

Towards Defence Industry Cooperation
between U.K. and Japan
日英防衛産業協力に向けて

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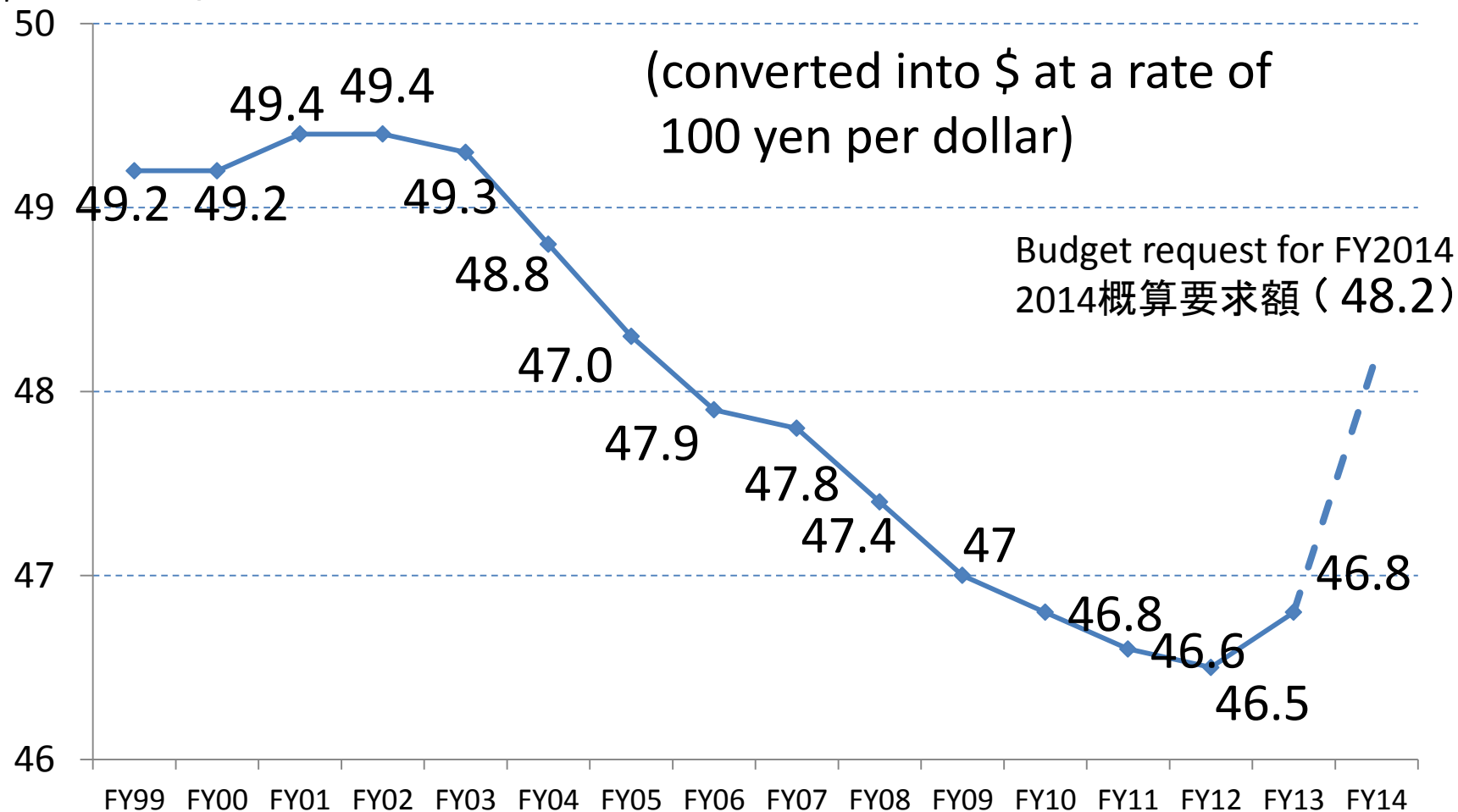
The current status of Japanese Defence Budget

日本の防衛予算の現状

Defence-Related Expenditures of Japan

日本の防衛関係費

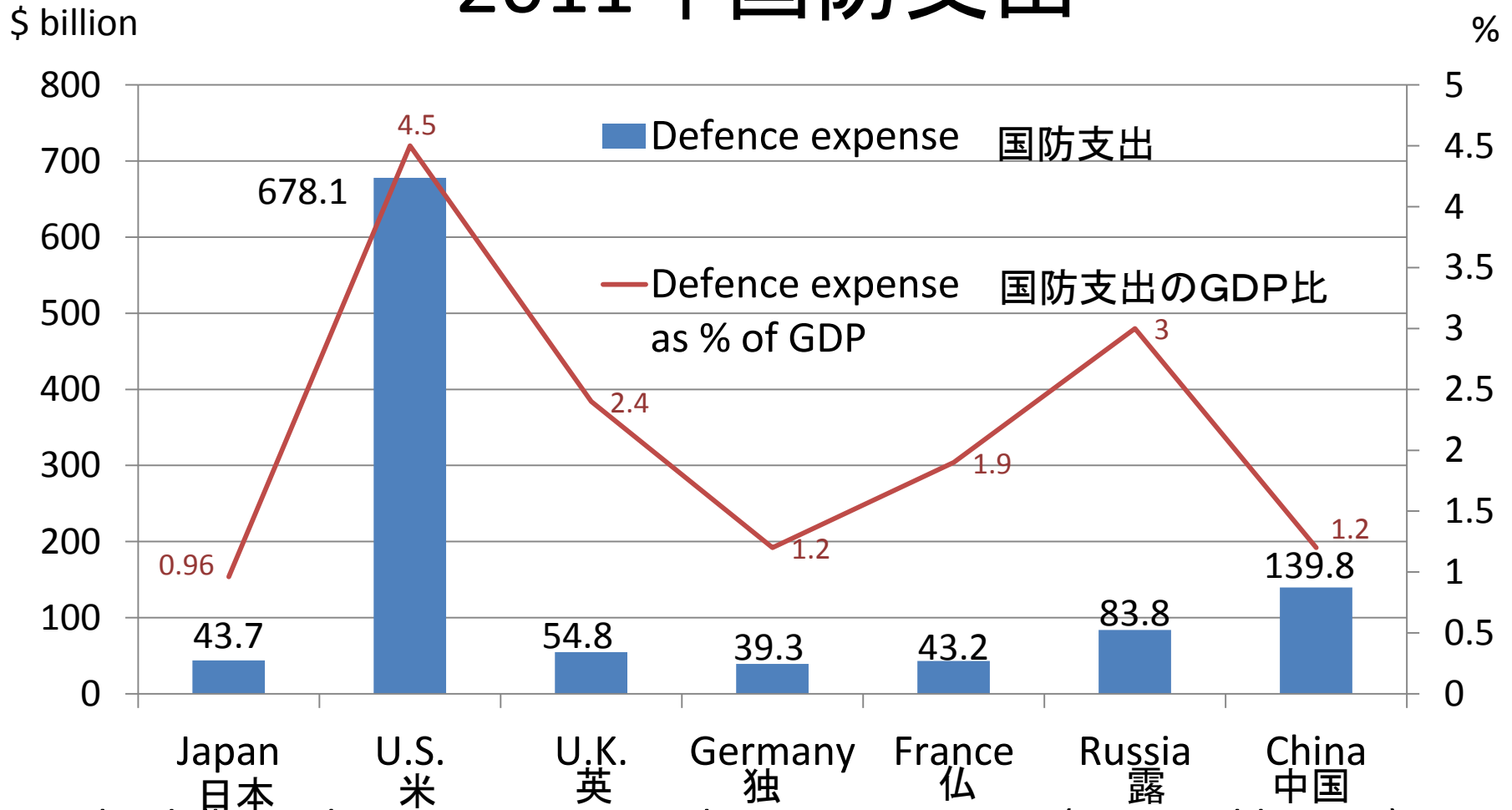
\$ billion (10億ドル)



SOURCE: MOD website (<http://www.mod.go.jp/e/index.html>)

Defence - Expenditures in 2011

2011年国防支出



The dollar exchange rate uses purchasing power parity(OECD publication).

“1 U.S. dollar=106.765082 yen=0.678797 pound=0.803298 euro(Germany)=0.865689 euro(France)=18.102078 ruble=4.173 yuan”

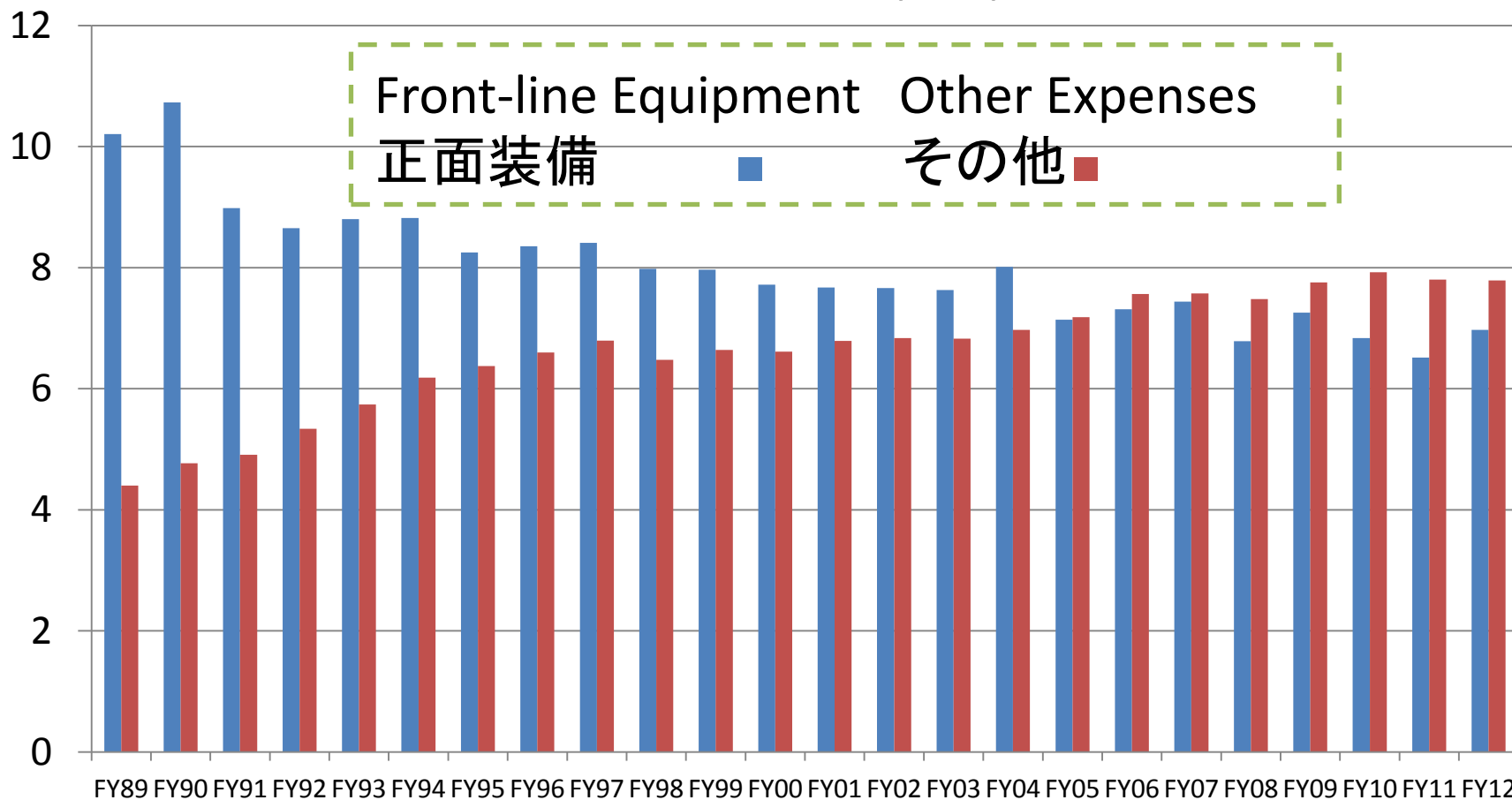
SOURCE: MOD website (<http://www.mod.go.jp/e/index.html>)

Contract Amount of Front-line Equipment

正面装備契約額

(converted into \$ at a rate of
100 yen per dollar)

\$ billion



Japanese Defence Equipment and its Manufacturers

日本の防衛装備品・メーカー

Japanese Major Defence Equipment 主要裝備品

types	Equipment					
<p>Indigenous Development & Production</p> <p>国産</p>	 <p>Patrol aircraft</p>	 <p>Cargo aircraft</p>	 <p>Destroyer (Aegis system: FMS)</p>			
<p>Licensed Production / Joint development & production</p> <p>ライセンス生産・共同開発生産</p>	<p>VLS</p> 	<p>Missile</p> 	 <p>Helicopter</p>	<p>AIP System (Submarine)</p> 	<p>Jet Fighter</p>  <p>marine propulsion module</p>  <p>BMD SM3</p> 	
<p>Import</p> <p>輸入</p>	<p>Missile</p> 	<p>LCAC</p> 	<p>Utility Aircraft</p> 	<p>Trainer Aircraft</p> 	<p>AWACS</p> 	<p>Tanker</p> 

Source; Defence of Japan 2013

Japanese Major Defence Equipment 主要装備品 (Indigenous Development & Production -1 国産-1)



Aegis Destroyer "Kongo"

Standard displacement; 7,250t
Speed; 30kt
Length; 161m



Destroyer "Hyuga"

Standard displacement; 13,950t
Speed; 30kt
Length; 197m

Submarine "Soryu"

Standard displacement;
2,950t
Speed; 20kt
Length; 84m



**AIP System
(Licensed production)**



Type 10

Main Battle Tank

Weight; 44t,
4-stroke cycle V8
Diesel engine,
Main armament;
120mm canon

Japanese Major Defence Equipment 主要装備品 (Indigenous Development & Production -2 国産-2)



Type 88
Surface-to-Ship
Missile



Type 03
Medium Range
Surface-to-Air Missile



Torpedo



P-1 Patrol Aircraft

C-2 Cargo Aircraft



US-2 Amphibian Aircraft

Japanese Major Defence Equipment 主要装備品 (Joint Development & Production 共同開発・生産)

JAPAN-U.S. Cooperative Development of Advanced Interceptors for BMD



F-2 Fighter;

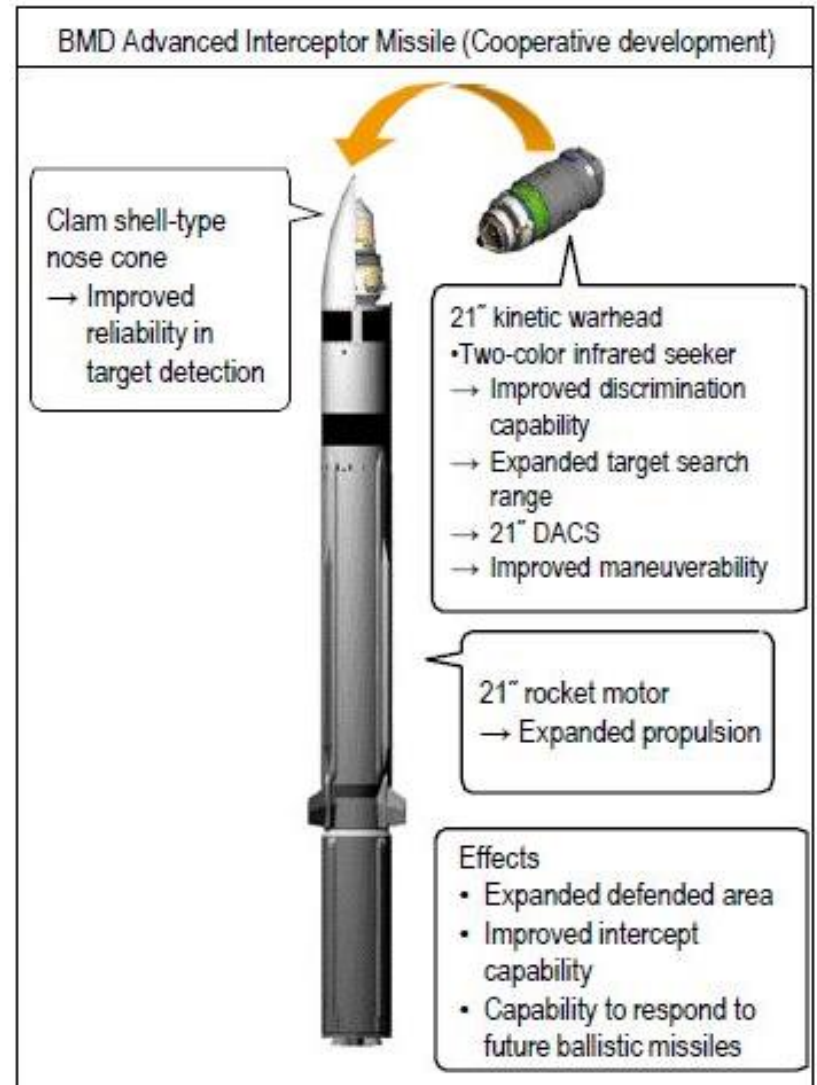
JAPAN-U.S. Cooperative Development

Max take-off weight; 22ton

Max Speed; Mach2

Length; 15.5m

Armament; 20 mm Gun, AAM-5 × 4,
ASM-2 × 4



Japanese defence manufactures 防衛関係メーカー

	Manufacturer	Contracts	Contract value (billions yen)	Share (%)	Main products
1	Mitsubishi Heavy Industries 三菱重工	233	289	19.6	Fighter Aircraft, Helicopter, Missile, Destroyer, Submarine, Tank, Torpedo
2	Kawasaki Heavy Industries 川崎重工	140	210	14.3	Cargo Aircraft, Patrol Aircraft, Helicopter, Submarine, Missile
3	Mitsubishi Electric 三菱電機	121	115	7.8	Missile, Radar Set, Avionics
4	NEC 日本電気	301	115	7.8	Multipurpose Radio Machine, Communication System
5	Fujitsu 富士通	169	53	3.6	Information Communication System
6	Toshiba 東芝	73	50	3.4	Missile, Avionics, Command & Control System
7	IHI	37	35	2.4	Aircraft Engines, Marine Propulsion System
8	Komatsu 小松製作所	58	33	2.3	High-Explosive Projectile, Light Armored Vehicle, Shell
9	JX日鉱日石エネルギー	143	27	1.8	Aircraft Fuel
10	Hitachi 日立製作所	88	26	1.7	Information Processing Device, Underwater Mine Detector, Avionics

Strength of Japanese and European
Defence Industry,
Issues of Defence Industry Cooperation

日欧防衛産業の強み、
防衛産業協力の課題

Strength of Japanese and European Defence Industry

日欧防衛産業の強み

Japanese strength;

エレクトロニクス、先進材料、精密加工、自動化、納期遵守、ものづくり力

- State of the art technology founded on advanced civilian technology such as electronics (sensor, device, semiconductor), advanced materials (composite materials), precision machining and automation etc.
- Strict observance of delivery date and manufacturing excellence



European strength;

高度先進技術、実戦で実証された装備品、国際共同開発・生産の豊富な経験

- Advanced technologies and “combat-proven” equipment
- Rich experiences in international joint development and production

Issues of Defence Industry Cooperation

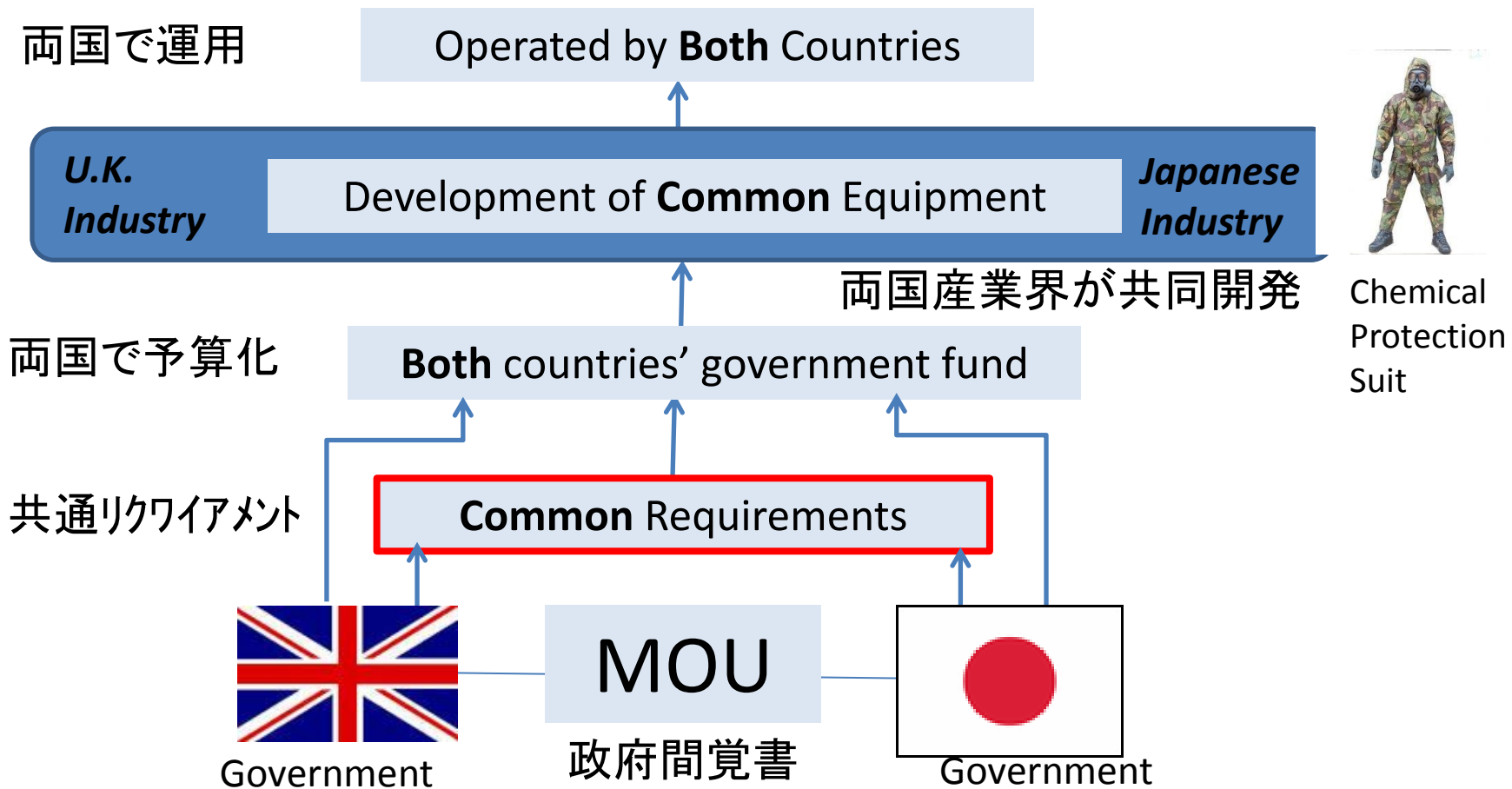
防衛産業協力の課題

- 1. Different policies towards exports of defence equipment**
U.K.; Proactive vs. Japan; Restrained ?
防衛装備品輸出方針の違い 英国;積極的 対 日本;抑制的?
- 2. Differences of procurement, contract and budget system between U.K. And Japan**日英の調達、契約、予算制度の違い
U.K.; 10-year Equipment plan 10年装備調達計画(英)
Japan; Midterm defense buildup plan(5 years) 中期防(日)
- 3. Detailed Institution for Information Security**
情報保護に関する具体的制度設定

Two approaches of Cooperation

防衛産業協力の
2つのアプローチ

Model 1: Government-Government Cooperation 政府レベル協力



Model 2: Industry-Industry Cooperation

産業レベル協力

運用

運用

Operated by U.K. Government

Operated by Japanese Government

**U.K.
Industry**

*Development of
Equipment*

*Development of
Equipment*

**Jap.
Industry**



予算 Fund

Requirements

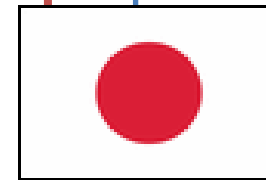
リクエスト



Fund 予算

Requirements

リクエスト



Supply of Sub-components

部品供給



Evaluation of cost, reliability and
developing period

コスト、信頼性、開発期間を評価

Cooperation with Europe

欧州との防衛産業協力

Japan-Europe Defence Industry Forum

日欧防衛産業フォーラム

Continuous dialogues for building the Relationship and Networking
対話を通じて関係構築とネットワーク作り

(November 22nd 2012 in Tokyo)

“EU-Japan Common challenges, shared solution seminar”

Hosted by EBC(European Business Council)

(March 12th 2013 in Tokyo)

“Japan-Europe Defence Industry Forum”

Hosted by METI

(June 19th 2013 in Paris Air Show)

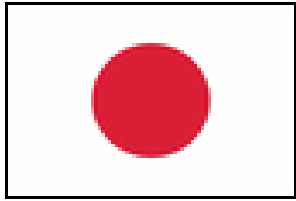
“Japan-Europe Defence Industry Forum”

Hosted by GFAS with the support of METI at Paris Air Show

Industry Dialogue with U.K.

英国との産業間対話

Government



Japanese Government

*-Defense Equipment
Cooperation Framework
-Information Security
Agreement
(July 4th 2013)*



U.K. Government

Industry

*ADS: UK Aerospace, Defence, Security and Space Industries

Coordination meeting between SJAC and ADS* in Sept. 2013

-Discussed the way to promote Cooperation

9月に防衛産業間で協力の進め方につき協議

Defence Industry Dialogue in Farnborough Air Show in June 2014

ファンボローエアショーで防衛産業フォーラム開催を計画

-Presentation of Industrial Capabilities in both countries and
Networking 両国の防衛技術力の検証、ネットワーキング

Conclusion

結論

Proposals for Defence Industry Cooperation

防衛産業協力のための提言

- 1. Amendment to 3Ps on Arms Export which enables real industry level cooperation is necessary.**
武器輸出3原則の見直し
- 2. Coordination of Differences in policy/governmental system and establishment of government organization to promote industry cooperation**
政策・制度面の違いの調整と産業協力推進機関設置
- 3. Clarification of industrial Capability in both countries**
両国防衛産業の技術力検証