A. The Essence of State Defense

In the international relations realm which is always dynamic, certain countries should have a strong defense power in order to survive and defend their sovereignty. If a certain country in the condition of unprepared, the unpredictable attack and threat from outer countries can’t be avoided. Indonesia as a sovereign country also should have a strong defense power especially in military preparedness without denying the fact that Indonesia is an archipelago country. In order to build a strong defense power to survive, Indonesia defense was compiled in a system of universal defense which aimed for national interest. The universal defense system is a defense system which involves the entire citizens based on their role and function. The involvement of citizens which is based on nationalism is oriented towards the common goals, and realization of national interest (Buku Putih Pertahanan Indonesia, 2015).

The universal defense system is characterised by populist, totality, and territorial. Populist means that the defense operation is enshrined together with the people and for the people's interest. Totality means that the entire sources and national infrastructure resources empowered for defense effort. Territory means that the title defense forces are implemented extensively in the area of NKRI based on the geographical condition of Indonesia as an archipelago at once as a maritime state (Buku Putih Pertahanan Indonesia, 2015).
B. Army as the Part of State Defense

Peaceful situation, with absence of threat, must be a goal that is always pursued by each country. In order to create such a concussive situation like that, there must be a peacekeeper which defends the sovereignty of a state. Army is one of the instruments that can uphold that goal. In Indonesia, national armies are divided into three parts based on their area; TNI AD for land, TNI AL for an ocean, and TNI AU for air area. Those national armies were established in order to defend the struggle of Indonesian independence from Dutch threat which has the ambition to recolonize Indonesia through the violence of arms. TNI is a development organisation which started previously with Badan Keamanan Rakyat (BKR) or the people's security body on October 5th, 1945, and later became Tentara Keamanan Rakyat or the people's security army.

Furthermore, in order to fix the order which was based on international military, it changed to Tentara Republik Indonesia, or the army of the Republic of Indonesia. The main task of TNI is to uphold the state sovereignty, defend the territorial integrity of the Republic of Indonesia which is based on Pancasila and the constitution of the republic of Indonesia 1945, protect every single nations with all of the spilt blood of Indonesia from the threat and disruption of the integrity of the nation and the state in further development, to improve national army and fight for the independence and sovereignty of Indonesia. In order to unite two armed force which were TRI as the regular army and agencies of people's struggle, then on 3rd June 1947, President confirms with the establishment of TNI ("Tentara Nasional
Indonesia” n.d). In the other side, as a sovereign state which consists of hundreds islands, Indonesia needs a strong and concrete policy to defend the sovereignty from the uncertainty threats which can come anytime. During 2004 until 2014, the government of Indonesia under president SBY had applied the conception of state defence posture, Konsepsi Postur Pertahanan Negara, by ministry of defence which consists of the three main components: capability, power, and degree (Karim, 2014).

The components of are capability of defence, strategic intelligence, military operation besides war, and also support capability. They could not be fully implemented due to the lack of human resources, facility, and weaponry system (alutsista). The components of power until 2014, Indonesia owned 395,000 active troops, which consist of 300,400 armies, 65,000 navies, and 30,100 airforces (Karim, 2014). For the weaponry equipment, Indonesian army is supported by various alutsista such as main battle tank type Leopard also 350 light tanks such as AMX and Scorpion. Indonesian army also possesses a various battle transport vehicle amounted 549 such as Anoa panzer, Stromer, Black Fox, Commando Ranger, Saracen, Casspir, and Barracuda.

The amount of artillery owned by Indonesian army is 1,907. For Indonesian Navy, it is supported by various ships such as 2 Cakra submarines, 11 frigates, 72 patrol ships, 11 mine warfare’s, and around 32 support and logistic ships. For Indonesian air force, it is supported by 78 fighter jet such as Sukhoi SU-27SK (2 units), SU-27SKM Flaker (3 units), SU-30MK Flanker (2 units), and SU-30MK2 Flanker (9 units).
Beside Sukhoi, Indonesian air force is also supported by F-5E Tiger, F-16A, and F-16B. For the component of the degree, Indonesian army consists of 13 kodams (military district) which are 3 kodams in Sumatera, 4 kodams in Java, 2 Kodams in Kalimantan, 1 Kodam in Bali, NTB and NTT, 1 Kodam in Sulawesi, 1 Kodam in Maluku, and 1 kodam in Papua. Indonesian Navy consists of 2 fleet regions, in Jakarta and Surabaya. Meanwhile, Indonesian air force consist of 4 combat squadrons at Iswahyudi air base, Pekanbaru, Hassanuddin, and Supadio (Karim, 2014, pp. 11-14)

C. Defense Industry as the Part of State Defense

As what has been mentioned before, the army is one of the instruments in state defense that is required to uphold the peaceful situation and defend the sovereignty. This means that there is more than one instrument, besides army which can support and supply, in the realization of the peaceful situation. Defense industry also has a significant influence towards the development of army equipment in certain countries. In Indonesia, the early goals of the building of Indonesian strategic industry started from the presidential decree number 59 in 1983 about the formation of the board of trustees and the defense industry security manager including in the strategic State-owned enterprises (BUMNIS), which is independent and politically aimed for defence interest. In the aerospace sector, it is handled by PT Dirgantara (previously PT IPTN), maritime sector it is handled by PT PAL, the weaponry and
ammunition are handled by PT Pindad, and explosive sector is handled by PT Dahana (Karim, 2014, p. 98).

1. PT. Dirgantara

As an effort to develop technology and aviation industry, on April 28, 1976, the government of Indonesia established aircraft industry IPTN initiated by B.J. Habibie. In the process, the company was renamed to Aircraft Industry Nusantara (IPTN). That was when it started to grow and develop the industry of modern and well-equipped aircraft in Indonesia. IPTN has managed to assemble and produce various types of airplanes and helicopters, through cooperation with several major international flights. Since the late 1980s, IPTN has begun working with several foreign aircraft manufacturers to make some components of the aircraft (Sejarah Negara Com, 2014). PT. IPTN is now selling its redundant capabilities in the area of engineering by offering design to test activity services, manufacturing, aircraft and non-aircraft components, and after sales services. It was in this relation that the name IPTN had been changed into PT. Dirgantara Indonesia or Indonesian Aerospace abbreviated IAe which was officially inaugurated by the President of the Republic of Indonesia, KH. Abdurrahman Wahid, in Bandung on August 24, 2000 ("PT Dirgantara Indonesia Persero" n.d).
2. PT. PAL

PT. PAL Indonesia (Persero) started from a shipyard named Namira and established by the Dutch government in 1939. Under the colonisation of Japan, this company changed into Kaigun SE 2124. After the independence of Indonesia, these companies were nationalized by the government and change them into Penataran Angkatan Laut (PAL). In April 1980, the government changed the status of this company from the public company into a limited liability company based on certificate number 12 made by the notary Hadi Moentoro, SH. The company is located in the far of Surabaya with the main activities manufacture warships and commercial ships, providing the services of repair and maintenance of ships as well as general engineering with a particular specification upon order (Artileri, 2012). PT PAL Indonesia is one of the gates to enter the global industry in the defense sector. With its position as the main guide of alutsista in ocean area, PT PAL Indonesia (Persero) will continue to improve its ability to be able to play a role in Driving the Global Maritime Access to Synergy in the future. The significant role of PT PAL INDONESIA (persero) will bring maritime industry of Indonesia to the fulfilment of the maritime market globally. Current capabilities and the quality of the architecture of PT.PAL Indonesia (Persero) has recognised by international market ("PAL Indonesia" n.d).
3. PT Pindad

In the period 1808-1850, military equipment repair shop named Artilleriee Constructive Winkle (WIA) and Pyrotekniesche Werkplaats (PW) were established to hold inventory and maintenance of tools and weapons gadget which were damaged, while PW had a function to create and improve munitions or works related to explosives to fulfill the needs of Netherland's Navy. In the period 1923-1932, workshops in Surabaya and others moved to Bandung and were merged into one with the name Artilerie Inrichtingen (AI). In 1942, the Netherlands surrendered to Japan and then WIA was renamed Dai Ichi Kozo (DIK). In 1947 it was renamed DIK Leger Productie Bedrijven (LPB). On April 29, 1950, the Dutch governments handed over LPB to Indonesia become Pabrik Senjata dan Mesiu (PSM) (Artileri, 2012). In 1958, PSM was changed to Pabrik Alat Peralatan Angkatan Darat, later become Pindad which become BUMN, a State-owned enterprises, stated in Government Regulation (PP) Number 4 1983 dated, Februari 11, 1983 ("Pindad" n.d)

4. PT Dahana

The history of Dahana started from the project of Menang Angkatan Udara Republik Indonesia (AURI) in 1966 at Tasikmalaya, West Java. After 1973, was established as the public company, then it officially became Persero
Company based on government regulation Number 36/1973 in 1991. Dahana has proven capable of providing explosives and blasting services are integrated for different needs and conditions, including bench blasting, trench blasting, and underwater blasting. Dahana was able to handle the complete blasting process starting from the design, calculation, preparation of drill hole, blasting configuration, provisioning, execution of blasting explosive, and security operations. Dahana has successfully established a Factory Cartridge Emulsion, ANFO Detonator Factory, Electric and Non-electric, Ammonium Nitrate Solution and factory Booster, as well as bonded magazine and on bonded warehouse-site Plant, emulsion plant in various locations of mines. In 2012, Dahana completed the construction of the largest manufacturing and development in ASEAN called Energetic Materials Center (EMC) located in Subang, West Java ("Dahana" n.d). Oil and gas market are growing sectors which are always challenging. Oil and amp gas exploration such as seismic surveys has successfully fulfilled the needs of explosive materials with Dahana's own products, which is Dayagel Seismic. In the oil and gas exploitation called ‘Oilwell Perforating’, Dahana succeeded to fulfill the needs of shaped charges products by producing their own products and cooperating with COS (Chatered Olitech Singapore). The manufacturer has been operating since 1995. Granite quarry markets in rapidly growing at Karimun Island and Dahana grabbed this chance by establishing the factory of On-site Bulsik Emulsion at 1998, which is the masterpiece of Dahana's

D. The Needs of Indonesia Military Alutsista (Weaponary System)

Indonesia military capability is reported and considered as a strong military; not only the personnel, but also the equipment such as tanks, jet-fighter, and many other instruments which support the equipment of Indonesian military. As what has been mentioned previously, Indonesia has several defense industries which concern in a certain sector based on what their produce. In the other side, the military capability of Indonesia still needs more development. Especially in technology, the local products of Indonesian defence industry need to compete with other countries arms product, in order to expand and increasing their product in quality and quantity.

Before Indonesia has a better arms products rather than other countries arms product, they need to learn first about the technology of what the good arms product is. Defence minister Ryamizard Ryacudu said that the local arms products still has a weakness. “There is an aircraft which just flies only 100 hours, and there is a problem. There are several broken parts also,” he said. The former army chief staff, emphasising on the updates of Indonesian military alutsista is urgent. Because there are several products aged 30 to 40 years old and it is not renewed (Ramadhan, 2016).

This phenomenon means that Indonesia needs to cooperate with the country which is already well-advance in technology, especially for their military equipment.
As we know, Russia arms products such as AK-47 are so famous and a lot of countries are satisfied with this product. Indonesia can learn their technology and strategy about how to produce a certain arms product which has a good not only in quantity but also in quality though military cooperation.

**E. Indonesia’s Effort to Increase Military Capacity**

As what has been mentioned previously, Indonesia is still lack technology, facility, and human resources. If this problem is not taken seriously by Indonesia, their military power could be weaker. And one of the ways which conducted by Indonesia to surpass this issue is through the military cooperation with Russia. Based on the regulation of the president of the republic of Indonesia number 46 in 2012, about the agreement between the government of the republic of Indonesia and the government of the Russian federation on military-technical cooperation, states that that in Moscow, Russia, on 21 April 2003 the government of the Republic of Indonesia has signed the agreement between the government of the Republic of Indonesia and the Government of the Russian Federation on Military Technical Cooperation, as a result of negotiations between the delegation of the government delegates The Republic of Indonesia and the government of the Federation of Russia (Lembaran Negara Republik Indonesia, 2012). One of the implementations from this policy is the deal to purchase four aircraft and two Russian helicopters. The aircrafts (jet fighter) that would be purchased were the Sukhoi SU-27 flanker type, Sukhoi SU-30MK, and helicopters MI-35 type which signed by President Megawati at Moscow,
April 2003 (Liputan 6, 2003). After the term of president Megawati finished, the position of president was hold by SBY. Under his administration, Indonesian foreign policy principle emerged as a million friends and zero enemies, which means has a similar understanding with independent and active principle which emerge during the era of President Soekarno (Bimo Yusman, 2014).

Both of these principles were emphasizing on the Indonesia foreign policy which did not take any western or eastern blocs, just like when cold war happened. Indonesia is free to cooperate with any other countries, without considering where they stand, and what their ideology. One of the implementations of this principle was when President SBY visited Moscow. He started to conduct the official visit to Russia in 2006. After that, President Putin came to Indonesia in 2007 in order to strengthen bilateral relations between Indonesia and Russia. And one of the results from those visit was, the government of Russia gave credits for the purchase of alutsista, including Sukhoi 27 jet fighter, kilo class submarine, and Helicopter Mi 35 (Purwaningsih, 2006). Then, the further question is, why does Indonesia need to cooperate with Russia other than with other countries? In the next chapter, the author would describe the Russian military capability as the consideration for Indonesia to cooperate in military cooperation.