

# Possible cooperation between German & Japanese companies

The New Export Nation Project

November 24<sup>th</sup> 2011

Hiroshi Kobayashi  
JETRO Tokyo Headquarters

# About JETRO

- Japan External Trade Organization

➔ promote mutual trade and investment between Japan and the rest of the world

- ✓ 76 overseas offices in 55 countries
- ✓ 48 offices in Japan (in every prefecture)

JETRO in Deutschland



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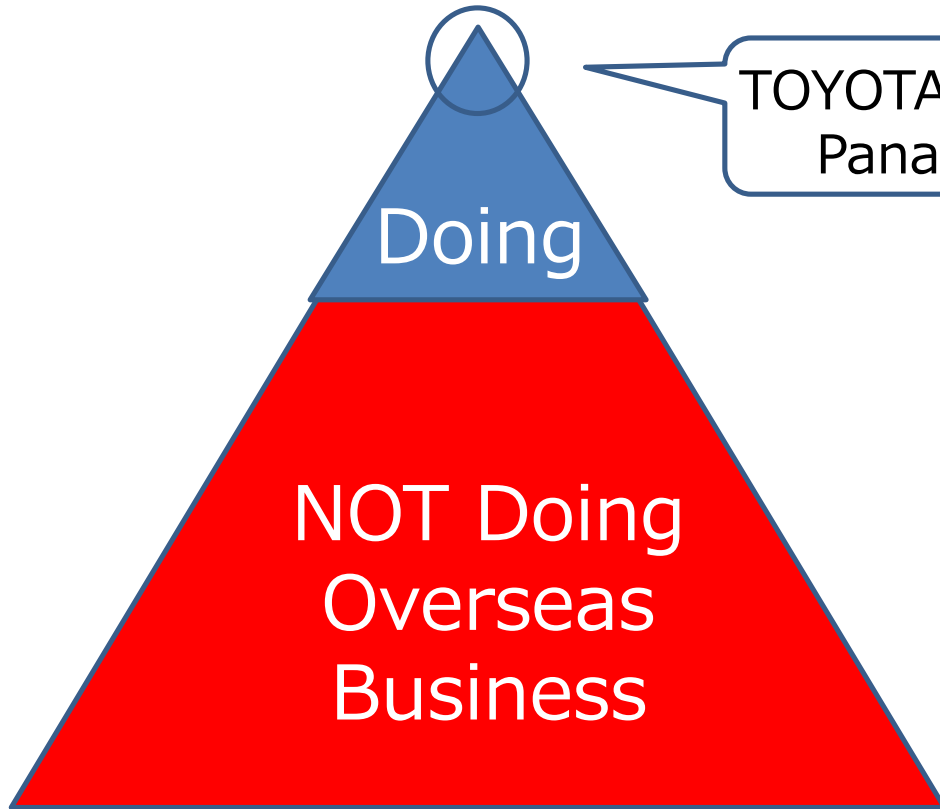
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<https://www.jetro.go.jp/germany/>

# About the Consortium

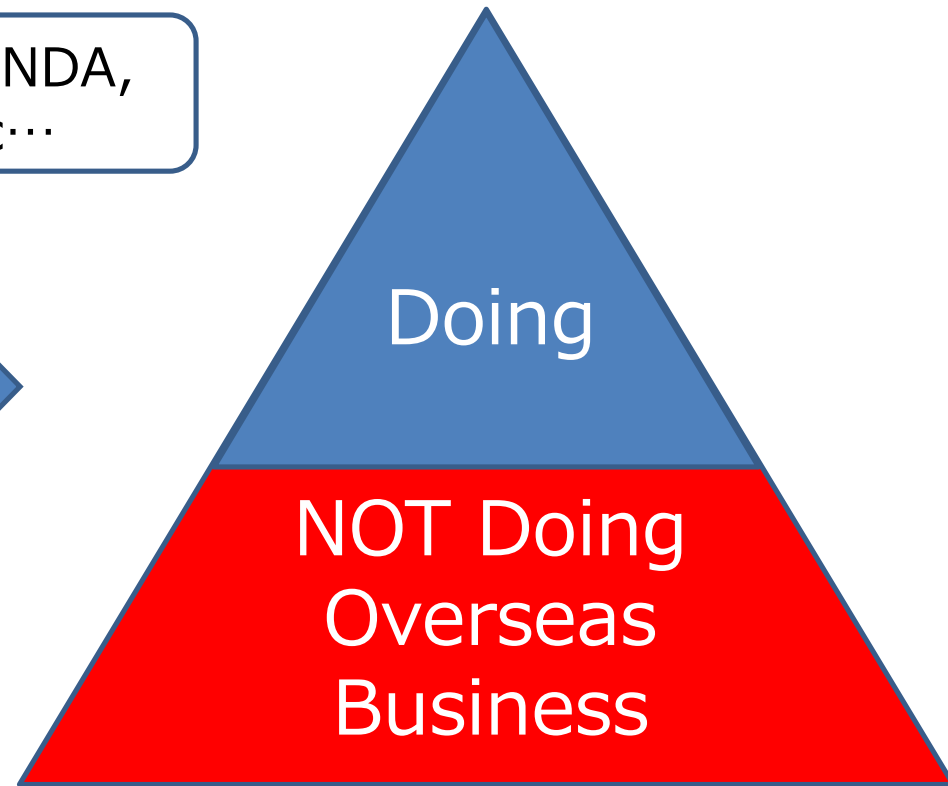
More & more request for support  
10-20 years ago



TOYOTA, HONDA,  
Panasonic...



Now



Company size :  
**Smaller**

Industrial area :  
**Wider**

# No Superman...Let's form the "Consortium"

Since 2016



JETRO:

- ✓ Secretariat function
- ✓ Main player of the support

Inquiries ↓ ↑ Information, advice



## Consortium Members

METI  
Central Gov't

Local gov't and  
Agencies

Chamber of  
Commerce

**JETRO**

SMRJ

Shoko Chukin Bank

JICA

JBIC

Japan Bar Association

NEDO

NEXI

Regional Banks  
Credit unions

## JETRO Experts

"Hands-on" expert

"One time" expert

Consortium for a New Export Nation

# Overview (2 minutes video)

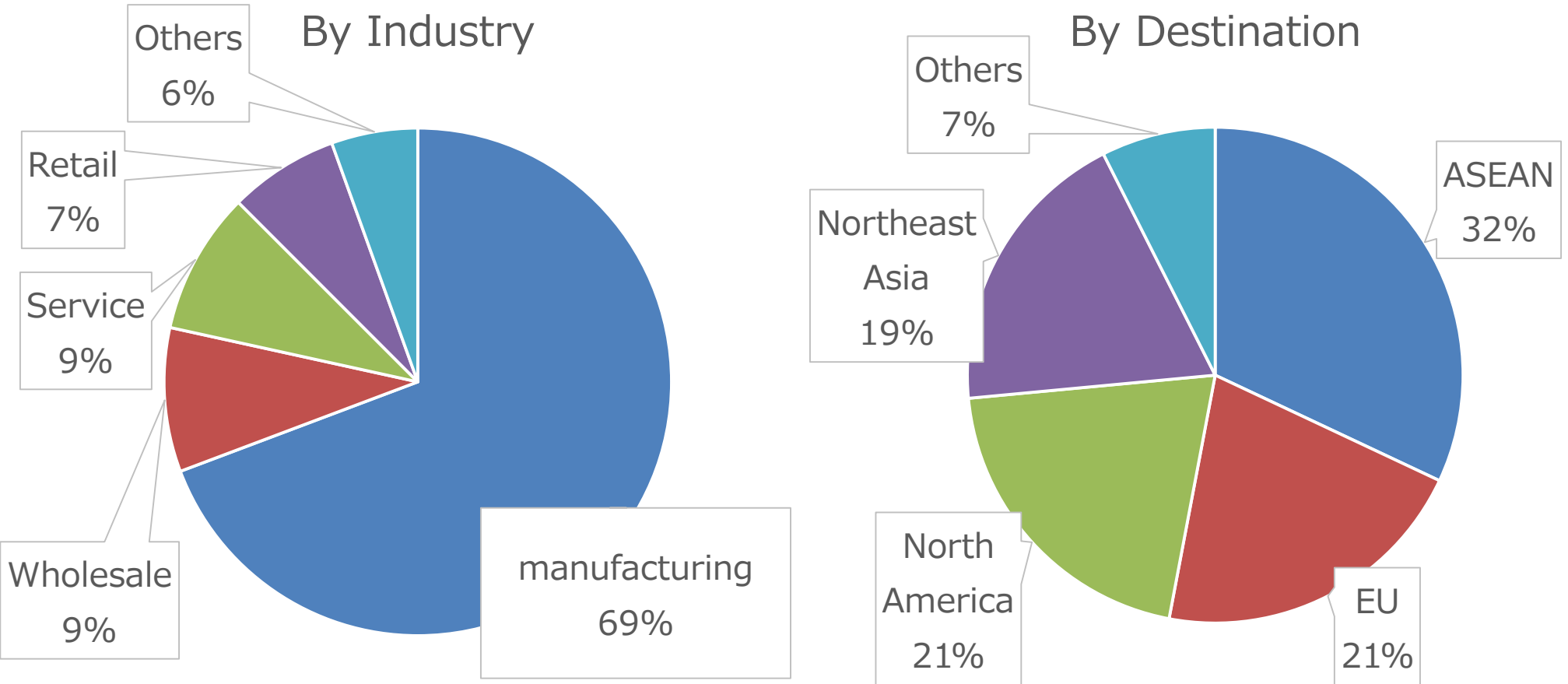


Consortium for a New Export Nation

<https://www.youtube.com/watch?v=d-BKzenQCzY>



# Supporting nearly 900 companies annually



N = 872

# All seeking for alliance & partnership

A reservoir of ideas, chances & opportunities

New  
developments



New technologies

New products

New approaches

for example...

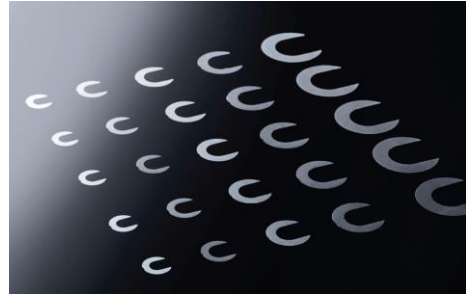
# Precise Mirror Polishing & Lapping Technology



Precise Polish Surface on Roll

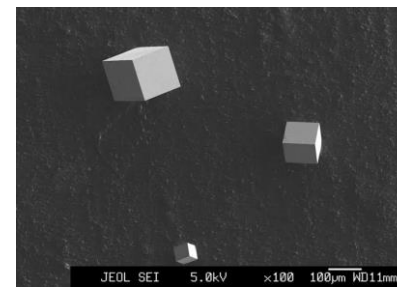
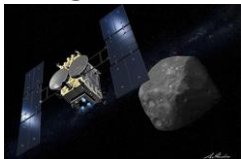


Super Precision Long Foil



Spacer, shim, Washers

Contribution to  
JAXA



MINIATURE-SIZED OBJECTS

SLAC/Harvard Univ.



NASA



## TDC Corporation

Service: Ultra High-precision  
Mirror Polishing &  
Lapping

### Technology:

- ✓ Roughness: Ra 1nm
- ✓ Flatness: 30 nm
- ✓ Parallelism: 100 nm
- ✓ Tolerance:  $\pm 100$  nm, etc.

### Application:

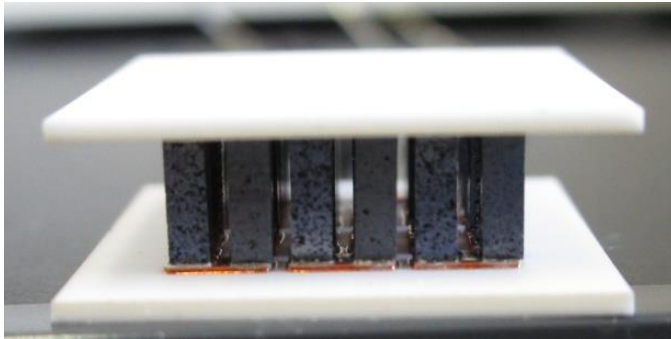
- ✓ Micro Electro Mechanical Systems
- ✓ Nanotech
- ✓ Medical
- ✓ Aerospace, etc.



<https://mirror-polish.com/en/>

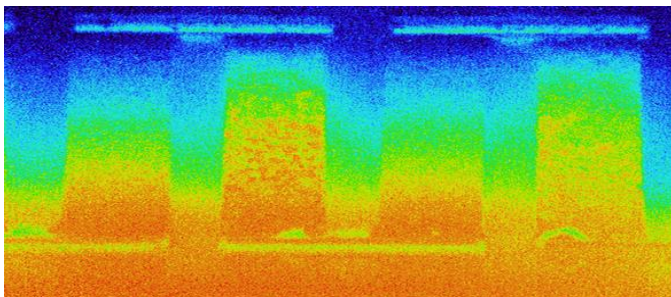


# Sustainable Thermoelectric Technology



Element 1.5x1.5x5 (18 pairs)

Geometry 20 mm x 20 mm



Provided by Japan Advanced Institute of Science and Technology



<https://hakusan-mfg.co.jp/en/>

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## Hakusan Inc.

Product: Sustainable  
Thermoelectric Module

### Features:

- ✓ Alternative of the current Bi/Te (scarce materials) thermoelectric module
- ✓ Material costs reduction in your production

### Application:

- ✓ Optics / Electronics
- ✓ IoT device power supply
- ✓ Thermal recycling

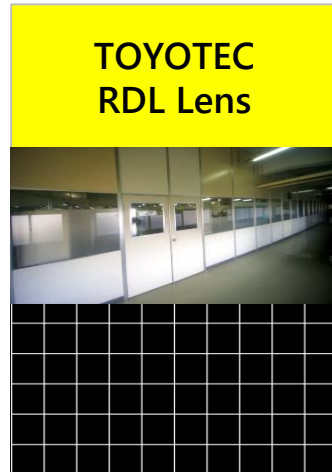
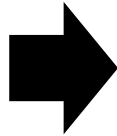
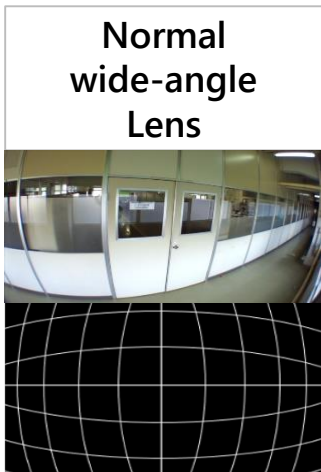
# Ultra-Low Distortion Lens Technology



**TOYOTEC Co., Ltd.**

Service: Design & Manufacturing of optical units and components

Product: Real Distortion-less Lens Unit



Technology:

- ✓ 120 degrees Wide-angle lens unit
- ✓ Ultra-low distortion

Application:

- ✓ Medical Equipment
- ✓ Robot vision
- ✓ Drone
- ✓ Automotive
- ✓ Agri-tech, etc.









<https://www.toyotec.com/en/>

# “Non-metal” bearings



They can be used in

Water  Ferromagnetic field 	Vapor  Electrical conduction 	Chemical Liquid  High or Low Temperature 
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## Kashima Bearings, Inc.

Product: Plastic bearings

Technology:

- ✓ No lubricant needed
- ✓ Doesn't rust
- ✓ Anti-corrosion
- ✓ Non-magnetic

Application:

- ✓ Cleanroom
- ✓ MRI
- ✓ Sterilization equipment
- ✓ Food processing machinery

### Total Cost Merit



For example, now a client uses a metallic bearing that is exchanged every 3 months.

•Metallic bearing €1.00/pc    •Fee of exchange €30.00 /1 time

	Initial Cost	After 3 months	After 6 months	1 year later
Metallic Bearing	€1.00+€30.00 = <b>€31.00</b>	€31.00+€1.00×1 pc +€30.00×1 time = <b>€62.00</b>	€31.00 +€1.00×2 pcs. +€30.00×2 times = <b>€93.00</b>	€31.00 +€1.00×4 pcs. +€30.00×4 times = <b>€155.00</b>

If the client utilizes a plastic bearing, he only needs to exchange it once a year.

•Plastic Bearing €20.00 /pc    •Fee of exchange €30.00 /1 time

	Initial Cost	After 3 months	After 6 months	1 year later
Plastic Bearing	€20.00 +€30.00 = <b>€50.00</b>	<b>€50.00</b>	<b>€50.00</b>	€50.00 +€50.00 = <b>€100.00</b>

The benefit of the Plastic Bearing is clearly the reduced running cost.



<http://kashimabearings.com/>

<https://kashima-bearings.de/>



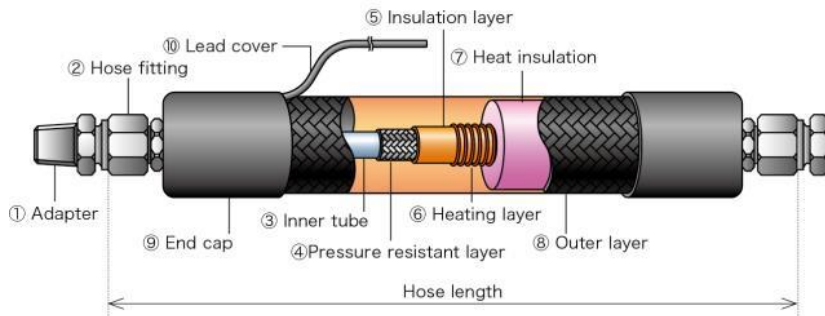
# Excellent Temperature Distribution of $\pm 10^{\circ}\text{C}$

**Toyonaka Hot Laboratory Co., Ltd.**

Product: Heated Hose

Technology:

- ✓ Uniform heat distribution
- ✓ Excellent thermal insulation
- ✓ ~ Max 450 degrees Celsius
- ✓ ~ Max 35 MPa



Application:

- ✓ Gas transfer (for compositional analysis and in manufacturing)
- ✓ Hot melt transfer
- ✓ Steam transfer



<https://toyonakahot.com/>

# Precision Gun Drilling Processing



Medical(Orthopedic. Surgical Instruments)

**HI-TAK Co., Ltd.**

Product: Medical gun Drilling Machine

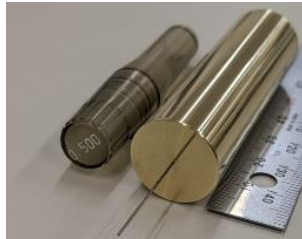
Service: Precision processing

Technology:

- ✓ Drilling of  $\phi 1.0 \times 400\text{mm}$  for Ti6Al4V
- ✓ Realized world's longest depth of 105mm with the world's smallest diameter gun drill ( $\phi 0.5$ )!

Application:

- ✓ Orthopedic surgical instruments
- ✓ Implant
- ✓ Joint of fractured part



<https://hi-tak.com/>



# Vital Signs Monitor Simulator for Medical Training

**Penguin System Co., Ltd.**

Product: EmerSim

Technology:

- ✓ Cloud service (requires only browser)
- ✓ Expensive mannequin not required
- ✓ Very real waveforms and sounds (Electrocardiogram sounds, ambulance siren, nurse call, etc.)

Application:

- ✓ Emergency care training course
- ✓ 10 minutes workspace simulation in the hospital
- ✓ Medical education in classroom



**EmerSim** 

Vital Signs Monitor Simulator  
for Emergency Care Training



<https://emersim.jp>

We have hundreds of more companies...

Please ask JETRO

Product ?



Technology ?

Service ?

We can introduce suitable company

# Possible alliance and partnership (case1)

## Technology collaboration

Thorough networking /matching arrangement with IVAM

Joint activity for

- ✓ Research
- ✓ Development
- ✓ Productization



Engineering assistance for

- ✓ Product designing
- ✓ Product development
- ✓ Maintenance

ODM

Licensing

**Is there anyone who can meet this need?**



# Possible alliance and partnership (case2)

## Trade collaboration

Thorough networking /matching arrangement with IVAM

Joint Business development  
(Based on Tech Collaboration)

- ✓ Product planning
- ✓ Market research
- ✓ Marketing activity  
at Exhibition, SNS, etc.



Vender  
Supplier  
Buyer  
Distributor  
Service Provider

**Is there anyone who can meet this need?**

# For more information, please contact

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Or JETRO office nearest to you !



<https://www.jetro.go.jp/en/jetro/worldwide/>