



# Moving forward the EU-India Security Dialogue

## Traditional and emerging issues

### India-EU defence cooperation: the role of industry

Research Paper No. 12 | December 2016



EU Public Diplomacy and Outreach  
in India and in the SAARC



Project funded by  
the European Union

## EU-India Think Tank Twinning Initiative





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### Moving forward the EU-India Security Dialogue: Traditional and emerging issues

Gateway House: Indian Council on Global Relations, Mumbai,  
in partnership with  
Istituto Affari Internazionali, Rome



### India-EU defence cooperation: the role of industry

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## **India-EU defence cooperation: the role of industry**

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## **List of abbreviations**

- DPP – Defence Procurement Procedure
- DRDO – Defence Research and Development Organisation
- EDA – European Defence Agency
- EU – European Union
- FDI – Foreign Direct Investment
- HAL – Hindustan Aeronautics Limited
- HADR – Humanitarian Assistance and Disaster Relief
- JWG – Joint Working Group
- LPDs – Landing Platform Docks
- MEPs – Members of the European Parliament
- MoU – Memorandum of Understanding
- NATO – North Atlantic Treaty Organization
- NPT – Nuclear Non-proliferation Treaty
- R&D – Research and Development
- SAR – Search and Rescue
- ToT – Transfer of Technology
- TPCR – Technology Perspective and Capability Roadmap

## **Methodology**

Desk research and interviews with officials of the Government of India and officials of the EU delegation in India, serving and retired military officers, academicians, representatives of Indian defence companies and European defence companies operating in India.

# **India-EU defence cooperation: the role of industry**

## **1. Introduction**

Europe has for long been important in India’s foreign policy priorities—more so as a continent that was able to emerge from the ravages of the two World Wars by overlooking its internal political differences and divisions to establish a supranational organisation. Despite the heavy losses and suffering inflicted on India by European colonial powers, after diplomatic relations were established between India and the then Europe Economic Community in 1963, the Indian policy establishment was eager to understand and leverage the benefits from Europe’s regional integration process. The continent’s advances in science and technology were especially alluring for India, which was looking to utilise technology for domestic development.

In 1993, the European Union was formed—but its member states had conflicting attitudes towards India. As a result, the relationship between the EU and India vacillated between distrust and misplaced expectations. It did not reach the next level of synergy and cooperation, despite India’s explicit interest. Over time, it became much easier for India to develop closer ties with individual European countries.

## **2. Strategic partnership, little convergence**

Both sides had shared beliefs in a stable international order, democracy, and the rule of law. Acting on these, in 2004, India and the EU formed a strategic partnership at The Hague Summit.<sup>1</sup> In 2006, India and the EU set up an annual Security Dialogue encompassing the Joint Working Groups (JWG) on counter-terrorism, cyber security, and counter-piracy.<sup>2</sup> And in 2013, a dialogue was established on non-proliferation and disarmament. While these mechanisms conveyed a sense of common understanding between India and the EU on the broader security dynamics, for most part the approaches of the two sides to key regional and international security issues have been quite different, and in some cases, even divergent.

For instance, many EU member states have been militarily engaged in Afghanistan for more than 10 years as part of the North Atlantic Treaty Organization (NATO)-led International Security Assistance Force. Yet, the EU has not made any substantive effort to consult with or include India in the process of political reconciliation with the Afghan Taliban, despite India’s geographical location as a neighbour and an important contributor to Afghanistan’s reconstruction.

Similarly, on terrorism there has been much common rhetoric, but very little cooperation between the two sides with regard to intelligence-sharing or countering terrorism financing. Another factor that has impacted India-EU interaction in the last five years is the Enrica Lexie case, in which two Italian marines were accused of the

killing of two Indian fisherman off the coast of Kerala in February 2012.<sup>3</sup> Moreover, the protracted negotiations over the free trade agreement (FTA) between the two sides have also obstructed progress in other sectors of the relationship.

On some issues, India and the EU have clear disagreements, particularly on Pakistan and China—the main sources of security threats for India. Some Indian diplomats, who have served in the country’s missions in Europe, have pointed out that the EU does not quite share or understand India’s assessment of these threats. On other issues, India has objected to the activist stance of some Members of the European Parliament (MEPs). For instance, on the Kashmir issue, in the past, some MEPs—along with Pakistan’s Inter Services Intelligence-backed organisations like the Kashmir Centre-European Union and Kashmir Centre-London—have highlighted, through lectures and events, India’s alleged human rights violations in the Kashmir Valley. As a result, the Indian security establishment has questioned the EU’s commitment to deepening ties with India.<sup>45</sup>

On the other hand, India’s support to Russia and calls for a peaceful diplomatic resolution during the Ukraine crisis in 2013-14 drew critical reactions within the EU, which was keen to isolate Russia and impose sanctions.<sup>6</sup> Another factor which constrained cooperation was India’s status of a non-signatory to the Nuclear Non-Proliferation Treaty (NPT). For long, the EU insisted that it can cooperate with India on defence and civilian nuclear issues only if India signed the NPT. This position seems to have softened after the 2008 India-U.S. civil nuclear cooperation agreement.

At another level, considering the EU’s own struggle to evolve a common position on security and defence, and its standing as a major security actor in Europe in the context of NATO, many Indian officials and strategic analysts have questioned the practicality and relevance of engaging with the EU on security and defence issues.<sup>7</sup> The ‘Global Strategy for the EU’s Foreign and Security Policy’ document of June 2016, by the European External Action Service, also does not look at India as a security actor with whom ties can be enhanced to address regional and international security issues.<sup>8</sup> It primarily views India from the prism of economics—as an economic power, a part of the EU’s economic diplomacy and a strategic partner in forging a free trade agreement. The only security area on which the two sides have converged, but with limited cooperation, is combating Somali piracy in the Indian Ocean.<sup>9</sup>

All these factors have contributed to the absence of a deeper defence cooperation between India and the EU. It remains a relationship that struggles to find its momentum.

### **3. Stronger relations between New Delhi and European capitals**

The absence of a meaningful defence relationship with the EU collectively is in clear contrast to India’s closer bilateral defence ties with individual European countries

including France, the United Kingdom, and Germany. These ties have spanned defence and security dialogues, defence trade, and joint military exercises (see Table 1).

**Table 1: India's joint military exercises with European countries (2015-present)**

Period	Type	Location	Name of exercise	Countries involved
April 2015	Naval	Off the coast of Goa	Varuna	France
June 2015	Army	Salisbury Plains, UK	Ajeya Warrior	UK
July 2015	Air	Lincolnshire, UK	Indradhanush	UK
September 2015	Naval	South Coast of UK	Konkan	UK
January 2016	Army	Jodhpur, Rajasthan	Shakti-2016	France
June -August 2016	Naval	Hawaii, U.S.	RIMPAC 2016	26 countries in total hosted by the U.S. From the EU: Denmark, France Germany, Italy, and the Netherlands.

*Source: Gateway House Research, based on information from the Government of India's Ministry of Defence and the U.S. Department of Defense*

For long, a major component of India's relationship with European countries was the purchase of defence equipment. Since Independence, India had made concerted but inadequate efforts to promote indigenous defence production.<sup>10</sup> As a result, and facing a hostile security environment in its neighbourhood, India had to rely on arms imports to augment its defence capabilities. Given their historical links, the UK was an inevitable initial source of defence equipment, before India turned to the Soviet Union for defence procurement in the 1960s. Some defence items were procured from France too in this decade, such as the Alize ASW aircraft and the Alouette helicopters.

The types of defence imports broadened by the early 1980s, when India began to acquire arms from West European countries, including Mirage aircraft from France, submarines from Germany, and the Anglo-French attack aircraft, SEPECAT Jaguar.<sup>11</sup> While this trade was mostly with towards the Western Europe, Central and Eastern European countries such as Poland and the Czech Republic also got a share in India's defence market, primarily as a legacy of India's defence trade with the Soviet Union.

Although the defence trade with Europe may appear fragmented, it is consonant with India's foreign policy priorities and the need to diversify its military supplies. At present, European equipment provides some of the most critical capabilities for all the three wings of the Indian military (see Table 2, 3, and 4), some of which are also being upgraded. Broadly, Indian military personnel have found West European equipment to be technologically outstanding and reliable, but very expensive to procure and maintain.<sup>12</sup> However, many in the military have been doubtful about the quality of the spare parts coming in from Central and East Europe.<sup>13</sup>

**Table 2: European\* equipment in the Indian military**

<b>Service</b>	<b>Country</b>	<b>Vendor</b>	<b>Equipment</b>
<b>Indian Army</b>	Germany	Diehl Remschied	Tracks and accessories for Arjun tank
	Poland	Polish Bumar	WZT-3 armoured vehicles
	Germany	EADS	Tactical Communications System
	Italy	Fincantieri	Two fleet tankers
	Spain	Nexter	Manufacturing of 1,400 155 mm towed cannons
	Czech Republic	Tatra Trucks	Tatra vehicles (in a JV with BEML Ltd.)
<b>Indian Air Force</b>	France	Dassault Aviation	Mirage 2000 aircraft upgrade
		MBDA	Missile systems for Mirage 2000 upgrade
		Thales	Weapons system integrator for Mirage 2000 upgrade
	United Kingdom	BAE Systems	Twenty Hawk-132 jet trainers
		Cobham	5th generation air-to-air refuelling equipment
		Rolls Royce	AE 2100D3 engines on the C-130J Super Hercules fleet
	Germany	Dornier GMBH (license produced)	Dornier Do 228 turboprop utility aircraft
United Kingdom and France	SEPECAT	SEPECAT Jaguar deep strike aircraft	
<b>Indian Navy</b>	France	MBDA	Short-range surface-to-air missile
	United Kingdom	Vickers-Armstrongs Limited	INS Viraat (originally commissioned as HMS Hermes) (to be decommissioned in late 2016)
	Germany	Atlas Elektronik	6 Active Towed Array Sonar systems
		Thyssen Krupp Marine Systems	Six HDW Class 214 submarines
		Dornier GMBH (license produced)	Dornier Do 228 turboprop utility aircraft
<b>Mixed users</b>	France	Aérospatiale (license produced)	Alouette III (Chetak) light utility helicopters

Source: Gateway House research based on the data obtained from the websites of the Indian Navy, Indian Air Force and Bharat Rakshak

\* EU or European company/companies: For the purpose of this paper, any reference to a EU company or companies will include:

- A company registered as a European public limited-liability company (Societas Europaea or SE) under the EU regulations on the Statute for a European company and allied laws, or
- A company registered in an EU member state under the national laws of that particular state.
- A company that is a subsidiary of a company registered outside the EU, and has a majority shareholding of non-EU persons, is excluded from this paper.



**Table 3: European defence companies operating in India**

Company	Multi-national ownership	Indian subsidiary	Projects/ contracts/ proposals	Status	Contract type
<b>Airbus (Netherlands)</b>	France: 10.9%  Germany: 10.9%  Spain: 4.1%	Airbus India Operations (New Delhi)	Proposal to produce C-295 aircraft to replace the aging Avro aircraft of the Indian Air Force in partnership with Tata Advanced Systems Limited (TASL)	No tangible progress yet; Awaiting trials for the C-295; process of evaluation and cost negotiation will begin after the trials	Commercial tender
<b>Agusta Westland (subsidiary of Leonardo-Finmeccanica)</b>	---	See <b>Leonardo-Finmeccanica</b>	12 AW101 helicopters	Deal was cancelled due to allegations of corruption and kickbacks	Commercial tender
<b>Atlas Elektronik (Germany)</b>	Krauss-MaffeiWegmann: 51%  Airbus: 49%	Atlas Elektronik India Pvt. Ltd (New Delhi)	Manufacturing six Active Towed Array Sonar systems	Induction in progress	Commercial tender
<b>BAE Systems (UK)</b>	---	BAE Systems India Services Pvt. Ltd. (New Delhi)	Producing twenty BAE System Hawk-132 jet trainers	Being negotiated; agreement awaiting closure	Commercial tender
<b>Cobham (UK)</b>	---	Cobham India Pvt. Ltd. (New Delhi)	Cobham & TASL have agreed to manufacture Cobham's 5th generation air-to-air refueling equipment as of July 2014	In production	Commercial tender
<b>Dassault Aviation (France)</b>	Dassault: 55.55%  Airbus: 23.36%	Dassault Aircraft Services India Pvt. Ltd. (New Delhi)	36 French Dassault Rafale-B/C fighters in flyaway condition	Ongoing negotiations between India and France	G2G
<b>DCNS (France)</b>	Consortium with Navantia (Spain)	Scorpène India Consortium	DCNS and Mazagaon Docks partnership for six Scorpène class submarines	The first submarine began sea trials in October 2015; the next five submarines are expected to be delivered every nine months, completing the project by 2020	Commercial tender
<b>EADS (Germany)</b>	See <b>Airbus</b>	EADS India Pvt. Ltd. (New Delhi)	Proposal for Indian Army's Tactical Communications System	Partnered with Tata in 2008 to secure bid	Commercial tender
<b>Fincantieri</b>	Italian Co.	Fincantieri	Contract to	Currently under	Commercial

<b>(Italy)</b>	Fintecna 72.5%	India Pvt. Ltd.	supply two fleet tankers	investigation regarding the failure to meet specifications of steel as envisaged in the request for proposals	tender
<b>Leonardo-Finmeccanica (Italy)</b>	---	Selex ES India Pvt. Ltd.	Procurement of 98 heavy weight torpedoes for submarines	Request for proposal in this regard is withdrawn as of May 2016 due to controversy over allegations of improper procurement process	Commercial tender
<b>MBDA (France)</b>	Airbus: 37.5%  BAE: 37.5%  LF: 25%		Short-range surface-to-air missile for the Indian Navy	Talks with the DRDO and Bharat Dynamics Ltd.	Commercial tender
<b>Navantia (Spain)</b>	Consortium with DCNS of France	Scorpene India Consortium	LPDs like INS Jalashwa for amphibious military operations	Existing memorandum of understanding (MoU) with Larsen & Toubro at Goa Shipyard	Commercial tender
<b>Nexter (Spain)</b>	---	Nexter Systems India Pvt. Ltd.	Manufacturing of 1,400 155 mm towed cannons	Final bid submitted for the tender	Commercial tender
<b>Rolls Royce (UK)</b>	---	Rolls-Royce India Pvt. Ltd.	AE 2100D3 engines on the C-130J Super Hercules fleet of six aircraft	Contract stipulated to be completed in 3 years	Commercial tender
<b>Safran (France)</b>	---	Safran India Pvt. Ltd.	Production of engine parts for Rafale aircraft	Project scaled back due to India's revised order	G2G
<b>Thales (France)</b>	---	Thales India Pvt. Ltd.	Upgrade of Mirage 2000 fleet, in partnership with Dassault	Upgrade progressing as scheduled; four upgraded jets have been already delivered till April 2016	Commercial tender
<b>Thyssen Krupp Marine Systems (Germany)</b>	Various German Corps: 70%  Hellenic Shipyards (Greece): 25%	ThyssenKrupp India Pvt. Ltd.	Proposal to participate in the submarine tender	Final tender not yet awarded	Commercial tender

Source: Gateway House research, based on information from the websites of defence companies

**Table 4: The European defence industry and its linkages to India**

Country	Defence industry	Major enterprises	Cooperation with India	Bilateral treaties/ agreements with India
<b>U.K.</b>	<ul style="list-style-type: none"> <li>Large defence industry with heavy support from the government</li> <li>Global share in arms exports is 5%.</li> </ul>	BAE Systems, Cobham	<ul style="list-style-type: none"> <li>Indian Navy operates BAE System's Sea Harrier aircraft</li> <li>BAE's Hawk trainer jet is currently being produced under licence in India.</li> <li>In-country assembly, integration and test facility for the M777 ultra lightweight Howitzer</li> <li>TASL is manufacturing for Cobham's 5th generation air-to air refuelling equipment</li> </ul>	<ul style="list-style-type: none"> <li>2004, Strategic Partnership Agreement</li> </ul>
<b>Germany</b>	<ul style="list-style-type: none"> <li>5% share in global arms exports</li> <li>Recently, the German government has sought to cut defence exports, particularly to West Asia</li> <li>Some defence companies part of the major European companies such as Airbus</li> </ul>	Krauss-Maffei Wegmann, Diehl Remscheid GMBH, Rheinmetall AG, Thyssen Krupp Marine Systems	<ul style="list-style-type: none"> <li>Ashok Leyland's JV with Krauss-Maffei Wegmann</li> <li>Diehl Remscheid supplying tracks and accessories for the Arjun tank</li> <li>Rheinmetall blacklisted by India on corruption charges</li> <li>Navy operates a fleet of HDW diesel-electric submarines</li> </ul>	<ul style="list-style-type: none"> <li>2006, Bilateral Defence Cooperation Agreement</li> <li>2001, Strategic Partnership Agreement</li> </ul>
<b>France</b>	<ul style="list-style-type: none"> <li>5% share in global arms exports</li> <li>Heavily dependent on government spending for R&amp;D investment</li> </ul>	Dassault Aviation, MBDA, Thales, DCNS	<ul style="list-style-type: none"> <li>Extensive involvement in India</li> <li>Many JVs with private defence companies</li> </ul>	<ul style="list-style-type: none"> <li>2006, Agreement on Defence Cooperation</li> </ul>
<b>Poland</b>	<ul style="list-style-type: none"> <li>One of Eastern Europe's robust defence industries</li> <li>Currently undergoing restructuring and consolidation</li> <li>Major land equipment like tank, armoured vehicles, air systems</li> <li>Many U.S. companies source their components from Poland</li> </ul>	Polish Bumar (Polish Defence Holding)	<ul style="list-style-type: none"> <li>Bharat Earth Movers Limited has a contract with Polish Bumar for procuring armoured recovery and repair vehicles</li> </ul>	<ul style="list-style-type: none"> <li>2003, MoU on Defence Cooperation with 2011 addendum</li> <li>1996, Agreement Between India and Poland for the Promotion and Protection of Investments</li> </ul>
<b>Spain</b>	<ul style="list-style-type: none"> <li>Major defence exporter in Europe</li> </ul>	Indra Sistemas,	<ul style="list-style-type: none"> <li>Navantia is part of the original</li> </ul>	<ul style="list-style-type: none"> <li>2012, MoU on Defence</li> </ul>

	<ul style="list-style-type: none"> <li>Government has encouraged domestic defence companies to partner with foreign companies</li> <li>Companies including Airbus and General Dynamics have manufacturing facilities</li> <li>The country has a 100% offsets policy</li> </ul>	Navantia, Instalaza SA	contract awarded to the DCNS for the Scorpène submarines	<p>Cooperation</p> <ul style="list-style-type: none"> <li>1972, Agreement on Trade and Economic Cooperation</li> </ul>
<b>Czech Republic</b>	<ul style="list-style-type: none"> <li>Defence industry underwent privatisation in early 1990s</li> <li>Known for producing heavy equipment, radar technologies and jet trainer aircraft</li> </ul>	TATRA trucks, OMNIPOL a. s., Gearspect Group a.s.	<ul style="list-style-type: none"> <li>Tatra trucks in partnership with Bharat Earth Movers Ltd. Has delivered 100 all-wheel drive vehicles</li> <li>Omnipol is in collaboration with OFB, Heavy Vehicle Factory, Avadi and Heavy Engineering Corporation, Ranchi</li> </ul>	<ul style="list-style-type: none"> <li>2003, Agreement on Defence Cooperation</li> </ul>
<b>Bulgaria</b>	<ul style="list-style-type: none"> <li>Large indigenous defence industry</li> <li>Ranked as a "medium" small arms exporter</li> </ul>	Arsenal AD, Kintex, TEREM, VMZ Sopot, Samel 90, Apolo GMBH, THOR Global Defense Group	<ul style="list-style-type: none"> <li>Arsenal AD supplied 67,500 AK-47 assault rifles to India's paramilitary forces, from 2010 to 2012, 9 of which proved defective in tests</li> <li>The arms dropped over Purulia, West Bengal in 1995 were also allegedly procured from KAS Engineering Consortium, a state-owned Bulgarian agency<sup>14</sup></li> </ul>	<ul style="list-style-type: none"> <li>1993, MoU on Defence Cooperation</li> </ul>

Source: Gateway House research based on data obtained from the websites of Government of India's Ministry of External Affairs and Stockholm International Peace Research Institute

#### 4. India's military modernisation

At present, India is in the midst of a massive modernisation of its armed forces, given its persistent border disputes with Pakistan and China, and the Chinese Navy's growing profile in the Indian Ocean region. Estimates of India's military expenditure over the next decade, range from approximately \$130 billion<sup>15</sup> (€116.404 billion) to approximately \$223 billion (Rs. 15 lakh crores/ € 199,669 billion).<sup>16</sup> Most of these defence requirements (60%) have been met through the imported equipment.<sup>17</sup> This has made India the world's largest arms importer during the preceding five years, accounting for 14% of global arms imports.<sup>18</sup> More European equipment is proposed to be inducted (see Table 5) into the Indian military as part of this modernisation.

**Table 5: Proposed European equipment in the Indian military**

Service	Country	Vendor	Equipment
Indian Air Force	France	Dassault	36 Rafale fighter planes
Indian Air Force	France	Airbus	C-295 twin turboprop planes
Indian Navy	UK	James Fisher Defence	Submarine rescue systems
Mixed users	Slovenia	Pipistrel Aircraft	194 microlight aircrafts

Source: Gateway House Research, based on information from the website of Government of India's Ministry of Defence and the websites of defence companies

These imports have bridged the gaps in India's military capabilities from time to time, but this dependence on arms imports has also made the country susceptible to sanctions and technology denial regimes, which India witnessed after its 1974 and 1998 nuclear tests. Therefore, going forward, India is hoping to shed the tag of being the world's largest arms importer by achieving 70% defence indigenisation by the end of this decade.<sup>19</sup> A majority of the weapons procurement proposals cleared by the government in the last two years have been reserved for domestic production (see Table 6).

**Table 6: Weapons acquisitions cleared by India since 2014**

Equipment	Vendor	Approximate cost (RBI rate- as on 30 August 2016 € 1: INR 75.1823)
Seven P17A stealth frigates	Mazagon Dock; Garden Reach Shipbuilders and Engineers	Rs. 50,000 crores (€ 6,650.502 million)
Six P75I submarines	N.A.	Rs. 60,000 crores (€ 7,980.602 million)
15 Chinook CH-47 heavy-lift transport helicopters	Boeing	Rs. 7000 crores (€ 931.07 million)
22 AH-64E Apache attack helicopters	Boeing	Rs. 8000 crores (€ 1,064.08 million)
Seahawk Multi-role S70-B helicopters	United Technologies	Rs. 1,800 crores (€ 239.418 million)
Four Landing Platform Docks	Hindustan Shipyard Limited and a private shipyard*	Rs. 25,000 crores (€ 3,325.251 million)
Avro aircraft replacement programme	Tata-Airbus*	Rs 23,000 crores

		(€ 3,059.231 million)
Light utility helicopters	Rostec-Hindustan Aeronautics Limited	Rs. 6,000 crores (€ 798.06 million)

Source: Gateway House research, based on information from the website of Government of India's Ministry of Defence and news reports

\* contract pending

For this, India has launched the 'Make in India' policy initiative, at the heart of which is the intent to create a domestic defence industrial base. Under this, the government has sought to tap the potential of private companies for defence production—the sector that is so far primarily dominated by state-owned enterprises.

Specifically for the defence sector, India has taken the following steps in the last two years:

- Reviewing the country's direct foreign investment (FDI) policy and raising the cap for foreign investment to 49% from 26%,<sup>20</sup> and to beyond 49% through the government approval route in cases resulting in access to modern technology;<sup>21</sup>
- Allowing foreign investment in the manufacturing of small arms and ammunitions;<sup>22</sup>
- Updating the 'Defence Products List' by de-licensing non-lethal and dual-use items;<sup>23</sup>
- Giving additional industrial licenses for defence production to a growing number of private companies, taking the total number to more than 150 companies<sup>24</sup> from 127 in 2010.<sup>25</sup>

In March 2016, India announced a new DPP, the policy under which military equipment is acquired. This policy aims to prioritise buying locally-developed military hardware for the three defence services through the introduction of a new category called Indigenously Designed, Developed and Manufactured.<sup>26</sup> Those Indian defence companies that can locally design and develop the required equipment will be preferred by the government of India's Ministry of Defence when it purchases new weapons for the military.

Even as it aims to increase the quantum of local defence production, India has also acknowledged that for the foreseeable future, high-technology arms import will continue to meet the current operational requirements of its military, as is evident in the proposed purchase of Rafale aircraft from France for the Indian Air Force. For imports, there is now an increasing preference within the Indian government to establish government to government (G2G) deals, rather than commercial deals, because of concerns over cost and corruption. Accordingly, the Rafale deal was moved from a commercial deal to the G2G sphere, where the Indian government has been negotiating with the French government, rather than with Dassault Aviation, for buying the planes. Similarly, in 2016, India scrapped a commercial tender for buying six aerial tankers from France's Airbus and is considering a G2G deal for the same.<sup>27</sup>

India has also initiated defence R&D and technology cooperation in the last 10 years with its top three arms supplier countries: the U.S. (Pathfinder projects, JWGs on aircraft carrier, and jet engine technologies),<sup>28</sup> Russia (BrahMos missile system, Fifth Generation Fighter Aircraft and the Multi-role Transport Aircraft), and Israel (Barak-8 missile system).

## **5: Opportunities in India’s defence market**

In view of the shrinking defence budgets in most European countries—notwithstanding the pledge by European NATO members to spend 2% of their GDP on defence by the end of the decade<sup>29</sup>—India, with its rising military expenditure, offers many opportunities for European companies. Earlier, a major area of contention for foreign companies, including European entities, about doing business in India was European ownership control over Indian joint ventures and the transfer of technology (ToT). With the relaxation of FDI norms in the defence sector, it is now possible for any foreign company willing to engage in ToT, to start a venture in India.<sup>30</sup> The new norms also allow them to tie up with Indian companies to cater to the domestic market and establish hubs for their global supply chains. Already, major Indian private sector companies such as the Tata Group and Mahindra Defence, through partnerships with foreign companies, have entered the global supply chain in the aerospace sector.<sup>31 32</sup>

European defence companies can substantially contribute to ‘Make in India’ in land, air, naval, and electronic systems. India’s major proposed acquisitions for the military are:

- Land systems: Infantry combat vehicles, specialised vehicles such as mine-protected vehicles, armoured vehicles and all-terrain combat vehicles, anti-tank and surface to air missiles, assault rifles;
- Air systems: Medium combat aircraft, land reconnaissance and maritime surveillance aircraft, unmanned aerial systems—surveillance and armed, medium and heavy-lift helicopters, light utility helicopters, VVIP transport helicopters, aerial tankers, amphibious aircraft;
- Naval systems: Aircraft carrier and associated systems, diesel-electric submarines with air-independent propulsion technology, Landing Platform Docks, guided missile frigates, interceptor boats.

There are also multiple opportunities in the sub-systems that form parts of the larger equipment. Other potential opportunities for European companies, especially through R&D and co-development, are in the defence electronics spanning systems, sub-systems, and systems of systems. At present, all three wings of the Indian military are in the process of integrating network-centric warfare capabilities, with the Indian Navy being the most advanced. By harnessing India’s information technology sector as a hub, European companies can contribute to India’s efforts to gain self-reliance in defence electronics.

Moreover, India has already made an effort to spell out the specific technologies required for its military. The Ministry of Defence, through the ‘Technology Perspective and Capability Roadmap’ (TPCR), 2013, based on the Indian military’s ‘Long Term Integrated Perspective Plan 2012-27’, has identified some high technologies related to sensors, propulsion, electronic communication, nano-materials, and other components (see Table 7), where foreign defence companies can significantly contribute.<sup>33</sup> Separately, India’s defence research agency, the Defence Research and Development Organisation (DRDO), regularly maintains a list for acquiring critical technologies such as those related to lasers and hypersonic flights.<sup>34</sup>

**Table 7: Technological priorities identified by India**

<b>Category</b>	<b>Technologies</b>
<b>Communication/ electronic systems</b>	<ul style="list-style-type: none"> <li>• Information integration and analysis systems; battlefield information systems</li> <li>• C3I systems</li> <li>• Mobile satellite terminals with systems and applications supporting Software Defined Radios, including man-pack versions</li> <li>• Electrically controlled antennae</li> <li>• Pulse Power network technologies</li> <li>• Terahertz technologies</li> </ul>
<b>Space-based equipment</b>	<ul style="list-style-type: none"> <li>• Satellites producing sub-metric resolution images</li> <li>• Space-based radars and electronic warfare systems</li> </ul>
<b>Aerospace-related systems</b>	<ul style="list-style-type: none"> <li>• Long-range UAVs</li> <li>• Precision Air-Ground Weapons</li> <li>• Shared and Conformal Apertures</li> <li>• High performance turbo fan engines</li> <li>• Full Authority Digital Engine Control systems</li> <li>• Super Cavitations technology,</li> <li>• Super Cruise technology</li> <li>• Technologies for hypersonic flights (propulsion, aerodynamics, and structures)</li> </ul>
<b>Missiles</b>	<ul style="list-style-type: none"> <li>• BVR fire-and-forget air-to-air missiles</li> <li>• Surface-to-air missiles with electronic warfare capabilities</li> <li>• Anti-radiation missiles (air- and ground-launched varieties)</li> <li>• Stealth technology</li> <li>• Air-borne sensors and sensor fusion</li> </ul>
<b>Armament</b>	<ul style="list-style-type: none"> <li>• Electro-Magnetic Pulse weapons</li> <li>• Ammunition equipped with navigation and guidance systems</li> <li>• Electromagnetic Rail Gun technology</li> <li>• High-explosive squash head ammunition</li> <li>• Muzzle Reference System</li> <li>• Composite sabot manufacturing technology</li> <li>• Precision guided munitions</li> <li>• Advanced Recoil System</li> <li>• Gun barrel technologies</li> </ul>
<b>Nano-technology</b>	<ul style="list-style-type: none"> <li>• Nano-technology based sensors and displays</li> </ul>
<b>Others</b>	<ul style="list-style-type: none"> <li>• Artificial intelligence and robotics</li> <li>• Diesel-electric propulsion of ships and integrated electric propulsion generator</li> <li>• Fibre Lasers technology</li> <li>• Sensor technologies</li> <li>• CBRN protection suite, collective protection equipment, decontamination systems and equipment</li> <li>• Miniature SAR &amp; ISAR technologies</li> </ul>



	<ul style="list-style-type: none"> <li>• High efficiency flexible Solar Cells technology</li> <li>• Molecularly Imprinted Polymers</li> <li>• Low Observable technologies</li> <li>• Technologies for generating High Power Lasers</li> <li>• Surface-Coated Double Base Propellant</li> <li>• Titanium casting, forging, fabrication, and machining</li> <li>• Under water systems including communication, sonar, stealth etc.</li> </ul>
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*Source: Gateway House research, based on data obtained from the websites of Government of India's Ministry of Defence and the Defence Research and Development Organisation*

In addition to upgrading its military capabilities, India is also on its way to substantially upgrading the capabilities of its paramilitaries and police forces. This capability augmentation is especially important for India because even as it battles external security threats, a plethora of internal security challenges—insurgency in Jammu and Kashmir and the North East, left-wing extremism in central India, and porous borders—aggravate India’s security situation. The need to augment the capabilities of the police forces became more urgent after the 2008 attacks in Mumbai exposed multiple vulnerabilities in India’s security preparedness.

Under the Modernisation of State Police Forces Scheme, India is investing Rs. 12,379 crores (€1,646.531 million) (2012-2017) including Rs.432.90 crores (€57.58 million) for Mega City Policing.<sup>35</sup> Capability addition for the police forces under this includes acquisition of armoured vehicles, weapons, and training equipment. In addition, some of the ongoing technology-based projects for potential deployment in the police force include ground-penetrating radar (for landmine and tunnel detection), explosive detectors, unmanned aerial vehicles, remotely operated robotic all-terrain vehicle, and thermal imaging.<sup>36</sup> There is an increased emphasis on installing closed-circuit television cameras for surveillance and controlling access to a location or area.. Additionally, Indian paramilitaries such as the Border Security Force and the Sashastra Seema Bal are on a continuous lookout for technology-based solutions to plug gaps in border protection.

Many European companies have already sensed an opportunity with ‘Make in India’ and have offered joint ventures and co-development projects (see Table 8).

**Table 8: Proposals from European defence companies since May 2014 under the ‘Make in India’ initiative**

Type of proposal	Indian company	European company	Nature of proposals
<b>Co-development and technology</b>	Larsen & Toubro Limited (L&T) and Ashok Leyland Defence Systems	Nexter Systems (France)	A consortium agreement to collaborate for the Mounted Gun System artillery programme of the Indian Army.

	TASL	Terma A/S (Denmark)	To jointly run the CMS Development Centre in New Delhi to work closely with the Indian Navy and support the modernisation process of Indian Navy, empanelment for the ongoing and future requirements of naval combat management system.
	Hindustan Aeronautics Ltd. (HAL)	Safran Helicopter engines (France)	Joint venture to establish a support centre in India for national and international rotorcraft customers.
<b>Systems</b>	Mahindra Aerospace	Premium AEROTECH (Airbus) (Germany)	Large aero-components production contract
	TASL	Cobham (Wimborne, United Kingdom)	TASL will manufacture for Cobham's world-leading 5th generation air-to air refuelling equipment
	Reliance Defence and Engineering Ltd.	Thales (France)	Sonar for surface ships and submarines, mine warfare and mine counter-measure equipment
	Larsen & Toubro Limited (L&T)	Nexter Systems (France)	Nexter submitted, on 15 February 2016, its final bid in an Indian tender for a €1 billion (\$1.1 billion) contract for 1,400 Caesar 155 mm towed cannons, and a pitch for its Trajan 155 mm/52 calibre gun
<b>Sub-systems</b>	Mahindra Aerospace and Defence	Airbus Helicopters (United Kingdom)	Airframe parts for the helicopter, AS565 MBe Panther
		BAE Systems (United Kingdom)	In-country assembly, integration, and test facility for the M777 ultra lightweight howitzer (ULH)
<b>Systems and sub-systems</b>	Kalyani Strategic Systems Ltd. (KSSL)	Saab (Sweden)	Joint venture for the production and delivery of air defence systems

Source: Gateway House research, based on information from the websites of defence companies

However, most of these proposals are product-based, short-term partnerships. On the other hand, many Indian defence companies would also like to see a more long-term engagement from European companies in the form of commitment to set up defence R&D centres or transfer technology. This will enable the Indian companies to achieve economies of scale and secure contracts abroad.

Another pain point for Indian companies has been the Indian government's 'No-Cost, No-Commitment' clause—the government will not bear the cost of the equipment trials nor is it committed to buy the equipment after the trials—in the procurement of defence equipment.<sup>37</sup> Since the trial of any defence equipment is a costly affair, many private companies are reluctant to participate in the bidding.<sup>38</sup> The foreign companies forming the JVs with their Indian partners should consider a burden-sharing model for this.

## 6. Potential minefields and challenges

As explained in the previous section, it is clear that multiple opportunities beckon European companies and they can play a niche role in meeting India's defence requirements. However, the potential minefields and challenges that can derail their prospects are:

- a. EU's dual use regime: The export control regime set up by the EU with regard to dual-use items presents a possible risk that could impinge on the defence cooperation between the two. The EU's dual-use control regime is extremely detailed, exhaustive, and restrictive.<sup>39</sup> Not only are there EU-level controls, but each member also has its own restrictions for brokering and transferring dual-use items.<sup>40</sup> The complexity also suggests a high risk potential of disruption in any future defence deal, especially in the supplies of hardware, given the large number of components that make up a weapons platform. For instance, under the October 2015 update of the EU "community regime," "fly-by-wire systems"<sup>41</sup> were added to the control list included under the Wassenaar Arrangement—which India is not a part of. More importantly, the EU is inclined to expanding its dual-use control regime despite its economic problems and political frictions.<sup>42</sup> A survey conducted by the EU in 2015 suggested that respondents favoured the development of the "catch-all" control process.<sup>43</sup> Under this, not only defence but any machine that could be remotely useful in any military programme deemed dangerous to the EU can be held back.
- b. EU's arms embargoes: India has never been subject to an EU arms embargo. However, after India's 1998 nuclear tests, there were discussions within the EU about imposing EU-wide sanctions against India. The UK campaigned for these and for recalling all EU ambassadors from New Delhi, but was opposed by France, Germany, and Belgium.<sup>44</sup> As a result, there were no common EU sanctions, but some countries took national measures such as suspending development aid to India. Nearly all of the substantive sanctions were lifted three years later.<sup>45</sup> Indian policy makers are wary about a similar situation recurring, because despite the apparent compatibility in India's and EU's values in a stable international order, there are wide political differences between them on issues such as terrorism, human rights, and non-proliferation.
- c. Commercial rivalries among the European defence companies: Barring multi-national European consortiums such as the Eurofighter Typhoon project, which lost out to Rafale in India's Medium Multi-Role Combat Aircraft competition, individual European companies generally compete with each other intensely for securing defence contracts abroad. This can sometimes lead to unethical business practices such as kickbacks, alleged corruption by rivals, and breaches

of sensitive data. This is intended to damage the credibility of the rival companies, as evident in the recent data breach of the French company DCNS,<sup>46</sup> which is involved in India's Scorpène-class submarine project. In India's case, in the past too, some of these allegations involved European companies such as Tatra Trucks, AgustaWestland (now Finmeccanica), and BVT Poland. The combined effect of all this has been the cancellation of defence contracts, blacklisting of these companies, and prolonged investigations into the culpability of Indian middlemen and senior military personnel. This, in turn, has affected India's military modernisation plans. More importantly, it has reduced the scope and flexibility of enlarging cooperation with European companies.

- d. **Impact of 'Brexit':** In terms of the strategic relationship, it is too early to assess how the UK's proposed exit from the EU will impact India-EU defence cooperation. But two potentially distinct scenarios can be expected. In the first scenario, the departure of a leading European military power can further weaken the EU's attempts to strengthen its military role in the continent and carve out an identity for itself that is distinct from NATO. This can impel India to further concentrate on bilateral channels to advance its defence cooperation with European countries. In the second scenario, 'Brexit' may actually lead to better intra-EU defence cooperation as London had consistently blocked attempts at defence integration—it has resisted budget increases for the EDA and rejected proposals for the establishment of an EU headquarters for military operations, whereas other EU member states had pressed for integration (of defence forces to create a EU headquarters for military operations).<sup>47</sup> It is likely that a combination of factors—the situation at the EU's borders, falling national defence budgets, and that there could no longer be a British veto—will lead, over time, to deeper intra-Europe defence cooperation. This will make it easier for India to deal with the EU, even if it has less to offer. In any case, in terms of industrial cooperation, the UK is not a major contributor to European defence projects in India and its proposed departure from the EU should have no major impact.

## **7. Policy recommendations for deepening India-EU defence cooperation**

As the European defence companies look for opportunities in India's military modernisation plans, a greater strategic convergence between New Delhi and Brussels will provide the necessary underpinning for a greater cooperation. At the last India-EU Summit held in Brussels in March 2016, both parties had agreed to enhance security cooperation, building on and strengthening the existing EU-India working groups on cyber, counter-terrorism, counter-piracy and non-proliferation, and disarmament.<sup>48</sup> To realise the true potential of the defence aspect of this strategic partnership and to strengthen the existing cooperation, the following measures are suggested in Table 9:

**Table 9: Policy recommendations for deepening India-EU defence cooperation**

<b>Policy recommendation</b>	<b>Guiding principles</b>
<b>Strategic partnership</b>	
Treating India as a strategic partner	The EU needs to build a strategic relationship with India, the way it has done with Israel and on the lines of what Israel has built with India—based on trust and technology-sharing. Cooperation between the EU and Israel has flourished despite the latter's status as non-signatory to the NPT. Given India's clean non-proliferation record, the EU should treat India in the same manner as Israel in building the strategic partnership.
<b>Political interaction</b>	
Annual summits	Despite an existing commitment to hold annual India-EU summits at the highest level, no summit was held between 2012 and 2016. Regular summits will help India and the EU to evolve a common understanding of foreign policy challenges facing both, such as the impact of 'Brexit'.
Ministerial-level defence dialogue	While high-level visits such as the annual summits give the necessary visibility to the relationship, it is sustained engagement spread over multiple domains which will take the relationship forward. In this context, we propose a bi-annual Defence Dialogue between the Indian Ministry of Defence and the European Defence Agency (EDA) to develop and shape the India-EU strategic partnership and turn the existing bilateral defence ties between India and EU member-states into enhanced ties between India and the EU. The dialogue will also help EU officials to better appreciate India's sensitivities on issues such as Kashmir and iron out the known procurement hurdles.
Interaction with the Central and Eastern European countries	The focus within in the EU is mostly always on the West European countries. Therefore, this paper proposes that building on the involvement of Central and Eastern European countries in the Indian markets, India and the EU need to focus on engaging these countries in order to harness the opportunities for the 'Make in India'.
<b>Security dialogues</b>	
Strategic Intelligence Dialogue	A continued and increased interaction on intelligence and data-sharing between Indian and the EU security agencies to take forward the counter-terrorism cooperation. This engagement should preferably include sharing data on terrorist financing and money laundering activities. This interaction should also be used to reach a consensus on the U.N. Comprehensive Convention on International Terrorism, which India has been pushing for a long time.
<b>Counter-terrorism cooperation</b>	
Special forces interaction	Interactions such as the anti-terrorism exercises between the Special Forces from India and the EU will be a great catalyst for deepening the strategic engagement. Both sides have faced terrorist attacks of similar type and therefore have many lessons to share.
<b>Homeland security collaboration</b>	
Annual Homeland Security Dialogue	Unless the EU appreciates India's internal security and border protection challenges, it will be difficult for European companies to benefit from the opportunities that India's homeland security market has to offer.
<b>Cooperation with other countries</b>	

The EU, U.S. and, India business troika	Indian businesses are of the opinion that when it comes to doing business, American companies are more dependable than European companies, but Europe has an edge over the United States on many defence technologies. Hence, India can propose a trilateral dialogue with the EU and the U.S., looking at India’s strategic national and defence interests as the priority.
<b>Humanitarian Assistance and Disaster Relief (HADR) and Search and Rescue (SAR)</b>	
India-EU joint military exercises	India already holds many joint military exercises individually with European countries. This can be taken to the next level to organise India-EU joint exercises for HADR or SAR operations. This will help them to develop interoperability.
<b>Military engagement</b>	
Continued senior command-level dialogue, exchanges, and exercises	As a matter of policy, even though the Indian Ministry of Defence and the Indian military does not deal with any blocs per se, the EU will need to find ways to increase its engagement with the Indian military. This engagement can also cover sharing notes on experiences from each other’s participation in the UN peacekeeping operations
<b>Defence technology cooperation</b>	
Defence Technology Dialogue	On India, the European countries need to shed their attitude of engaging in a transactional relationship. The G2G discussions focused on defence technology will bring more strategic content to the relationship and ensure unencumbered transfer of technology. The proposed dialogue will also help to understand the complexities and risks to India-EU defence relations from the latter’s dual-use technology control regime. It can also help to identify technologies where India and the EU can collaborate, and to secure mutual assurances on non-addition of technologies that may figure in defence deals to the EU control list.
<b>Business interaction and outreach</b>	
India-EU Defence Trade meeting	It is necessary that there is a government-backed meeting of the defence companies from India and the EU to discuss possible collaborations, on the sidelines of an important event such as the Defexpo, the exhibition of weapons systems held biennially in India. This will help realistically evaluate the risks from the EU’s dual-use technology regime. The discussions at these meetings could also include Intellectual Property Rights issues.
Setting up defence R&D hubs and Centres of Excellence	The European companies working in India can demonstrate their long-term commitment to India by establishing defence R&D centres and Centres of Excellence in India’s academic institutions.

## 8. Conclusion

The India-EU defence partnership in the last decade has not realised its true potential, and this has further been affected by corruption and other issues. However, both sides should look at putting the past behind and focus on addressing critical challenges. India and the EU need to work on their common interest areas, forge collaborations, and expand the existing cooperation for mutual benefit. India’s new policies, especially in the defence sector, encourage domestic production—EU members and companies can use these to their own advantage. With political dialogues and JWG meetings, the two sides can work towards solutions that facilitate growth of the strategic partnership. The

increasing threat of terrorism and internal insurgencies necessitates that India and the EU must look at the larger picture and appreciate that a strong partnership between these two powers is the need of the hour.

**APPENDIX:****Table 1: India-EU timeline of summits/important developments**

<b>Date</b>	<b>Description</b>	<b>Place</b>	<b>Indian participants</b>	<b>EU participants</b>
<b>28 June 2000</b>	1st India-EU Summit	Lisbon	<ol style="list-style-type: none"> <li>1. Prime Minister Atal Behari Vajpayee</li> <li>2. External Affairs Minister Jaswant Singh</li> <li>3. Finance Minister Yashwant Sinha</li> <li>4. Commerce and Industry Minister Murasoli Maran</li> <li>5. Information and Technology Minister Pramod Mahajan</li> </ol>	<ol style="list-style-type: none"> <li>1. European Commission President Romano Prodi</li> <li>2. European Commissioner for External Relations Chris Patten</li> <li>3. European Commissioner for Trade Pascal Lamy</li> <li>4. European Commissioner for Research Philippe Busquin</li> <li>5. High Representative for the EU's Foreign and Common Security Policy Javier Solana</li> <li>6. Prime Minister of Portugal António Guterres (rotating Presidency European Council)</li> <li>7. Portuguese Minister for Foreign Affairs Jaime Gama</li> <li>8. Portuguese Minister for Science and Technology Mariano Gago</li> <li>9. Portuguese deputy Minister for Economy Vitor Ramalho</li> </ol>
<b>23 November 2001</b>	2 <sup>nd</sup> India-EU Summit	New Delhi	<ol style="list-style-type: none"> <li>1. Prime Minister Vajpayee</li> <li>2. External Affairs Minister Singh</li> <li>3. Human Resource Development, Ocean Development and Science &amp; Technology Minister Murli Manohar Joshi</li> <li>4. Commerce and Industry Minister Maran</li> </ol>	<ol style="list-style-type: none"> <li>1. European Commission President Prodi</li> <li>2. European Commissioner for Trade Lamy</li> <li>3. Prime Minister of Belgium Guy Verhofstadt (rotating Presidency European Council)</li> <li>4. Belgian Foreign Affairs Minister Annemie Neyts-Uytterbroeck</li> </ol>
<b>10 October 2002</b>	3 <sup>rd</sup> India-EU Summit	Copenhagen	<ol style="list-style-type: none"> <li>1. Prime Minister Vajpayee</li> <li>2. External Affairs Minister Sinha</li> <li>3. Disinvestment Minister Arun Shourie</li> </ol>	<ol style="list-style-type: none"> <li>1. European Commission President Prodi</li> <li>2. European Commissioner for External Relations Patten</li> <li>3. High Representative for the EU's Foreign and Common Security Policy Solana</li> <li>4. Prime Minister of Denmark Anders Fogh Rasmussen (rotating Presidency European Council)</li> <li>5. Danish Foreign Affairs Minister Per Stig Møller</li> </ol>
<b>29 November 2003</b>	4 <sup>th</sup> India-EU Summit	New Delhi	<ol style="list-style-type: none"> <li>1. Prime Minister Vajpayee</li> <li>2. External Affairs Minister Sinha</li> </ol>	<ol style="list-style-type: none"> <li>1. European Commission President Prodi</li> <li>2. European Commissioner for External Relations Patten</li> <li>3. High Representative for the EU's Foreign and Common Security Policy Solana</li> <li>4. Italian External Affairs Minister Margherita Boniver (rotating Presidency European Council)</li> </ol>
<b>8 November 2004</b>	5 <sup>th</sup> India-EU Summit	The Hague	<ol style="list-style-type: none"> <li>1. Prime Minister Manmohan Singh</li> <li>3. External Affairs Minister Natwar Singh</li> <li>4. Minister for Commerce and</li> </ol>	<ol style="list-style-type: none"> <li>1. European Commission President Prodi</li> <li>2. European Commissioner for Trade Lamy</li> <li>3. High Representative for the EU's Common Foreign and Security Policy Solana</li> </ol>



			Industry Kamal Nath	<ol style="list-style-type: none"> <li>4. Dutch Prime Minister Jan Peter Balkenende (rotating Presidency European Council)</li> <li>5. Dutch Minister for Foreign Affairs Ben Bot</li> </ol>
<b>7 September 2005</b>	6th India-EU Summit	New Delhi	<ol style="list-style-type: none"> <li>1. Prime Minister Singh</li> </ol>	<ol style="list-style-type: none"> <li>1. European Commission President José Manuel Barroso</li> <li>2. European Commissioner for Trade Peter Mandelson</li> <li>3. UK Prime Minister Tony Blair (rotating Presidency European Council)</li> </ol>
<b>13 October 2006</b>	7 <sup>th</sup> India-EU Summit	Helsinki	<ol style="list-style-type: none"> <li>1. Prime Minister Singh</li> <li>2. External Affairs Minister Sharma</li> <li>3. Minister for Commerce and Industry Nath</li> <li>4. National Security Adviser M. K. Narayanan</li> </ol>	<ol style="list-style-type: none"> <li>1. European Commission President Barroso</li> <li>2. European Commissioner for Trade Mandelson</li> <li>3. European Commissioner for External Relations Benita Ferrero-Walder</li> <li>4. High Representative for the EU's Common Foreign and Security Policy Solana</li> <li>5. Finnish Prime Minister Matti Vanhanen (rotating Presidency European Council)</li> <li>6. Finnish Foreign Minister Erkki Tuomioja</li> <li>7. Finnish Minister for Foreign Trade and Development Paula Lehtomäki</li> </ol>
<b>30 November 2007</b>	8 <sup>th</sup> India-EU Summit	New Delhi	<ol style="list-style-type: none"> <li>1. Prime Minister Singh</li> <li>2. External Affairs Minister Pranab Mukherjee</li> <li>3. Minister for Commerce and Industry Nath</li> <li>4. National Security Adviser Narayanan</li> </ol>	<ol style="list-style-type: none"> <li>1. European Commission President Barroso</li> <li>2. European Commissioner for Trade Mandelson</li> <li>3. Portuguese Prime Minister José Socrates (rotating Presidency European Council)</li> <li>4. Portuguese Minister of State for Foreign Affairs and Cooperation Joao Cravinho</li> </ol>
<b>29 September 2008</b>	9 <sup>th</sup> India-EU Summit	Marseille	<ol style="list-style-type: none"> <li>1. Prime Minister Singh</li> <li>2. Minister for Commerce and Industry Nath</li> <li>3. National Security Adviser Narayanan</li> </ol>	<ol style="list-style-type: none"> <li>1. European Commission President Barroso</li> <li>2. High Representative for the EU's Common Foreign and Security Policy Solana</li> <li>3. European Commissioner for Trade Mandelson</li> <li>4. French President Nicolas Sarkozy (rotating Presidency European Council)</li> <li>5. French Foreign Minister Bernard Kouchner</li> <li>6. French Secretary of State for External Trade Anne-Marie Idrac</li> </ol>
<b>29 June 2009</b>	20 <sup>th</sup> Ministerial Meeting	Prague	<ol style="list-style-type: none"> <li>1. Foreign Affairs Minister S. M. Krishna</li> </ol>	<ol style="list-style-type: none"> <li>1. EU Commissioner for External Relations Ferrero-Waldner</li> <li>2. EU GAERC President, Czech Deputy Prime Minister and Foreign Affairs Minister Jan Kohout</li> <li>3. Representative of EU High Representative for Common Foreign and Security Policy and the incoming Swedish Presidency Helga Schmid</li> </ol>
<b>6 November 2009</b>	10 <sup>th</sup> India-EU Summit	New Delhi	<ol style="list-style-type: none"> <li>1. Prime Minister Singh</li> </ol>	<ol style="list-style-type: none"> <li>1. European Commission President Barroso</li> <li>2. European Commissioner for External Relations and Neighbourhood Policy Ferrero-Walder</li> </ol>

				<ol style="list-style-type: none"> <li>3. European Commissioner for Trade Catherine Ashton</li> <li>4. Swedish Prime Minister Fredrik Reinfeldt (rotating Presidency European Council)</li> <li>5. Swedish Foreign Minister Carl Bildt</li> <li>6. Swedish Trade Minister Ewa Björling</li> </ol>
<b>22/25 June 2010</b>	21 <sup>st</sup> Ministerial Meeting	New Delhi	1. External Affairs Minister Krishna	1. EU High Representative for Foreign Affairs Ashton
<b>10 December 2010</b>	11 <sup>th</sup> India-EU Summit	Brussels	1. Prime Minister Singh	<ol style="list-style-type: none"> <li>1. European Council President Herman Van Rompuy</li> <li>2. European Commission President Barroso</li> </ol>
<b>16/17 January 2012</b>	22 <sup>nd</sup> Ministerial Meeting	New Delhi	1. External Affairs Minister Krishna	1. EU High Representative for Foreign Affairs Ashton
<b>10 February 2012</b>	12 <sup>th</sup> India-EU Summit	New Delhi	<ol style="list-style-type: none"> <li>1. Prime Minister Singh</li> <li>2. Foreign Minister Krishna</li> <li>3. Trade Minister Anand Sharma</li> <li>4. National Security Adviser Shiv Shankar Menon</li> </ol>	<ol style="list-style-type: none"> <li>1. European Council President Van Rompuy</li> <li>2. European Commission President Barroso</li> <li>3. EU Trade Commissioner Karel De Gucht</li> </ol>
<b>30 January 2013</b>	23 <sup>rd</sup> Ministerial Meeting	Brussels	1. External Affairs Minister Salman Khurshid	1. EU High Representative for Foreign Affairs Ashton
<b>30 March 2016</b>	13 <sup>th</sup> India-EU Summit	Brussels	<ol style="list-style-type: none"> <li>2. Prime Minister Narendra Modi</li> <li>3. Minister of Commerce and Industry of India Nirmala Sithamaram</li> </ol>	<ol style="list-style-type: none"> <li>2. European Council President Donald Tusk</li> <li>3. European Commission President Jean-Claude Juncker</li> <li>4. EU High Representative for Foreign Affairs Federica Mogherini</li> </ol>

Source: Gateway House Research, based on information from the websites of Government of India's Ministry of External Affairs and the EU

**Table 2: Joint ventures between Indian and European defence companies in India**

<b>Indian company</b>	<b>European company</b>	<b>Equipment offered</b>
Ametek India	Enertec Management (Amertec Systems Pvt. Ltd.)	Electronic systems, simulators
Ashok Leyland Defence	Krauss-Maffei Wegmann	Artillery systems and armoured vehicles
	Saab	Military vehicles
Axis Aerospace and Technologies	Thales	Aerospace equipment, flight simulators
Bharat Earth Movers India Ltd.	Tatra Trucks	Military trucks
Bharat Electronics Ltd.	Thales	Radar systems
	Terma	Naval radar systems
Hindustan Aeronautics Limited (HAL)	Snecma	Aerospace equipment
	BAE Systems	Aerospace equipment
	Rolls Royce	Aerospace equipment
	Safran Helicopter Engines	Support centre for rotorcrafts (a rotary wing aircraft)
Indian Eye Security	Saab	Marketing tactical simulation systems
India Forge	DIEHL Remscheid (Track Systems India Private Limited)	Tracks for armoured vehicles
Larsen & Tubro	EADS (including Cassidian)	Aerospace and electronic equipment
	Nexter	Artillery systems
	Thales	Avionics
Mahindra & Mahindra	Eurocopter	Helicopters and fixed wing aircraft
	Saab	Air defence systems
Max Aerospace and Aviation	Snecma (Max Aero Engines Private Limited)	Maintenance of military aircraft engines
Pipavav	Babcock	Aircraft carriers
	DCNS	Shipbuilding
Precision Electronics	Raytheon	Communication systems
Samtel Avionics	General Dynamics	Digital displays
	Thales	To develop, customize, manufacture, sell and maintain Helmet Mounted Sight & Display (HMDS), Optronics and other Avionics systems for the Indian market.
Tata Group	Airbus/EADS	Communication systems, proposal to produce C295 aircraft
	AGT International	Homeland security solutions
	Saab	Air defence systems
	TCS-Rolls Royce	Engineering services
	Thales	Optronics solutions
	Agusta Westland	Assembling of AW119Kx helicopters*

Source: Gateway House Research, based on information from the websites of defence companies and news reports

\* Status unclear

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