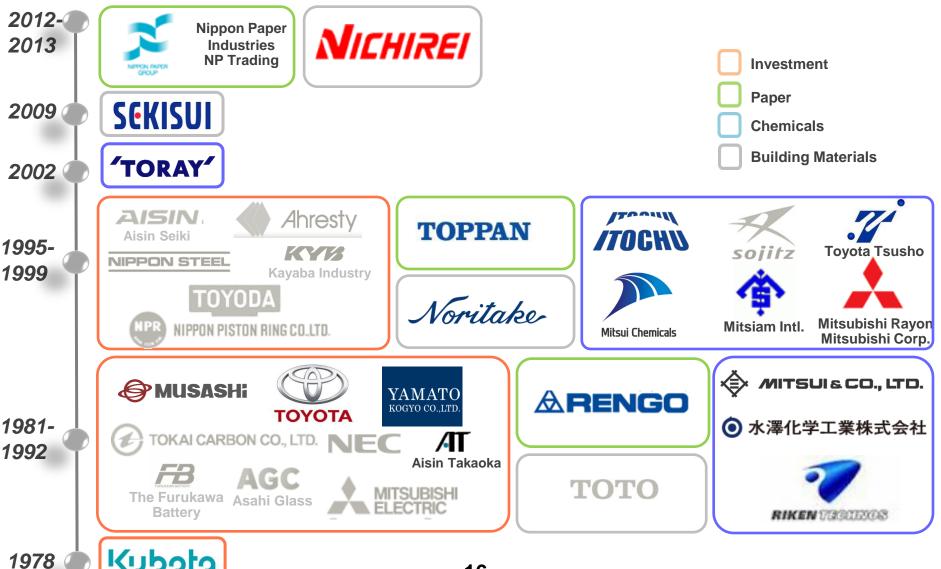






Strong Partnership with Japanese Companies

More than 30 years of SCG-Japanese partners relationship



How to effectively establish Collaboration

with Japanese Partners

Develop Understanding: Building Long-term trust

Establish Common Interests: and Take for more value

Be Fair & Respect

A Maintain Relationship: Encourage clear communication between partners



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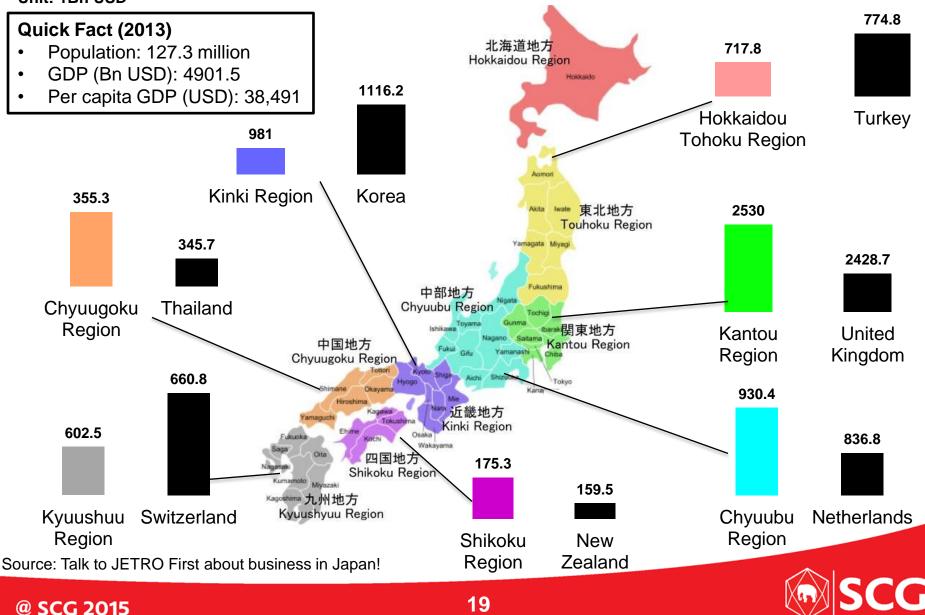






Despite matured market, Japan is still attractive market

Unit: 1Bn USD



A role model for innovation-driven economy

Stage of development

Country/Economy	Rank (out of 144)	Score (1–7)
Switzerland	1	5.70
Singapore	2	5.65
United States	3	5.54
Finland	4	5.50
Germany	5	5.49
Japan	6	5.47
Hong Kong SAR	7	5.46
Netherlands	8	5.45
United Kingdom	9	5.41
Sweden	10	5.41

The key driver for this high ranking are

- Its business sophistication (1st rank)
- Innovation factors (4th rank)

This effectively showed that Japan is innovation-driven economy

Transition Transition 2 3 1 1 - 22 - 3Innovation Efficiency Factor driven driven driven Institutions Innovation Infrastructure 6 **Business** Macroeconomic sophistication environment 3 2 Health and Market size primary education Higher education Technological and training readiness Financial market Goods market development efficiency Labor market efficiency -O- Advanced economies -O- Japan

Japan exceed average advanced economies in most aspects of development



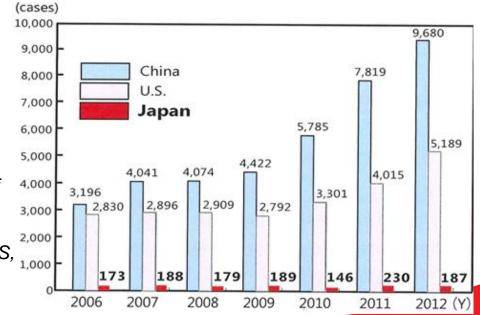
Source: Global Competitiveness Report 2014 - 2015 (WEF)

Japan has good history regarding innovation

Comparison of R&D Expenditure among G8 countries

Rank	Country	% of GDP	Research expenditures (100M USD)	FY
1	Japan	3.67	1,636	2012
2	Germany	2.88	931	2011
3	United States	2.77	4,152	2011
4	France	2.24	519	2011
5	United Kingdom	1.77	396	2011
6	Canada	1.74	243	2011
7	Italy	1.25	248	2011
8	Russian Federation	1.09	350	2011

Highest amount of R&D expenditure in G8 group

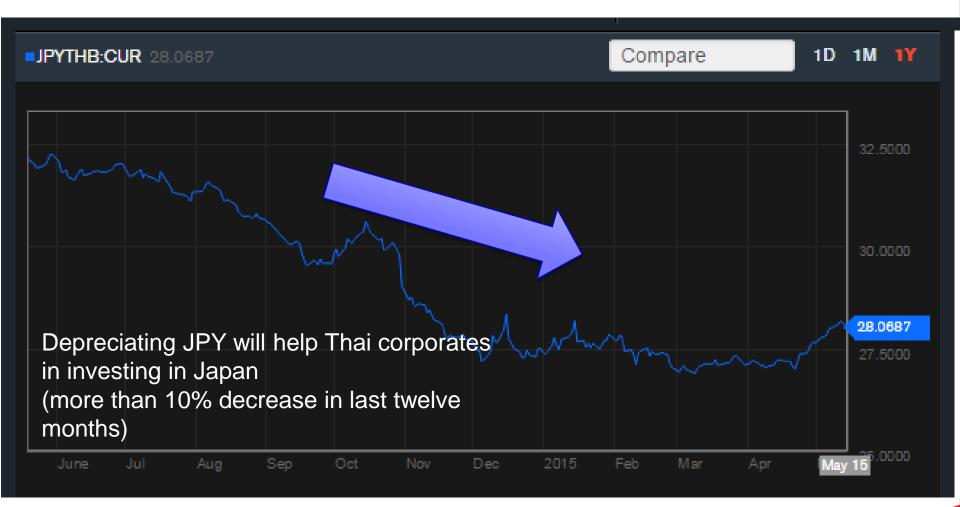


Relatively low number of lawsuits related to IP (patents, utility models, designs) in Japan, the US, and China

Source: Talk to JETRO First about business in Japan!



Japanese Yen is depreciating





Thailand is following aging society path of Japan

in the years to come

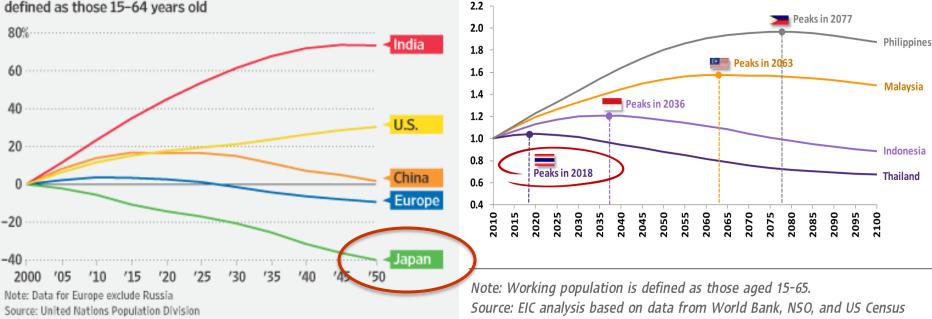
...and Thailand is going in the same path

Forecast of working-age population in select ASEAN countries (index: 2010=1)

Elsewhere in ASEAN, human resources will grow steadily for decades

Japan working age population is declining since 2000

Rise and Fall



Cumulative change in the size of the working-age population, defined as those 15–64 years old

Hence, Thailand can learn how to cope with aging society from Japan











Our take on investing in Japan

- Looking for value company one that fits our strategic rationales
 - Acquiring medium or small sized technology companies
 - Collaborating to extend technology in ASEAN
- SCG's case studies of investing in technology firms in developed countries (but with some issues of culture differences)
 - GTC Technology firm in the USA
 - Lysando Technology start-ups in Liechtenstein
 - Norner Pool of R&D expertise and chemicals IPs
 - Centre of Excellence in Chemistry at University of Oxford



SCG's 25% acquisition of GTC Technology USA in Oct 2009

... a leapfrog to increase technology business capability for SCG Chemicals



Business Overview

- Technology Licensing
 - Petrochemicals: BTX Extraction, Styrene Process, C5's
 - Refinery: Light naphtha isomerization
- Engineering Services
 - Basic engineering packages
 - Front-end engineering design
- Process Equipment Technology
 - Process design for optimization
 - Distillation tray design
- Chemicals & Catalysts
 - For GTC-licensed technologies such as xylene isomerization catalyst and chemical
 - absorbers

Collaborative Programs of SCG-GTC

- Co-development of R&D such as new aromatic extraction technology for petrochemical process
- Employee exchange program
- Bi-annual technical committee
 for technology update



Invest in New Growth Area - Biotechnology

Partnering with Global high-technology business start up



Technical Consultants:

- Gifu University (Japan)
- KU Leuven (Belgium)
- Several non-disclosure partners

✓ Functional Protein

✓Antimicrobial Property

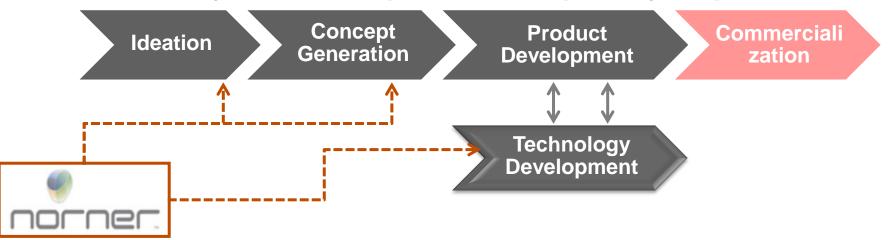
✓ Strong IP portfolio



Deal completed 2013

Acquiring Technology Leading Organization

key enabler to uplift R&D competency for petrochemical



- Spun-off R&D from Borealis (top 5 polyolefins producer) since 2007
- 50 scientists and researchers with avg. 35 years experience, including 10 Ph.D
- Integrated R&D facilities including plastic conversion machine
- More than 400 customers base worldwide

Deal completed 2014



Access to Large Pool of World Class Researchers

Setting up Center of Excellence to pursue breakthrough technologies



Centre of Excellence in Chemistry

- 4 Professors
- 10 Researchers
- 18 Patent applications (10% of University of Oxford filing last year)

Polymerization Catalyst

- New to the world ligand
- New platform for polymerization
- This platform is under testing by SCG

Nano-materials

- Leverage opportunity in specialty market such as catalyst.
- ✓ 1st Pilot plant will start up at the end of 2016

SCG Innovation Fund

- Capture early stage of new breakthrough
- ✓ 11 proposals have been granted last year



... We Think of Japan as

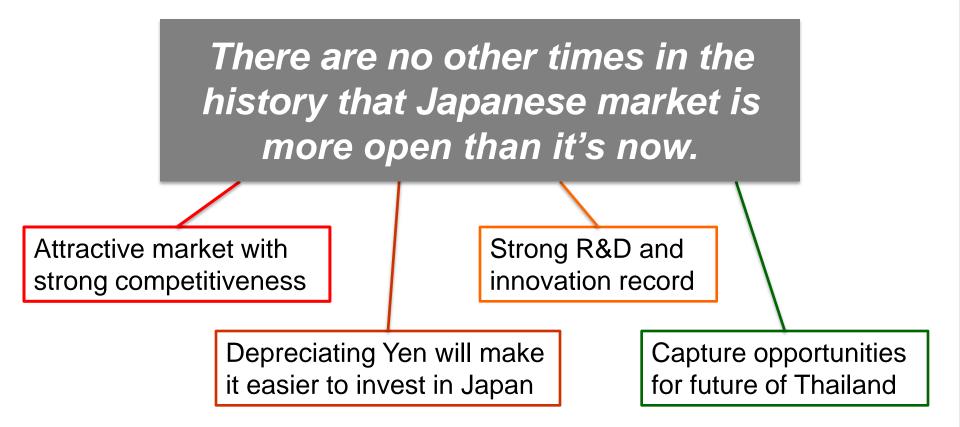
- More collaborative opportunities in the closer time zone
 - Even a chance to establish exchange program between employees in Thailand and Japan
- Higher chance to engage in long-term relationship
- Less different culture
- Opportunities to set up center of excellence
- Leverage competent human resource pool to expand business both within and outside Japan







In Summary...





Thank You

