Overview of Japan's Security Export Control System

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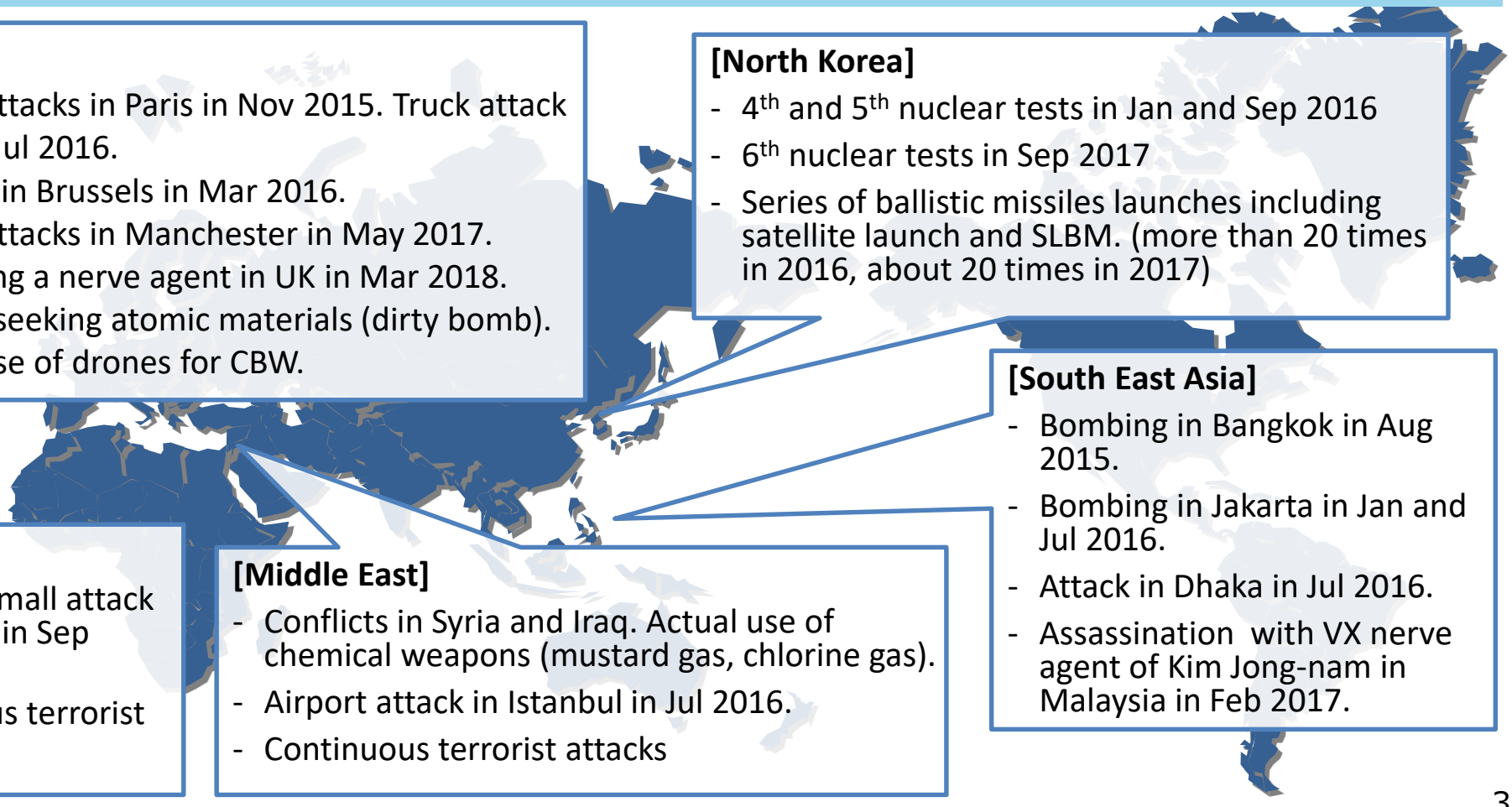
1. International Efforts for Export Control (Change of Security Environment)

- Non-state actors are rapidly expanding their presence, causing serious terrorism in many parts of the world. It has become a reality and threaten that non-state actors will use WMD by acquiring sensitive technologies.
- North Korea's nuclear tests and series of ballistic missile launches are serious threats in east Asia.



[Europe]

- Terrorist attacks in Paris in Nov 2015. Truck attack in Nice in Jul 2016.
- Bombings in Brussels in Mar 2016.
- Terrorist attacks in Manchester in May 2017.
- Attack using a nerve agent in UK in Mar 2018.
- Terrorists seeking atomic materials (dirty bomb). Possible use of drones for CBW.

[North Korea]

- 4th and 5th nuclear tests in Jan and Sep 2016
- 6th nuclear tests in Sep 2017
- Series of ballistic missiles launches including satellite launch and SLBM. (more than 20 times in 2016, about 20 times in 2017)

[South East Asia]

- Bombing in Bangkok in Aug 2015.
- Bombing in Jakarta in Jan and Jul 2016.
- Attack in Dhaka in Jul 2016.
- Assassination with VX nerve agent of Kim Jong-nam in Malaysia in Feb 2017.

[Africa]

- Shopping mall attack in Nairobi in Sep 2013.
- Continuous terrorist attacks.

[Middle East]

- Conflicts in Syria and Iraq. Actual use of chemical weapons (mustard gas, chlorine gas).
- Airport attack in Istanbul in Jul 2016.
- Continuous terrorist attacks

1. International Efforts for Export Control

(Concerns of Civilian Technology Diverted to Military Use, Changes in the Export Control Environment in Asia)

- Civilian technology becomes an important element of advanced defense equipment and the importance of civilian technology in terms of security is increasing.

<Carbon Fiber>

Golf shaft

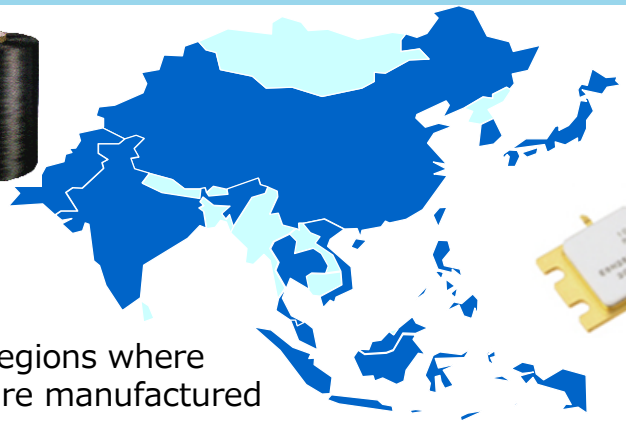
Structural material for fighters

<Power Semiconductor>

Power amplifier

Radar for naval ships

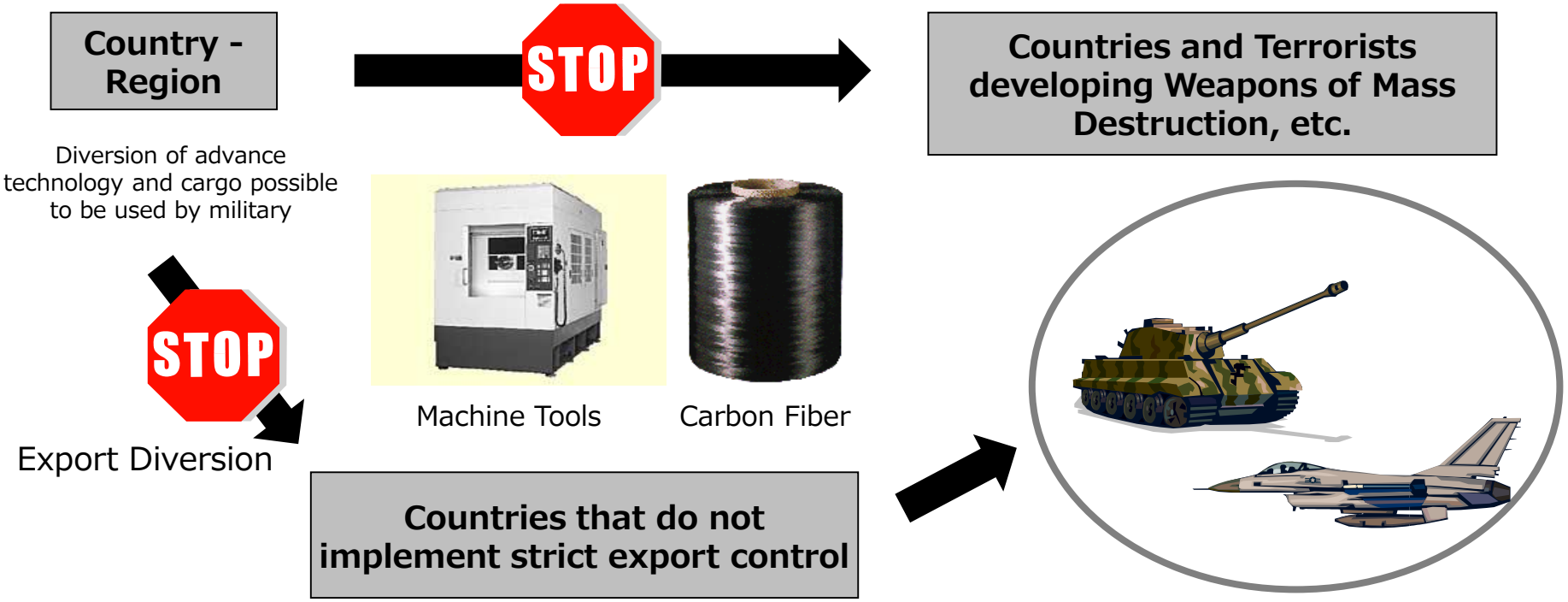
- Asian countries are increasing their production capacity of sensitive dual use items. In addition, the importance of Asian ports as a hub for global and regional trade is rising.



Countries and regions where machine tools are manufactured

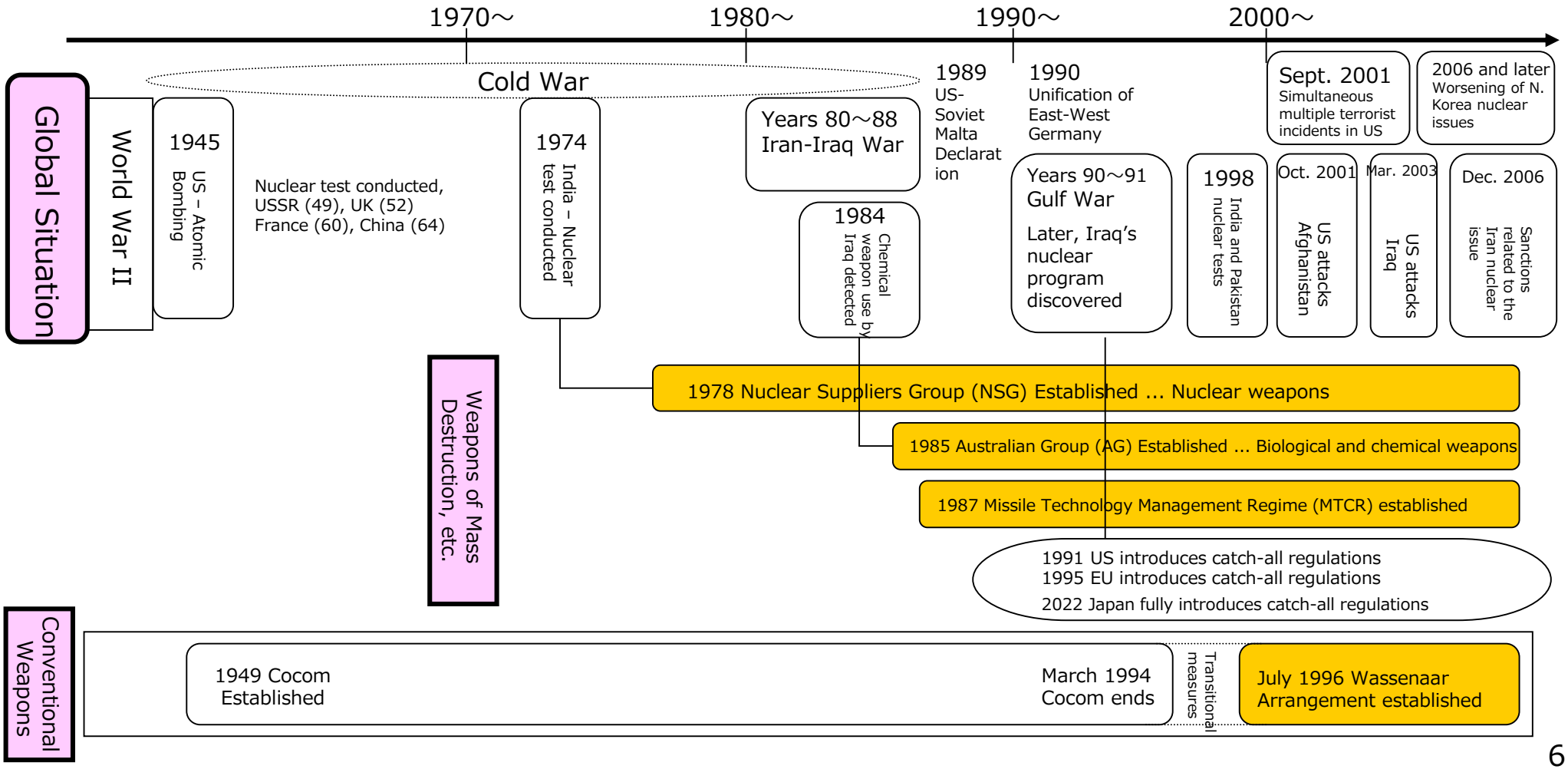
1. International Efforts for Export Control
(Need for Export Control)

- When advanced technology and goods are transferred to countries, regions or terrorists developing Weapons of Mass Destruction or Conventional Weapons, it may become an international threat and destabilize the international situation.
- Acquisition of cargo and technologies related to Weapons of Mass Destruction by countries of concern and terrorists has become more sophisticated such as diversion of exports to third countries.
- Strict trade control is being promoted by international export control regimes to prevent this. In non-participating countries, it is necessary to undertake measures based on this.



1. International Efforts for Export Control
(Transitions of International Export Control)

- With the diffusion of the East-West Cold War and Weapons of Mass Destruction as an opportunity, the International Export Control Regime for the control of exporting sensitive items was established.
- Along with the international situation becoming more complex, the role of the regime has also become increasingly complex.



1. International Efforts for Export Control (Overview of the 4 International Export Control Regimes)

	Nuclear Suppliers Group (NSG)	Australia Group (AG)	Missile Technology Control Regime (MTCR)	Wassenaar Arrangement (WA)
Controlled items	- Part 1: Nuclear material, equipment, and technology - Part 2: Nuclear-related dual-use material, equipment, and technology	- Chemical weapons related items - Biological weapons related items	- Complete rocket systems and UAV - Production facilities, batch mixers, aluminum powder, maraging steels, composite structure, gyros, radar, etc.	- Munitions items (firearms, bombs, military aircraft, battle tanks, etc.) - Dual-use items (metal alloys, carbon fiber, machine tools, cryptographic devices, optical sensors, etc.)
Establishment	1978	1985	1987	1996
Number of participating states	48	41+EU	35	42

1. International Efforts for Export Control (United Nation Security Council Resolution 1540)

METI Ministry of Economy, Trade and Industry

- Participants in this Resolution must:

➢ In accordance with their national procedures, **adopt and enforce appropriate effective laws** which prohibit **any non-State actor** to manufacture, acquire, possess, develop, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery (WMDs), as well as attempts to engage in any of the foregoing activities, participate in them as an accomplice, assist or finance them

➢ **Take and enforce effective measures** to establish domestic controls to prevent the proliferation of WMDs, including appropriate laws and regulations to **control export, transit, trans-shipment and re-export** and **controls on providing funds and services** related to such export and trans-shipment such as financing, and transporting that would contribute to proliferation, as well as establishing **end-user controls**

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2. Transfer of Sensitive Technology to Countries of Concern (Diversification and sophistication of procurement activities)

- With the increase of importance of dual-use * 1 in the military field, there is a concern that the complexity of distribution forms can hide the actual end-users using various measures and the concerning subject of sensitive technology * 2 or goods possible to be used for the military, can be skillfully acquired.

Export Transactions
- Front companies
- Through third countries
- Falsification of users and applications

Technology Transactions
- Front companies
- Email, cloud
- Exhibitions, lectures

Corporate Acquisitions
- Influence by foreign governments
- Support from national public funds

Academic and Research Exchanges
- Teachers, researchers, foreign students
- Joint research
- Peer review

Employment and Job Searching
- Head hunting
- Employment at important companies

Technology Theft
- Cyber attacks
- Industrial spies

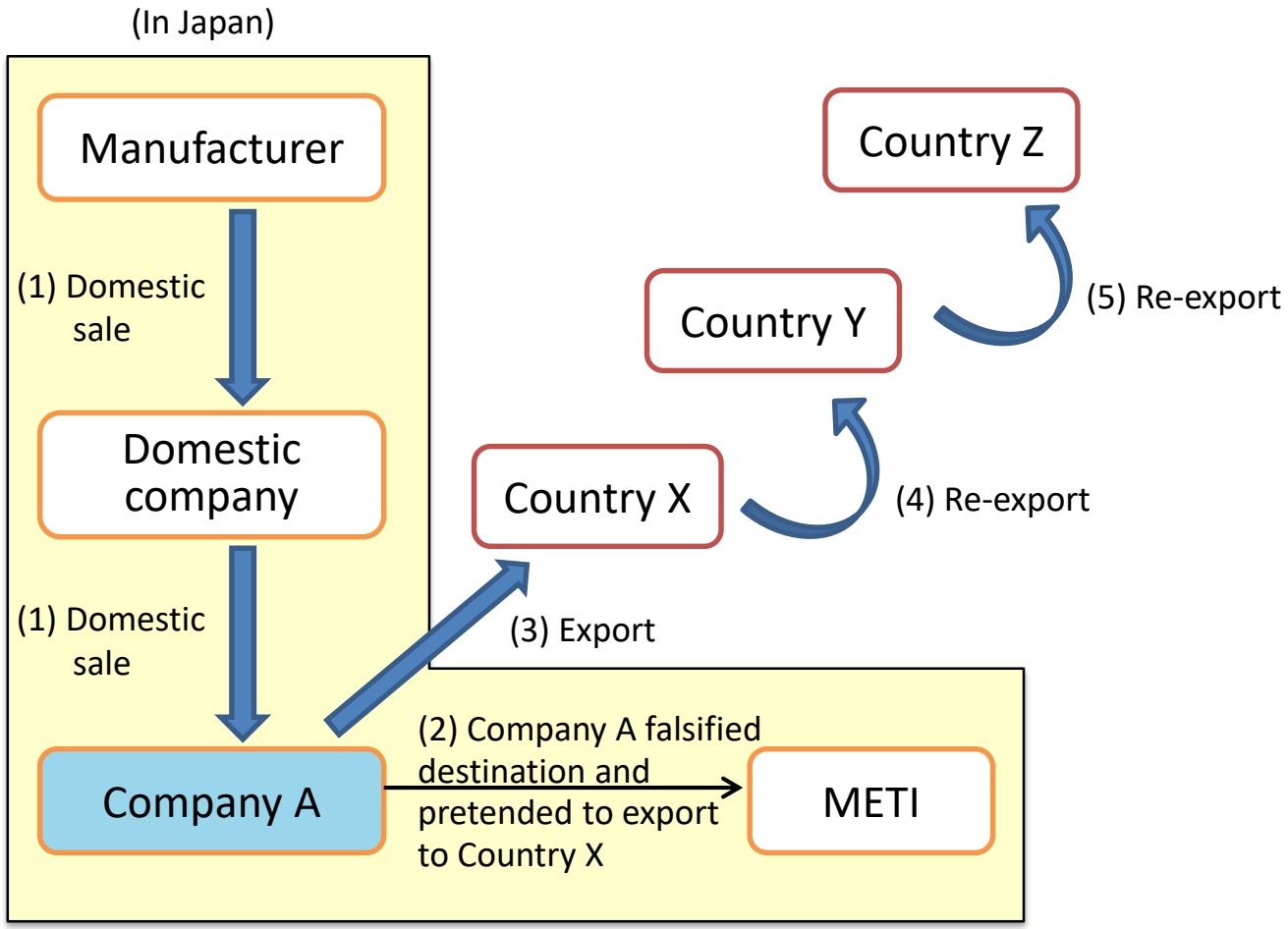
* 1 “Dual Use” means both military and civilian use. *
* 2 “Sensitive Technology” refers to technology defined in the Foreign Exchange Ordinance that is likely to be used for the military.

2. Transfer of Sensitive Technology to Countries of Concern (Circumvention and Diversion)

- Although many countries have established export control systems, entities of concern have diversified procurement activities by circumventing trade, using third country, front company or falsifying information, etc.

[Diversion Case with complicated circulation]

- In January 2010, Company A exported carbon fiber to Country Y which was transited via Country X. Company A falsified destination as Country X, but actually Country Y.
- In June 2015, the court sentenced a fine of 1 million yen against Company A and 1 million yen against employees.
- In January 2016, METI ordered prohibition of export to all areas for 4 months to Company A as administrative sanction.



2. Transfer of Sensitive Technology to Countries of Concern
(Examples of diverted exports by foreign students in Japan)

- Country A's Foreign student Y exported aircraft-mounted infrared cameras, etc. that are controlled under the Foreign Exchange Act to Country A via Region B without obtaining permission from the Minister of Economy, Trade and Industry from 2016 to 2017. *The student is enrolled in the department of technology at a university in Tokyo.
- In February 2018, a conviction (fine 1 million yen) was finalized by summary order for violation of the Foreign Exchange Law by foreign student Y. In April of the same year, the Ministry of Economy, Trade and Industry issued an administrative punishment of an export ban for three months on the foreign student based on the Foreign Exchange Law.

Ministry of Land, Infrastructure and Transport

Old equipment disposal contract accompanying new equipment delivery

Company C

Company D and E
(Disposal processing, crushing disposal consignment)

Multiple companies are intermediary and reselling

Company X
(Household appliance dealer)

Company X puts out the controlled item on Yahoo Auctions, foreign student Y successfully bids to purchase it.

Country A's foreign student Y

Unauthorized export to country A through region B

Country A

Controlled Item

2. Transfer of Sensitive Technology to Countries of Concern
(Concerning examples of advanced technology outflow overseas involving universities, etc.,)

- Some emerging countries are increasingly acquiring advanced technologies through various routes.
- This outflow of advanced technology (Intangible Technology Transfer: ITT) is a major problem among the countries concerned.

US Case Example 1

- A woman living in Florida from Country A **exported to Country A systems and components for marine submersibles** from 2002 to 2014 according to **instructions from a professor, etc., working at a Technical University B** in Country A that is listed on the Foreign User List.
- It was discovered that one of the purposes of export, was for use in the development of marine submersibles unmanned submersibles, remotely operated boats and autonomous submersibles by the professor of University of Technology B in Country A.
- For the above reasons, **the woman from country A was charged with fraud, attempted crimes against the United States, and illegal export of information activities and was sentenced to 21 months in prison.**

US Case Example 2

(Source) Various reports, etc.

- Atmospheric Glow Technologies (AGT) concluded a research contract with the United States Air Force Research Laboratory (USAF) on **plasma actuators for unmanned aerial vehicles**.
- Since former student (Daniel Max Sherman) of **Prof. J. Reece Roth, University of Tennessee** was at AGT, the professor and AGT signed a joint research agreement on the above research.
- Prof. Roth and Mr. Sherman agreed to have graduate student assistants help with the research. **Students from countries A and B who were conducting research activities under this professor were granted access to reports on this research without obtaining permission from the US government**. Additionally, Prof. Roth took a personal computer containing technical information related to the research with USAF to Country A for a lecture without an export license.
- As a result of this, Prof. Roth and Mr. Sherman were charged and sentenced to 4 years and 14 months in prison (just over 1 year) respectively, for **violating the Arms Export Control Law**.

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3. History of Japan's Security Export Control (What Japan has Learned from the past?)

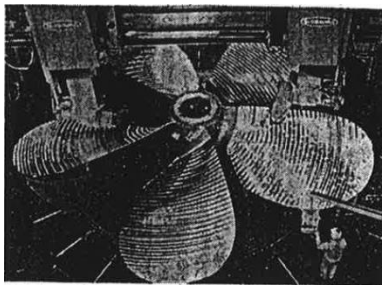
- **1949** The Foreign Exchange and Foreign Trade Control Act (FEFTA) was enacted.
- **1952** Japan acceded to **COCOM** (Coordinating Committee for Multilateral Export Controls)

↓ Implementation of export control based on FEFTA

- **1987 Toshiba Machine Company Incident**

(**Illegal Export of machine tools** to the **Soviet Union**)

Severe anti-Japan sentiment in the US



Mainichi Shimbun, Evening paper, 1987

- ✓ **Loss of Japan's credibility**
- ✓ **Change of the executives in the company which exported the machine tool**
- ✓ **Shareholder lawsuit**

3. History of Japan's Security Export Control (How Japan has strengthened security export control?)

➢ After the incident, Japanese government **introduced strict security export controls** and **implemented it with the efforts of Industry**.

Government

- ✓ Doubled licensing officers
- ✓ Strengthened penalties
- ✓ Extended the prosecution prescription for illegal export
- ✓ **Introduced Internal Compliance Program (ICP)**

Industries

- ✓ **Implemented strict export control based on ICP**
- ✓ Strengthened voluntary export controls
  (e.g. Install relocation detection devices)

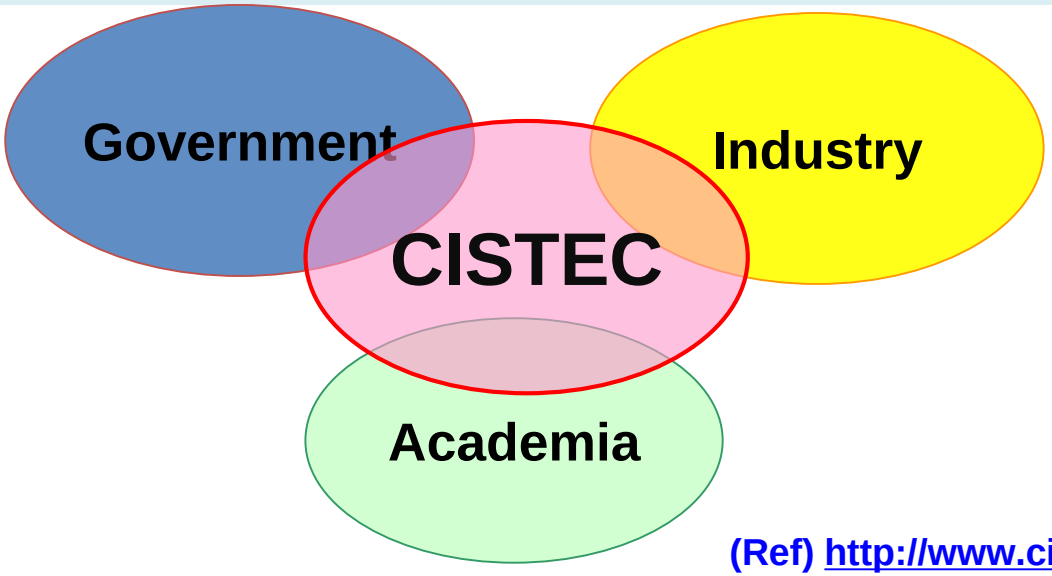
Restore credibility

3. History of Japan's Security Export Control (ICP : Industry's Efforts for Security Export Control)

- **ICP (Internal Compliance Program)** is an **exporter's internal policy** to comply with the export control law and regulations.
- ICP is **not mandatory for exporters**, but METI has been encouraging exporters in Japan to establish ICP. **METI has registered** exporters having ICP **since 1987.**
- METI has also been encouraging overseas subsidiaries to develop ICP since 2005.
- Currently the number of companies which have been registered is about **1,400**.

3. History of Japan's Security Export Control (Bridging the government and the Industry)

- Center for Information on Security Trade Control (CISTEC) is the **only non-profit and non-governmental organization** specializing in security export control in Japan.
- Founded in 1989, operated with funds from industry.
- The number of associated members: **422** (including major exporting companies in Japan)
- Major mission: serving as a **channel** among the industry, government and academia.



(Ref) http://www.cistec.or.jp/english/index.html

3. History of Japan's Security Export Control (Lessons learned by Japan)

- ✓ **Secure trade control is important to ensure the security of the international community.**
  - ➢ If strict trade control is not enforced, not only the home country's but the world's security environment will be affected.

- ✓ **A single incident can easily cost a country or company to lose trust.**
  - ➢ Obtaining trust in strict trade controls are being enforced promotes corporate investment and leads to economic development

- ✓ **Having a system is not enough, strict management is necessary**
  - ➢ Even if a system is present, if strict management is not done, then it is the same as having no system at all

- ✓ **Efforts by both the Country and the Industries are needed**
  - ➢ It is essential to establish a practical trade control system in the country
  - ➢ It is important that the country and industries cooperate to enact trade control
  - ➢ It is desirable for industries to also make voluntary efforts

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4. Japan's Security Export Control system (Overview)

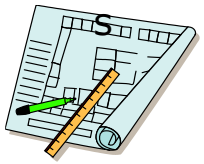
- When advanced technology and cargo belonging to developed countries are passed on to countries and regions that develop Weapons of Mass Destruction and Conventional Weapons, they become an international threat and can destabilize the international situation.
- To prevent these problems, export controls and technology transaction controls are being promoted through international export control regimes focused on developed countries. Additionally, control of inward direct investments can be also thought of as necessary.
- In Japan, these controls are implemented based on the "Foreign Exchange and Foreign Trade Law".

Carbon Fiber

Export of Goods → **Permission System**

Regulate exports of goods that disrupt maintenance of international peace and security

Blueprints



Transfer of Technology → **Permission System**

Regulate transfer of technology that disrupts the maintenance of international peace and security

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Japanese Companies

Inward Direct Investments → **Advance Notification System**

(Can change, advise stoppage, order)

①Regulation of issues that compromise country's security
②Disrupt maintenance of public order
③Inward direct investments that disrupt the protection of public safety

4. Japan's Security Export Control system (Organization for Security Export Control in METI)

- METI is responsible for export control with about 120 staffs concerning the security field.
- An export license is issued only by METI under Foreign Exchange and Foreign Trade Act.
- Security export licensing division examines application of sensitive items while twelve local branches deal with less sensitive items.

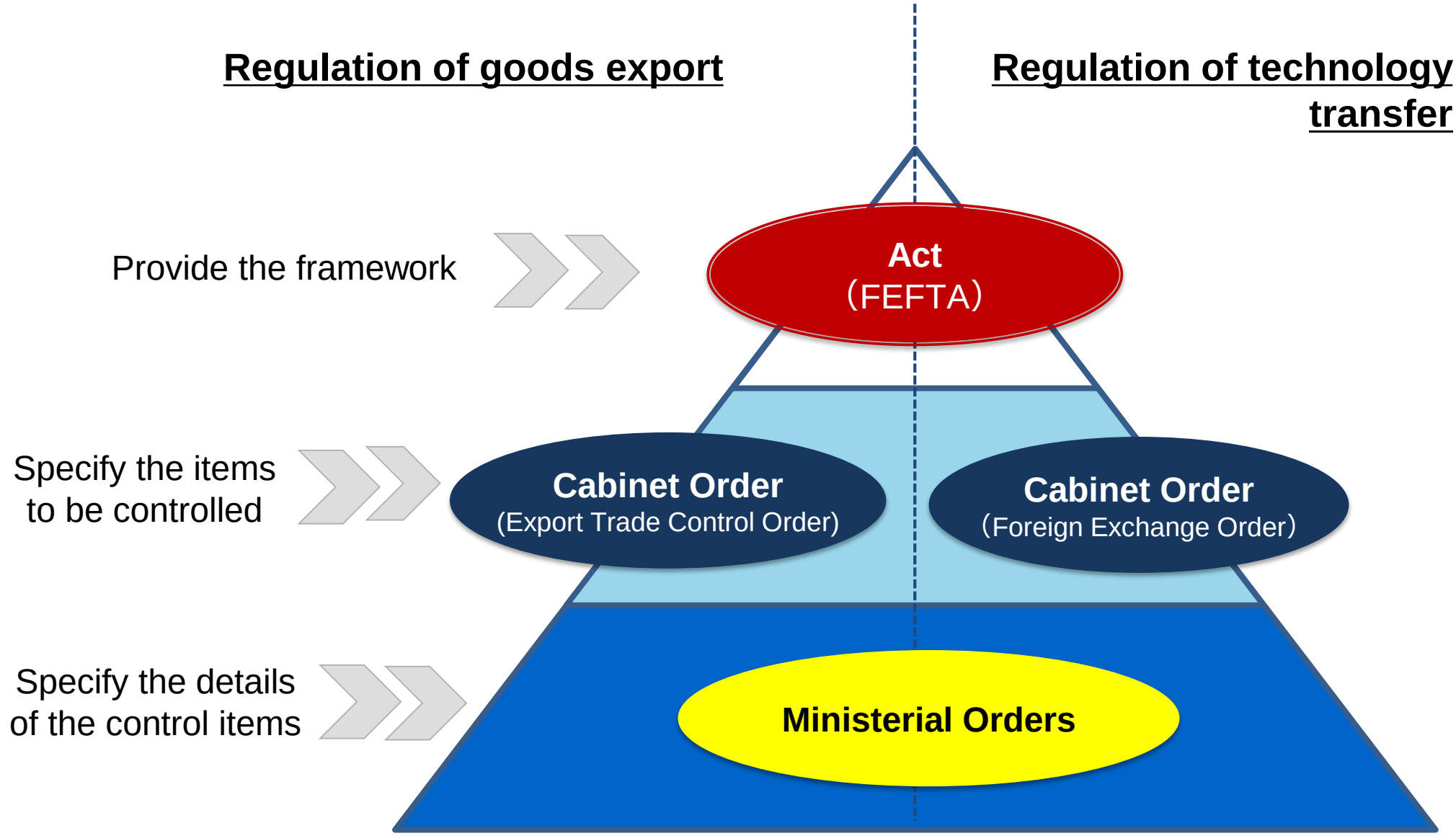
Trade and Economic Cooperation Bureau of METI

Trade Control Department

- **Security Trade Control Policy Division**
  - Plans export control policies
  - Manages Three Principles on Defense Equipment and Technology
  - International Investment Control Office
    - Manages inward Foreign direct investment regulations
  - Office of Research and Planning for Export Control
    - Analyzes information related to export control
- **Security Export Control Administration Division**
  - Manages export control regulations
  - International Affairs Office
    - Joins discussions in export control related regimes
    - Organizes International outreach activities (meetings, seminars)
  - Technology Research Office
    - Analyzes technology related to export control
  - Security Export Inspection Office
    - Conduct inspections of exporters
    - Domestic outreach activities
    - Gives instructions and guidance to exporters
- **Security Export Licensing Division**
  - Examines export license applications
  - Issues/rejects export licenses

12 Local Branches for Licensing and Inspection
Sapporo, Sendai, Saitama, Tokyo, Yokohama, Nagoya, Osaka, Kobe, Hiroshima, Takamatsu, Fukuoka and Okinawa

4. Japan's Security Export Control system (Legal Structure under the Law)



※FEFTA : Foreign Exchange and Foreign Trade Act

4. Japan's Security Export Control system (Structure of the Control List under the Law)

■ Legal Structure

1. Law

✓ ***Foreign Exchange and Foreign Trade Act (FEFTA)***
- *Basic framework*

2. Cabinet Orders

✓ ***Export Control Order***
- *List of goods*

✓ ***Foreign Exchange Order***
- *List of technologies*

3. Ministerial Orders

- *Details (specifications and interpretations of the listed items)*

■ Control List Structure

Cabinet Order		Regime list
Item 1	Weapons	WA/ML
2	Dual-use items	NSG
3		AG
3-2		
4		MTCR
5		WA/BL・SL
⟆		
13		
14	Others	WA/ML (excluding item 1)
15	Dual-use items	WA/VSL
16	Catch-all	

List control

Catch-all control

4. Japan's Security Export Control system (Control List under FEFTA)

	Item
1. Arms	
1)	Firearms, ammunitions
2)	Explosives, explosive dispensers
3)	Propellants, military fuels
4)	Propellants, military fuels
5)	Directed-energy weapons
6)	Kinetic energy weapons and projectiles
7)	Military vehicles, bridges, etc.
8)	Military vessels, etc.
9)	Military aircraft, etc.
10)	Anti-submarine nets, anti-torpedo nets
11)	Armor plates, military helmets, body
12)	Military searchlights or control equipment
13)	Bacterial/chemical warfare agents
13-2)	Chemical compounds for clarifying bacterial/chemical warfare agents
14)	Biopolymers for chemical agents, etc.
15)	Equipment for the production/test of warfare low explosives
16)	Equipment or device for the production of arms
17)	Military satellites or components thereof
2. Nuclear Power	
1)	Nuclear fuel or nuclear source materials
2)	Nuclear reactors or power-generating equipment for nuclear reactors
3)	Deuterium or deuterium compounds
4)	Artificial graphite
5)	Equipment for the separation/reprocessing of nuclear fuel materials
6)	Equipment for the separation of lithium isotopes
7)	Equipment for the separation of uranium/plutonium isotopes
8)	Frequency changers
9)	Nickel powder, nickel porous metal
10)	Equipment for the production of deuterium or deuterium compounds
10-2)	Equipment for the production of uranium/plutonium
11)	Flow-forming machines
12)	1. Numerically-controlled machine tools 2. Measurement equipment
13)	Induction furnaces, arc furnaces or melting furnaces
14)	Isostatic presses
15)	Robots
16)	Vibration test systems
17)	Structural materials for gas centrifuge rotors
18)	Beryllium
19)	Substances used as alpha sources for the detonation of nuclear weapons
20)	Boron 10
21)	Substances used as reducing or oxidizing agents for the production of nuclear fuel materials
22)	Crucibles
23)	Hafnium
24)	Lithium
25)	Tungsten
26)	Zirconium
27)	Electrolytic cells for fluorine production
28)	Equipment for the production of gas centrifuge rotors
29)	Centrifugal balancing machines
30)	Filament winding machines
31)	Laser oscillators
32)	Mass spectrometers or ion sources
33)	Pressure gauges or bellows valves
34)	Superconducting solenoid electromagnets
35)	Vacuum pumps
35-2)	Scroll-type compressors and vacuum
36)	Direct current power units
37)	Electron accelerators or X-ray generators
38)	Impact testing machines
39)	High speed cameras
40)	Interferometers, pressure gauges, pressure transducers
41)	Goods used for the detonation (testing) of nuclear weapons
42)	Photomultiplier tubes
43)	Neutron generators
44)	Remote control manipulators
45)	Radiation shielding windows or frames
46)	TV cameras or lenses specially designed for protection from the influence of radiation
47)	Tritium
48)	Equipment for the production, collection or preservation of tritium
49)	Platinized catalysts
50)	Helium-3
51)	Primary products of rhenium
52)	Containers with explosion-proof
3. Chemical Weapons	
1)	Raw materials for chemical warfare agents or substances/raw materials having equivalent toxic ability with chemical warfare agents
2)	Equipment or device for the production of chemical agents
3 - 2. Biological Weapons	
1)	Source materials for bacterial warfare agents
2)	Equipment for the production of bacterial agents
4. Missiles	
1)	Rockets or their production equipment
1-2)	Unmanned aerial vehicles (UAVs) or their production equipment
2)	Guidance or testing equipment for rockets
3)	Propulsion units
4)	Flow-forming machines
5)	Servo valves, pumps, gas turbines
5-2)	Bearings for pumps
6)	Propellants or their raw materials
7)	Equipment for the production/test of propellants
8)	Powder and granular materials mixers
9)	Jet mills or equipment for the production of metal powders
10)	Equipment for the production of composite materials
11)	Nozzles
12)	Equipment, et alia, for the production of nozzle or re-entry vehicle nose tips
13)	Isostatic presses or controllers
14)	Furnaces or controllers for composite materials
15)	Structural materials for rockets or UAVs
16)	Accelerometers or gyroscopes for rockets or UAVs
17)	Flight controllers or attitude controllers, et alia, for rockets or UAVs
18)	Avionics equipment
18-2)	Thermoelectric batteries for rockets or UAVs
19)	Gravity meters or gravity gradiometers for aircraft or ship mounting
20)	Launch pads or associated ground launch support equipment for rockets or UAVs
21)	Radio telemetry equipment, radio telecontrol equipment for rockets or UAVs
22)	Computers designed for use in a rocket
23)	Analog-to-digital converters for rockets or UAVs
24)	Vibration test equipment, aerodynamics testing equipment, combustion test equipment, et alia
24-2)	Electronic computers used for designing rockets
25)	Materials or equipment for reducing the level of the radio waves, acoustic waves or light
26)	Integrated circuits, detectors, or radomes for rockets or UAVs
5. Advanced Materials	
1)	Fluorine compound products
2)	(delete)
3)	Aromatic polyimide products
4)	Tools for forming of titanium, aluminum or its alloys
5)	Alloys or powders of titanium or aluminum and their production equipment
6)	Metallic magnetic materials
7)	Uranium-titanium alloys or tungsten alloys
8)	Superconductive materials
9)	(delete)
10)	Lubricants
12)	Liquids for coolant
13)	Ceramic powders
14)	Ceramic composites
15)	Polydiorgano silane or polysilazane, et alia
16)	Bismaleimide or aromatic polyamideimide, et alia
17)	Fluorinated polyimides
18)	Molded products that use prepregs or preforms

4. Japan's Security Export Control system (Control List under FEFTA)

	Item
6. Material Processing	
1)	Bearings
2)	Numerically-controlled (N/C) machine tools
3)	Machine tools for the production of gears
4)	Isostatic presses
5)	Coating devices
6)	Measurement equipment
7)	Robots
8)	Feedback devices, et alia
9)	Spin-forming machines
7. Electronics	
1)	Integrated circuits
2)	Devices using microwaves or millimeter waves
3)	Signal processing equipment
4)	Devices using superconductive materials
5)	Superconducting electromagnets
6)	Primary/secondary or solar cells
7)	High voltage capacitors
8)	Encoders
8-2)	Thyristor devices or modules
8-3)	Semiconductor devices for power control
9)	Sampling oscilloscopes
10)	Analog-to-digital converters
11)	Digital instrumentation recorders
12)	Signal generators
13)	Frequency analyzers
14)	Network analyzers
15)	Atomic frequency standards
15-2)	Spray cooling method temperature control devices
16)	Semiconductor manufacturing equipment
17)	Masks or reticles
18)	Semiconductor substrate
19)	Resists
20)	Aluminum, gallium and other organic metallic compounds / Phosphorus, arsenic and other organic compounds

	Item
21)	Phosphorus, arsenic or antimony hydrides
22)	Silicon carbides
8. Computers	
1)	Computers
9. Telecommunication	
1)	Telecommunication transmission equipment
2)	Electronic changers
3)	Communication optical fibers
4)	(delete)
5)	Phased array antennas
5-2)	Radio direction finding equipment for monitoring use
5-3)	Wireless communication wiretapping devices
5-4)	Equipment capable of detecting the position of objects by observing interferences of radio waves, possessing a receiving function only
5-5)	Internet communication monitoring equipment
6)	Design/production equipment for items 1) through 3), and 5) through 5-5)
7)	Encryption equipment
8)	Equipment designed to prevent the leakage of information transmission signals
9)	(delete)
10)	Communication cable systems capable of detecting surreptitious intrusion
11)	Design/production/measurement equipment for items 7), 8) or 10)
10. Sensors	
1)	Underwater acoustic equipment
2)	Optical detectors or coolers thereof
3)	Optical fibers for use in sensors
4)	High speed cameras
5)	Reflectors
6)	Optical components for space use
7)	Controllers of optical equipment or components
7-2)	Aspherical optical elements

	Item
8)	Laser oscillators
8-2)	Laser microphone
9)	Magnetometers, underwater electric field sensors or magnetic field gradiometers, or calibrating equipment thereof
9-2)	Underwater monitoring systems
10)	Gravity meters or gravity gradiometers
11)	Radars
12)	Equipment for measuring optical reflectance, et alia
13)	Equipment for the manufacture or calibration equipment of gravity meters
14)	Materials, et alia, for optical detectors or components thereof
11. Navigation Devices	
1)	Accelerators
2)	Gyroscopes
3)	Inertial navigation systems
4)	Gyro-astro compasses, global navigation satellite systems / equipment for receiving radio waves, or aircraft altimeters
4-2)	Underwater navigation devices using sonar
5)	Testing/production equipment for items 1) through 4-2)
12. Marine	
1)	Submersible vessels / vehicles
2)	Vessel components or auxiliaries thereof
3)	Underwater salvage systems
4)	Underwater lighting systems
5)	Underwater robots
6)	Sealed power units
7)	Circulation water tanks
8)	Buoyant materials
9)	Closed-circuit or semi-closed circuit self-contained diving equipment
10)	Underwater acoustic transmitters used for obstruction
13. Propulsion Units	
1)	Gas turbine engines

	Item
2)	Spacecrafts for satellite or space development use
2-2)	Controllers designed for use in satellites
3)	Rocket propulsion systems
4)	Unmanned aerial vehicles
5)	Testing/production equipment for items 1) through 4), and 10) of 15.
14. Miscellaneous	
1)	Metallic fuel in a powder state
2)	Substances which are additives or precursors to low explosives or high explosives
3)	Diesel engines
4)	(delete)
5)	Self-contained diving equipment
6)	Civil engineering machinery for air transportation
7)	Robots or control equipment thereof
8)	Electric braking shutters
9)	Tear or sneeze gas and application equipment thereof
15. Sensitive Items	
10)	Simplified explosion devices
11)	Detectors for explosives
1)	Molded goods using inorganic fibers, et alia
2)	Radio wave absorbers or conductive polymers
3)	Nuclear heat source materials
4)	Digital telecommunication transmission equipment
4-2)	Units for obstruction of simplified explosion devices
5)	Underwater acoustic equipment
6)	Optical detectors for space use
7)	Radars which utilize a transmitting pulse width less than 100 nanoseconds
8)	Submersible boats
9)	Soundproofing devices for vessels
10)	Ramjet engines, scramjet engines, combined cycle engines

4. Japan's Security Export Control system (Overall Japan's Export Control Types under the Law)

Type of Regulations	Regulation Object	Target detail	License
List Control	➢ Goods Export ➢ Technology Transfer	➢ Control List (category 1 - 15)	➢ Individual License ➢ Bulk License
Catch-all control	➢ Goods Export ➢ Technology Transfer	➢ WMD (Weapons of Mass Destruction) (category 16) ➢ Conventional Weapons (category 16)	➢ Individual License
Brokering Control	➢ Goods ➢ Technology Transfer	➢ Control List (category 1) ➢ Catch-all control of WMD (category 2 - 16)	➢ Individual License
Transshipment Control	➢ Goods	➢ Control List (category 1) ➢ Catch-all control of WMD (category 2 - 16)	➢ Individual License

4. Japan's Security Export Control system (Individual License and Bulk License)

- **Individual License**
  - Transaction-based examination.
  - Check the contents of each transaction.

(Ref) 4 Pillars of the examination

1. The goods will be actually delivered to the end user.
2. The goods will be actually used by the stated end user.
3. The goods will not be used for the purposes of impeding the maintenance of international peace and security.
4. The end user will appropriately control the goods.

- **Bulk License**
  - For specific destination and specific items, repeated transaction, etc.
  - Do not examine each transaction.
  - Check the exporter's compliance (ICPs, etc.).

4. Japan's Security Export Control system (Catch-all control of WMD)

➢ In case there are concerns that the goods or technologies in question could contribute to WMD proliferation programs, exporters have to apply for an export license.

Region — **All regions except for Group A countries**

Items — **Any Item which is not on the control list** (except for food, etc.)

The Commodity Watch List (40 +12* items)

(*only for Syria, as from 15 April. 2015)

Conditions

(1) The "Know" Condition

- In case exporters have come to know that the items will be used for the development, manufacture, use and/or storage of WMD
- In case exporters have come to know that the end user is/was involved in WMD-related program, e.g. through "Foreign End User List". However, it is not the case when it's apparent that the item in question is to be used for a purpose other than the WMD-related activities

(2) The "Informed" Condition

- METI will inform an exporter to apply for an export license when METI considers that the items in question are/may be intended for WMD.

Group A country: Countries which are member countries of all export control regimes and have comprehensive export control systems (26 countries as of Sep. 2019).

4. Japan's Security Export Control system (Catch-all control of conventional arms)

➢ In case there are concerns that the goods or technologies in question could contribute to military end-use, exporters have to apply for an export license.

Region

Countries under UN arms embargo

Non Group A Countries except for UN Arms embargo countries

Items

Any Item which is not on the control list (except for food, etc.)

The Commodity Watch List (34 items)

Conditions

(1) The "Know" Condition

In case exporters have come to know that the items will be used for the development, manufacture or use of conventional arms in UN embargo countries

(2) The "Informed" Condition

METI will inform an exporter to apply for an export license when METI considers that the items in question are/may be intended for a military end-use.

(2) The "Informed" Condition

Group A country: Countries which are member countries of all export control regimes and have comprehensive export control systems (26 countries as of Sep. 2019).

4. Japan's Security Export Control system (Foreign End User List)

- The FEUL is a list of foreign entities that may have some relationship to the development, manufacture, use and/or storage of WMD and/or missiles.
- Exporters are required to submit export license applications when they wish to export goods to the entities on the FEUL unless it is obvious that the goods to be exported are not going to be used for WMD and/or missile purposes.
- The FEUL is revised annually. (entities are on the list as from Apr. 26, 2019)

Number of the Entities on Foreign End User List

Iran	222
North Korea	143
Pakistan	57
China	63
Syria	20
India	4
UAE	9
Afghanistan	2
Taiwan	1
Israel	2
Hong Kong	3
Egypt	2
Lebanon	6
Total	534

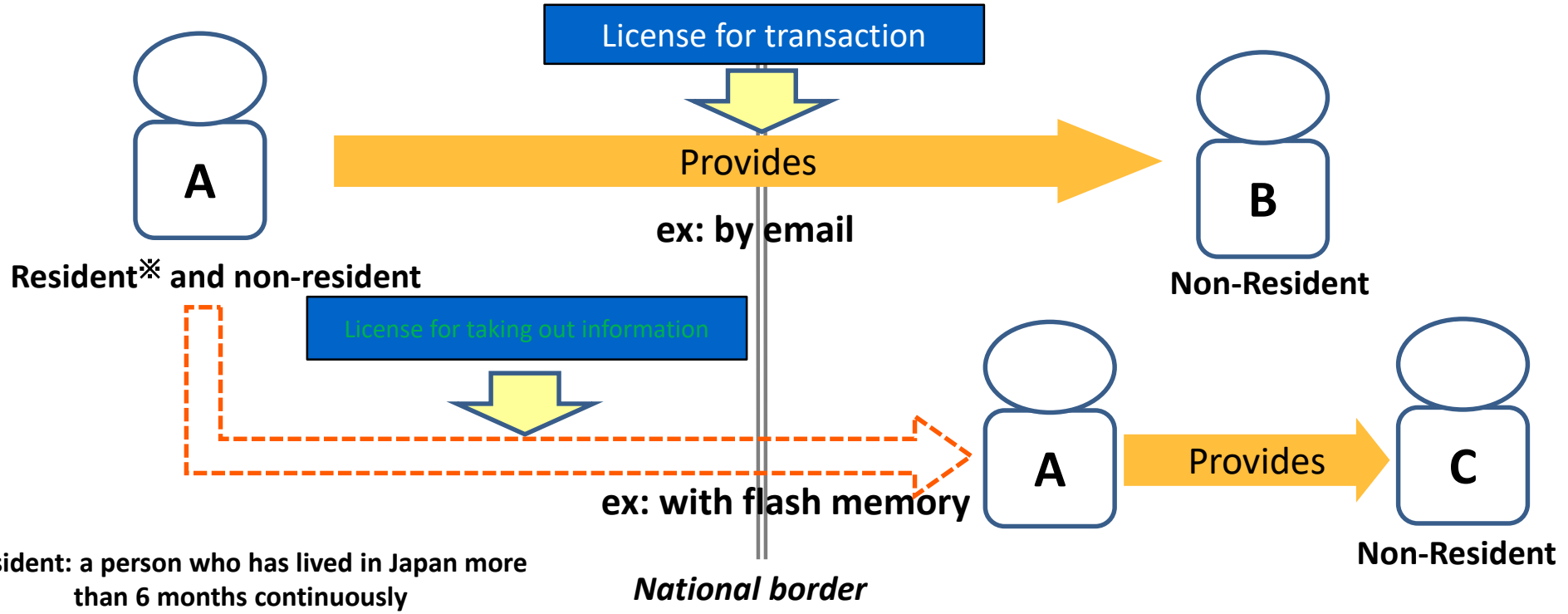
No.	Country or Region	Company or Organization	Also Known As	Type of WMD
1	Islamic Republic of Afghanistan	Al Qa'ida/Islamic Army	・Al Qaeda ・Islamic Salvation Foundation ・The Base ・The Group for the Preservation of the Holy Sites ・The Islamic Army for the Liberation of Holy Places ・The World Islamic Front for Jihad against Jews and Crusaders ・Usama Bin Laden Network ・Usama Bin Laden Organisation	C
2	Islamic Republic of Afghanistan Islamic Republic of Pakistan	Ummah Tameer E-Nau (UTN)		N
≀				
480	Republic of Lebanon	Shadi for Cars Trading		B,C,M
481	Republic of Lebanon	Technolab	・Techno Lab	B,C,M

4. Japan's Security Export Control system (Technology Control 1)

- FEFTA regulates Intangible Transfer of Technology (ITT). "Regulated Technology " is defined as "specific information necessary for the design, production or use of regulated products". The information takes form of technical data or technical assistance.

Case 1. Technology transfer from Japan to a foreign country

- Focus on the country/location of the recipient

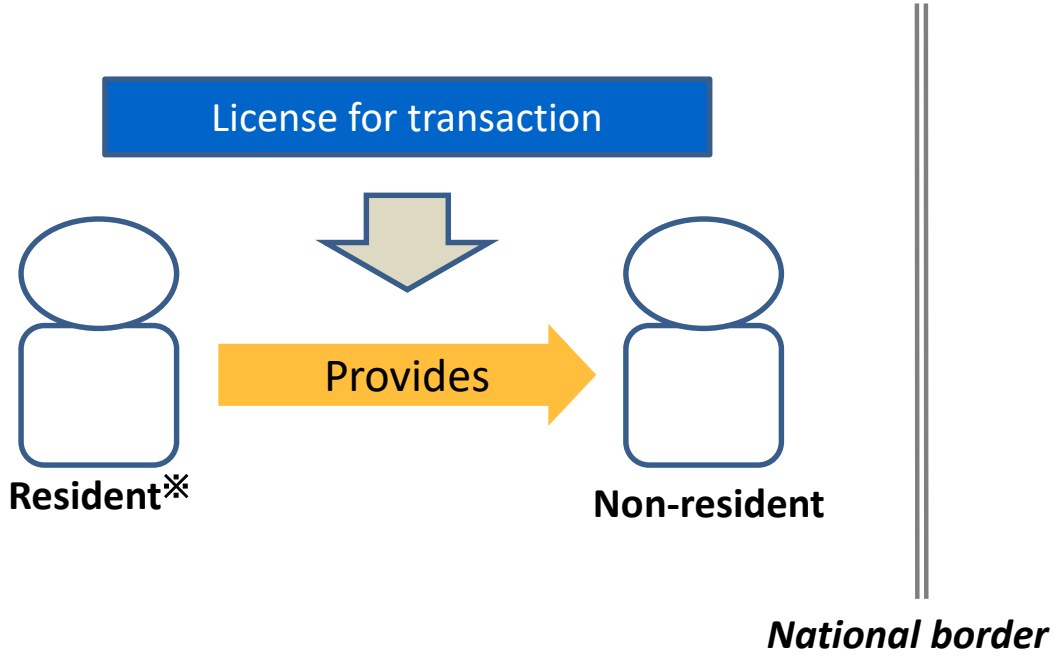


※Resident: a person who has lived in Japan more than 6 months continuously

4. Japan's Security Export Control system (Technology Control 2)

Case 2. Technology transfer to a non-resident

- transfer of listed technology by any resident to a non-resident
- focus on whether the recipient is a resident or not



※Resident: a person who has lived in Japan more than 6 months continuously

4. Japan's Security Export Control system (Brokering Control)

- Overseas transaction in which any goods or technologies move from one foreign country to another, and in which a person including a legal person in Japan is engaged directly or through its overseas office
- A person in Japan must obtain a license when it enters into a contract, directly or through its overseas subsidiary, of selling/buying, leasing or donating goods or technologies, with foreign companies

Items **Any item** (except for food, etc.)

Conditions

1. Conventional weapons : no conditions

2. Items other than conventional weapons (Except for Items transacted between Group A Countries) ;

(1) Exporter's Initiative = The "Know" Condition

In case exporters have come to know that the items will be used for the development, manufacture, use and/or storage of WMD

(2) METI's Initiative = The "Informed" Condition

The "inform" is given when METI considers that the items in question are/may be intended for WMD.

4. Japan's Security Export Control system (Transshipment Control)

- Transshipment control applies to foreign goods passing through Japan
- "Transshipment" is defined as an act to transship foreign goods at airports or seaports in Japan

Items **Any item** (except for food, etc.)

Conditions

1. Conventional weapons: no conditions

2. Items other than conventional weapons (Except for Items exporting to Group A Countries) ;

(1) Exporter's Initiative = The "Know" Condition

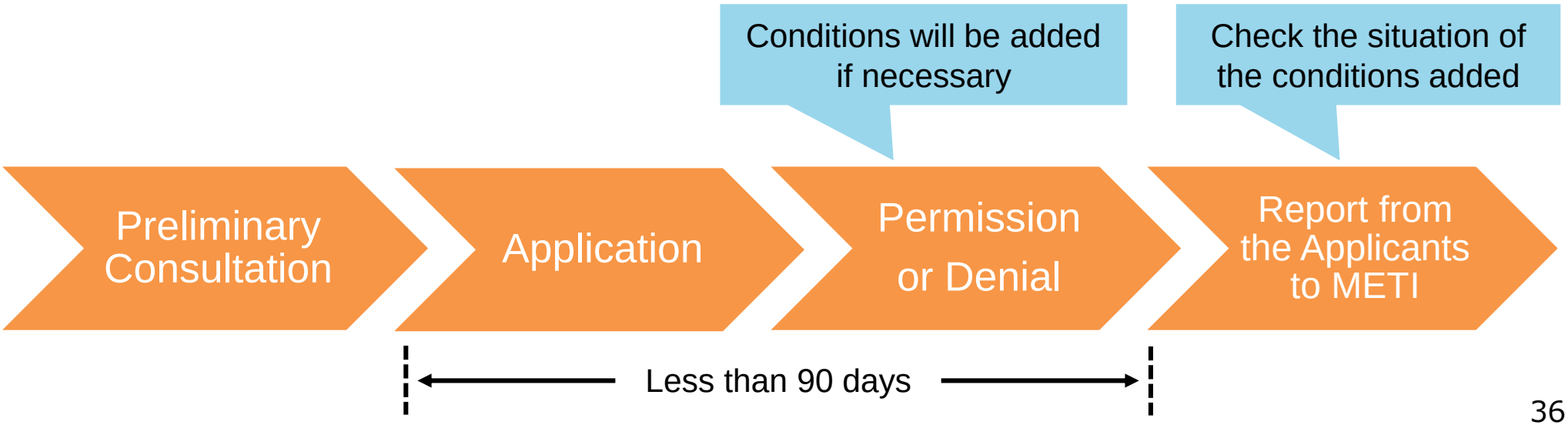
In case exporters have come to know that the items will be used for the development, manufacture, use and/or storage of WMD

(2) METI's Initiative = The "Informed" Condition

The "inform" is given when METI considers that the items in question are/may be intended for WMD.

4. Japan's Security Export Control system (Procedure for Individual License Application)

- Exporter has the responsibility to classify whether an export item is subject to the control list. As a result of the classification, if the item is covered by the control list, the exporter must apply for export license to the Ministry of Economy, Trade and Industry (METI).
- METI examines the appropriateness of the end-use and the end-user of the license application, and decides whether to permit or deny the application. Conditions will be added to export licenses (e.g., post shipment monitoring of items, prior consent in case of re-transfer.) if necessary.



4. Japan's Security Export Control system (Penalties under the Act)

Criminal Penalty

(Individual)

Imprisonment (up to a maximum of 10 years)

Fines (up to a maximum of 30 **million yen** or **five times in value** of the goods)

(Company)

Imprisonment (up to a maximum of 10 years)

Fines (up to a maximum of **1 billion yen** or **five times in value** of the goods)

Publication

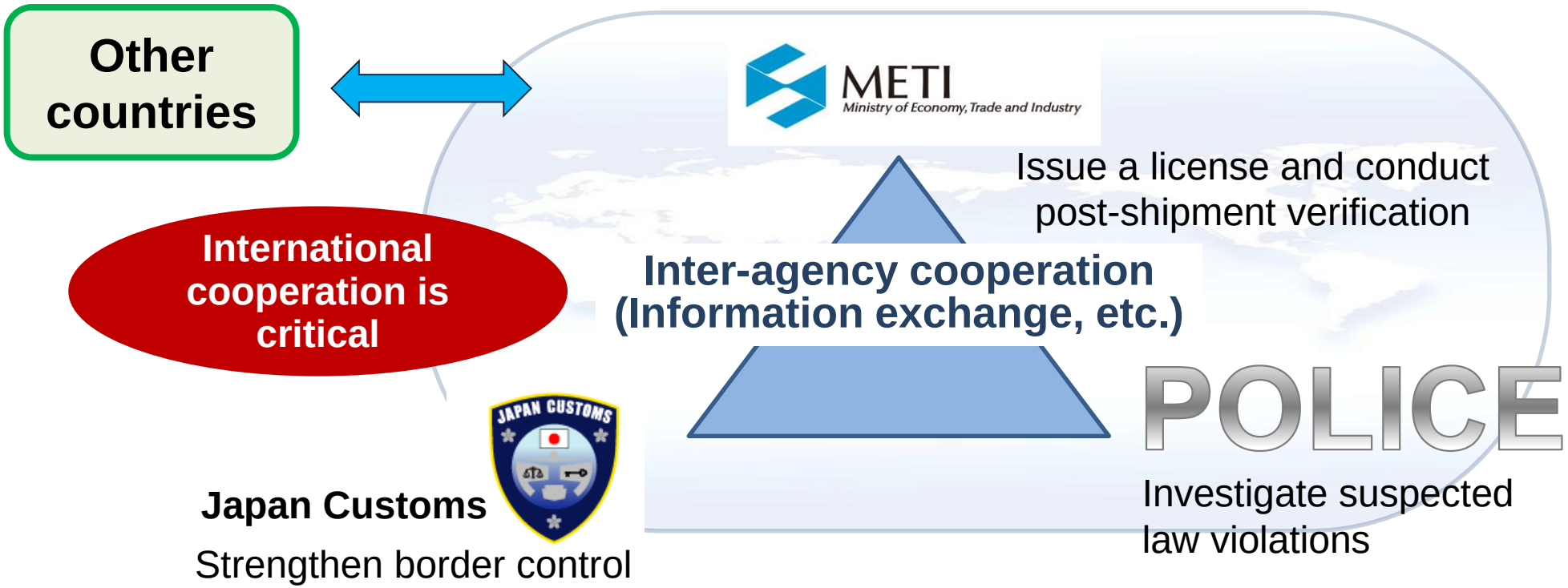
✓ **A warning by METI**, which would be made public on the METI website

Administrative Penalty

✓ **Prohibition of export** (up to a maximum of three years)

4. Japan's Security Export Control system (Interagency Cooperation on enforcement)

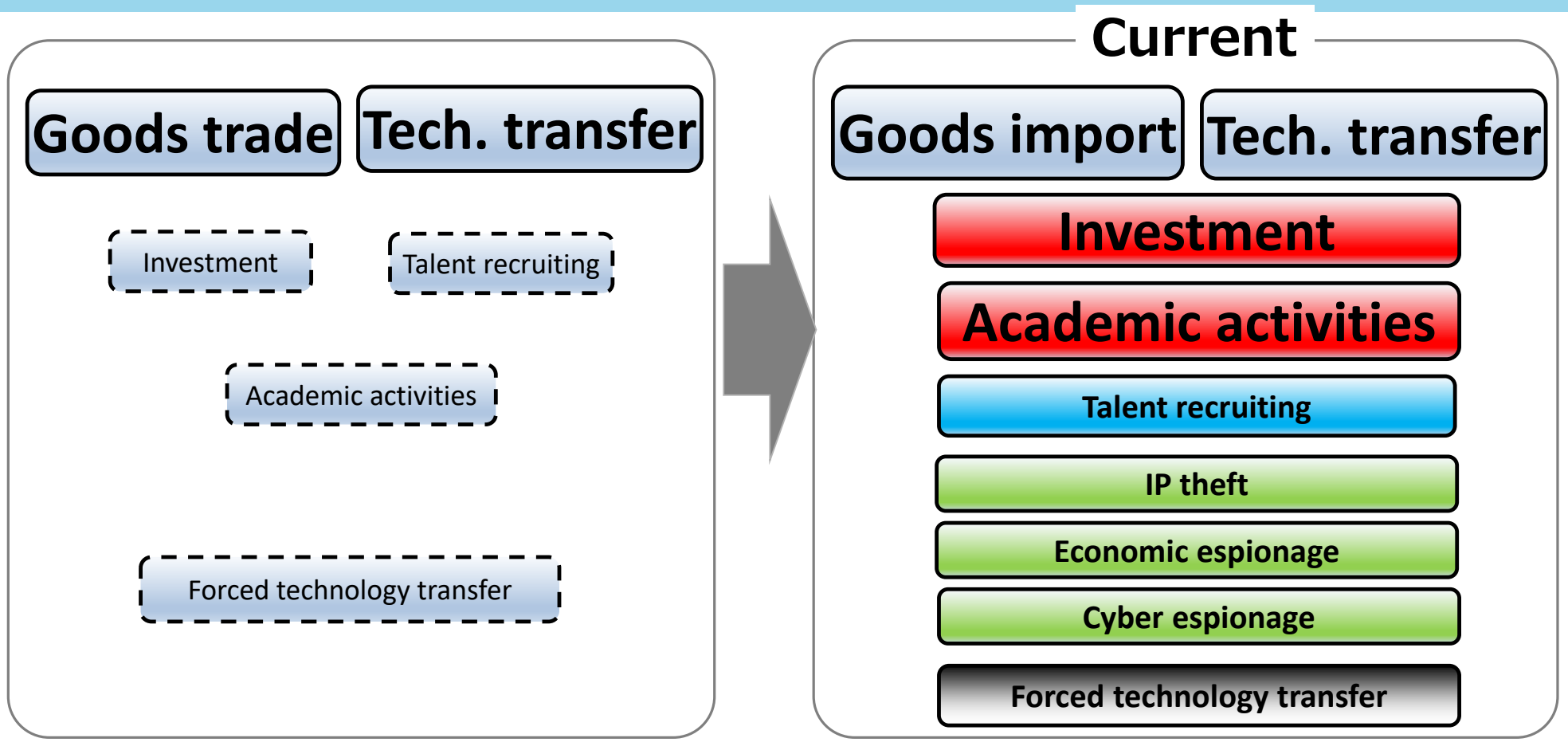
- Recently, there are many cases where entities of concern attempt to procure sensitive items by **circumventing trade**.
- METI is **strengthening inter-agency cooperation** with customs and police authorities for more effective enforcement.
- To strengthen countermeasures against circumvention, **international cooperation is critical**.



Contents

5. Japan's Approach to Protect Critical Technology
(Diversified procurement channels of critical technology)

- Traditionally, export control is a main area of technology control to maintain a competitive defense industrial base.
- Now that **diversified and complex** procurement channels have been observed, a **holistic approach is essential**.



5. Japan's Approach to Protect Critical Technology
(Actions to protect critical technology)

<Precise Analysis>

"KNOW THEM"
- Analysis of technological development in strategic sectors in countries of concern
- Collection of information of entities of concern and analysis of them
(e.g.Front-company, connection with military, acquisition method)

"KNOW OURSELVES"
- Identification of domestic firms/universities, etc. possessing critical technology

<Action at national level>

Technology leakage channels and Japan's counter-measures

Export of goods/ technology transfer

Export Control
(Foreign Exchange and Foreign Trade Act, FEFTA)

M&As

Inward Direct Investment Control
(FEFTA)

Exchange of people

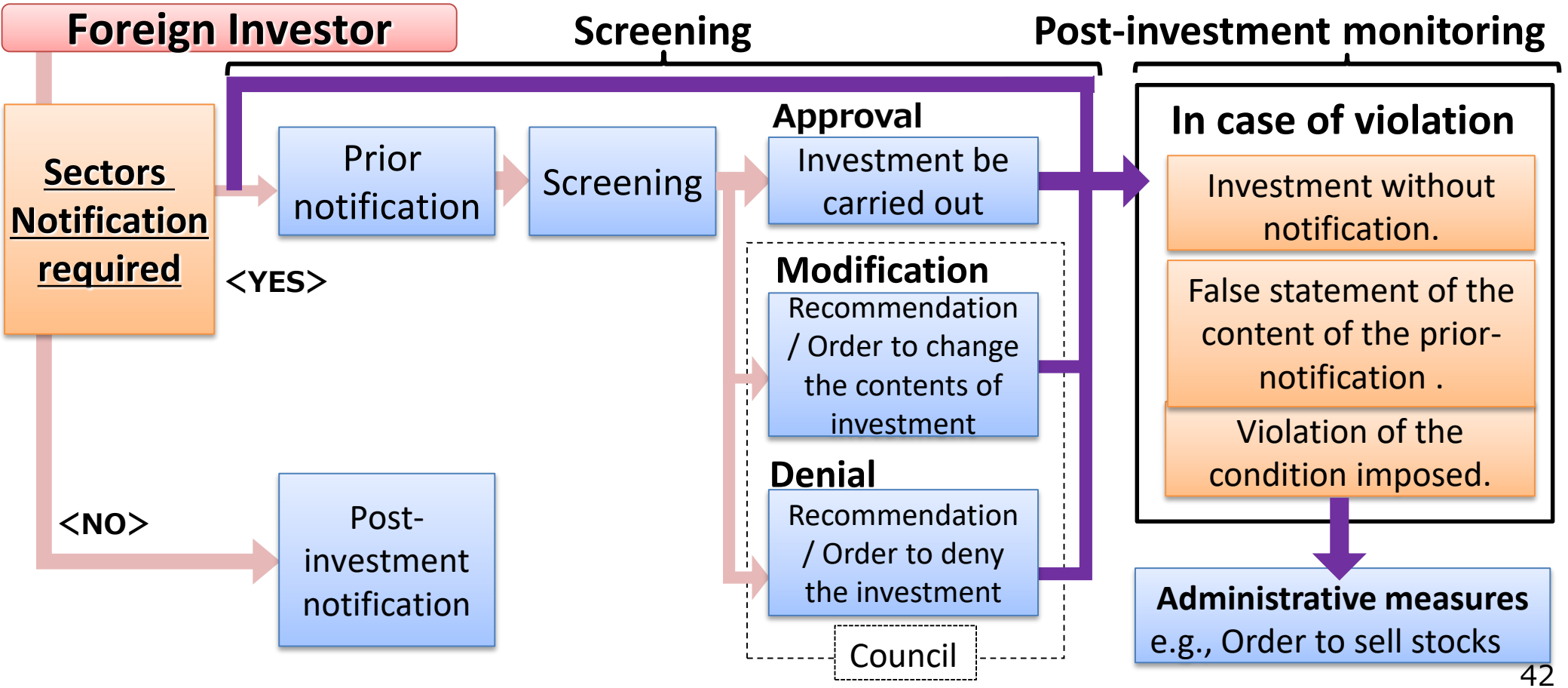
- **ITT control (FEFTA)**
- **Technology Control Guidance especially for university**

Theft of insider information

- **Security of trade secret (Unfair Competition Prevention Act)**
- **Cybersecurity**
- **Technology Information Security Guideline**

5. Japan's Approach to Protect Critical Technology (Inward FDI screening program)

- Foreign Exchange and Foreign Trade Act (FEFTA) is a governing law of both security export control and security investment control.
- Following acquisition are subject to investment screening.
  (1) 10% or more of total shares of a listed company; or
  (2) an unlisted corporation, etc.



5. Japan's Approach to Protect Critical Technology
(Expansion of sectoral coverage of inward FDI screening)

- In May 2019, we expanded sectoral coverage of inward FDI screening to the field of cybersecurity to prevent transfer of critical technology.
- The regulation came into force on 1 August, 2019.

Data processing related equipment and components manufacturing industry

- Integrated circuits
- Semiconductor memory media
- Optical discs and magnetic tapes and discs
- Electronic circuit board
- Wired communications equipment
- Mobile phone and PHS
- Radio communication equipment
- Computer, except personal computer
- Personal computer
- External storages

Data processing software manufacturing industry

- Custom software services
- Embedded software services
- Package software services

Information service industry

- **Regional telecommunications, except wire transmission telephones**(※)
- **Long-distance telecommunications**(※)
- Wire transmission telephones
- **Miscellaneous fixed telecommunications**(※)
- **Mobile telecommunications**(※)
- Data processing services
- **Internet support services**(※)

(※)=expanded scope of the industry

5. Japan's Approach to Protect Critical Technology (Outreach activities for Academia)

- The Comprehensive Strategy on Science, Technology and Innovation, is a national R&D promotion strategy published in June 2018, which states importance of ITT control in academia and strengthening its measures.
- METI has strengthened outreach activities for academia.

METI's Approach (Overview)

Holistic Approach

Specific Approach

Guidance for Academia

- Publicize the Guidance on METI's website (Oct 2017) and send it to all universities through the Ministry of Education

(Ref) http://www.meti.go.jp/policy/anpo/law_document/tutatu/t07sonota/t07sonota_jishukanri03_eng.pdf (English)

E-Learning Contents for Academia, Case Studies

- Release e-learning contents for academia on METI' website (May 2018).

(Ref) http://www.meti.go.jp/policy/anpo/daigaku/el/elindex_e.html (English)

- Case Studies Concerning Security Export Control at Universities and Research Institutions

Establishing Networks

- Seminars targeting administrative staff
- Establish networks not only between government and universities but also among universities in each region
- Establish a network among national research insittutes

Dispatch of Expert Advisers

- Dispatch about 20 expert advisers to assist universities in implementing export control management in accordance with the Guidance

On-site consultation services by METI

- METI visits and consults with university leadership. Since July 2016, METI has visited over 130 universities

5. Japan's Approach to Protect Critical Technology
(Publishing the New Guidance for Academia(Oct. 2017))

METI
Ministry of Economy, Trade and Industry

- METI's Guidance:
  - ✓ Identifies control areas and exemplifies 55 critical research areas that universities should pay particular attention to.
  - ✓ Provides model organizational structures in consideration of actual university situations; suggests efficient management methods for researchers and administrators.
  - ✓ Provides model documents for ICP, Check sheet and Review sheet.

Key Elements of the Guidance

Identify Control Areas

Activity

- Admission and exit of foreign students
- Participation in international conferences
- Collaborative research with other universities
- Visiting fellows from overseas

Critical Research Areas

- Nuclear engineering
- Automatic control, robotics
- Aerospace engineering
- Telecommunication
- Sophisticated materials etc.

Control Methodology

Organization

- Top-down system led by the President
- Establishment of security export control division (establish branch as necessary for more appropriate administration)

Division of Roles

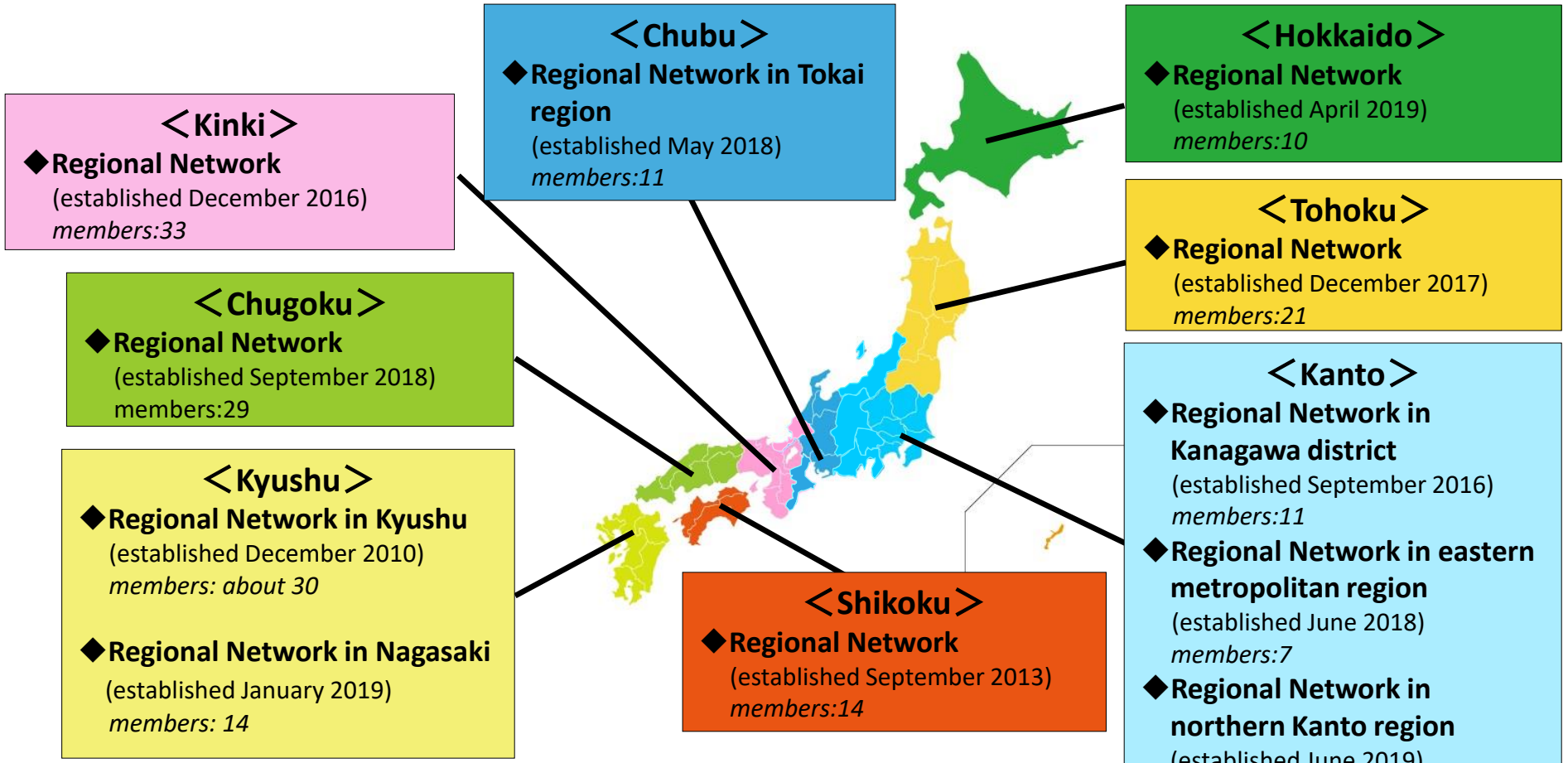
- Each Professor
  - ✓ Screening based on simple check sheet
- Administrative division
  - ✓ Careful review based on review sheet

Model documents

- Internal Compliance Program
  - ✓ Formulate two types according to the size of the university
- Check sheet, Review sheet
  - ✓ Simple "Yes" or "No" format
  - ✓ Check the list for concerned research areas
- Written Pledge

5. Japan's Approach to Protect Critical Technology
(Support establishing regional networks)

- METI supports establishing networks among universities in each region.
- These networks enable university staff to exchange updated information and best practices among universities.



5. Japan's Approach to Protect Critical Technology
(Further actions on ITT control)

- Strengthening of ITT Control on Government – funded projects
  - ITT control by Funding Agency (currently applying to NEDO)

→ Further action?

- Awareness raising through compiling "Near Miss Cases" in universities
  - Compiled to cases and included in the guidance document

(Ref.)Identification of Goods and Technologies to be Transferred Based on Old Laws and Regulations

Content of Misconduct

Researcher X consulted the section in charge of export control in order to confirm whether the technology to be transferred is subject to export control or not.

Researcher X initially determined that it was “not controlled”, but his/her judgement was made according to old laws that were downloaded in the past.

Action’s Taken

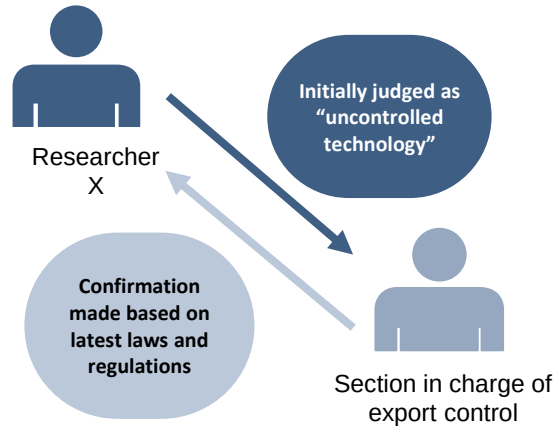
Examination based on the latest laws and regulations were conducted, and accordingly it was determined that the technology was subject to control.

Cause of Misconduct

Judgement based on old laws and regulations.

Classification: Transfer of Technology

Update of Commodity Identification



Measures – Advice

- ✓ To raise awareness of the necessity to download the latest "Cargo and Technology Matrix Table" from the Ministry of Economy, Trade and Industry website when determining the status of goods and technology to be transferred.
- ✓ Information on legal revisions and matrix tables are posted on the Ministry of Economy, Trade and Industry website（http://www.meti.go.jp/policy/anpo/index.html）.

(Ref.)Requests for Sending Items from Foreign Researchers

Content of Misconduct

Professor X was asked by Professor Y from University α in Country A to obtain a sample of a certain item. According to Professor Y regarding the item, "The item is difficult to purchase in Country A, so I'd like you to buy it from the manufacturer in Japan and send it to me." Professor X and Professor Y had a personal relationship where they originally obtained their degrees from the same laboratory at University β and exchanged research information even after graduation.

Professor X noticed that University α was registered on the “Foreign User List”, and contacted the export control section of his/her University.

Action’s Taken

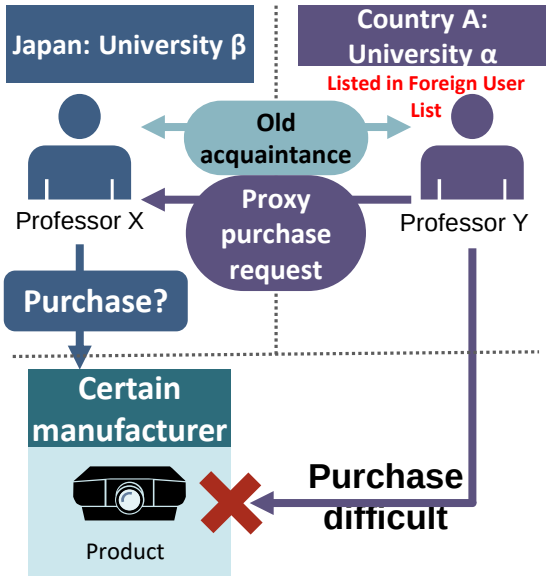
The section in charge of export control advised that this was a case that should be strictly checked from the standpoint of Catch-all Control as well as conducting identification whether goods and technologies are controlled by export laws and regulations. Professor X declined the request after receiving this advice.

Cause of Misconduct

If University α had not been registered on the “Foreign User List”, the case could have been overlooked, resulting in unauthorized export.

Classification: **Export of Cargo**

Obtaining Samples of Items



Measures – Advice

- ✓ Personal relationships after graduation may cause involvement in unintentional unauthorized export.
- ✓ Specifically, awareness raising is necessary that providing samples (export) and exchanging information (transfer of technology) after graduation may be subject to export control laws and regulations.

(Ref.)Determination of Degree of Public Domain Regarding International Conferences

Content of Misconduct

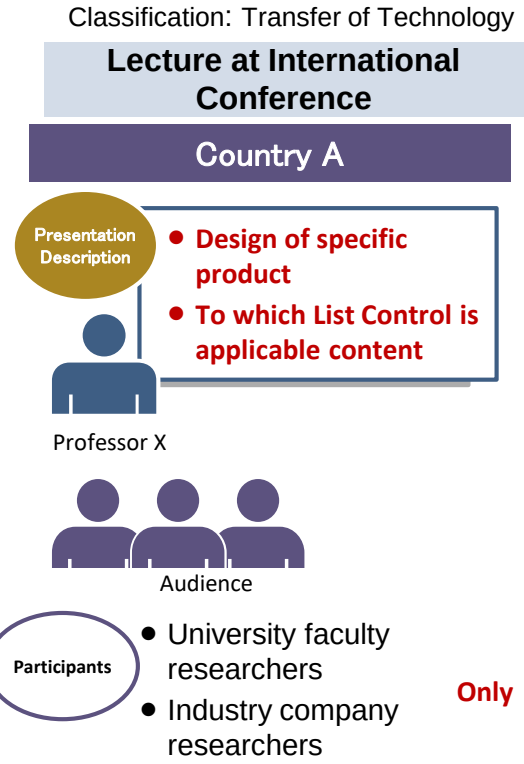
A following inquiry from Professor X was informed to the export control section: “My research results will be presented at an international conference held in Country A. Since this presentation will be a ‘Public Release of Technology’, no measures were especially taken, but would this be a right action to take?’”.
After evaluation of the “Public Release of Technology”, the conditions stated that participants in the international conference were limited to “university faculty researchers” or “industry company researchers”, and the presentation material of Professor X will not be disclosed on web site and these materials were confidential.

Action’s Taken

Based on the fact that confidentiality obligations were imposed, the section in charge of export control determined that it was not a “transaction that provided technology to be made public (public release of technology)”. Additionally, when identification of that material against List Control was conducted, it was found to be a controlled technology.

Cause of Misconduct

Professor X had misunderstood that any presentation was completely regarded as “public release of technology”.



Measures – Advice

- ✓ Correct understanding is essential regarding to which case the exceptions apply.
- ✓ Even for lectures at international conferences, unless "there is a possibility of an undefined number of people obtaining or attending", then the exception of public domain cannot be applied.
- ✓ Even in special cases where exceptions to public domain are applicable, it is necessary to conduct an appropriate examination by the section in charge of export control and not merely rely on professors’ judgement.
- ✓ Even when it can be said that the presentation itself belongs to the public release of technology, if there is a possibility that discussions exceeding the content of the presentation will be conducted with individual researchers after the presentation, it should be kept in mind of points that the exceptions on public domain cannot be applied.

Thank you for your attention.