

# **DEFENCE PRODUCTION, SALES AND PROCUREMENT: INTERNATIONAL BEST PRACTICES:**

**DEFENCE INDUSTRIAL COOPERATION WITH  
FOREIGN COUNTRIES**

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GENERAL**

# DEFENCE PRODUCTION, SALES AND PROCUREMENT: INTERNATIONAL BEST PRACTICES

- \* **Adrian Kendry experience: 1990s Crowe Chair in the Defence Industrial Base and working with AIAA (LM, NG, B, 3M, BAE, RR) and NATO**
- \* **Building Integrity programme and defence industry and procurement: EDA, European Defence Industry Association (ASD), BI Conference and the defence sector**
- \* **Trends in international defence spending and procurement: assessing effectiveness in defence procurement in creating capabilities**
- \* **Meeting the challenges of disruptive technologies and upgrading legacy systems**
- \* **Meeting the challenges of short term urgent requirements (0-3 years), medium term needs (3-8 years), longer term modernisation of the defence industrial base (8-15 years)**

# THE CHALLENGES CONFRONTING UKRAINE'S DEFENCE PROCUREMENT

- \* *“The regional security environment particularly affects the demand for military capital equipment, as well as maintenance and life-cycle management of existing equipment*
- \* *Understanding the context in which Ukraine defence procurement reform would occur is essential. Military organizational structures globally were primarily designed and built in a period that had considerably less complexity*
- \* *In 2016, the velocity of technological change and the swiftly evolving international strategic environment has resulted in defence establishments scrambling to keep pace with transformational change*
- \* *Under these circumstances, a principally static defence establishment can lead to inadequate or inefficient organizational practices and procedures”*
- \* *(Dr. Ross Fetterley)*

# **RUSSIAN DEFENCE PROCUREMENT AND POLICY: UKRAINIAN ANALYSIS**

- \* On partial information, the budget of the Russian Federation provided 2.501 trillion rubles for military funding in 2014. In 2015 the sum went up to 3.078 trillion rubles. In 2016, the planned defense was estimated at 3.145 trillion rubles**
- \* Current procurement pattern of the Russian Ministry of Defense demonstrates Russia's urge for more aggressive presence at sea and in the air, the priority is given to navy, air force and electronic warfare and intelligence**
- \* Significant funds are allocated to the means of increasing military and political pressure on neighboring countries and blocks (mobility of strategic nuclear weapons, sea component of the nuclear triad)**

# **RUSSIAN DEFENCE PROCUREMENT AND POLICY**

- \* Improving the efficiency and adaptability of conventional weapons through the use of battle management systems and support for ground troops**
- \* Probably insufficient funds for a large-scale rearmament of ground forces**
- \* Priority is improving the efficiency of existing combat platforms**
- \* Utilization of more advanced associated technology (command and control and electronic warfare systems, modern accurate tactical and guided missiles, weapon stations)**
- \* Bypassing sanctions through “front companies” buying dual-use goods**

# DEFENCE PRODUCTION, SALES AND PROCUREMENT: INTERNATIONAL BEST PRACTICES

- \* **What international experiences in accountable, transparent and cost effective defence procurement are able to guide Ukraine at the beginning of an uncertain political budgetary and economic year?**
- \* **What are the key lessons learned from international defence procurement? Trends in international defence spending and procurement: assessing effectiveness in defence procurement in creating capabilities**
- \* **UK, US, China, India, France, Germany**
- \* **Current Reform Priorities**
- \* **Weaknesses in oversight structures and possible solutions**
- \* **Capacity development needs and best practice**

# DEFENCE PRODUCTION, SALES AND PROCUREMENT: INTERNATIONAL BEST PRACTICES

- \* **Transparency and meeting the challenges of short term urgent requirements (0-3 years), medium term needs (3-8 years), longer term modernisation of the defence industrial base (8-15 years)**
- \* **Oversight Monitoring Compliance and Penalties**
- \* **National priorities and maintaining integrity and reducing corruption**
- \* **Defence Production, Sales and Procurement: International Best Practices**
- \* **What international experience in accountable, transparent and cost effective defence procurement is able to guide Ukraine at the beginning of an uncertain political budgetary and economic Year?**

# DEFENCE PRODUCTION, SALES AND PROCUREMENT: INTERNATIONAL BEST PRACTICES

- \* **AK and Ukraine**
- \* **Ukraine JWGES 2012. UKROBORONPROM management of defence sector and budgetary, delivery, technological and DIB management challenges.**
- \* **AK and Building Integrity: The Defense Acquisition Process US AIAA and EU ASD and EDA**
- \* **Building Integrity programme and defence industry and procurement: EDA, European Defence Industry Association, BI Conference and the defence sector**
- \*
- \* **Global defence spending and procurement:**
- \* **Accountability and Meeting the challenges of disruptive technologies and upgrading legacy systems**



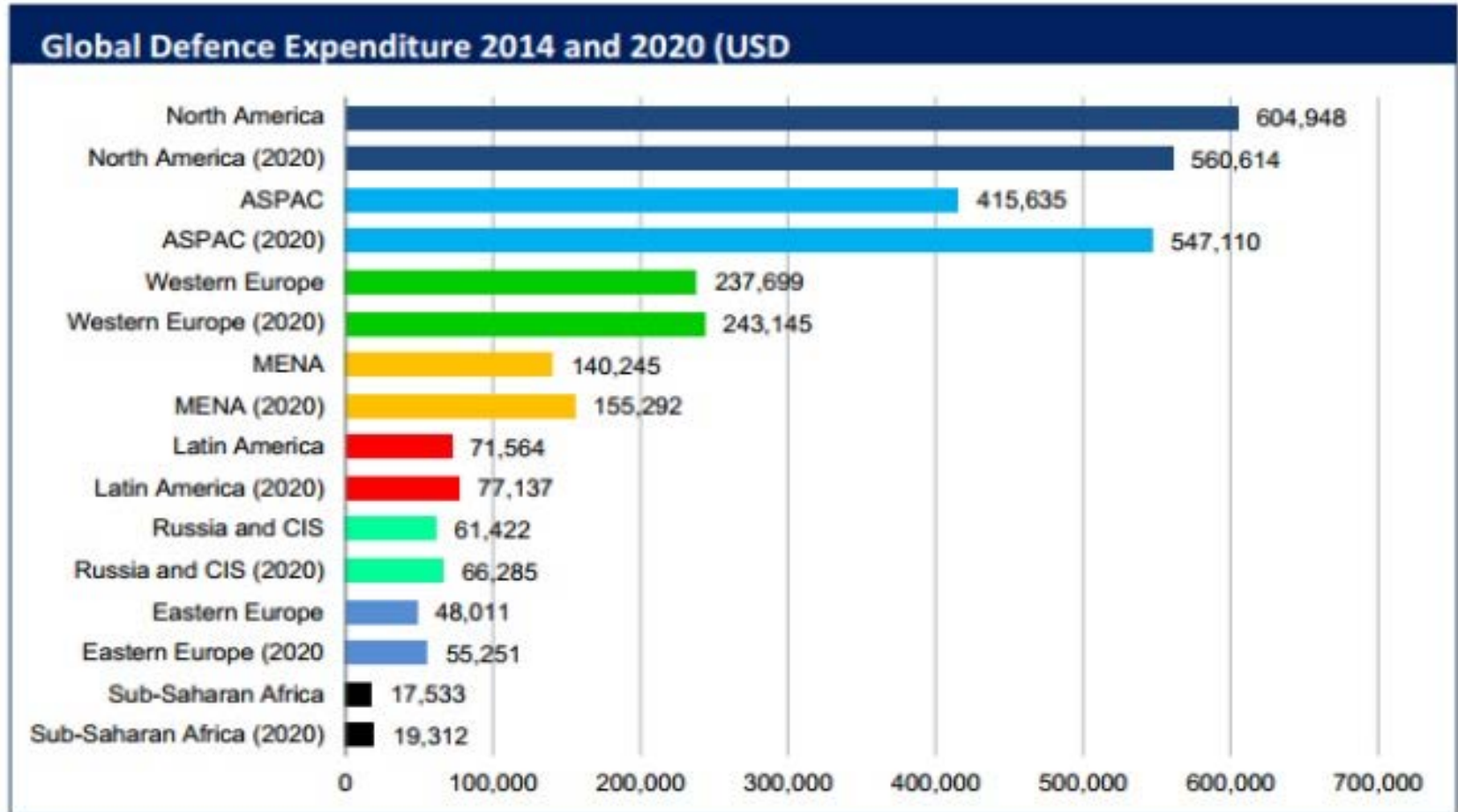
# **PRINCIPLES OF DEFENCE ACQUISITION: THE NAVAL POSTGRADUATE SCHOOL MONTEREY CALIFORNIA**

- \* Defense Procurement & Contracting Overview**
- \* Legal Aspects of Contracting (Contract Law, Formation, and Interpretation)**
- \* Transparency, Fraud & Ethics**
- \* Acquisition Planning**
- \* Competition (International Competitive Bidding through Directed Single Sourcing)**
- \* Contracting for Services**
- \* Outsourcing**
- \* Supplier Source Selection**
- \* Foreign Military Sales / Foreign Military Financing and Offsets**
- \* Contract Management**



# GLOBAL DEFENCE SPENDING

# GLOBAL DEFENCE SPENDING 2014 AND 2020



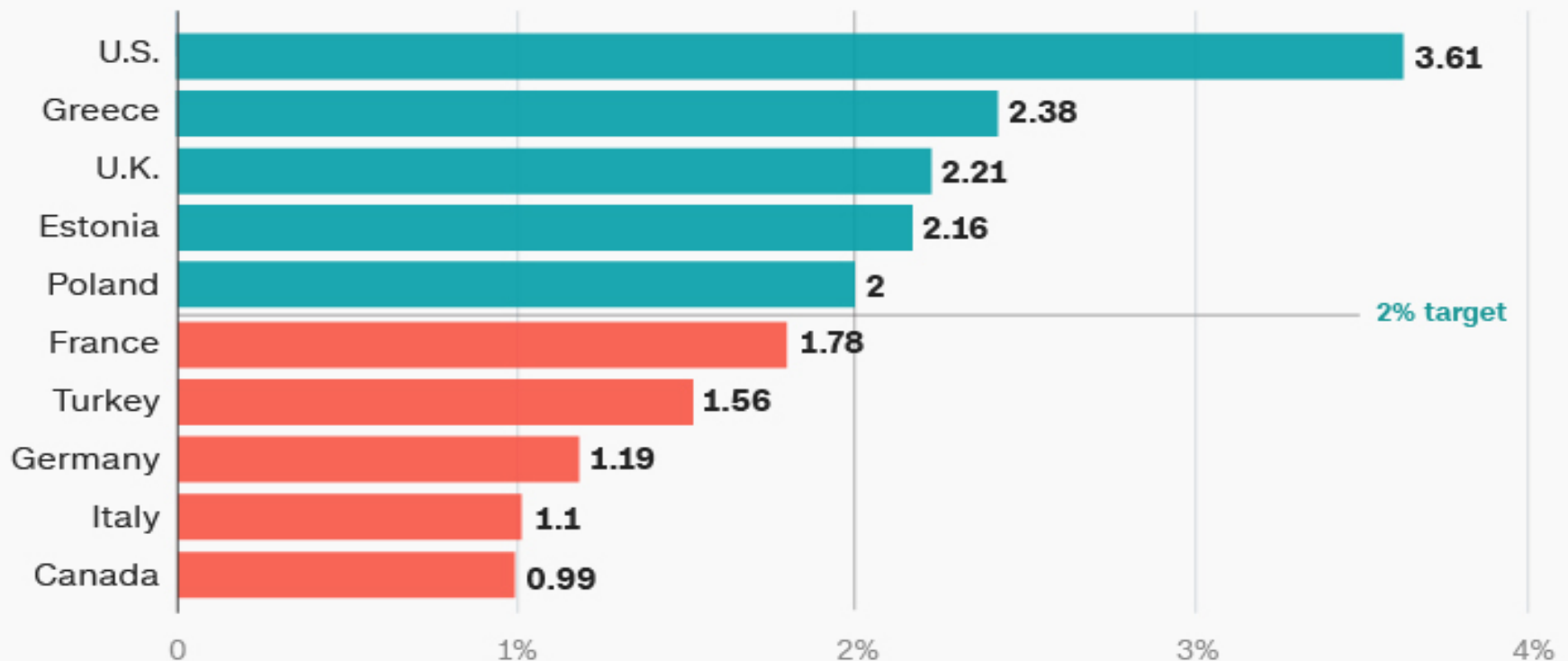
# TRENDS IN INTERNATIONAL DEFENCE SPENDING: NATO AND THE REST OF THE WORLD

## DEFENCE SPENDING 2013 AND 2014, BILLIONS \$ CURRENT EXCHANGE RATES

	2014	2015	% CHANGE
USA	762.9	744.9	-2.36
CHINA	130	145	11.5
JAPAN	40	42.8	7
RUSSIA	62	77	24
INDIA	36.1	40	10.8
UK	55	54	-1.8
FRANCE	40.9	41.2	.7
GERMANY	44.3	41.7	-5.86
TURKEY	20.6	23.9	16

# DEFENCE SPENDING AS % GDP

Spending as percentage of GDP:



SOURCE: NATO

# EUROPEAN UNION GLOBAL STRATEGY ON SECURITY AND DEFENCE

- \* *“While insisting on the undisputed fact that NATO remains the primary framework for most Member States, the Strategy underscores that the EU needs to be strengthened as a “security community: European security and defence efforts should enable the EU to act autonomously while also contributing to and undertaking actions in cooperation with NATO”*
- \* *(Federica Mogherini, November 2016)*

# EUROPEAN UNION GLOBAL STRATEGY ON DEFENCE AND SECURITY

- \* For Europe to achieve strategic autonomy and become a security provider capable of responding to external crises and keeping its territory and citizens safe, Member States need to have at their disposal “all major high- end military capabilities and equipment”, as well as the technological and industrial means to acquire and sustain such capabilities*
- \* “This implies full-spectrum land, air, space and maritime capabilities, including strategic enablers”*

# EUROPEAN UNION GLOBAL STRATEGY ON DEFENCE AND SECURITY

- \* *Europeans must also improve the monitoring and control of flows which have security implications*
- \* *This requires investing in Intelligence, Surveillance and Reconnaissance, including Remotely Piloted Aircraft Systems (RPAS, or drones), satellite communication*





# NATO DEFENCE SPENDING

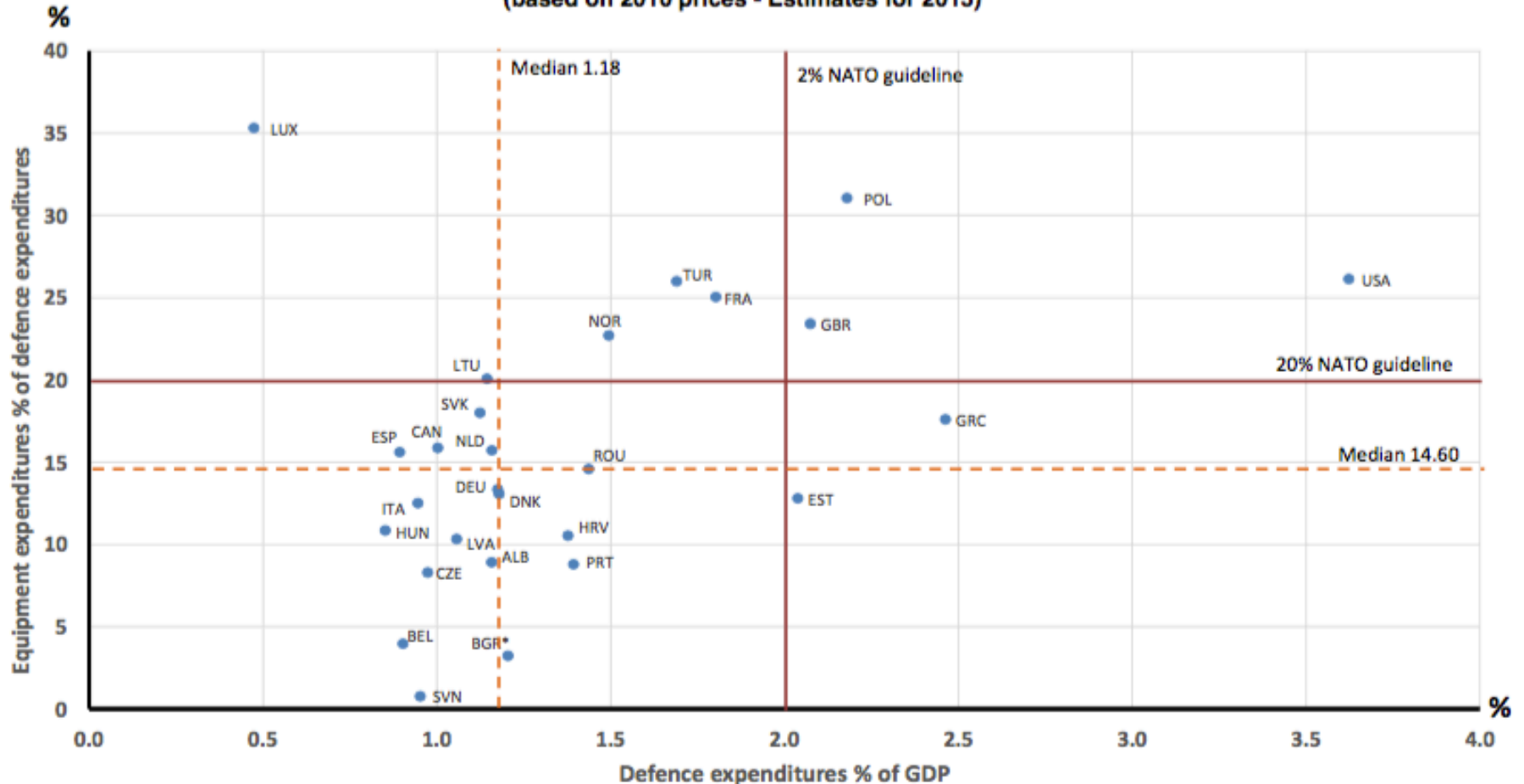
# NATO DEFENCE EXPENDITURES % GDP

Table 3. Defence expenditures as a percentage of gross domestic product and annual year change  
(based on 2010 prices)

Country	2008	2009	2010	2011	2012	2013	2014	2015 e
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>As a percentage of gross domestic product</b>								
Albania	//	1.52	1.56	1.53	1.49	1.41	1.35	1.16
Belgium	1.20	1.16	1.08	1.05	1.05	1.01	0.97	0.90
Bulgaria (a)	2.13	1.75	1.67	1.33	1.35	1.46	1.32	1.20
Croatia	//	1.62	1.54	1.60	1.53	1.47	1.41	1.38
Czech Republic	1.31	1.52	1.29	1.07	1.06	1.03	0.96	0.97
Denmark	1.36	1.34	1.41	1.30	1.35	1.24	1.17	1.18
Estonia	1.78	1.79	1.70	1.68	1.89	1.90	1.93	2.04
France (b)	2.27	2.02	1.96	1.87	1.87	1.86	1.84	1.80
Germany	1.28	1.39	1.35	1.28	1.31	1.23	1.19	1.18
Greece	2.85	3.08	2.63	2.37	2.26	2.19	2.20	2.46
Hungary	1.21	1.14	1.04	1.05	1.04	0.95	0.87	0.85
Italy	1.43	1.42	1.35	1.30	1.24	1.20	1.09	0.95
Latvia	1.52	1.21	1.06	1.02	0.89	0.93	0.94	1.06
Lithuania	1.11	1.07	0.88	0.79	0.76	0.76	0.88	1.14
Luxembourg	0.39	0.40	0.47	0.39	0.38	0.38	0.39	0.47
Netherlands	1.35	1.42	1.34	1.26	1.23	1.16	1.15	1.16
Norway (c)	1.46	1.54	1.52	1.51	1.47	1.49	1.52	1.49
Poland	1.61	1.71	1.77	1.72	1.74	1.72	1.85	2.18
Portugal	1.42	1.53	1.49	1.49	1.41	1.44	1.30	1.39
Romania	1.44	1.33	1.24	1.28	1.22	1.28	1.35	1.44
Slovak Republic	1.46	1.52	1.27	1.09	1.10	0.99	0.99	1.12
Slovenia	1.49	1.59	1.61	1.30	1.18	1.06	0.98	0.95
Spain	1.14	1.13	1.03	0.94	1.04	0.92	0.91	0.89
Turkey	1.97	2.06	1.93	1.76	1.76	1.75	1.70	1.69
United Kingdom	2.44	2.51	2.51	2.42	2.20	2.30	2.20	2.07
<b>NATO - Europe *</b>	<b>1.69</b>	<b>1.70</b>	<b>1.64</b>	<b>1.56</b>	<b>1.53</b>	<b>1.51</b>	<b>1.47</b>	<b>1.43</b>
Canada	1.28	1.39	1.16	1.23	1.09	0.99	1.02	1.00
United States	5.04	5.32	4.81	4.77	4.42	4.09	3.79	3.62
<b>North America</b>	<b>4.67</b>	<b>4.94</b>	<b>4.46</b>	<b>4.42</b>	<b>4.09</b>	<b>3.78</b>	<b>3.51</b>	<b>3.37</b>
<b>NATO - Total *</b>	<b>3.16</b>	<b>3.31</b>	<b>3.04</b>	<b>2.98</b>	<b>2.82</b>	<b>2.66</b>	<b>2.51</b>	<b>2.42</b>

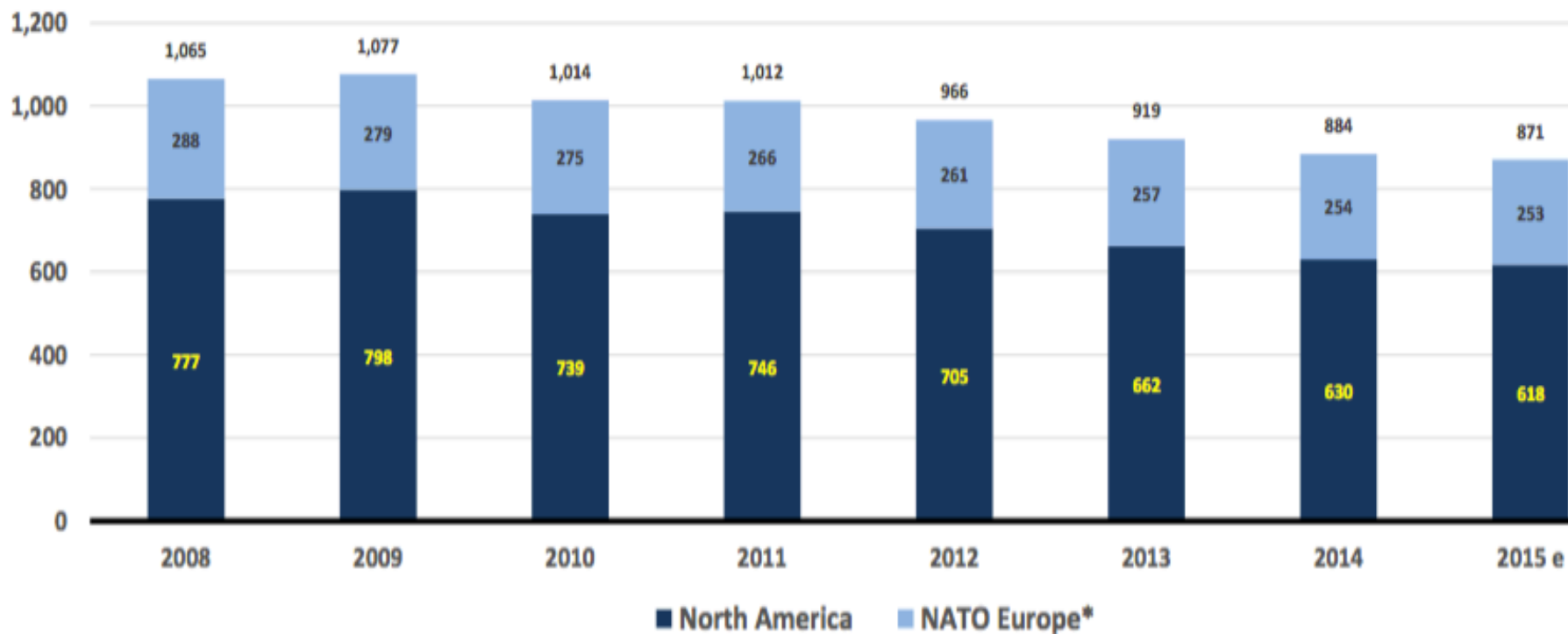
# THE NATO 2% AND 20% COMMITMENTS

Graph 5 : Defence expenditures as % of GDP versus equipment expenditures as % of defence expenditures (based on 2010 prices - Estimates for 2015)



# NATO DEFENCE EXPENDITURE 2008-2015

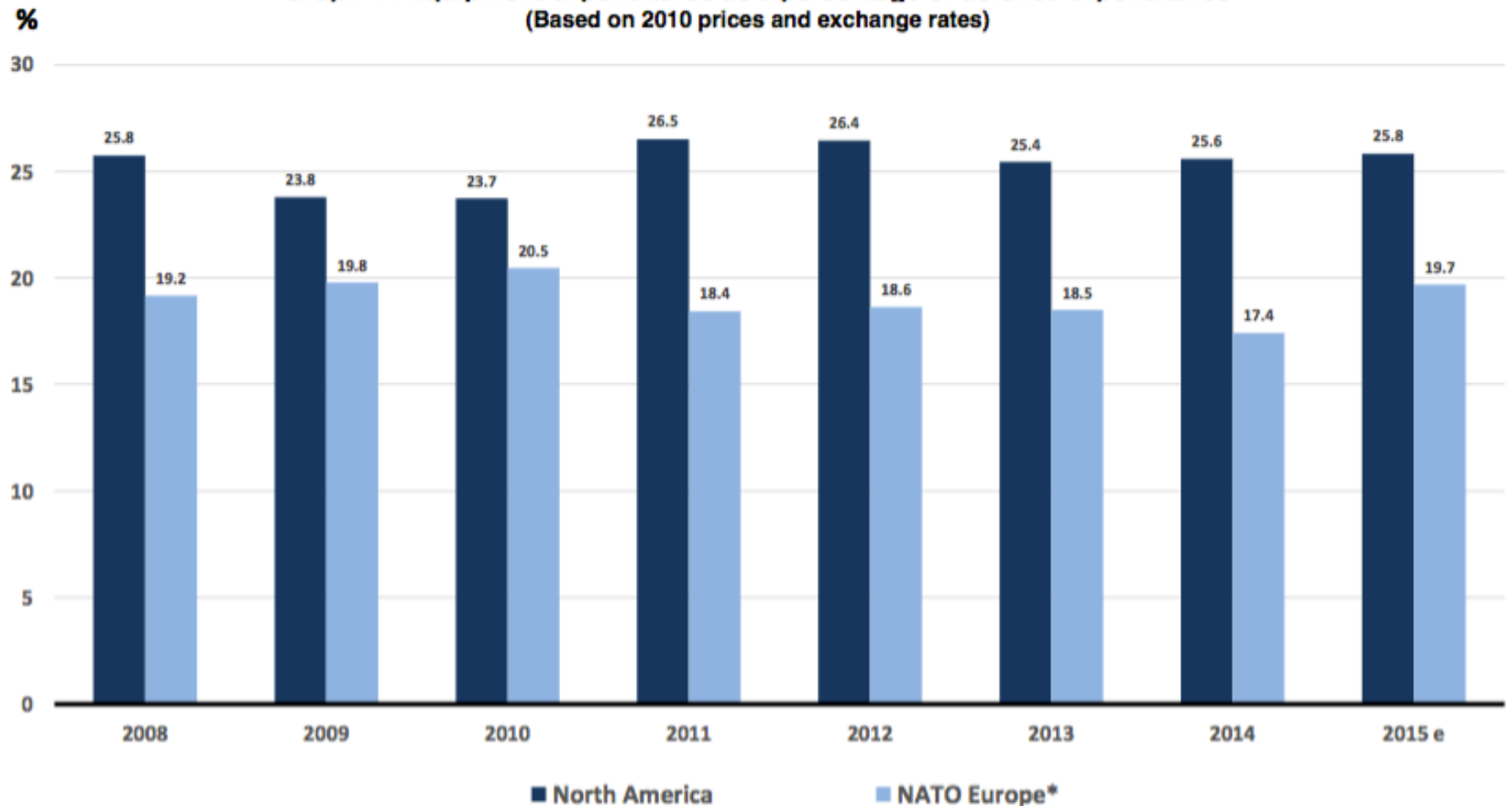
Graph 1 : Defence expenditures  
(Billion 2010 US dollars)



Graph 2 : Defence expenditures as a percentage of gross domestic product

# NATO EQUIPMENT EXPENDITURE 2008-2015

**Graph 4 : Equipment expenditures as a percentage of defence expenditures**  
(Based on 2010 prices and exchange rates)



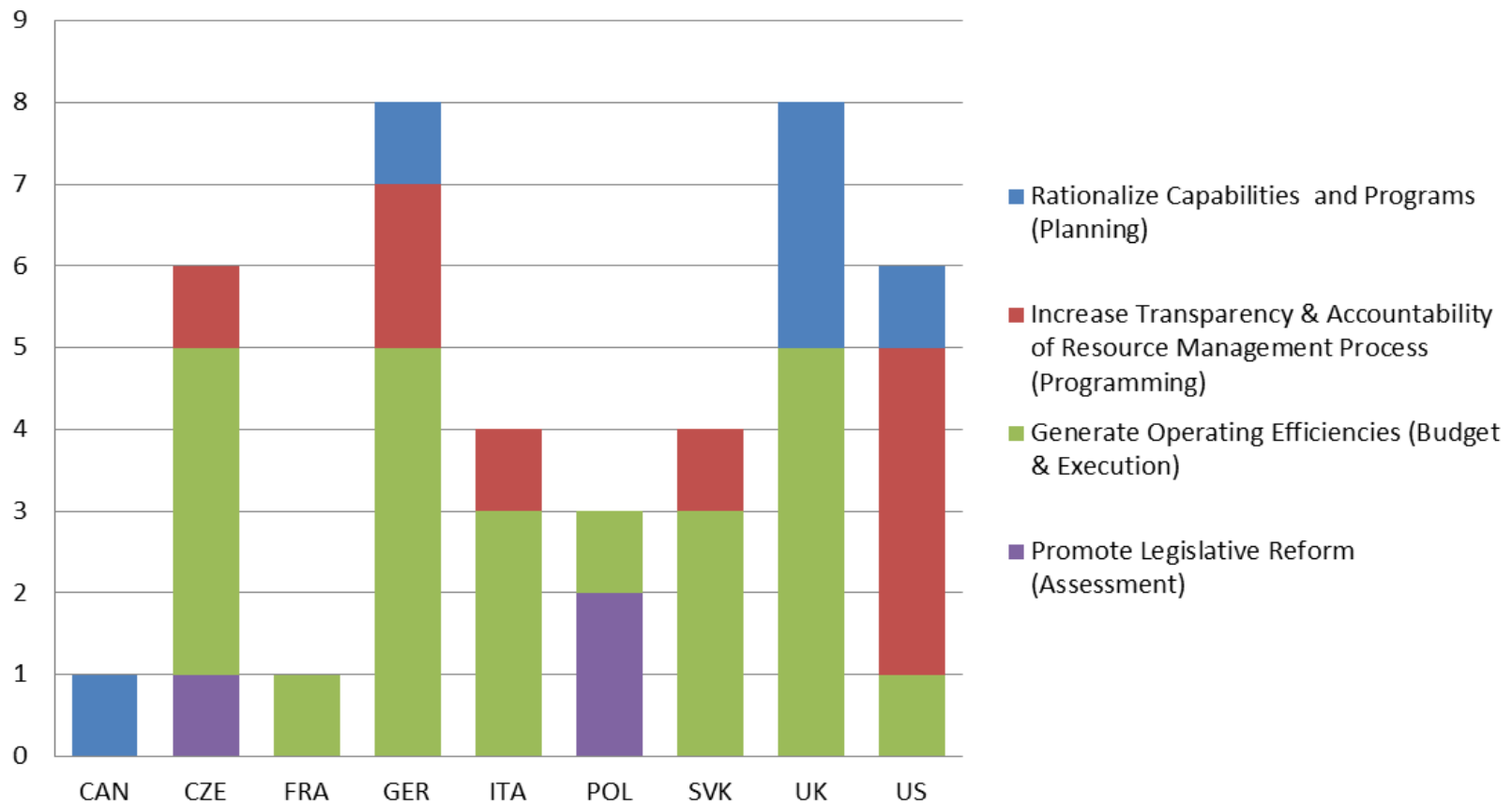
# DEFENCE SPENDING, CAPABILITIES AND OUTCOMES

Nations tend to focus more on *how* they spend their money (efficiency) rather than *what* capabilities in which to invest (effectiveness)

*(NATO STO Future Defence Spending Study February 2016)*

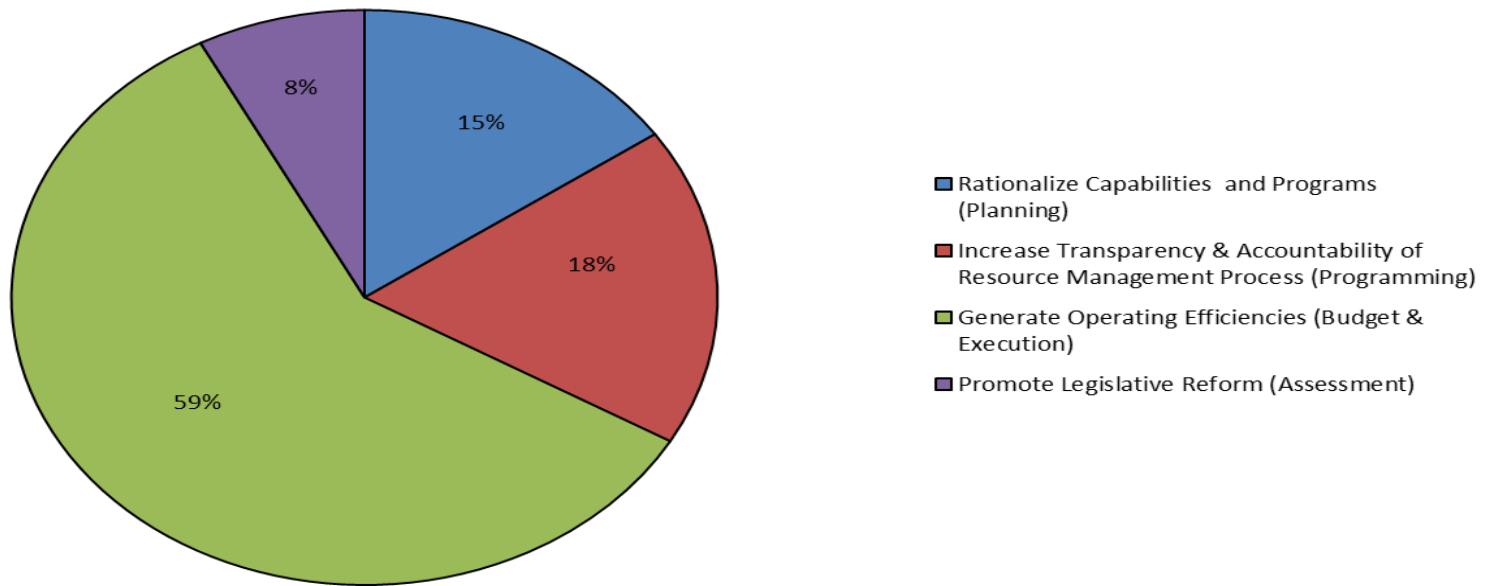
# NATO COUNTRY DEFENCE RESOURCE MANAGEMENT PRACTICES

## Resourcing Strategies, By Country



# NATO COUNTRY DEFENCE RESOURCE MANAGEMENT PRACTICES

**Distribution of Defence Resource Management Practices  
(% of total practices by category)**





# THE CHALLENGES FOR EUROPEAN AND NATO DEFENCE PROCUREMENT AND THE DEFENCE INDUSTRIAL BASE

- **Europe continues to face challenges within the defence procurement cycle**
- **From concept development to production and retirement, all the stages within the system life cycle require full cooperation, not only between NATO members but also between Ministries of Defence and defence contractors**
- **Defence competition is constrained by industry working for national governments**
- **Bringing civilian technology companies, SMEs and start-ups into the fold to foster higher levels of innovation and to leverage newer technologies**
- **These include artificial intelligence, Big Data and robotics, also presents difficulties as these companies may find defence too slow, complex and highly regulated**

# THE CHALLENGES FOR EUROPEAN AND NATO DEFENCE PROCUREMENT AND THE DEFENCE INDUSTRIAL BASE

- \* **Reshaping the European defence industrial and technological base as a fundamental basis for generating smart defence and smart armies**
- \* **This requires both reform initiatives from the demand side (nations must agree on common requirements for proposed equipment platforms) and the supply side (the measures to consolidate and improve the industrial and technological base)**
- \* **Interoperability issues can only be tackled if there is a common strategy towards the development of new capabilities and implementing best strategies to optimise NATO's System Life Cycle**

# THE CHALLENGES FOR EUROPEAN AND NATO DEFENCE PROCUREMENT AND THE DEFENCE INDUSTRIAL BASE

- **Despite the fact that modern military establishments are infinitely much more capable and lethal than former generations, they are less robust than earlier generations**
- **This is due to vast advances in technology and the complexity this brings, the proliferation of interdependencies, and the constraints inherent in leaner organizational structures**
- **Countries faced with the combination of an extended operational tempo and funding constraints due to challenging fiscal restrictions, both organizational reform and adaption to shifting circumstances can fall behind other nations in a transforming international security environment**
- **This can result in institutional governance issues, due to misaligned organizational priorities and structures**

# EUROPEAN DEFENCE R&D: THE WAY AHEAD

- Europe is under pressure to invest as much as the US does in defence R&D. The European Commission's Defence Action Plan acknowledges the need for the European defence industry to innovate
- Eizbieta Bienkowska, the European Commissioner for Internal Market, Industry, Entrepreneurship and SMEs, told the NATO Industry Forum that under the plan, the EC proposes funding of €90 million (€25 million in 2017) over the next three years for defence research to foster innovation in the defence supply chain.
- Research is expected to focus on so-called 'disruptive' technologies. Bienkowska also talked about financial tools for defence-related SMEs and working towards a European Defence Fund to support the financing of jointly agreed defence capability programmes.

# THE UK MoD AND PROCUREMENT POLICY

- MOD is one of the biggest public procurement organisations in Europe (£19 billion with UK industry), the single largest customer for UK industry with diverse range of requirements (military fighting vehicles to facilities management) customers include armed forces and national security agencies
- Promote innovation in business and with current and potential suppliers to deliver business in an increasingly efficient and effective way.
- Principal Areas:
  - technology: cloud and digital, network services, software and technology products and services
  - vehicle platforms: the procurement and support of ships, submarines, aircraft, vehicles
  - supporting services: weapons and general requirements including food, clothing, medical supplies and temporary accommodation
  - buildings: facilities management, maintenance and repair, utilities and fuel
  - people: permanent and temporary staff (including clinical staff), outsourced services (such as language and employee services) and advisory services

# UK MoD PROCUREMENT POLICY

- \* **Competition is the default position in procuring in the domestic and global defence and security market for proven products**
- \* **Principle qualified by need to take action to protect technological advantage to maintain national security**
- \* **Network of supply chain advocates helps tackle reported cases of poor procurement practice and improve standards**

# KEY DECISION MAKERS OF: GOVERNMENT – MODS/ARMED FORCES

- \* **Procurement**
- \* **Capability Planning**
- \* **Armaments**
- \* **Supply Chain**
- \* **Logistics**
- \* **Strategy**
- \* **Bilateral Cooperation**
- \* **Defence Policy development**
- \* **Interoperability**
- \* **Industrial Cooperation**