

June 2023

# WASTED: 2022 GLOBAL NUCLEAR WEAPONS SPENDING

International Campaign to Abolish Nuclear Weapons | REPORT

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FOR MY  
FAMILY  
#SAVEUKRAINE



ICAN

# Wasted: 2022 Global Nuclear Weapons Spending

**International Campaign  
to Abolish Nuclear Weapons**

**REPORT**

**icanw.org**

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# Executive Summary

**In 2022, nuclear-armed states spent five thousand more dollars per minute on their nuclear arsenals than in 2021, a total of \$157,664 per minute on nuclear weapons.**

In 2022, nuclear-armed states spent five thousand more dollars per minute on their nuclear arsenals than the year before, a total of \$157,664 per minute on nuclear weapons. Nine countries spent \$82.9 billion in 2022 on nuclear weapons, of which the private sector earned at least \$29 billion. The United States spent more than all of the other nuclear-armed states combined, at \$43.7 billion. Russia spent 22% of what the US did, at \$9.6 billion, and China spent just over a quarter of the U.S. total, at \$11.7 billion.

There are at least \$278.6 billion in outstanding nuclear weapons contracts, some of which don't expire for decades. In 2022, at least \$15.9 billion in new nuclear weapon contracts were awarded. The companies that received them turned around and invested in lobbying governments, spending \$113 million on those efforts in the US and France. Together, nuclear weapon producing companies, nuclear-armed governments and those in nuclear alliances spent \$21-36 million funding the ten of the most prominent think tanks researching and writing about nuclear weapons in nuclear-armed states.

Russia's invasion of Ukraine and overt threats to use nuclear weapons have induced fear across the planet, but have also spurred a resilience and re-thinking of outdated concepts like nuclear deterrence. Those whose incomes depend on the existence of nuclear weapons fiercely defended the right of nine countries to indiscriminately murder civilians with weapons of mass destruction, but a majority are going in another direction.

In June 2022, more than sixty states parties to the Treaty on the Prohibition of Nuclear Weapons gathered in Vienna. In an incredibly inclusive meeting, they engaged with those impacted by decades of nuclear weapons production and development, youth destined to inherit the last generation's contaminating nuclear legacy, and financiers who know there is power and profit to be found by avoiding the nuclear industry. This meeting adopted the most comprehensive and coordinated action plan on nuclear disarmament in the past decade, and they are well on their way to implementing its agreements.

The nine nuclear-armed states may have wasted \$157,644 a minute on nuclear weapons in 2022, but no matter how much they spend, their nuclear weapons remain tools of terror and intimidation propped up by a mythical tale of deterrence that is rapidly unravelling.

## KEY FIGURES

### Country Spending

 <b>The United States</b>	<b>\$43.7 billion</b> 🕒 \$83,143 / minute
 <b>China</b>	<b>\$11.7 billion</b> 🕒 \$22,219 / minute
 <b>Russia</b>	<b>\$9.6 billion</b> 🕒 \$18,228 / minute
 <b>The United Kingdom</b>	<b>\$6.8 billion</b> 🕒 \$12,975 / minute
 <b>France</b>	<b>\$5.6 billion</b> 🕒 \$10,603 / minute
 <b>India</b>	<b>\$2.7 billion</b> 🕒 \$5,181 / minute
 <b>Israel</b>	<b>\$1.2 billion</b> 🕒 \$2,226 / minute
 <b>Pakistan</b>	<b>\$1 billion</b> 🕒 \$1,967 / minute
 <b>North Korea</b>	<b>\$589 million</b> 🕒 \$1,221 / minute
 <b>2022 Total</b>	<b>\$82.9 billion</b> 🕒 \$157,664 per minute

Company	Spent lobbying in 2022	2022 nuclear weapons related income (USD)
Aerojet Rocketdyne	\$2,337,301	\$4,000,000
Airbus	\$5,291,433	(total figure unknown)
BAE Systems	\$4,609,153	\$844,056,621
Bechtel	\$1,304,995	\$1,658,614,787
Boeing	\$16,674,506	\$892,967,757
Draper	\$0	\$30,682,607
General Dynamics	\$13,800,000	\$2,760,745,351
Honeywell International	\$8,431,869	\$6,530,439,364
Huntington Ingalls Industries	\$1,643,996	\$847,534,629
Jacobs Engineering	\$1,084,991	\$318,030,655
L3 Harris Technologies	\$3,929,996	\$30,553,462
Leidos	\$3,869,996	\$3,318,494,697
Leonardo	\$1,209,994	(total figure unknown)
Lockheed Martin	\$15,817,464	\$2,001,230,808
Northrop Grumman	\$11,730,000	\$9,603,304,188
Peraton	\$870,000	\$26,882,091
Raytheon Technologies	\$13,389,996	\$542,363,667

Company	Spent lobbying in 2022	2022 nuclear weapons related income (USD)
Rolls Royce	\$120,000	(total figure unknown)
Safran	\$881,326	(total figure unknown)
Textron	\$4,631,774	\$8,944,444
Thales	\$1,709,319	(total figure unknown)
<b>Total new nuclear weapon related contracts awarded in 2022, at least \$15.9 billion.</b>		

#### Think tank funding from companies, governments, and alliances that produce and support nuclear weapons

Atlantic Council	\$4,180,000 - \$7,419,974
Brookings Institution	\$2,460,000 - \$4,974,984
Carnegie Endowment for International Peace	\$2,020,000 - \$4,499,986
Chatham House	no amount publicly available
Center for New American Security	\$2,710,001 - \$4,729,975
Center for Strategic and International Studies	\$2,590,000 - \$3,829,987
Hudson Institute	\$375,000 - \$469,999
Observer Research Foundation	\$888,106
Royal United Services Institute	\$2,488,409 - \$5,431,512
Stimson Center	\$3,296,369

**Total company funding** \$ 5 - 9 million

**Total government funding** \$ 16 - 27 million

**Total funding from companies, governments, and alliances that produce and support nuclear weapons** \$ 21 - 36 million

Think tanks do not all report exact contributions per donor, the range presented reflects the information published by these institutions.

# Introduction

In 2022, Russia's overt threats to use nuclear weapons illustrated that nuclear deterrence is just an unproven theory that puts us all at constant risk of annihilation while requiring a massive industry to maintain. Luck, not reason or strategy, has kept nuclear weapons from being used in warfare for the past 78 years.<sup>1</sup> But we can't count on our luck to hold in perpetuity. For the first time in decades, the general public was confronted with a very real threat of nuclear war in 2022. The threat that nuclear weapons pose, as long as they exist, became tangible, with iodine tablets selling out across Europe and an increase in demand for nuclear bunkers.<sup>2</sup>

The mainstream media increased its reporting on what would physically happen to humans and the environment when deterrence theory fails. While the focus was often on a possible use by Russia, there was also a growth in understanding that any impact would not be constrained by borders and could have global effects.<sup>3</sup> The war laid bare the inherent risks and dangers of nuclear deterrence theory in preserving international peace and security, as a nuclear-armed state unabashedly used its nuclear weapons to prevent foreign interference as it violated international law and started a war.<sup>4</sup> Yet, politicians, CEOs, and experts continued to tout the value of nuclear deterrence, and argued for an increased reliance on nuclear weapons.

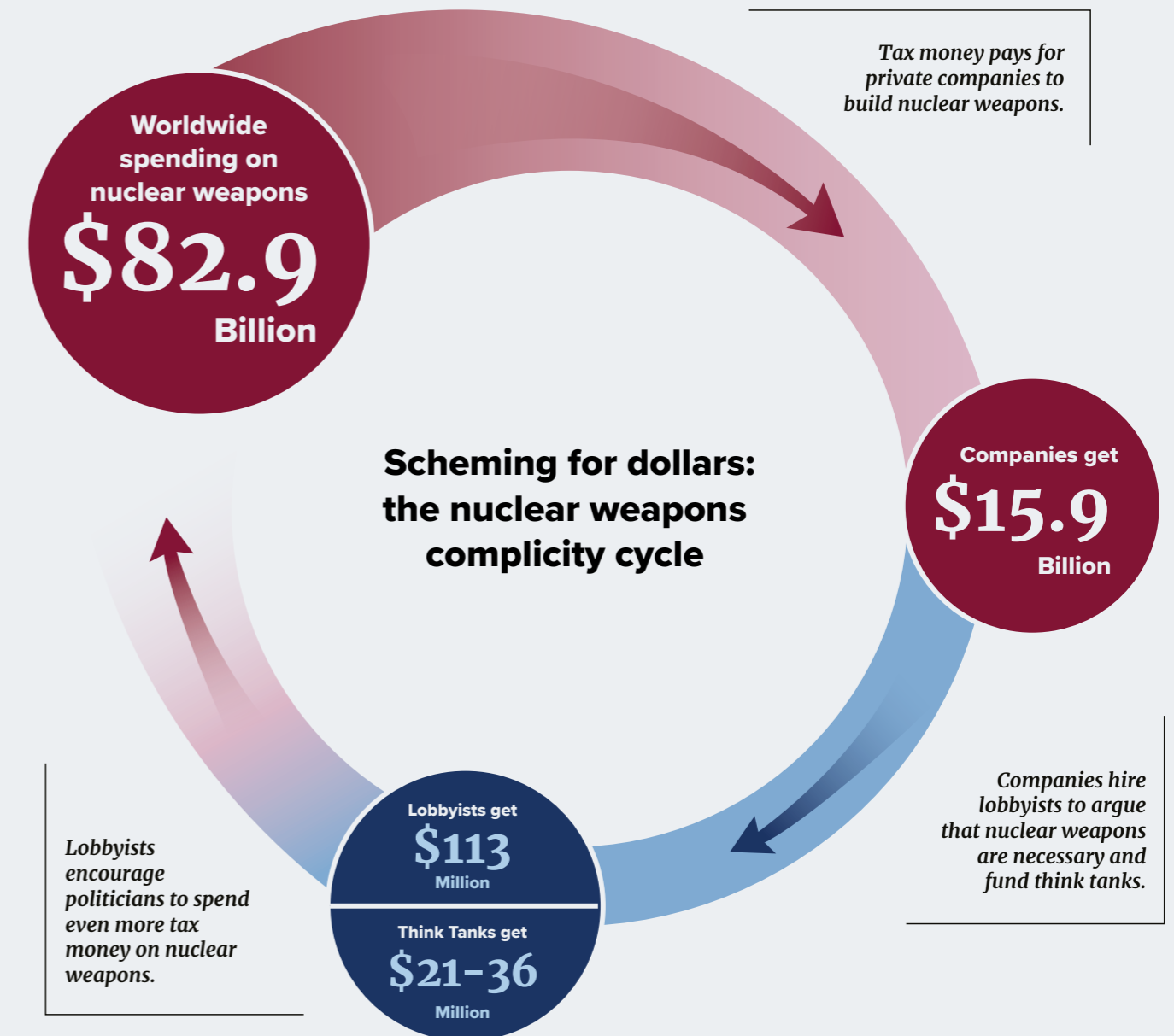
Why? Because their paychecks depended on it. Behind the scenes, throughout 2022, nuclear-armed countries poured their resources into expanding and maintaining nuclear weapons, while nuclear weapon producing companies and countries in nuclear alliances did their best to sell deterrence by funding think tanks and lobbyists. Board members at nuclear weapons producing companies played an integral role in keeping the money flowing to weapons of mass destruction — sitting on boards of banks that lend to them and major think tanks researching and writing about nuclear weapons.

Nuclear-armed countries poured money into the production of weapons of mass destruction, handing over at least 35% of their massive spending to companies. These companies then turned around and paid lobbyists and think tanks to sell the myth of nuclear deterrence.

Russia's invasion of Ukraine publicly demonstrated how unacceptably dangerous nine countries' reliance on nuclear weapons is. Those whose incomes depend on the existence of nuclear weapons fiercely defended the right of these countries to indiscriminately murder civilians with weapons of mass destruction through falsehoods of deterrence.

They may have the resources, but they don't have the numbers. In June 2022, more than sixty states parties to the Treaty on the Prohibition of Nuclear Weapons gathered in Vienna for the treaty's first Meeting of States Parties, adopting the first action plan on nuclear disarmament in over a decade. Every country needs to get on the right side of history and join this treaty before it's too late.

## NUCLEAR WEAPONS SPENDING CYCLE | 2022



**This report unveils the dirty secret of the nuclear weapons industry: the billions wasted on illegal weapons of mass destruction to maintain an industry dedicated to the deadly theory of nuclear deterrence.**

# Countries

## INTRODUCTION

The International Campaign to Abolish Nuclear Weapons estimates that the nine nuclear-armed countries spent **\$82.9 billion** on nuclear weapons in 2022. This equals **\$157,664** spent in every minute of 2022. This means countries increased spending on nuclear weapons by **\$2.5 billion** since 2021.

 <b>The United States</b>	<b>\$43.7 billion</b> ⌚ \$83,143 / minute
 <b>China</b>	<b>\$11.7 billion</b> ⌚ \$22,219 / minute
 <b>Russia</b>	<b>\$9.6 billion</b> ⌚ \$18,228 / minute
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 <b>North Korea</b>	<b>\$589 million</b> ⌚ \$1,221 / minute
 <b>2022 Total</b>	<b>\$82.9 billion</b> ⌚ \$157,664 per minute



## China

### \$11.7 billion (78.6 billion yuan)

**China has 410 nuclear weapons and can launch them from land-based missiles, aircraft, and submarines.<sup>5</sup>**

There is no reliable public information about Chinese nuclear spending. Therefore, ICAN used a percentage of total military spending to calculate China's nuclear expenditure. ICAN estimated China spends four per cent of its total military spending on nuclear weapons based on similar estimates in a 2020 Reaching Critical Will report and in a 2011 Global Zero estimate.<sup>6</sup> The Stockholm International Peace Research Institute (SIPRI) estimated that in 2022 China spent \$292 billion on military expenditures.<sup>7</sup> Four per cent of \$292 billion is about \$11.7 billion, or 78.6 billion yuan, our estimate for Chinese nuclear spending in 2022.

China spent \$22,219 (149,493 yuan) every minute of 2022 on nuclear weapons. On a constant currency basis, China increased its nuclear weapons spending by \$710 million (4.78 billion yuan) in 2022.



**China spent \$22,219 (149,493 yuan) every minute on nuclear weapons in 2022.**



## France

### \$5.6 billion (€5.3 billion)

**France has under 300 nuclear weapons, according to French President Macron.<sup>8</sup> The Federation of American Scientists estimates that France has 290 nuclear weapons which can be launched from aircraft and submarines.<sup>9</sup>**

The 2022 French defence bill allocated €5.3 billion for nuclear weapons (the line item "deterrence" in the budget) in 2022.<sup>10</sup> This includes annual costs for nuclear warheads, renewal of nuclear-capable cruise missiles, submarine-launched missiles, and submarines. Costs can be seen in more detail in the Ministry of Defence 2022 budget justification document.<sup>11</sup> Notably not included in the deterrence budget are costs associated with the Rafale aircraft, which can be used to launch nuclear weapons. Given that these costs are not publicly available, our estimate assumes that the nuclear weapons budget covers the bulk of French nuclear weapons spending and does not include these additional costs. France spent roughly 10 per cent of its total military budget on nuclear weapons in 2022.<sup>12</sup>

France spent \$10,603 (€10,083) on nuclear weapons every minute in 2022. On a constant currency basis, France increased its nuclear weapons spending by \$315 million (€300 million) in 2022.

According to a military programming law approved in 2018, the total amount that France will spend on its nuclear weapons programme from 2019-2025 is €37 billion.<sup>13</sup> In April 2023, the new draft Military Programming Law for the period of 2024-2030 was introduced, including 13%, or €53.69 billion, for nuclear weapons, for the modernisation and renewal of all nuclear forces, demonstrating a plan to increase French spending on nuclear weapons by nearly 50% in the coming years, compared to the previous five years.<sup>14</sup>



**France spent \$10,603 (€10,083) on nuclear weapons every minute in 2022.**



## India

### \$2.7 billion (214 billion Indian rupees)

India is estimated to have 164 nuclear weapons and can launch nuclear weapons from land-based missiles, aircraft, and submarines.<sup>15</sup>

While little is officially published about Indian nuclear weapon spending, an October 2016 Stimson Center report looked at parliamentary oversight documents and created a methodology to calculate annual nuclear weapons spending.<sup>16</sup> A 2016 Indian parliamentary report stated that India spent 46% of the Defence Research and Development Organisation (DRDO)'s budget on its nuclear-capable delivery systems. Given that about half of the U.S. nuclear budget goes to nuclear delivery systems, the Stimson Center report assumed that India's total nuclear spending would follow the same pattern.

ICAN's research thus follows the Stimson Center's methodology by taking 46% of the 2022-2023 DRDO budget (23,264 crore Indian rupees) to get 10,701.4 crore Indian rupees and doubling it to reach 21,402.9 crore Indian rupees.<sup>17</sup> A crore is 10 million, so 21,402.9 crore is 214 billion Indian rupees. Converted into USD, this total is \$2.7 billion, our estimate for Indian nuclear spending in 2022.

This is roughly 3 per cent of the \$81.4 billion India spent on its military in 2022. India spent \$5,181 (407,209 Indian rupees) every minute of 2022 on nuclear weapons.

On a constant currency basis, India increased its nuclear weapons spending by \$590 million (46 billion Indian rupees) in 2022.



India spent \$5,181 (407,209 Indian rupees) on nuclear weapons every minute in 2022.



## Israel

### \$1.2 billion (3.9 billion shekels)

Israel is estimated to have 90 nuclear weapons and is believed to be able to launch them from land-based missiles, submarines, and aircraft.<sup>18</sup>

There is no reliable public information about Israeli nuclear spending, given that it publicly does not confirm that it possesses nuclear weapons. Therefore, ICAN used an average percentage of what nuclear-armed countries spend on nuclear weapons out of total military spending to assess Israel's nuclear spending. SIPRI estimated that in 2022, Israel spent \$23.4 billion on its military.<sup>19</sup> Five per cent of \$23.4 billion is \$1.2 billion, our estimate for Israeli nuclear spending in 2022.

Israel spent \$2,226 (7,476 shekels) every minute on nuclear weapons in 2022. On a constant currency basis, Israel increased its nuclear weapons spending by \$990,777 (3 million shekels) in 2022.



Israel spent \$2,226 (7,476 shekels) every minute on nuclear weapons in 2022.



## North Korea

### \$589 million (761.3 billion won)

North Korea is estimated to have 30 nuclear weapons.<sup>20</sup> It is developing nuclear-capable missiles which can be launched from land and from submarines.

There is very little public information about North Korean nuclear spending or its military spending overall. South Korea annually estimates North Korean gross national income and it placed North Korea's 2021 GNI at 36 trillion won.<sup>21</sup> North Korean military spending is largely unknown but in 2009 a South Korean think tank estimated North Korea spent \$8.7 billion on its military, which represented about one-third (35%) of GNI at that time.<sup>22</sup>

Assuming that North Korea continues to spend 35% of its GNI on its military, North Korea would have spent about 12.7 trillion Korean won on its military in 2021. Global Zero estimated that in 2011 North Korea spent about 6% of its military budget on its nuclear programme.<sup>23</sup> Assuming that North Korea still spends 6% of its annual military spending on nuclear weapons, North Korea would have spent about 761.3 billion won on its nuclear program in 2021. When converted to USD, 761.3 billion won is \$589 million, our estimate for 2022 North Korean nuclear spending.

This means North Korea spent \$1,121 (1.4 million won) every minute on nuclear weapons in 2022.

On a constant currency basis, North Korea increased its nuclear weapons spending by \$21 million (26.9 billion won) in 2022.



North Korea spent \$1,121 (1.4 million won) every minute on nuclear weapons in 2022.



## Pakistan

### \$1 billion (211.3 billion Pakistani rupees)

Pakistan is estimated to have 170 nuclear weapons that it can launch from land-based missiles and aircraft, and it is developing the ability to launch them from submarines.<sup>24</sup>

Analysts in the past decade have estimated that Pakistan spends about ten per cent of its total military spending on its nuclear arsenal, confirmed in a 2016 parliamentary report revealing that Pakistan spent 9.8 per cent of its official military budget on nuclear weapons that year.<sup>25, 26</sup>

Ten per cent of Pakistan's 2022 military spending (\$10.3 billion) is \$1 billion, our estimate for Pakistani nuclear spending in 2022.<sup>27</sup>

Pakistan spent \$1,967 (403,089 Pakistani rupees) every minute on nuclear weapons in 2022.

On a constant currency basis, Pakistan increased its nuclear weapons spending by \$94 million (19 billion rupees) in 2022.



Pakistan spent \$1,967 (403,089 Pakistani rupees) every minute on nuclear weapons in 2022.



**Russia spent \$18,228 (1.3 billion roubles) every minute on nuclear weapons in 2022.**



## Russia \$9.6 billion (669.6 billion roubles)

Russia has 5,889 nuclear weapons which it can launch from land-based missiles, submarines, and aeroplanes.<sup>28</sup>

A 2018 SIPRI report found that Russian nuclear weapons system spending cost about 13% of total defence expenditures in recent years (2010 and 2016). Therefore, in previous years, this report calculated 13% of total Russian defence spending to provide an estimate of nuclear weapons spending.<sup>29</sup> However, in 2022, Russian military spending increased significantly beyond what was projected due to its invasion of Ukraine. SIPRI estimated Russian military spending at \$65.9 billion in 2022, but noted that projected military costs had increased substantially in 2022, "largely attributable to the war."<sup>30</sup> These costs can be assumed to be largely, if not completely, associated with conventional weapons costs; the line item in the Russian budget dedicated to the "nuclear weapons complex" (which is just one component of our calculation of Russian nuclear weapons spending) remained unchanged from what was budgeted in 2022 to what was reported as enacted. Other allocations for conventional forces, for example for the Russian national guard, or for "mobilization and extra forces training" increased significantly.<sup>31</sup>

Nuclear weapons spending therefore would have likely been a smaller percentage of total military spending than in previous years in 2022. Therefore, in order to provide a more accurate estimate for Russian nuclear weapons spending for 2022, this year we calculated the increase in the "nuclear weapons complex" line item from 2021 to 2022 (6%) and applied this increase to last year's nuclear weapons spending calculation. Our estimate of Russian nuclear weapons in 2022 is therefore 669.6 billion roubles or \$9.6 billion, which is about 11% of Russian military spending in 2022. Russia spent \$18,228 (1.3 billion roubles) every minute on nuclear weapons in 2022. On a constant currency basis, Russia increased its nuclear weapons spending by \$551 million (38 billion roubles) in 2022.



Test salvo firing of an intercontinental ballistic missiles "Bulava" from the lead SSBN "Yuri Dolgoruky". Source: Ministry of Defense of the Russian Federation.



**The United Kingdom spent \$12,975 (£10,522) every minute on nuclear weapons in 2022.**



## The United Kingdom \$6.8 billion (£5.5 billion)

The United Kingdom has 225 nuclear weapons which it can launch from submarines.<sup>32</sup> It cooperates closely with the United States to produce its Trident II D-5 nuclear-capable missiles, and the submarines which are armed with them.

The United Kingdom does not release official detailed costs for its nuclear weapons programme, although analysts have produced estimates based on what data is available. A 2016 Campaign for Nuclear Disarmament report calculated that the overall cost to replace the UK nuclear submarine programme will be £205 billion (\$284).<sup>33</sup> A Nuclear Information Service report calculated the average cost per year of the overall program would be £3.4 billion (\$4.7 billion).<sup>34</sup> A 2021 National Audit Office report admitted that official projections of nuclear weapons spending costs have been too low, acknowledging that in the last year, ten-year projected costs grew by £16 billion.<sup>35</sup>

In a 2018 National Audit Office report, the cost of the defence nuclear enterprise from 2021-2022 were projected as £4.97 billion, which includes £2.203 billion for submarines, £1.25 billion for the missiles and warheads, £711 million for propulsion systems and another £769 million in support programs and other costs.<sup>36</sup> The £2.203 billion in reported submarine costs include the nuclear-capable Dreadnought-class submarines, the Astute-class, the Marine Underwater Future Capability (MUFC)-class submarines and "other submarines." Since ICAN does not include non-nuclear-capable delivery system costs in this report's estimates, the £2.203 billion reported for submarines was revised to only include the costs for the nuclear-capable Dreadnought-class.<sup>37</sup> The annual cost for the Dreadnought programme was estimated as £2.2 billion in a 2023 parliamentary research briefing.<sup>38</sup> We've also added in the contingencies reported for the Dreadnought programme, estimated at £0.6 billion for 2021-22.<sup>39</sup>

With this revision, the total estimated cost of the UK nuclear programme for 2021-22 comes to £5.5 billion, or \$6.8 billion. This amounts to about 10 per cent of the UK's total military spending of \$68 billion.<sup>40</sup>

The United Kingdom spent \$12,975 (£10,522) every minute on nuclear weapons in 2022.

On a constant currency basis, the United Kingdom increased its nuclear weapons spending by \$757 million (£614 million) in 2022.





**The United States spent \$83,143 every minute of 2022 on nuclear weapons.**



## The United States \$43.7 billion

**The United States has 5,244 nuclear weapons which it can launch from land-based missiles, submarines, and aeroplanes.<sup>41</sup>**

The Department of Energy's National Nuclear Security Administration (NNSA) and the Department of Defense divide responsibilities for the nation's nuclear weapons. The NNSA is responsible for the research, development, production, testing and dismantlement of the nuclear warheads, while the Department of Defense manages the development of warhead delivery systems, such as missiles, aircraft, and submarines. The Department of Defense also manages the deployment of nuclear weapons once they are produced, and any foreign storage facilities for deployed weapons.

The ICAN spending estimate combines U.S. Department of Defense and NNSA funding.<sup>42</sup> The U.S. Congress allocated \$16 billion for the NNSA in 2022 to spend on weapons activities.<sup>43</sup> In 2022, the Department of Defense requested \$27.7 billion for "Nuclear Modernization," including the "Ground-Based Midcourse Defense, B-21 Bomber, Columbia class submarine and Nuclear Command, Control, and Communications."<sup>44</sup> The Defense Department doesn't provide more detail on all the programs covered under this category. However, given the similarity to the Congressional Budget Office total estimate for Department of Defense spending on nuclear weapons systems, including nuclear delivery systems and nuclear command and control, it can be assumed to be comprehensive.<sup>45</sup>

Adding \$16 billion to \$27.7 billion results in a total of \$43.7 billion spent on nuclear weapons in the United States in 2022. This is roughly five per cent of total U.S. military spending in 2022.<sup>46</sup>

The United States spent \$83,143 every minute of 2022 on nuclear weapons.

The United States decreased its nuclear weapons spending by \$500 million in 2022.



Static fire test for Sentinel solid rocket motor. ©Public Domain.

# Companies

## INTRODUCTION

Globally, nuclear armed countries have contracts with companies to produce nuclear weapons totalling at least \$278.6 billion continuing in some cases through 2040. In 2022, at least \$15.9 billion in new nuclear weapon contracts were awarded. Companies earned at least \$29 billion from these contracts in 2022. These same companies turned around and invested some of their earnings in lobbying governments, spending \$113 million on those efforts in the US and France, the only countries in which it is legally obligated to report on lobby expenditures.

Northrop Grumman continues to have the most money in ongoing contracts to produce nuclear weapons, at \$81.7 billion. When shareholders raised concerns about the company's lobbying efforts to prevent the exploration of alternatives to nuclear weapons, they were told plainly that these lobby efforts are good for business.<sup>47</sup>

It's not only good for Northrop's business either. BAE Systems won the largest single nuclear weapons contract in 2022, a \$12 billion contract to spend the next two decades working on the Minuteman III ICBMs — the system that Northrop was awarded \$13 billion in 2020 to replace. The U.S. has now contracted at least \$25 billion on two types of ICBMs, a system that the American Physical Society has called unreliable.<sup>48</sup>

The nuclear weapons business is not all ICBMs though. Companies like Bechtel, Huntington Ingalls Industries, and Honeywell International bring in billions each year to manage and operate the facilities in which nuclear weapons are produced and key components are tested. The sprawling nuclear weapons complex is constantly dealing with cost overruns, security issues, and poor performance reviews. It was partly for this reason that the UK decided to renationalise its Atomic Weapons Establishment, providing Serco with an exit from the realm of nuclear weapons producers. In the U.S. several board members from nuclear weapons producing companies are also on the boards

of not-for-profit entities involved in the management and operation of the nuclear weapons complex.

Of course, Russia's invasion of Ukraine on 24 February 2022, and the resulting export control restrictions and international sanctions against Russia, Belarus and certain Russian entities and individuals, has resulted in disruptions to many of the companies associated with the production of nuclear weapons. Airbus, a Dutch registered company, working on the French nuclear arsenal (through production facilities in Germany) had to delay projects it was working on with the Russian state; there were also significant supply chain issues for the company, as it has historically sourced titanium from Russia.<sup>49</sup>

Several companies anticipated significant increases in their overall sales in 2022, as weapons production ramped up because of the war. Lockheed Martin's CEO, Jim Taiclet, talked about the impact of the war in Ukraine on the company at investor calls saying, "deterrence is a more valuable product than it's been in a century" and that the company was positioning itself as a deterrence company. He did this citing Germany's decision on acquiring the F-35 and "moving towards nuclear mission responsibilities in Europe" to future nuclear command and control projects.<sup>50</sup>

Additionally, there has been a notable rise in lending and other investments made to various nuclear weapons producers. For the first time, this report provides the names of board members who sit on both the companies building nuclear weapons and the banks that lend to them. Companies including Airbus, Boeing, Leonardo, Raytheon, Rolls-Royce, Safran, and Textron all have board members with financial institution ties. Additionally, this report continues to provide the names of board members and trustees of think tanks who have ties to nuclear weapons producers.

On the other hand, BAE Systems has board members that are involved in setting investment industry standards.

With debates across Europe on how to deal with the defence sector and its known contributions to human rights violations in setting up the social taxonomy for EU investors, the role of weapons company board members in investment regulations may reflect an agenda not often discussed in the public domain.

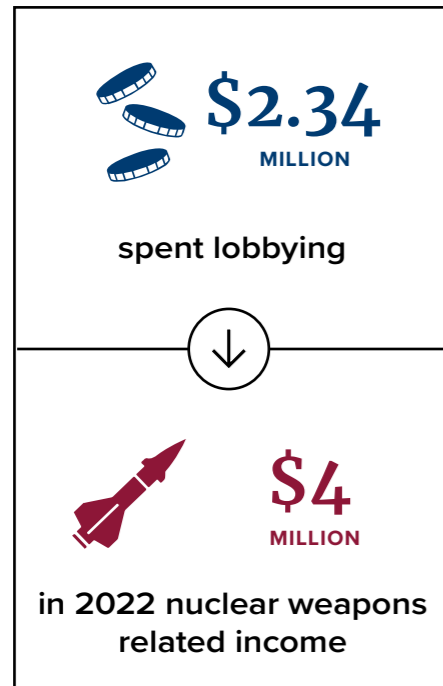
Board members of nuclear weapon producers are also tied to several think tanks, serving as members or trustees. Key figures from the nuclear weapons industry are involved with think tanks that produce information on nuclear weapons including: the Brookings Institution, the Center for a New American Security, the Center for Strategic and International Studies, Chatham House (the Royal Institute of International Affairs), Harvard Kennedy School's Belfer Center for Science

and International Affairs, the Heritage Foundation and the Hoover Institution at Stanford University. Board members are also tied to other think tanks, working on a range of other issues, including the Aspen Institute, the Center for American Progress, the Council on Foreign Relations, and the Heritage Foundation.

Nuclear weapons remain the most heinous weapons ever deployed, and after a year of threats to use them, are once again high in the consciousness of the companies building them (and their significant investors). While this select class of individuals see a benefit to their bottom line, the reality is that should these weapons be used, their wealth will not protect them. They jeopardise the lives of innocent people in propping up falsehoods of deterrence and their utility.

## NUCLEAR WEAPON RELATED CONTRACTS AND LOBBYING IN 2022

Company	Spent lobbying in 2022	2022 nuclear weapons related income (USD)
Aerojet Rocketdyne	\$2,337,301	\$4,000,000
Airbus	\$5,291,433	(total figure unknown)
BAE Systems	\$4,609,153	\$844,056,621
Bechtel	\$1,304,995	\$1,658,614,787
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Safran	\$881,326	(total figure unknown)
Textron	\$4,631,774	\$8,944,444
Thales	\$1,709,319	(total figure unknown)



\$1.71

Earned in nuclear weapon contracts for every dollar Aerojet Rocketdyne spent lobbying.



???

There is no information published as to the CEO Eileen Drake's 2022 salary.

## Aerojet Rocketdyne

A special meeting of Aerojet Rocketdyne's stockholders took place on March 16, 2023. The purpose of the meeting was to consider a proposal for a merger with L3 Harris Technologies, Inc. Ultimately, the shareholders agreed to the acquisition offered by L3 Harris Technologies.<sup>51</sup> It's worth noting that Aerojet Rocketdyne had attempted a merger with Lockheed Martin last year, but the proposal was rejected by the U.S Federal Trade Commission.<sup>52</sup> In the event that the new merger attempt also fails, Aerojet Rocketdyne may be obligated to pay L3 Harris approximately \$100 million in fees.

The failure to merge with Lockheed Martin generated tensions within the Aerojet Rocketdyne board of directors, and now half of the Aerojet Rocketdyne board members are new, having begun service in 2022. These new members were likely put in place to remove the near cabal that former Executive Chairman Warren Lichtenstein had put together (in an attempt to oust Eileen P. Drake).<sup>53</sup> As there has been no annual meeting or agreement to prepare one in the company, there is no information published as to the CEO Eileen Drake's 2022 salary.

These issues within the board and facing the future direction of the company have resulted in no official annual report of the company published since 2021. There remains significant turmoil in the process to be acquired by another firm — formerly Lockheed Martin, but now L3 Harris Technology.<sup>54</sup>

Aerojet Rocketdyne reported \$2,237.6 million in net sales in 2022.<sup>55</sup> Aerojet Rocketdyne Holdings, Inc is the name of the parent company, and borrows money under the names Gencorp Inc and Aerojet.

### NUCLEAR WEAPONS

Aerojet Rocketdyne manufactures the boost propulsion system for all U.S. and UK nuclear armed missiles, including the Trident and Minuteman III systems.<sup>56</sup> Aerojet Rocketdyne is also producing the solid rocket motor and post-boost propulsion system for the new U.S. intercontinental ballistic missile system, 'LGM-35A Sentinel' (formerly called the Ground - Based Strategic Deterrent).<sup>57</sup>

The company is currently developing, and in 2022 tested, the eSR-19, a large solid rocket motor to upgrade motors previously used in Minuteman II missiles, and to be used in several future systems.<sup>58</sup> It is likely the eSR-19, or Aerojet's eSR-73, will be used in new intercontinental ballistic missiles under development in the US.

### CONTRACTS

In 2022, Aerojet Rocketdyne did not secure new nuclear weapons-related contracts. However, the company does have outstanding multi-year contracts related to nuclear weapons production, including for the Minuteman III system.<sup>59</sup>

### LOBBY & INFLUENCE

In 2022, Aerojet Rocketdyne reported spending \$1,440,000 on their own lobbying efforts. An additional \$897,301 was spent hiring external lobbyists including: Brachman, Marshall; Carmen Group Incorporated; Defense Consulting Group, LLC; Ervin Graves Strategy Group, LLC; Fife Strategies, LLC; Plurus Strategies, LLC; Policy Navigation Group, and The Nickles Group, LLC.<sup>60</sup>

General Kevin P. Chilton (Ret), one of the Aerojet Rocketdyne Board members, also serves on the Board for two U.S. nuclear weapon laboratories: the Sandia National Laboratory and the Lawrence Livermore National Laboratory. He was

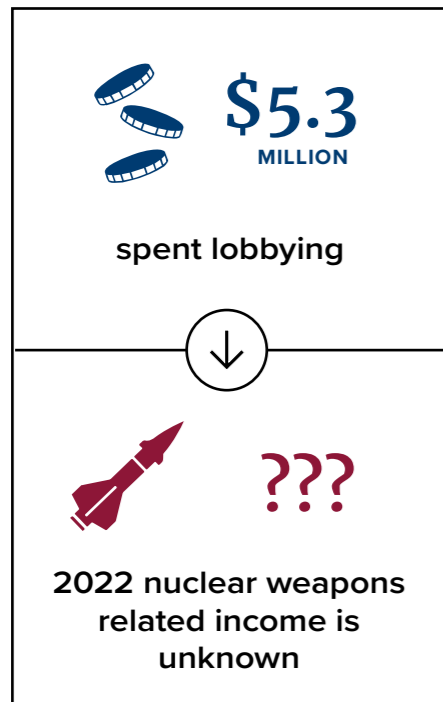
responsible for the U.S. ICBM force during his time in the Air Force as well. He is also connected to the Lobby firm, Chilton & Associates LLC.<sup>61</sup>

Gail Baker, a new board member, is also a board member at Leonardo DRS, the U.S. arm of Leonardo, the Italian company involved in manufacturing key components for the French nuclear arsenal.<sup>62</sup>

Thomas Corcoran, a board member since 2008, is also on the board of L3 Harris, the company that Aerojet is trying to merge with.<sup>63</sup> John Schumacher, a Senior Vice President, is a trustee for NDIA, the National Defence Industrial Association, an industry wide lobby group.<sup>64</sup>



Aerojet Rocketdyne's Design Verification Test of the eSR-19. Source: Aerojet Rocketdyne, Inc.



**\$3,543,426**

Earned by Guillaume Faury, Chief Executive Officer Airbus.

## Airbus

Airbus is significantly involved in two joint ventures contracted to produce key components for the French nuclear arsenal. Airbus also owns 37.5% of MBDA and half of ArianeGroup.<sup>65</sup>

Airbus is partially state-owned by France (10.89%), Germany (10.87%) and Spain (4.10%), with the rest of its shares owned by the public.<sup>66</sup>

Airbus CEO, Mr Guillaume Faury, earned €3,726,000 (\$3,543,426) in direct cash compensation for 2022, a 35% increase from 2021.<sup>67</sup> He is also currently serving as the president of Groupement des Industries Françaises de l'Aéronautique et du Spatial (GIFAS), one of the main arms industry lobby groups in France.<sup>68</sup>

The Russian invasion of Ukraine directly disrupted Airbus in a couple of ways. First, the titanium used by Airbus is sourced from Russia. Second, the joint venture ArianeGroup is involved in the Soyuz programme and Russia's Roscosmos has suspended rocket launches since the invasion began.<sup>69</sup> This has impacted the ability of Airbus to secure materials and paused the delivery of products.

### NUCLEAR WEAPONS

ArianeGroup is the prime contractor for French M51 nuclear missiles. These are missiles with intercontinental capabilities, multiple warheads, carried on nuclear-powered ballistic missile submarines. ArianeGroup describes its role in M51 production as "upstream research, design, development and production of the missiles, the land-based operating infrastructure and the command-and-control system on board the submarines".<sup>70</sup>

The prime contractor for the ASMPA missile, which carries the next generation nuclear missile (TNA (tête nucléaire aéroportée)) is MBDA France.<sup>71</sup>

### CONTRACTS

The 2022 French defence budget allocated €6.28 million for nuclear weapons-related expenses in 2022. This includes efforts towards creating new M51 submarine-launched ballistic missiles, continued production of existing missiles, and the air-launched cruise missile costs as well.<sup>72</sup>

The French defence budget allocates over €50 million for the ASMPA and indicates MBDA is the prime contractor. However, it does not provide details about precisely what MBDA (and therefore, Airbus) will receive.<sup>73</sup>

According to the French 2022 defence budget, €1.6 million was allocated to the M51 submarine launched ballistic missiles, and Ariane Group is listed as the primary contractor, but the contract amount itself is unclear.<sup>74</sup>

### LOBBY & INFLUENCE

Airbus board member Victor Chu is connected to international institutions including the World Economic Forum and the Royal Institute of International Affairs.<sup>75</sup> Another board member, Ralph D. Crosby Jr, was previously an officer in the U.S. Army, where his last military assignment was as military staff assistant to the Vice President of the United States.<sup>76</sup>

Airbus also receives significant financing from the French Bank, BNP Paribas, and Airbus board member Stephan Gemkow is a senior advisor to the banking group.<sup>77</sup> In total, Airbus was connected to more than \$5.2 million in lobby expenditures in France and the United States combined.

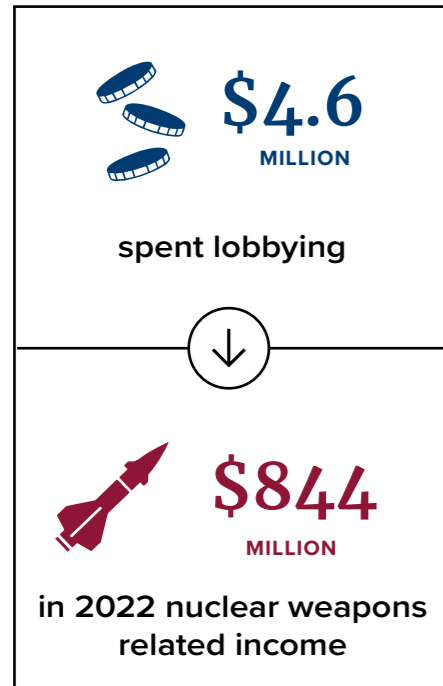
In the US, Airbus reported \$2.6 million in lobby expenditures on their own behalf, and another \$1.3 million through hired lobbyists. Airbus hired the following firms to lobby on their behalf in the US: Bob Riley & Associates, LLC, Cassidy & Associates, Inc., Federal Solutions, LLC, Fierce Government Relations, Hogan Lovells US LLP, Invariant LLC, MRC Consulting, LLC, Prime Transatlantic, LLC, and Tiber Creek Group.<sup>78</sup>

Airbus spent more than €1.3 million on lobbying in France, of which at least €250,000 was directly connected to MBDA.<sup>79</sup> ArianeGroup did not register any lobbying activity.

In the UK, Airbus was connected to at least 41 meetings with key representatives of the UK government. Of these, at least six meetings were to discuss Airbus' role in the UK defence sector. Four of the Airbus lobby meetings were held with the UK Prime Minister.<sup>80</sup>



Kharkiv subway stations are now an asylum for all citizens whose homes were destroyed or who are living in heavily shelled areas, 22 March 2022. Photo by: Wojciech Grzedzinski.



## BAE Systems

BAE Systems is involved in the French, UK and U.S. nuclear arsenals. The specific amounts BAE receives from the French and UK governments are not disclosed, but the U.S. government has outstanding contracts with BAE for at least \$13.9 billion through 2040.

Dr. Charles Woodburn CEO of BAE Systems PLC earned £3,625,402 (\$2,940,201) in 2022, not including long-term incentives or stock options.<sup>81</sup>

### NUCLEAR WEAPONS

BAE Systems is significantly involved in the French nuclear arsenal through its 37.5% ownership of MBDA.<sup>82</sup> MBDA is the prime contractor for the ASMPA, the air-launched nuclear missiles of France.<sup>83</sup>

BAE is also involved in system engineering, training, technical support and development of the U.S. Minuteman III system.<sup>84</sup>

BAE Systems also provides supply support and information technology services for the Trident II (D5) Strategic Weapon System (SWS).

BAE Systems (along with Rolls Royce) is building the four-submarine Dreadnought fleet, the UK's nuclear armed submarines.<sup>85</sup> BAE Systems is the lead for the whole boat build and secondary propulsion and is the platform technical authority on the Dreadnought programme. The UK government committed an initial £1.3 billion to the programme in 2016.<sup>86</sup> However, it is estimated that the programme will cost at least £10 billion.<sup>87</sup>

BAE Systems is also working on the U.S. Virginia class nuclear-armed submarines, manufacturing the propulsors and payload tubes for the new boats.<sup>88</sup>

### CONTRACTS

In 2022, the UK Ministry of Defence announced it would fund an additional £2 billion (\$1.62 billion) in funding for the Dreadnought nuclear-armed submarines, with an estimate of £10 billion (\$8.11 billion) for the current delivery phase.<sup>89</sup> This does not include the costs of the Trident missile production, nor the new warhead production and design.



**\$183.13**

Earned in nuclear weapon contracts for every dollar BAE spent lobbying.



**\$2,940,201**

Earned by Dr. Charles Woodburn, Chief Executive Officer.

The French defence budget allocates over €50 million for the ASMPA, and indicates MBDA is the prime contractor, however, it does not provide details about precisely what MBDA (and therefore, BAE Systems), will receive.<sup>90</sup>

In the US, BAE Systems was awarded a \$12 billion contract in 2022, for Minuteman III system engineering through at least 2040.<sup>91</sup> This is in addition to an existing 12-year contract for \$1.7 billion, set to expire in 2025.<sup>92</sup>

BAE is also contracted for work on the Virginia-class nuclear-armed submarine and the associated Trident missiles. There are two existing contracts for the submarine work, for a total of \$118 million.<sup>93</sup> In 2022, one new contract was awarded for work on the Trident missiles for \$11 million.<sup>94</sup> The other two outstanding Trident missile contracts are valued at \$103 million.<sup>95</sup>

### LOBBY & INFLUENCE

In the US, BAE Systems reported spending \$3.5 million on their own lobbying efforts in 2022 and spent more than \$1 million on external lobbyists. The lobbying firms BAE hired in the US included: Bedrock Strategies, LLC; Brownstein Hyatt Farber Schreck, LLP; Cassidy & Associates, Inc.; Etherton and Associates, Inc.; Holly Strategies Incorporated, and Prsam.<sup>96</sup>

In France, BAE is estimated to have spent €93,750 on lobbying associated with MBDA, of which BAE Systems is 37.5% owner.<sup>97</sup>

Several companies met with the UK Minister of State Jeremy Quin at the Ministry of Defence regarding the Dreadnought contract announcement in May 2022. BAE Systems, Northrop Grumman, Lockheed Martin and Thales were all part of that meeting. This was just one of 49 reported lobby meetings BAE Systems held with UK government representatives, at least 18 of which were with the Ministry of Defence.<sup>98</sup>

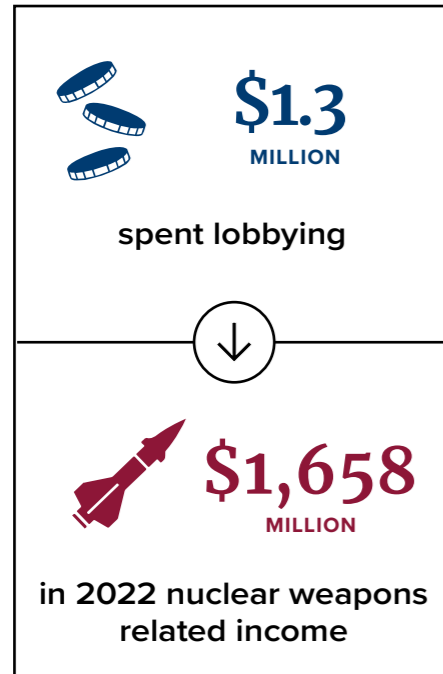
Two board members of BAE Systems have connections with other nuclear weapons producers. Nicole Piasecki was a VP at Boeing until September 2017 and Tom Arseneault was involved with a Lockheed Martin company until it was acquired by BAE.<sup>99</sup>

A few BAE Systems board members have intimate ties to financial institutions. Sir Roger Carr, the chairman, is a former Senior Independent Director of the Court of the

Bank of England,<sup>100</sup> Chris Grigg, CBE is also the Chair of the UK Infrastructure Bank.<sup>101</sup> Dame Elizabeth Corley also has significant ties to the financial sector; she currently chairs the board of the Impact Investment Institute, having previously chaired the industry Taskforce on Social Impact Investing for the UK government, is also on the board of Morgan Stanley and previously worked for Merrill Lynch Investment Managers. She is actively involved in investment industry standards setting through several advisory board roles.<sup>102</sup> Additionally, Dr. Ewan Kirk is a founder of Cantab Capital Partners, and was a partner at Goldman Sachs.<sup>103</sup> Incoming chairperson, Cressida Hogg is also a director of the London Stock Exchange Group plc.<sup>104</sup>



A time exposure of eight Peacekeeper (LGM-118A) intercontinental ballistic missile reentry vehicles passing through clouds while approaching an open-ocean impact zone during a flight test. ©Public Domain.



## Bechtel

Bechtel is a family company that is not publicly traded on any stock exchange. Brendan Bechtel, the board chairman and CEO, is the 5th generation of the family to lead the company. Bechtel is estimated to receive \$1.6 billion in annual income for work related to nuclear weapons production.

### NUCLEAR WEAPONS

Bechtel, along with the University of California, Battelle and Texas A&M University manage and operate the Lawrence Livermore National Laboratory (LLNL).<sup>105</sup> Two nuclear warheads are being modernised at LLNL, the W80-4 and the W81-7.<sup>106</sup> The lab is also developing the novel explosive LX-21, the first new explosive to be introduced into a nuclear warhead without full-scale underground testing.<sup>107</sup>

Bechtel is part of the Consolidated Nuclear Security joint venture that operates the Pantex Plant and the Y-12 National Security Complex.<sup>108</sup> The Y-12 National Security Complex is responsible for the remanufacture of components for the B61-12 nuclear gravity bomb made of uranium and other materials. The Pantex Plant is responsible for producing high explosives, requalifying the B61 pit, and final assembly of the complete B61-12 bomb for delivery to the U.S. Air Force.<sup>109</sup> Pantex is also the facility in which the warheads for SLBMs (the W88 Alt 370) are produced.<sup>110</sup>

### CONTRACTS

The contract for the Lawrence Livermore National Laboratory was awarded in 2007, and expected to run through 2026, with an estimated value of \$64.3 billion.<sup>111</sup> The consortium comprises Bechtel, the University of California, BWX Technologies and Amentum Services Inc. The ownership division is not known, but if equally divided it is estimated that Bechtel receives approximately \$828 million per year.<sup>112</sup>

The contract for Pantex and Y-12 was awarded in 2013 and continues through 2027, with a total estimated value of \$48 billion. If equally divided among the consortium members, it is estimated Bechtel would receive \$830 million per year.<sup>113</sup>

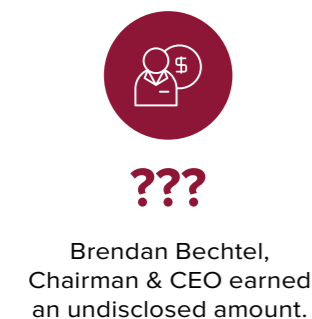
In 2022, Bechtel was awarded a \$3 billion, 10-year contract to manage and operate the only deep underground repository for nuclear waste: the Waste Isolation Pilot Plant in Carlsbad, New Mexico.<sup>114</sup> While this contract is not to produce new nuclear weapons, it is for environmental clean-up of contaminated items from U.S. production of nuclear weapons.

### LOBBY & INFLUENCE

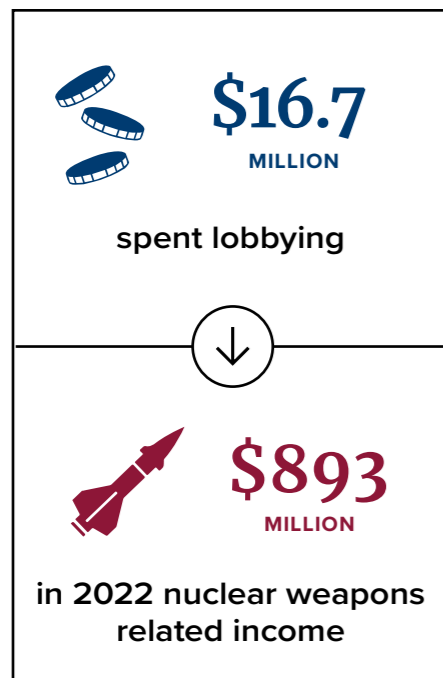
Bechtel spent more than \$1.3 million on lobbying in 2022. \$940,000 was spent by the company itself, while it hired three firms: Ernst & Young LLP; Miller & Chevalier Chartered and Owen Evans Ingols to conduct lobbying on its behalf.<sup>115</sup>

Brendan Bechtel is a trustee of the Center for Strategic and International Studies and the National Geographic Society, and a member of the Council on Foreign Relations.<sup>116</sup> Michael Bailey, General Counsel for Bechtel is a board member for Coalition for Integrity (formerly Transparency International - USA).<sup>117</sup>

In the UK, Bechtel met with government officials a dozen times in 2022, including the Prime Minister's office at least once, to discuss the nuclear energy industry.<sup>118</sup>



Two Minuteman III, intercontinental ballistic missiles are launched twelve seconds apart. ©Public Domain.



**\$53.55**

Earned in nuclear weapon contracts for every dollar Boeing spent lobbying.



**\$22,480,396**

Earned by David L. Calhoun, President and Chief Executive Officer.

## Boeing

Boeing is involved in several U.S. nuclear weapons programmes.

David L. Calhoun, President and CEO took home \$22,480,396 in 2022, about \$1.4 million more than in 2021.<sup>119</sup>

### NUCLEAR WEAPONS

Boeing is producing the guided tail kit for the U.S. B61-12 gravity bomb. Full production of the new bombs began in 2021 and will continue through 2026.<sup>120</sup>

Boeing also produces the B-1 and B-52 bombers, considered by the US as part of their nuclear arsenals, and included in annual budget allocations, as well as the E-4B, the specially designed aeroplane designed to serve as the primary command and control centre in case the seat of government is no longer viable, including in case of a nuclear attack. At least one of the planes is on alert at every moment.<sup>121</sup> While the E-4B can communicate with all nuclear-armed vessels, only the Boeing built E-6B can authorise launch of nuclear weapons, and the US is considering merging these capabilities on future aircraft.<sup>122</sup>

Boeing provides engineering services for the guidance system, flight test telemetry and termination, and manufactures propulsion units for the Minuteman III ICBMs.<sup>123</sup> It is also responsible for maintenance, repair, and rebuilding in support of the navigation subsystem of the Trident II (D5) nuclear weapons for the US and UK.<sup>124</sup>

Finally, Boeing is also responsible for the integration of the new U.S. nuclear-armed cruise missile (the Long-Range Standoff) with the B-52 bomber.

### CONTRACTS

In November 2022, Boeing was awarded a \$78.2 million contract for the E-4B Fleet.<sup>125</sup>

Boeing got two new Minuteman III contracts in 2022, for a total value of \$36.4 million.<sup>126</sup> It has two other outstanding Minuteman III contracts, valued at \$2.6 billion over 18 years.<sup>127</sup> For engineering services on the B-1 and B-52 nuclear bombers, Boeing has a five-year, \$2.3 billion contract.

There are two outstanding B61-12 contracts to produce the tail kit assembly, valued at a total of \$318 million.<sup>128</sup>

To support the new Long Range Standoff integration, Boeing has a five-year, \$250 million contract.<sup>129</sup>

Boeing also works on the Trident missiles, for which it currently holds a two-year \$3.5 million contract.<sup>130</sup>

### LOBBY & INFLUENCE

Boeing spent more than \$16 million lobbying in the US and France in 2022. In the US, Boeing spent \$13 million on its own lobby efforts. Boeing also hired the following lobby firms for a total of \$3.6 million: Atlantic Strategies Group LLC, Ballard Partners, Cornerstone Government Affairs, Inc., Crossroads Strategies, LLC, Empire Consulting Group, Ernst & Young LLP (Washington Council Ernst & Young), Etherton and Associates, Inc., Gephardt Group Government Affairs, J. Sullivan Advocacy, K&L Gates, LLP, Lamont Consulting Services, LLC, Mehlman Castagnetti Rosen & Thomas, Inc., Mehlman Consulting, Inc. (FKA Mehlman Castagnetti

Rosen & Thomas, Inc.), Monument Advocacy, Norm Dicks and Associates LLC, Roberti Global, S-3 Group, Stapleton & Associates, LLC, The Lugar Group (FKA Lugar Hellmann Group) and West Front Strategies LLC.<sup>131</sup>

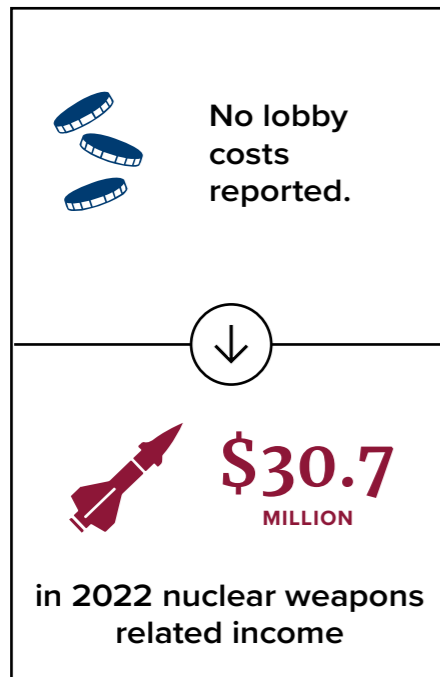
In France, Boeing spent less than €10,000 lobbying in 2022.<sup>132</sup>

In the UK, Boeing had eight meetings with government officials in 2022. Three of these were directly with the Ministry of Defence.<sup>133</sup>

John M. Richardson, a Board Member of Boeing, is a former Deputy Administrator in the National Nuclear Security Administration, the agency responsible for stockpiling U.S. nuclear weapons, and he currently serves as a director for BWX Technologies, which is a subcontractor at U.S. nuclear weapons laboratories.<sup>134</sup>



Models of the cone-shaped warheads on a Trident missile at the National Museum of Nuclear Science & History in New Mexico, United States. Published under CC BY-SA 2.0 license.



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David R. Shedd, Chairman of the Board earned an undisclosed amount.

## Draper (Charles Stark Draper Laboratory)

Draper works on guidance, navigation & control systems; radiation-hardened electronics; precision sensors and cyber resilience to support the U.S. nuclear arsenal.<sup>135</sup>

In 2022, Draper earned approximately \$31 million from nuclear weapon-related contracts.

### NUCLEAR WEAPONS

Draper is a non-profit research and development organisation. They are included here for their significant involvement in research and design for U.S. and UK Trident II (D5) missiles.

According to the US Department of Defense “CSDL possesses the unique knowledge of the total Trident Guidance system including its design and use on the Trident II weapon system.”<sup>136</sup>

### CONTRACTS

In 2022, Draper had three outstanding contracts related to Trident II production. Draper earned an estimated \$31 million for nuclear weapon-related work in 2022. Two contracts were modified in 2022. The first is a three-year contract for strategic guidance systems for the Trident system.<sup>137</sup> The other contract, for strategic guidance, navigation, and control subject matter expertise to research and develop current and maturing concepts and technologies that will enable follow-on, full-scale development of the second life extension of the Navy’s Trident II (D5) Strategic Weapons Systems, continues until November 2024, and was modified for \$202 million.<sup>138</sup>

Draper continues with its contract for production of Trident II (D5) Strategic Weapon System MK6 Guidance Equivalent Units. The contract has a total estimated value of \$445.5 million and continues through at least 2026.<sup>139</sup>

### LOBBY & INFLUENCE

Draper did not report any lobbying in the US, nor did any lobbyists list Draper as their client. No lobbying activities have been reported since 2020. However, the new President and CEO of Draper, Jerry M. Wohletz, brings decades of experience from BAE Systems, another nuclear weapons producer.<sup>140</sup>

Bob Bacon served as Draper’s Director for Strategic Guidance, Navigation & Control Programs, with cradle-to-grave responsibility for managing the Trident II D5 Strategic Guidance Program and is now Vice President for Navy Strategic Systems at Draper. Another leadership team member, Mary Kim, was formerly in-house counsel at General Dynamics.<sup>141</sup>

David R. Shedd, Chairman of the Draper Board, is a former leader in the U.S. intelligence community and was previously a Visiting Distinguished Fellow, Davis Institute for National Security, at the Heritage Foundation.<sup>142</sup>

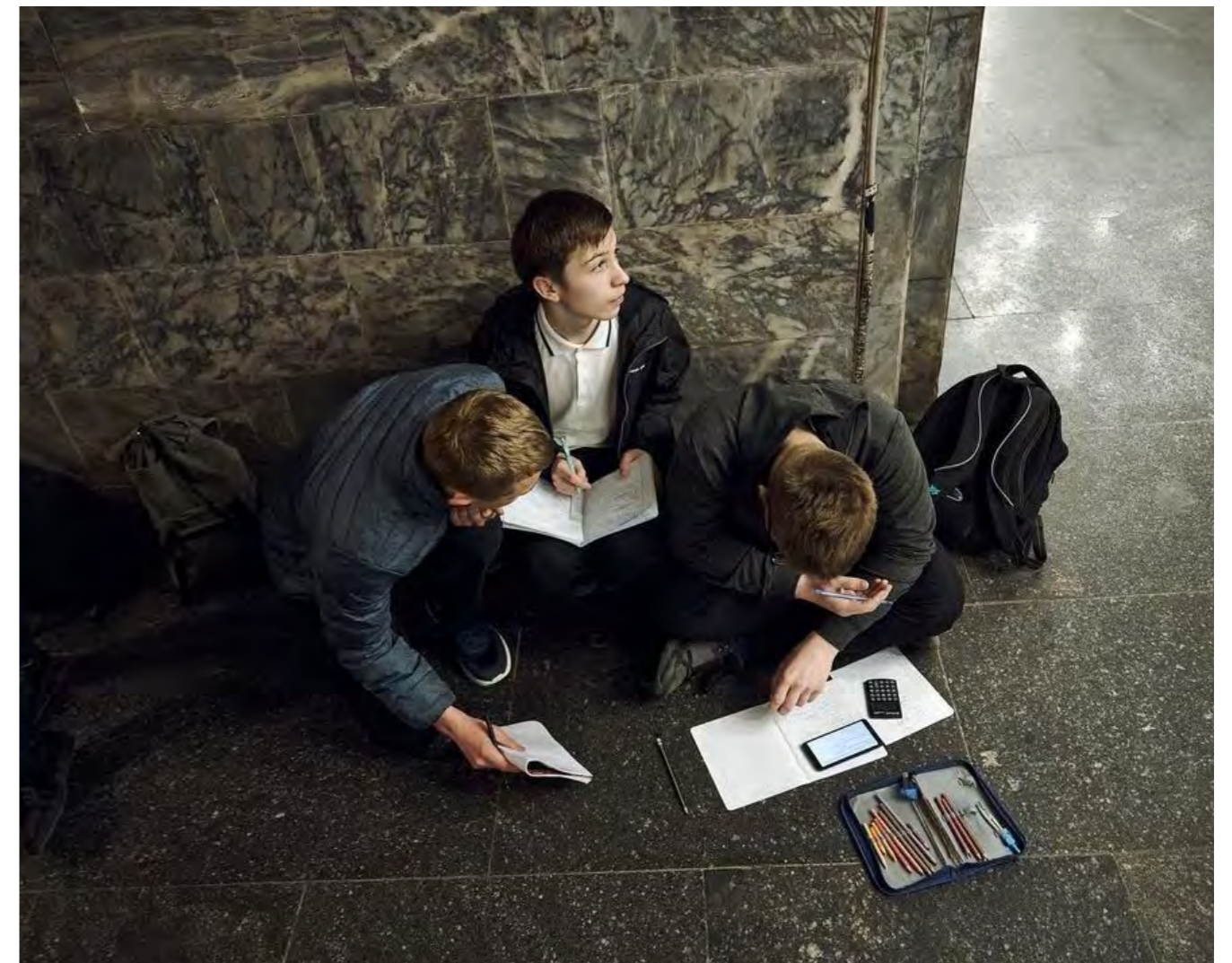
Draper board member Dr. Barbara Stevens is a former CIA staff person who is also currently connected to the think tank the Foundation for Defense of Democracies and serves on the board of advisors for the Center on Cyber and Technology Innovation.<sup>143</sup> Betty J. Sapp, another

board member, also has a background in the intelligence community, having served as the director of the U.S. National Reconnaissance Office.<sup>144</sup>

David Aronoff, another board member, is also on the board of the Global Cyber institute, as well as a trustee at the University of Vermont.<sup>145</sup>

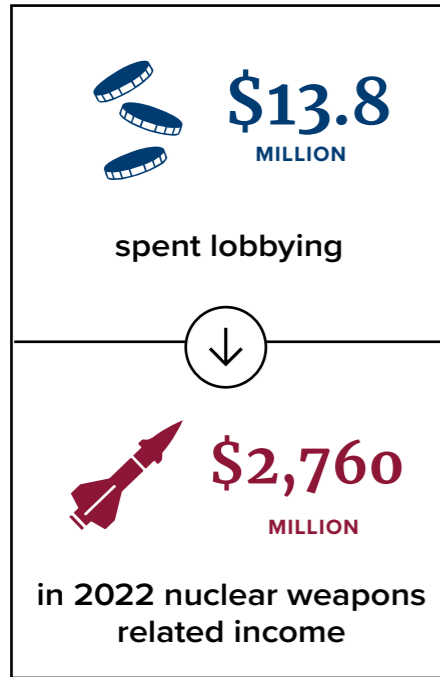
Draper board member Vice Admiral Terry J. Benedict is also the Director of the Strategic Systems Programs, the body of the U.S. Navy responsible for its nuclear weaponry, particularly the Trident system.<sup>146</sup>

Wanda Sigur, another board member, worked directly for Lockheed Martin, another nuclear weapon producing company.<sup>147</sup>



Ukrainian children study at one of the Kyiv subway stations during the Russian drone attack. May 30, 2023. Photo by: Kostiantyn Liberov and Vlada Liberova.





**\$200**

Earned in nuclear weapon contracts for every dollar General Dynamics spent lobbying.



**\$21,478,167**

Earned by Phebe N. Novakovic, Chairman and CEO.

## General Dynamics

Phebe N. Novakovic, who is the Chairman and CEO of General Dynamics Corp., earned over \$21.4 million in 2022, not including stock options or other long term incentive pay-outs.<sup>148</sup>

General Dynamics earns an estimated \$2.8 billion per year on the nine specific nuclear weapons contracts it currently holds with the U.S. and UK governments.<sup>149</sup>

### NUCLEAR WEAPONS

General Dynamics is responsible for integrating Trident nuclear weapons in the new U.S. Columbia-class program and the United Kingdom Dreadnought-class submarines. General Dynamics receives contracts through the U.S. contract system, but sometimes for work on UK weapons.<sup>150</sup>

Electric Boat, one of the business units of General Dynamics, is the prime contractor for the Columbia-class ballistic missile submarine for the U.S. government. The company is contracted to build 12 boats in the \$113 billion programme.<sup>151</sup>

### CONTRACTS

In 2022, General Dynamics received \$6.8 billion in nuclear weapon-related contract awards from the US. Two of the 15 contract agreements were new contracts, both related to the Trident II system. One new \$54 million contract was made with the US but is for the UK variant of the system.<sup>152</sup> The other new \$6 million contract was directly with the US.<sup>153</sup>

The Columbia-class SSBN contracts resulted in an additional \$5.4 billion from the Navy, with additional options totalling \$585 million, for advance procurement and advance construction of Columbia-class submarine components as well as enhancements to the submarine industrial base.<sup>154</sup>

The company was also awarded a \$275 million maximum potential value for Columbia- and Dreadnought-class ballistic missile submarine fire control systems in 2022.<sup>155</sup> In total in 2022, \$6 billion was awarded to General Dynamics for these nuclear-armed submarines in contracts which run between two and seven years.<sup>156</sup>

### LOBBY & INFLUENCE

General Dynamics spent \$13.8 million lobbying in the US. in 2022. Of that, \$11,580,000 was spent lobbying on its own behalf, while the remaining \$2.2 million was spent in hiring the following lobby firms: Alignment Government Strategies; American Defense International, Inc.; Baker Donelson Bearman Caldwell & Berkowitz /The Daschle Group; Cornerstone Government Affairs, Inc.; Ervin Graves Strategy Group, LLC; Fife Strategies, LLC; Harbinger Strategies, LLC; Innovative Federal Strategies, LLC; Nelson, Mullins, Riley & Scarborough; PRASAM; Subject Matter, and; Van Scoyoc Associates.<sup>157</sup>

In the UK, General Dynamics had eight meetings with government officials, five of which were directly with the Ministry of Defence.<sup>158</sup>

Phebe Novakovic, the Chairman and CEO of General Dynamics, is also on the board of trustees for the Centre for Strategic and International Studies.<sup>159</sup>

JP Morgan Chase currently has more than \$1.1 billion in outstanding loans to General Dynamics, of more than \$3 billion in overall investments.<sup>160</sup> Phebe Novakovic serves on the JP Morgan Chase board of directors,<sup>161</sup> as does James S. Crown, Lead Director for General Dynamics.<sup>162</sup>

Several other board members have connections to the U.S. government or think tanks or are former military. The Aspen Institute board of trustees includes James S. Crown<sup>163</sup>, alongside Robert Steel, who is Aspen's Chairman Emeritus.<sup>164</sup> Rudy F. deLeon has been a senior fellow at the Center for American Progress since 2007.<sup>165</sup>

Government connections include James N. Mattis, who served as Donald Trump's Secretary of Defence.<sup>166</sup> Rudy F. deLeon also served as deputy Secretary of Defense in 2000-2001. Admiral Cecil Haney (Ret.), also on the GD board, used to be responsible for the U.S. nuclear arsenal in his role as Commander of USSTRATCOM, and Peter A. Wall who was formerly Chief of the General Staff for the British Army and Director of Operations for the UK Ministry of Defence 2007-2009.<sup>167</sup>



U.S. Army demonstration of the transporters used for LGM-30G Minuteman III intercontinental ballistic missiles. ©Public Domain.



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Groupe REEL does not disclose its leadership, or their earnings.

## Groupe REEL

Groupe REEL took over the operations of Constructions Industrielles de la Méditerranée (CNIM) in September 2022.<sup>168</sup>

### NUCLEAR WEAPONS

CNIM, now Groupe REEL, is the main subcontractor responsible for French submarine-launched nuclear-armed ballistic missiles, the M51. It does this work under contract to Naval Group.<sup>169</sup>

REEL has designed specific equipment, notably for the assembly and loading of missiles for strategic nuclear submarines.<sup>170</sup>

### CONTRACTS

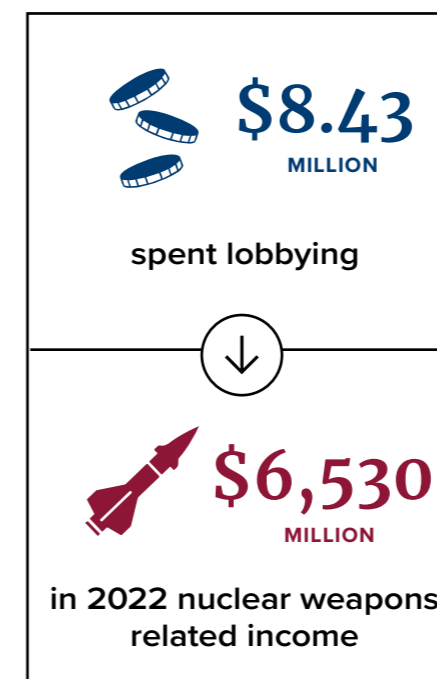
According to the French defence budget for 2022, there was a commitment of €2.9 million (\$2.8 million) for the ocean-going component of the nuclear arsenal, however it is unclear what percentage of that is contracted to CNIM/REEL.<sup>171</sup>

### LOBBY & INFLUENCE

Only GICAT listed REEL as a client in 2022, with an estimated cost to the company of around €432.<sup>172</sup>



The 2024-2030 LMP - the SSBN Le Triomphant, Goulet de Brest © Sarah Lacarrere/Marine Nationale/Defense.



\$774

Earned in nuclear weapon contracts for every dollar Honeywell spent lobbying.



\$21,428,584

Earned by Darius Adamczyk, Chairman and CEO.

## Honeywell International

Honeywell's Board Chairman and CEO, Darius E. Adamczyk, earned \$21,428,584 in 2022, an increase of just under one million dollars from the previous year.<sup>173</sup>

### NUCLEAR WEAPONS

Honeywell's wholly owned subsidiary, Honeywell Federal Manufacturing & Technologies, operates the Kansas City National Security Campus (KCNSC). The facility is responsible for manufacturing and procuring non-nuclear components for nuclear weapons including electronic, mechanical and engineered material components.<sup>174</sup>

Honeywell is part of the Mission Support & Test Service, LLC (MSTS) consortium that manages and operates the U.S. Nevada National Security Site, which conducts tests designed to "provide data relevant to improving our predictive capability and for certification of the current and future stockpile."<sup>175</sup> The consortium is also contracted for producing nuclear weapons "components (primary, secondary, nonnuclear)" as well as "strategic materials capabilities and productions."<sup>176</sup> MSTS consists of Honeywell International Inc., Jacobs Engineering Group Inc, and Huntington Ingalls International subsidiary, Hill Nuclear, Inc.<sup>177</sup>

Honeywell is also part of the joint venture managing and operating the Savannah River Site and Savannah River National Laboratory which produces nuclear components for nuclear weapons.<sup>178</sup>

Honeywell also produces and maintains the pendulous integrated gyroscopic accelerometer for the Minuteman III missile.<sup>179</sup>

### CONTRACTS

For the Savannah River Site, the joint venture Savannah River Nuclear Solutions was awarded a 16-year, \$24.9 billion contract in 2008.

In 2015, Honeywell was awarded the contract for the Kansas City National Security Campus. The 10-year contract has a potential value of over \$15 billion.<sup>180</sup>

Honeywell is part of the Mission Support and Test Services LLC (MSTS) consortium which was awarded the 10-year, \$9.8 billion contract for the U.S. Nevada National Security Site in 2017.<sup>181</sup>

The Sandia contract was awarded to National Technology & Engineering Solutions of Sandia, LLC, a wholly owned subsidiary of Honeywell, in 2017, for 10 years and \$43 billion.<sup>182</sup>

Finally, Honeywell's contract for the Pendulous Integrated Gyroscopic Accelerometer for the Minuteman III missile is the only new contract that was awarded in 2022, for eight years and \$89 million.<sup>183</sup>

**LOBBY & INFLUENCE**

Honeywell spent \$7.3 million lobbying on its own behalf in the US in 2022, and hired the following firms for an additional \$1 million: Akin Gump Strauss Hauer & Feld; Guidepost Strategies, LLC, and The Duberstein Group Inc.<sup>184</sup>

In France, Honeywell contracted Taddeo, for around €10,000, to lobby on its behalf.<sup>185</sup>

Honeywell's Board Chairman and CEO, Darius E. Adamczyk, is part of the Aspen Economic Strategy Group, a think tank which issues broad commentary on a range of issues.<sup>186</sup>



Panel installation takes place on the MGM-118A Peacekeeper weapons system. ©Public Domain.

# Huntington Ingalls Industries

Christopher D. Kastner, President and Chief Executive Officer (formerly Chief Operating Officer) was elected to the role in 2022, for which he was paid \$7,742.266.<sup>187</sup>

**NUCLEAR WEAPONS**

Huntington Ingalls Industries is connected to three joint ventures involved in management and operations at U.S. nuclear weapons facilities: Los Alamos National Laboratories (via Triad National Security); the Nevada Nuclear Security Site (via Mission Support and Test Services), and the Savannah River Site and Savannah River National Laboratory (via Savannah River Nuclear Solutions, LLC).

At Los Alamos, the company provides personnel, systems, tools and corporate reachback in the areas of pit production, plutonium manufacturing, production scale-up and nuclear operations and manufacturing.<sup>188</sup>

Formerly known as the Nevada Test Site, the Nevada National Security Site maintains facilities related to nuclear weapon modernisation and stockpiling.<sup>189</sup>

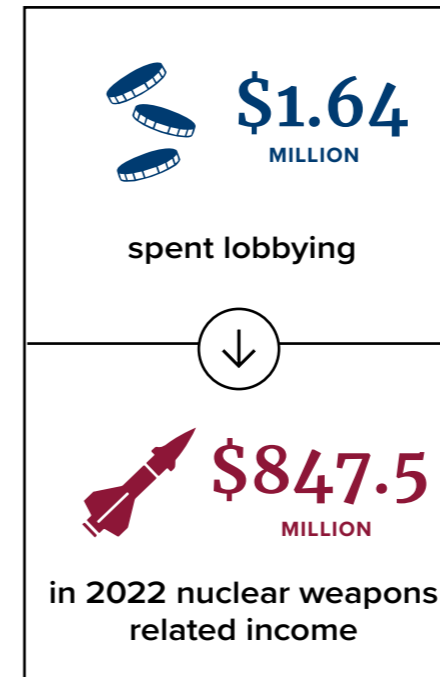
The Savannah River facility is the only facility in the nuclear security enterprise that has the capability to extract, recycle, purify, and reload tritium for nuclear weapons.<sup>190</sup>

**CONTRACTS**

Huntington Ingalls Industries is subcontracted to Triad National Security, LLC, and can be estimated to receive about \$615 million per year for work at Los Alamos.<sup>191</sup>

Mission Support and Test Services, LLC has a 10-year, \$9.8 billion contract for management and operations at the Nevada National Security Site, netting Huntington Ingalls Industries an estimated \$318 million per year.<sup>192</sup>

The 25-year contract for the Savannah River site is meant to conclude in 2023 and has an estimated total value of \$25 billion.<sup>193</sup> HII's subsidiary, Newport News Nuclear is, along with Fluor and Honeywell, a parent company responsible for Savannah River Nuclear Solutions, LLC.<sup>194</sup>



**\$515**

Earned in nuclear weapon contracts for every dollar Huntington Ingalls Industries spent lobbying.



**\$7,742,266**

Earned by Christopher D. Kastner, President and Chief Executive Officer.

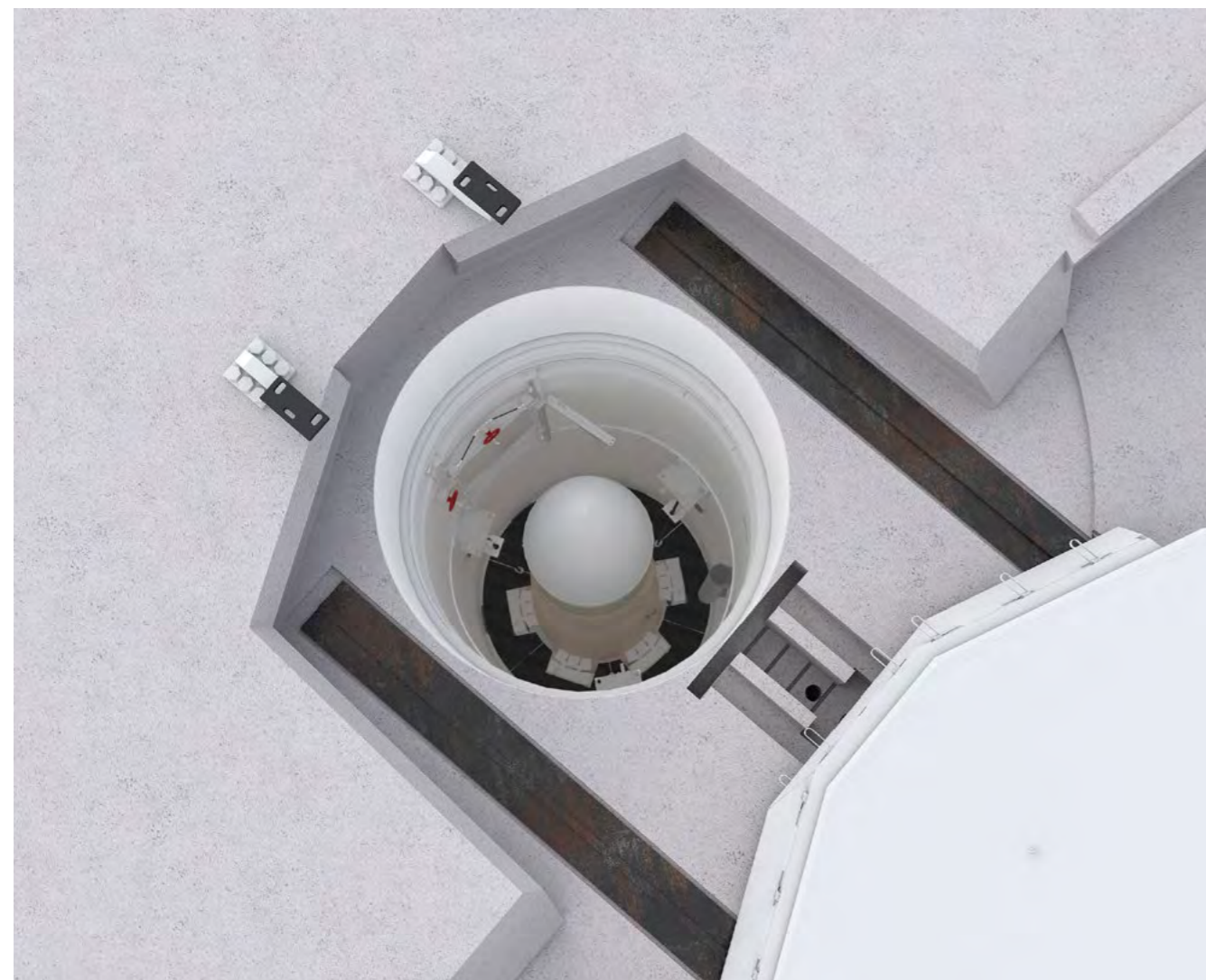
**LOBBY & INFLUENCE**

Huntington Ingalls Industries spent \$4.7 million on their own lobbying efforts in 2022 and hired external lobbyists for another \$1.6 million. The companies hired to lobby on behalf of HII included: Balzano Associates, Inc; BGR Government Affairs; Crossroads Strategies, LLC; Dahlberg Strategic; Federal City Strategies; Gephardt Group Government Affairs; Mr. Patrick Tucker; SPLYSS LLC; Squire Patton Boggs; Taft Stettinius & Hollister LLP dba Taft Advisors LLC; The Livingston Group, L.L.C., and; the Group DC, LLC.<sup>195</sup>

Admiral Kirkland Donald, the chairman of the HII board, and Stephane L. O’Sullivan and John K. Welch, other board members, are also on the board of Battelle Memorial Institute, one of the firms involved in the management and operations of the Lawrence Livermore National Laboratory.<sup>196</sup>

Frank R. Jimenez, another HII board member, spent years in the executive leadership of Raytheon Technology, another nuclear weapons producer. Board member Thomas Schievelbein was also a senior executive at another nuclear weapons producer, Northrop Grumman, for more than ten years. John K. Welch was a senior executive at General Dynamics.<sup>197</sup>

Tracy B. Mckibben has been on the HII board of directors since 2018. Previously, she practised law at Akin, Gump, Strauss & Feld LLP, one of the lobby firms hired by most U.S. nuclear weapon producers. She is also a member of the Council on Foreign Relations.<sup>198</sup>



An illustration of the LGM-35A Sentinel launch silo. ©Public Domain.

# Jacobs Engineering

Bob Pragada took over from Steven J. Demetriou as CEO of Jacobs Engineering Group Inc. in January 2023. Before he left, Demetriou earned just over \$14 million for the previous year.<sup>199</sup>

**NUCLEAR WEAPONS**

Jacobs is part of the Mission Support & Test Service, LLC (MSTS) consortium that manages and operates the U.S. Nevada National Security Site, which conducts tests designed to “provide data relevant to improving our predictive capability and for certification of the current and future stockpile.”<sup>200</sup> The consortium is also contracted for producing nuclear weapons “components (primary, secondary, nonnuclear)” as well as “strategic materials capabilities and productions.”<sup>201</sup> MSTS consists of Honeywell International Inc., Jacobs Engineering Group Inc, and Huntington Ingalls International subsidiary HII Nuclear, Inc.<sup>202</sup>

**CONTRACTS**

Jacobs is part of the Mission Support and Test Services LLC (MSTS) consortium awarded the 10-year, \$9.8 billion contract for the U.S. Nevada National Security Site in 2017.<sup>203</sup>

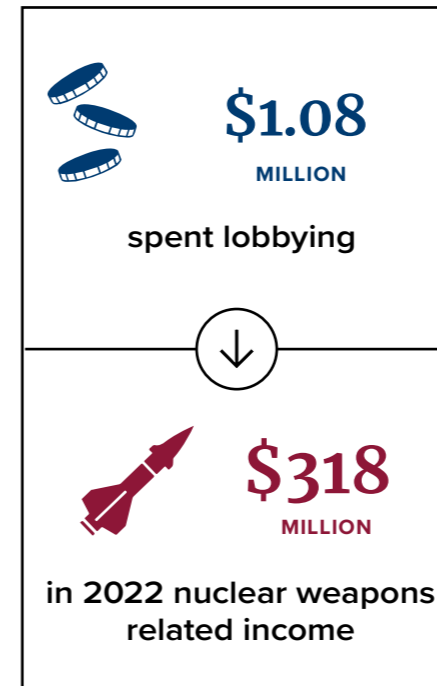
**LOBBY & INFLUENCE**

Jacobs Engineering spent \$780,000 on its own lobbying in the US in 2022, and hired Brownstein Hyatt Farber Schreck, LLP, Liebman & Associates, Inc., PRASAM and TGB Strategies LLC for another \$300,000 to lobby on their behalf.<sup>204</sup>

In the UK, Jacobs Engineering met with various government representatives seven times in 2022. Of these, at least four meetings were related to the nuclear energy sector.<sup>205</sup>

Board member Vincent (Vince) K. Brooks is also a member of the Council on Foreign Relations, as well as a visiting Senior Fellow at Harvard Kennedy School’s Belfer Center for Science and International Affairs.<sup>206</sup>

In December 2022, L3 Harris Technologies signed an agreement to acquire Aerojet Rocketdyne for approximately \$4.7 billion.<sup>207</sup>



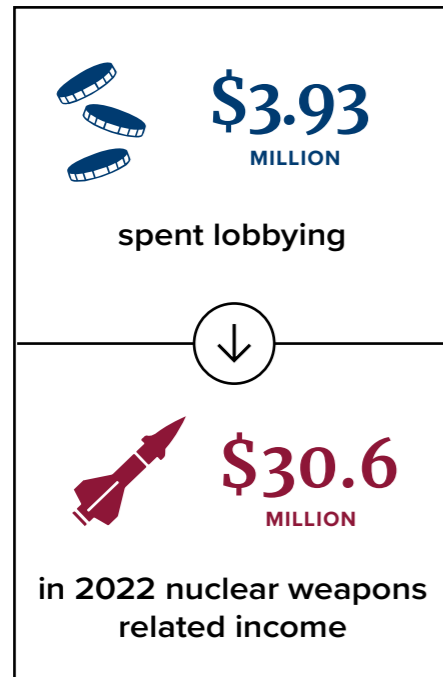
**\$293**

Earned in nuclear weapon contracts for every dollar Jacobs Engineering Industries spent lobbying.



**\$14,615,521**

Earned by Steve Demetriou, Chair of the Board & Chief Executive Officer.



## L3 Harris Technologies

Chris Kubasik, Chair & CEO, earned over \$16.7 million in 2022, about a million more than in the previous year.<sup>208</sup>

### NUCLEAR WEAPONS

L3 Harris Technologies will design the training systems for the new intercontinental ballistic missile system for the US, the Sentinel, also known as the Ground-Based Midcourse Defense (GBSD), formally called the Ground Based Strategic Deterrent.<sup>209</sup> L3 Harris subsidiary Interstate Electronics Corporation produces flight test instrumentation support and services related to the Trident II (D5) nuclear missile.<sup>210</sup>

### CONTRACTS

In 2022, L3 Harris was awarded an eight-year \$189 million contract for satellite and radio frequency products for the Minuteman III system.<sup>211</sup>

L3 Harris subsidiary Interstate Electronics Corporation was awarded a five-year contract in 2021 for flight test instrumentation for the Trident II system, with an estimated value of \$53 million per year.<sup>212</sup>

### LOBBY & INFLUENCE

L3 Harris spent \$3.5 million directly lobbying in the US in 2022 and hired lobbyists for another \$400,000. The firms hired by L3 Harris included: Ivy Green Consulting; McAllister & Quinn, LLC; PRASAM; RM2 Consultants, Inc.; The DLM Group, and; The Gaboton Group, LLC.<sup>213</sup> In the UK, L3 Harris Technologies had four meetings with the Defence Ministry in 2022.<sup>214</sup>

The leadership of L3 Harris has connections with other nuclear weapon producers. For example, Chris Kubasik, the CEO, was formerly President and CEO at Lockheed Martin and Roger Fradin was vice chairman at Honeywell. Executive Management personnel Michelle Turner, Samir Mehta and Jacqui Nevils are also former executives at Raytheon Technologies.<sup>215</sup>



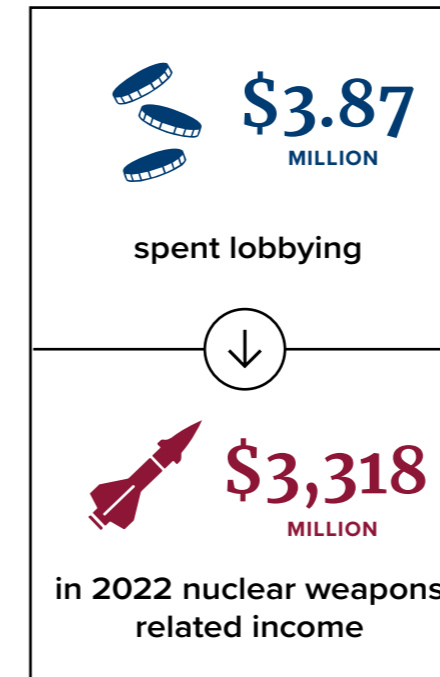
**\$7.77**

Earned in nuclear weapon contracts for every dollar L3 Harris spent lobbying.



**\$16,714,229**

Earned by Chris Kubasik, Chair and Chief Executive Officer.



## Leidos

Roger Krone, Chairman and CEO of Leidos, Inc., earned \$13.5 million in 2022, a \$700,000 increase over the previous year.<sup>216</sup>

### NUCLEAR WEAPONS

Leidos is part of the Consolidated Nuclear Security, LLC joint venture that manages and operates the Pantex Plant and the Y-12 National Security Complex.<sup>217</sup> Y-12 National Security Complex is responsible for the remanufacture of components for the B61-12 nuclear gravity bomb made of uranium and other materials. The Pantex Plant is responsible for producing high explosives, requalifying the B61 pit, and final assembly of the complete B61-12 bomb for delivery to the U.S. Air Force.<sup>218</sup> Pantex is also the facility in which the warheads for SLBMs (the W88 Alt 370) are produced.<sup>219</sup>

### CONTRACTS

In 2022, Consolidated Nuclear Security, LLC was awarded a five-year contract extension to manage and operate the Pantex Plant and the Y-12 National Security Complex.<sup>220</sup>

The contract is with Consolidated Nuclear Security, LLC (CNS), which is composed of Bechtel National Inc.; Leidos, Inc. (Leidos); ATK Launch Systems Inc.; and SOC LLC.<sup>221</sup> If equally divided, it is estimated that each participant earns almost \$830 million per year.<sup>222</sup>

### LOBBY & INFLUENCE

In 2022, Leidos spent \$2.7 million on its own lobby efforts and hired external lobbyists for an additional \$1.1 million. The firms hired by Leidos included: Alpine Group Partners, LLC.; American Defense International, Inc.; Avise Solutions; Ballard Partners; Capitol Resources, LLC; CR Federal; Innovative Federal Strategies, LLC; Jefferson Business Consulting, LLC; Park Government Relations, LLC; Potomac Capitol Associates, Inc.; Team Hallahan LLC, and; Troutman Pepper Strategies.<sup>223</sup>

In the UK, Leidos spoke at a government roundtable on "The Future of the Defence Security and Industrial Strategy," the only lobby meeting on record for the company in 2022.<sup>224</sup>

The Board of Directors of Leidos has connections with government agencies and spending decision making. For example, Gregory Dahlberg served as Minority Staff Director of the House Appropriations Defense Subcommittee with jurisdiction over funding for all Department of Defense and intelligence agency programs.<sup>225</sup> Dr. Miriam E. John used to work at Sandia National Laboratories (part of the U.S. nuclear weapons complex) and is a member of the Department of Defense's Defense Science Board and Threat Reduction Advisory Committee.<sup>226</sup>

Patrick M. Shanahan is a former Deputy Secretary of Defense and was involved in drafting the 2018 Nuclear Posture Review and 2019 Missile Defense Review for the US.<sup>227</sup>



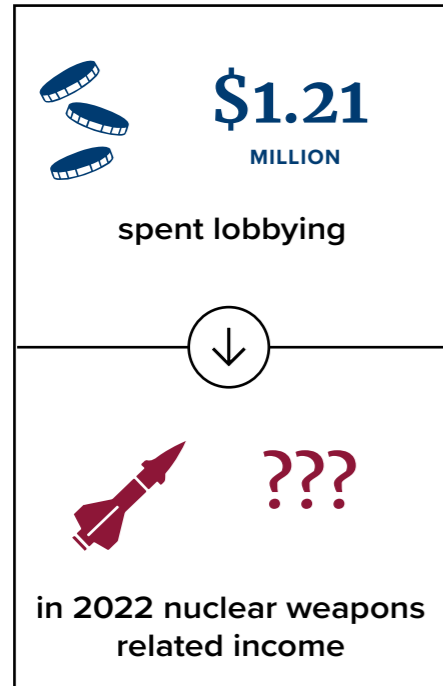
**\$857**

Earned in nuclear weapon contracts for every dollar Leidos spent lobbying.



**\$13,548,892**

Earned by Roger Krone, Chairman and Chief Executive Officer.



## Leonardo

Leonardo's CEO Alessandro Profumo took home \$1.96 million in 2022.<sup>228</sup> However, he will no longer serve as CEO after May 2023 when his second term is complete and will be replaced by Roberto Cingolani.<sup>229</sup>

In advance of Leonardo's 2023 annual meeting, several of its shareholders posed questions about the company's role in MBDA, specifically as it related to the production of the ASMPA nuclear-armed missiles for France. Leonardo chose not to respond.<sup>230</sup>

The Italian government has a significant shareholding in Leonardo, holding over 30% of outstanding shares.<sup>231</sup>

### NUCLEAR WEAPONS

Leonardo is significantly involved in the French nuclear arsenal through its 25% ownership of MBDA.<sup>232</sup> MBDA is the prime contractor for the ASMPA, the air-launched nuclear missiles of France.<sup>233</sup>

### CONTRACTS

The French defence budget allocates over €50 million for the ASMPA and indicates MBDA is the prime contractor. However, it does not provide details about precisely what MBDA (and therefore Leonardo), will receive.<sup>234</sup>

### LOBBY & INFLUENCE

In the US, Leonard spent \$865,000 lobbying on their own behalf, and hired lobbyists for an additional \$345,000. The lobbyists hired by Leonard included: Fife Strategies, LLC; O'Brien, Gentry & Scott, LLC; PRASAM; and Stapleton & Associates LLC.<sup>235</sup>

MBDA, of which Leonardo is 25% owner, lobbied in France in 2022, with an estimated contribution of €62,500 from Leonardo.<sup>236</sup>

In the UK, Leonardo was present at 20 lobby meetings with UK officials, half of which were with the Ministry of Defence.<sup>237</sup>

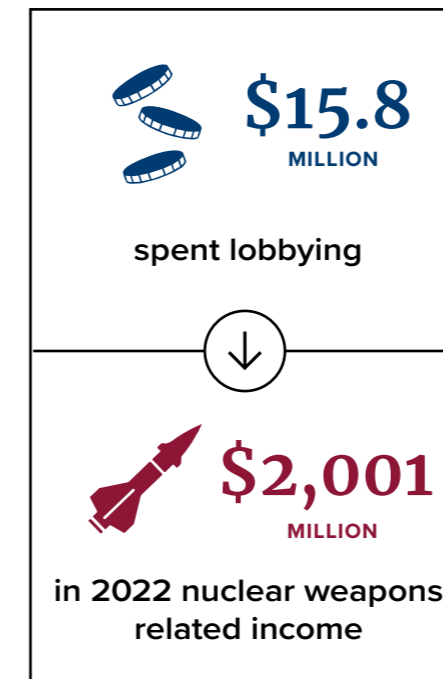
Ambassador Stefano Pontecorvo was appointed Chairman of Leonardo at its 2023 annual meeting. He was formerly the Italian Ambassador to NATO, among other diplomatic appointments over the last two-decades. He was also a diplomatic advisor for the Italian Minister of Defence.<sup>238</sup>

The new CEO, Roberto Cingolani, also has connections with NATO. He is a senior director of the NATO Investment Fund, a fund sponsored by NATO countries for technological development in defence and security.<sup>239</sup>

Intesa Sanpaolo has more than \$750.5 million in outstanding loans to Leonardo.<sup>240</sup> Board member Marcello Sala was the Executive Vice Chairman of the Intesa Sanpaolo Group Management Board (2007- 2016), where he oversaw international business and institutional relations.<sup>241</sup>



Earned by Alessandro Profumo, Chief Executive Officer.



## Lockheed Martin

Lockheed Martin more than doubled CEO James Taiclet's income in 2022, paying him \$45,201,355 for the year's work.<sup>242</sup>

In response to a shareholder proposal referring to the Treaty on the Prohibition of Nuclear Weapons, the company stated that they "support this goal of deterrence by adhering to U.S. Government oversight and policy objectives for all international sales." Lockheed Martin went on to claim that the TPNW was not international law because there are "many countries that continue to maintain and even threaten to use nuclear weapons".<sup>243</sup>

While the shareholder proposal calling for a human rights impact assessment was ultimately defeated, the Board also noted they would "walk away from business rather than risk violating anti-corruption laws or our corporate values." Despite Lockheed Martin's claim that the TPNW won't impact their work until the US joins, the company has previously cancelled contracts to produce prohibited cluster munitions, indicating investor pressure as the justification, even without the US joining the Convention on Cluster Munitions.<sup>244</sup>

### NUCLEAR WEAPONS

Lockheed Martin is the main producer of Minuteman III re-entry systems,<sup>245</sup> and producer of the Airborne Launch Control System Replacement.<sup>246</sup>

Lockheed Martin is also responsible for the construction of the Trident II (D5) nuclear missiles for both the UK and the US.<sup>247</sup>

### CONTRACTS

In 2022, Lockheed Martin was awarded three new Trident-related contracts (one of which was UK financed) for a total value of \$1.3 billion. The company has at least 13 other outstanding Trident-related contracts, extending through 2019 and valued at \$10.5 billion.<sup>248</sup>

Lockheed Martin currently has two Minuteman III-related contracts, valued at over \$381 million.<sup>249</sup>

### LOBBY & INFLUENCE

Lockheed Martin spent \$13.4 million lobbying on its own behalf in 2022. It also spent an additional \$2.3 million hiring these lobby firms: Baker Donelson Bearman Caldwell & Berkowitz /The Daschle Group; Ballard Spahr LLP; Brachman, Marshall; Capitol Counsel LLC; Carmen Group Incorporated; Etherton and Associates, Inc.; Flagship Government



Earned in nuclear weapon contracts for every dollar Lockheed Martin spent lobbying.



Earned by James D. Taiclet, Chairman, President & CEO.

Relations, Inc.; Hannegan Landau Poersch & Rosenbaum Advocacy, LLC; Holly Strategies Incorporated; Meeks, Butera & Israel PLLC; Plurus Strategies, LLC; Public Strategies Washington, Inc.; Rey, Mark; The McKeon Group, Inc.; The Group DC, LLC; Van Scoyoc Associates, and Venable LLP.<sup>250</sup>

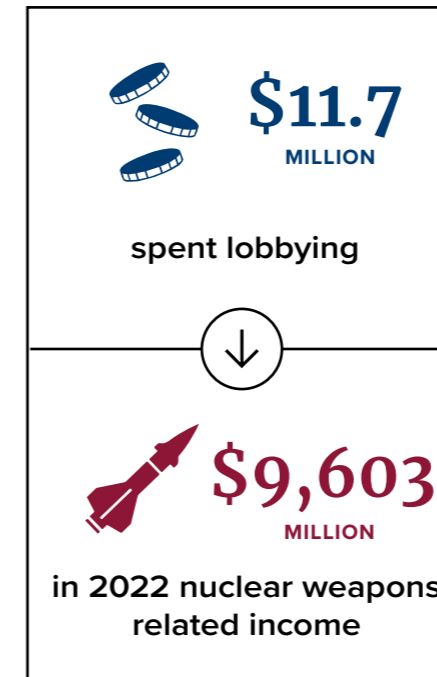
On 9 May 2022, Lockheed Martin met Minister of State Rt Hon Jeremy Quin MP at the UK Ministry of Defence regarding the Dreadnought contract announcement, along with Thales, Northrop Grumman, Babcock Marine Ltd, BAE Systems, Siemens, McGeoch Technology, and Truflo Marine. This was one of 12 meetings Lockheed Martin had with UK government officials in 2022, five of which were with the Ministry of Defence.<sup>251</sup>

James O. Ellis, Jr., a director since 2004, was a former commander of U.S. STRATCOM, responsible for planning and, if so ordered, using U.S. nuclear weapons.<sup>252</sup>

James D. Taiclet, Chair & CEO, board member Thomas Falk, and Senior VP Leo S. Mackay, Jr. are all members of the Council on Foreign Relations. Board members Joseph Dunford and James Ellis Jr. are also members of the Hoover Institution at Stanford University.<sup>253</sup>



An unarmed Trident II D5 missile launches from the ballistic missile submarine USS Nebraska off the coast of California. Photo by: Navy Petty Officer 1st Class Ronald Gutridg. ©Public Domain.



**\$819**

Earned in nuclear weapon contracts for every dollar Northrop Grumman spent lobbying.



**\$20,672,072**

Earned by Kathy J. Warden, Chairman, Chief Executive Officer and President.

## Northrop Grumman

Northrop's President, Board Chairman and CEO, Kathy J. Warden earned \$20,672,072 in 2022.<sup>254</sup>

A shareholder proposal filed at the end of 2022, and brought before the Northrop Grumman annual meeting, noted that the company lobbied against a proposal for the U.S. Pentagon to seek alternatives to the new nuclear weapons system the company was ultimately contracted to build. It added that "Nuclear weapons are illegal under international law due to their indiscriminate and disproportionate impacts on civilians."<sup>255</sup>

The Board of Directors responded, saying "The Company conducts political activities to support its long term, sustainable growth and other objectives of our Company and shareholder." It went further in discussing the nuclear weapons-related contracts, stating "We believe those programs are important to our country's national security, providing a deterrent to would-be aggressors. We believe also that these awards help to enable the continued success of our Company to the benefit of our shareholders."<sup>256</sup>

### NUCLEAR WEAPONS

Northrop Grumman manufactures key components for the U.S. Minuteman III system, the B61-12 gravity bombs, and the Trident system in use by the US. and UK.

Northrop Grumman's biggest nuclear weapons project is the Sentinel (formerly known as the Ground Based Strategic Deterrent), the new intercontinental ballistic nuclear weapons system the US. is building.<sup>257</sup>

The Northrop Grumman subsidiary ATK Launch Systems is part of the Consolidated Nuclear Security, LLC joint venture that manages and operates the Pantex Plant and the Y-12 National Security Complex.<sup>258</sup> Y-12 National Security Complex is responsible for the remanufacture of components for the B61-12 nuclear gravity bomb made of uranium and other materials. The Pantex Plant is responsible for producing high explosives, requalifying the B61 pit, and final assembly of the complete B61-12 bomb for delivery to the U.S. Air Force.<sup>259</sup> Pantex is also the facility in which the warheads for SLBMs (the W88 Alt 370) are produced.<sup>260</sup>

**CONTRACTS**

In 2022, Northrop Grumman was awarded one new contract related to the production of Trident missiles for the U.S. and UK government. The contract will run for at least seven years and is valued at \$72 million.<sup>261</sup>

Overall, the company has at least \$81 billion in outstanding contracts through 2029.

Navigational integration for the B61-12 is one part of a 10-year contract for \$19 billion.<sup>262</sup>

Contracts for the U.S. Columbia and UK Dreadnought nuclear armed submarines are valued at \$161 million.<sup>263</sup>

Northrop Grumman has five outstanding contracts for Minuteman III sustainment services, motors and engineering, valued at over \$36 billion.<sup>264</sup>

The new nuclear weapon system, the Sentinel, is currently estimated to bring the company \$13 billion over the next nine years.<sup>265</sup>

There are three outstanding contracts for the Trident system for underwater launcher support, valued at \$155.8 billion.<sup>266</sup>

Finally, the company earns an estimated \$829 million per year for its role at the Pantex Plant and the Y-12 National Security Complex.<sup>267</sup>

**LOBBY & INFLUENCE**

Northrop Grumman spent more than \$10 million on their own lobbying in 2022, and hired 535 Group, LLC, Covington & Burling LLP, Etherton and Associates, Inc., Innovative Federal Strategies, LLC, Kadesh & Associates, LLC, Reston Strategy Group, LLC, Subject Matter and The Duberstein Group Inc. for a total of more than \$1.4 million to also lobby on their behalf.<sup>268</sup>

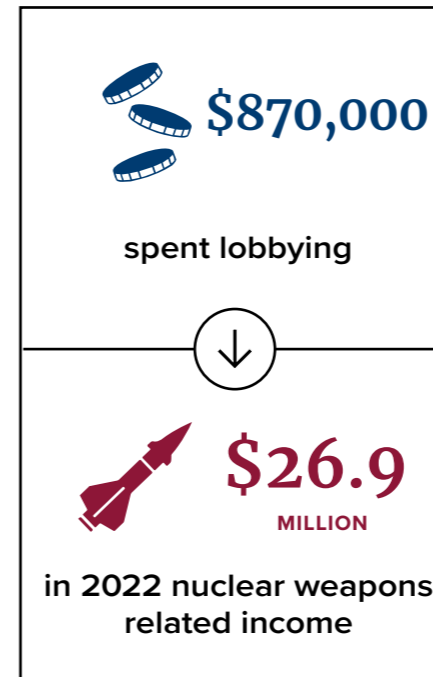
On 9 May 2022, Northrop Grumman met Minister of State Rt Hon Jeremy Quin MP at the UK Ministry of Defence regarding the Dreadnought contract announcement, along with Thales, Lockheed Martin, Babcock Marine Ltd, BAE Systems, Siemens, McGeoch Technology, and Truflo Marine. This was one of the three meetings Northrop Grumman had with the Ministry of Defence in 2022, the only meetings the company had with the UK government.<sup>269</sup>

Citigroup currently lends Northrop Grumman \$1.3 billion.<sup>270</sup> James S. Turley is on the Board of Directors of both Northrop Grumman and Citigroup.<sup>271</sup>

Many senior executives at Northrop Grumman come from other nuclear weapon producing companies. Ann Addison was at Leidos and Lockheed Martin.<sup>272</sup> Matt Bromberg was at Raytheon Technologies.<sup>273</sup> Sheila Cheston was at BAE Systems before joining Northrop, and Thomas Jones was at Boeing.<sup>274</sup> Stephen O'Bryan was at L3 Harris Technologies and Lockheed Martin.<sup>275</sup> Lucy C. Ryan was head of communications for General Dynamics.<sup>276</sup>

There are also connections with think tanks and public policy influence. Sheila Cheston, Corporate Vice President and General Counsel is a member of the Council on Foreign Relations.<sup>277</sup> Lesley Kalan is a Center for Strategic and International Studies Women's Global Leadership Fellow.<sup>278</sup> Board member David Abney is a member of the World Affairs Council of Atlanta, a non-profit group in Atlanta that convenes discussion on a range of international issues.<sup>279</sup> Ann Marie Fudge, another board member, is a senior trustee of the Brookings Institution.<sup>280</sup> Admiral (ret) Gary Roughead serves on the Board of Managers of the Johns Hopkins University Applied Physics Laboratory and is a fellow at the Hoover Institution at Stanford University.<sup>281</sup>

Gen. Mark A. Welsh III (U.S. Air Force retired) is the dean of the Bush School of Government and Public Service at Texas A&M University.<sup>282</sup> Texas A&M is part of the joint venture that manages the Los Alamos nuclear weapons laboratory for the US.<sup>283</sup>



**\$30.90**

Earned in nuclear weapon contracts for every dollar Peraton Inc. spent lobbying.



**???**

Stu Shea, CEO, earned an undisclosed amount.

**Peraton Inc.**

Peraton Inc is a private company and not publicly traded, therefore it is not required to disclose its CEO Stu Shea's salary. It does not publish its board of directors, but instead lists an advisory board composed of five former U.S. military or intelligence individuals.<sup>284</sup>

**NUCLEAR WEAPONS**

Peraton provides nuclear software cross check analysis for the Minuteman III system.

Peraton is providing Nuclear Safety Cross-Check Analysis (NSCCA) and Nuclear Safety Analysis and Technical Evaluation (NSATE) support for the Minuteman III system.<sup>285</sup> It is also working on the re-entry system for the Trident II missiles.<sup>286</sup> And is supporting efforts for the B-1 and B-52 bombers, under the U.S. nuclear weapons budget.<sup>287</sup>

**CONTRACTS**

Peraton was awarded a six-year \$18 million contract in 2022 for B-1B Reprogrammable Electronic Warfare Systems tests and B-52 Bomber Electronic Attack Systems.<sup>288</sup>

The Trident system contract is valued at \$21 million and expected to continue until 2026.<sup>289</sup> For work on the Minuteman III, Peraton has 18 years left on its \$360 million contract.<sup>290</sup>

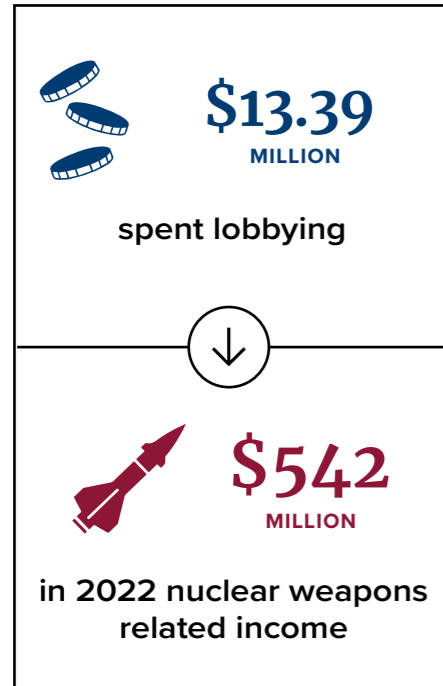
**LOBBY & INFLUENCE**

Peraton spent \$400,000 on their own lobbying in 2022. They also hired Monument Advocacy, Crossroads Strategies LLC, Innovative Federal Strategies LLC and Van Scoyoc Associates, who collectively spent \$470,000 to lobby on their behalf.<sup>291</sup>

The executive leadership of Peraton has close ties with other nuclear weapons producers. Chairman, President & CEO Stu Shea is the former President and Chief Operating Officer (COO) of Leidos. Szu Yang also worked there before joining Peraton.<sup>292</sup> Several executives joined from Northrop Grumman, including Jim Winner, Mike King, Matt McQueen, Tom Afferton, Tarik Reyes and Chris Valentino.<sup>293</sup>

Tarik Reyes is also on the Board of Managers for Sandia National Labs (NTESS).<sup>294</sup>





**\$40**

Earned in nuclear weapon contracts for every dollar Raytheon spent lobbying.



**\$22,609,036**

Earned by Gregory J. Hayes, Chief Executive Officer.

## Raytheon Technologies Corporation

Raytheon's Chairman and CEO Gregory J. Hayes earned \$22,609,036 in 2022, about \$700,000 less than in 2021.<sup>295</sup>

### NUCLEAR WEAPONS

Raytheon Technologies is building the replacement system for the AGM-86 air-launched cruise missile (ALCM) which had previously been built by Boeing for the B-52H Stratofortress bomber.<sup>296</sup>

Raytheon also provides communication installation and sustainment support for the Minuteman III missile system.<sup>297</sup>

One of the subsidiaries of Raytheon, Rockwell Collins produces the very low frequency high power transmit set production kit, spares, and production support assets in support of E-6B Take Charge and Move Out aircraft, to be able to launch U.S. nuclear weapons from anywhere on earth.<sup>298</sup> The company is also developing this for the B-2 and B-52 bombers.<sup>299</sup>

Raytheon is also involved in the UK's new nuclear-armed submarines, with a contract to train the crew at HM Naval Base Clyde.<sup>300</sup>

Raytheon subsidiary Collins Aerospace is building the secondary launch platform for the new Sentinel, formally the U.S. Ground Based Strategic Deterrent, which is also supposed to integrate with the existing Minuteman III system.<sup>301</sup>

Raytheon also does the logistic support, installation, and sustainment of Minuteman MEECN (Minimum Essential Emergency Communication Network) programme and the Minuteman MEECN programme upgrade.<sup>302</sup>

### CONTRACTS

In 2022, Raytheon UK received a £160 million contract for the Dreadnought crew training at HM Naval Base Clyde. The duration of the contract is unknown, but the ships are meant to be launched in the 2030s.<sup>303</sup>

Also in 2022, Raytheon got a three-year, \$98.9 million contract to modernise the Very-Low Frequency (VLF) communications system for nuclear weapons command and control.<sup>304</sup> It still has another similar \$62 million contract, for the E-6B, which is set to expire in 2024.<sup>305</sup>

Raytheon's biggest nuclear weapons-related contract is the six-year, \$2 billion contract for the Long-Range Standoff weapon, the replacement for the AGM-86 air-launched cruise missile.<sup>306</sup>

Finally, the ten-year \$79 million Minuteman III communications contract is currently meant to be completed in October 2023.<sup>307</sup>

### LOBBY & INFLUENCE

In the US, Raytheon spent over \$13 million lobbying in 2022. Approximately \$10.7 million of that was spent by the company itself, while it spent nearly three million on the following firms to lobby on its behalf: Akin Gump Strauss Hauer & Feld, American Defense International, Inc., BGR Government Affairs, Brownstein Hyatt Farber Schreck, LLP, Cornerstone Government Affairs, Inc., DLA Piper LLP (US), Etherton and Associates, Inc, Innovative Federal Strategies, LLC, Invariant LLC, J.A. Green and Company, S-3 Group, Thorn Run Partners, C. Baker Consulting, Inc., and The Vectre Corporation.<sup>308</sup>

In the UK, Raytheon held five defence-related meetings with UK government officials, including two with the Ministry of Defence.<sup>309</sup>

Jeff Shockey, Raytheon's Senior Vice President, Global Government Relations is also the founder of one of the lobby firms Raytheon, S-3 Group.<sup>310</sup> S-3 Group earned \$240,000 lobbying on Raytheon's behalf in 2022.<sup>311</sup>

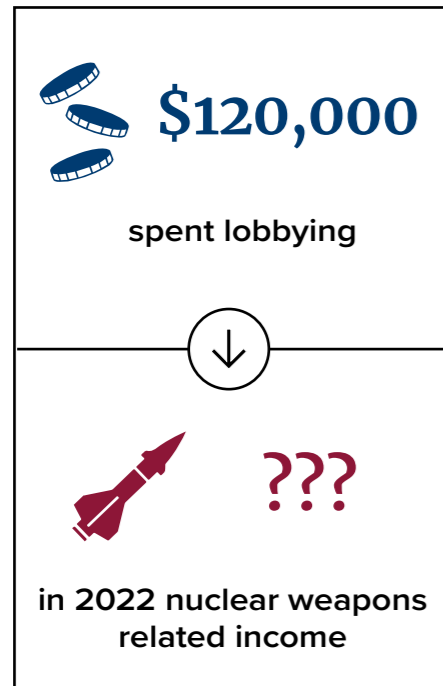
State Street has over \$13 billion invested in Raytheon Technologies.<sup>312</sup> Raytheon board member, Tracy A. Atkinson, was an executive vice president of State Street Corporation with several senior finance and risk management roles until March 2020.<sup>313</sup>

Brian C. Rogers, another board member, is also on the board of trustees at the Brookings Institution.<sup>314</sup>

Robert O. Work, another board member, also has former government and think tank ties. He was a U.S. deputy secretary of defence and was the chief executive officer of the Center for a New American Security.<sup>315</sup>



The new Minuteman III guidance system is being evaluated at Hill AFB before going to Vandenberg Air Force Base, California, for launch. ©Public Domain.



## Rolls-Royce

Warren East retired from his role as Chief Executive and member of the Rolls Royce board at the end of 2022 and received £3,835,000 compensation for the year.<sup>316</sup>

### NUCLEAR WEAPONS

Rolls-Royce will produce the engines for the new B-52 bombers.<sup>317</sup>

Rolls-Royce builds the nuclear reactors that power the UK's nuclear-armed submarines, including maintenance for the currently operating Vanguard-class.<sup>318</sup>

Rolls-Royce, along with BAE Systems and the UK Submarine delivery agency, forms the Dreadnought Alliance consortium, tasked with building the next generation of UK nuclear-armed submarines.<sup>319</sup>

### CONTRACTS

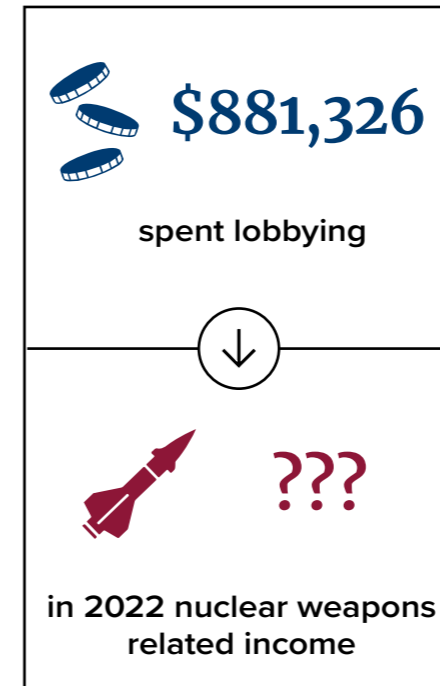
In 2022, the UK Ministry of Defence announced it would provide an additional £2 billion in funding for the Dreadnought nuclear-armed submarines, with an estimate of £10 billion for the current delivery phase.<sup>320</sup> This does not include the costs of the Trident missile production, nor the new warhead production and design.

### LOBBY & INFLUENCE

In the US, Rolls-Royce spent \$120,000 to hire J.A. Green and Company to lobby on its behalf in 2022.<sup>321</sup>

In the UK in 2022, Rolls Royce had 79 meetings with government officials. Of these, eight were with the Ministry of Defence, and four with the Prime Minister's office.<sup>322</sup>

Rolls-Royce board members have deep ties to the financial sector, three of them at the same institution. Anita Frew, the chair, was a director at Lloyds Banking Group, Aberdeen Asset Management and Royal Bank of Scotland. George Culmer, another board member, was also at Lloyds. Lord Jitesh Gadhia held senior roles at Blackstone, Barclays Capital and ABN AMRO, and is currently a non-executive director of the Court of Directors of the Bank of England. Nick Luff was also at Lloyds.<sup>323</sup>



## Safran

Safran is a 50% owner of ArianeGroup, which has contracts for French nuclear weapon production.<sup>324</sup> According to the Safran Universal Registration Document, CEO Olivier Andriès earned 48.8 times more than the average Safran employee receiving a pre-incentive compensation of €800,000 (\$760,800) in 2022.<sup>325</sup>

### NUCLEAR WEAPONS

ArianeGroup is the prime contractor for French M51 nuclear missiles. These are missiles with intercontinental capabilities and multiple warheads, carried on nuclear-powered ballistic missile submarines. ArianeGroup describes its role in M51 production as "upstream research, design, development and production of the missiles, the land-based operating infrastructure and the command-and-control system on board the submarines."<sup>326</sup>

The prime contractor for the ASMPA missile, which carries the next generation nuclear missile (TNA (tête nucléaire aéroportée)) is MBDA France.<sup>327</sup> However, Safran's subsidiary Safran Ceramics is involved in the design, development, manufacture and sale of solid propulsion systems and related equipment for all types of rockets and tactical and cruise missiles for air, sea and ground forces through a joint venture with MBDA called Roxel. Roxel is also involved in ASMP/ASMP-A missile production, providing boosters and additional devices.<sup>328</sup>

### CONTRACTS

The 2022 French defence budget allocated €6.28 million for nuclear-weapons-related expenses in 2022. This includes efforts towards new M51 submarine-launched ballistic missiles, continued production of existing missiles, and the air-launched cruise missile costs as well.<sup>329</sup>

According to the French 2022 defence budget, €1.6 million was allocated to the M51 submarine-launched ballistic missiles, and Ariane Group is listed as the primary contractor, but the contract amount itself is unclear.<sup>330</sup>

The French defence budget allocates over €50 million for the ASMPA, and indicates MBDA is the prime contractor, however, it does not provide details about precisely what the contracted and subcontracted parties receive.<sup>331</sup>



**LOBBY & INFLUENCE**

Safran registered lobby activity in both the US and France and spent an estimated \$881,326 between the two. In the US, they spent \$400,000 on their own lobbying efforts and hired Baker, Donelson, Bearman, Caldwell & Berkowitz (The Daschle Group) for \$120,000.<sup>332</sup>

In France, Safran spent €250,000 lobbying on its own behalf.<sup>333</sup> Safran was one of the many clients of Compagnie Européenne D'Intelligence Strategique (CEIS); France Industrie; France Invest; GICAN (GPT Indust Construc Activit Naval); GICAT; Groupement des Industries Françaises Aéronautiques et Spatiales (GIFAS) and; Le Cercle De L'Arbalette for which it spent an estimated €130,000.<sup>334</sup>

In the UK, Safran held three lobby meetings with government officials in 2022, all of which were primarily aerospace related.<sup>335</sup>

Ross McInnes, Group Chairman of the Board, was appointed Trustee of the IFRS Foundation in January 2018.<sup>336</sup>

Patricia Bellinger, another board member, has been the Chief of Staff and Strategic Advisor to the President of Harvard University since 2018.

BNP Paribas is currently underwriting \$658 million in Safran debt.<sup>337</sup> Monique Cohen serves on the board of directors of both Safran and BNP Paribas.<sup>338</sup>

Céline Fornaro serves as the representative of the French Government on the board of Safran; she is also a member of Chatham House, the Royal Institute of International Affairs (United Kingdom).<sup>339</sup>

Another director proposed by the French State, Alexandre Lahousse, is also the Representative of the French State on the Board of Directors of ArianeGroup Holding, of which Safran is a 50% owner.<sup>340</sup>



Photo by Ahmed Zalabany on Unsplash.

**Thales**

Naval Group is a French-law Public Limited Company that, as of 31 December 2022, was owned for 62.25% by the French State, 35% by Thales, 1.82% by the Group's employees and former employees through the company employee mutual fund, and 0.92% self-managed.<sup>341</sup>

Thales Chairman and CEO, Patrice Caine earned €2,019,800,000 (\$1,920,829,800) in 2022.<sup>342</sup>

**NUCLEAR WEAPONS**

Naval Group is the prime contractor for the French nuclear-armed submarine fleet. These submarines (Le Triomphant, Le Téméraire and Le Vigilant) are armed with the M51 nuclear missiles and considered by the French government to be integral to their nuclear weapons programme.<sup>343</sup>

**CONTRACTS**

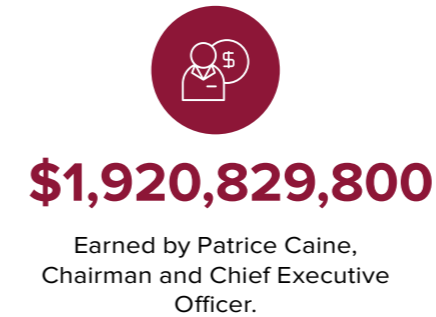
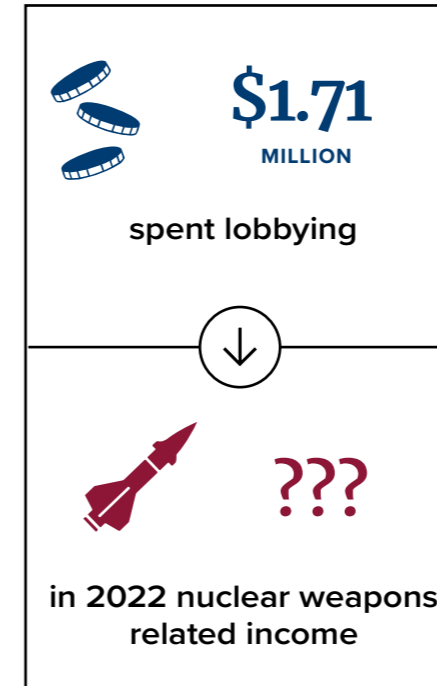
According to the Naval Group Annual Report for 2022, it received modernisation contracts for the second generation of SSBNs in 2022.<sup>344</sup> Naval Group will build four nuclear-powered ballistic missile submarines that will serve in the French Navy between the 2030s and the 2090s.<sup>345</sup> The group signed a contract for this work in 2021 but did not disclose the amount.<sup>346</sup>

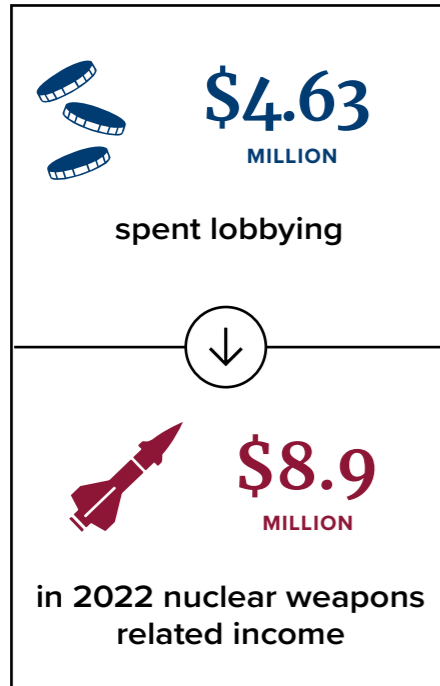
**LOBBY & INFLUENCE**

Thales spent at least \$340,000 lobbying in the US in 2022, hiring Baker Donelson Bearman Caldwell & Berkowitz (The Daschle Group) and Innovative Federal Strategies, LLC to carry out most lobby activities.<sup>347</sup>

In France, Thales and Naval Group, spent €1.4 million on lobbying activities. About €460,000 was Thales directly, while external consultants were hired for the remaining \$980,000.<sup>348</sup>

On 9 May 2022, Thales met Minister of State Rt Hon Jeremy Quin MP at the UK Ministry of Defence regarding the Dreadnought contract announcement, along with Northrop Grumman, Lockheed Martin, Babcock Marine Ltd, BAE Systems, Siemens, McGeoch Technology, and Truflo Marine. This was one of 19 lobby meetings Thales had with UK government officials, eight of which were with the Ministry of Defence.<sup>349</sup>





**\$1.93**

Earned in nuclear weapon contracts for every dollar Textron spent lobbying.



**\$15,367,279**

Earned by Scott C. Donnelly, Chairman, President and Chief Executive Officer.

## Textron

Textron CEO Scott C. Donnelly earned \$15.3 million in 2022, not including long-term incentive pay.<sup>350</sup>

Textron earns at least \$8.9 million per year on nuclear weapon-related contracts.

### NUCLEAR WEAPONS

Textron is building several components for the U.S. Minuteman III missile system, including multiprobe antennas and the missile midsections.<sup>351</sup> Textron is also involved in the missile payload integration project for the Sentinel, formally the Ground Based Strategic Deterrent, though contract details are unpublished.<sup>352</sup>

### CONTRACTS

Textron's \$3.2 million contract for key components for the Minuteman III missile, was awarded in 2021 and is set to expire in 2023.<sup>353</sup> In 2014, it was awarded a nine-year, \$66.1 million contract for Minuteman III fusing and firing devices.<sup>354</sup>

### LOBBY & INFLUENCE

Textron spent \$5.3 million in lobbying in the US in 2021. Of that, \$750,000 was spent hiring external lobbyists, and the rest was spent on its own behalf.<sup>355</sup>

Textron hired the following lobbyists in 2021: ACG Advocacy; American Defense International, Inc.; BGR Government Affairs; Covington & Burling LLP; Forza DC Strategies, LLC, and S-3 Group.<sup>356</sup>

Chairman and CEO Scott C. Donnelly is on the board of directors for the National Air and Space Museum and the Board of Trustees for Bryant University.<sup>357</sup> Board member Deborah Lee James is the retired 23rd Secretary of the United States Air Force.<sup>358</sup>

Board member Richard F. Ambrose is a former VP at Lockheed Martin;<sup>359</sup> Thomas A. Kenney is the retired Executive Chairman of Raytheon.<sup>360</sup>

Bank of America currently has \$115 million in outstanding loans to Textron,<sup>361</sup> and Lionel L. Nowell III and Maria T. Zuber serve on the board of directors of both Textron and BofA.<sup>362</sup>



An unarmed Minuteman III ICBM shoots out of the silo during an operational test launch Feb. 25 at Vandenberg Air Force Base, Calif. ©Public Domain.

# Think Tanks

## INTRODUCTION

Companies that produce nuclear weapons, and countries that possess or endorse them, spend millions each year on supporting the world's top think tanks which write about and research nuclear weapons. While not all think tanks disclose their funding, according to their most recent funding reports, the ten think tanks featured here accepted between \$21.1 and \$35.6 million in the last reported year from companies producing nuclear weapons, states possessing nuclear weapons, and countries in self-described nuclear alliances that allow for the use of nuclear weapons in their security doctrines. Many also have current or former CEOs, executives or board members from these companies or leaders from these countries sitting on advisory boards or serving on their board of directors.

The credibility of these think tanks as independent and objective institutions is undermined when they accept funding from companies and countries with vested interests in maintaining and building more weapons of mass destruction.<sup>363</sup> As long as they continue accepting these contributions, readers of these think tank reports should question if their policy recommendations or research topics are influenced by their funders.

Think tank	Funding from companies, governments, and alliances that produce and support nuclear weapons
<b>Atlantic Council</b>	\$4,180,000 - \$7,419,974
<b>Brookings Institution</b>	\$2,460,000 - \$4,974,984
<b>Carnegie Endowment for International Peace</b>	\$2,020,000 - \$4,499,986
<b>Chatham House</b>	no amount publicly available
<b>Center for New American Security (CNAS)</b>	\$2,710,001 - \$4,729,975
<b>Center for Strategic and International Studies (CSIS)</b>	\$2,590,000 - \$3,829,987
<b>Hudson Institute</b>	\$375,000 - \$469,999
<b>Observer Research Foundation (ORF)</b>	\$888,106
<b>Royal United Services Institute (RUSI)</b>	\$2,488,409 - \$5,431,512
<b>Stimson Center</b>	\$3,296,369

Not all think tanks publish exact figures per donor, the ranges presented here are reflective of the information published by these institutions.

# Atlantic Council | \$4,180,000 - \$7,419,974

The Atlantic Council is a U.S think tank. One of its featured issues of study is nuclear deterrence.<sup>364</sup>

According to the Atlantic Council's 2022 Annual Report, in 2021, the Atlantic Council received between \$4,180,000 and \$6,969,974 from nine companies that produce nuclear weapons, two countries that possess nuclear weapons, and 10 countries that allow the use of nuclear weapons in their security doctrines.

The Atlantic Council received between \$660,000 and \$1,469,991 from eight companies that produce nuclear weapons: Airbus, Bechtel, Boeing, Leonardo, Lockheed Martin, MBDA, Raytheon Technologies, Safran and Textron.<sup>365</sup>

In correspondence with ICAN in reference to last year's report, The Atlantic Council stated that the overwhelming majority of this funding is not to support work on nuclear weapons or nuclear strategy.

This represents an inflation-adjusted increase of between \$22,800 and \$82,200 from past year nuclear-producing company funding. The Atlantic Council no longer reported funding from Northrop Grumman, reported increased funding from Lockheed Martin and Safran, constant funding from Airbus, Boeing, MBDA, and Textron, and new funding from Bechtel and Leonardo.

In addition, the CEOs of two companies that produce nuclear weapons sit on the Advisory Board of the Atlantic Council: Guillaume Faury, CEO of Airbus and Gregory J. Hayes, Chairman and CEO of Raytheon Technologies. Numerous former heads of states and ministers from nuclear endorsing states also sit on the International Advisory Board of the Atlantic Council: Rt. Hon. Lord Robertson of Port Ellen, Former Secretary General of NATO, and Secretary Charles T. Hagel, Former US Secretary of Defense, to name a few. Also sitting on the Atlantic Council's International Advisory Board are Prime Minister Shaukat Aziz, Former Prime Minister of Pakistan, President José María Aznar, Former President of the Government of Spain, Lt. Gen. James Clapper, Jr., Former US, Director of National Intelligence, Sir Nicholas Clegg, Former Deputy Prime Minister of the United Kingdom, President Kolinda Grabar-Kitarović, Former President of Croatia, President Kersti Kaljulaid, Former President of Estonia, President Aleksander Kwaśniewski Former President of Poland, Secretary Lawrence H. Summers Former US Secretary of the Treasury, and Prime Minister Helle Thorning-Schmidt, Former Prime Minister of Denmark.

## COMPANIES

- **Airbus** \$250,000 - \$499,999
- **Bechtel** \$5,000 - \$9,999
- **Boeing** \$5,000 - \$9,999
- **Leonardo** \$100,000 - \$249,999
- **Lockheed Martin** \$100,000 - \$249,999
- **MBDA** \$25,000 - \$49,999
- **Textron** \$50,000 - \$99,999
- **Raytheon Technologies** \$100,000 - 249,999
- **Safran** \$25,000 - 49,999

In 2022, the Atlantic Council also received between \$3,520,000 and \$5,499,583 from two countries that possess nuclear weapons (the United States and France) and 10 countries that allow the use of nuclear weapons (Canada, Czech Republic, Estonia, Germany, Italy, Japan, Lithuania, Norway, Poland and South Korea) in their security policies.

## GOVERNMENTS

- **Canada** \$100,000 - \$249,999
- **The Czech Republic** \$5,000 - \$9,998
- **Estonia** \$5,000 - \$9,999
- **Germany** \$260,000 - \$274,998
- **Italy** \$25,000 - \$49,999
- **Japan** \$5,000 - \$9,999
- **Lithuania** \$125,000 - \$299,998
- **Norway** \$100,000 - \$249,999
- **Poland** \$10,000 - \$24,999
- **South Korea** \$250,000 - \$499,999
- **The United Kingdom** \$1,000,000+
- **The United States** \$1,350,000 - \$2,749,996

In 2022, additionally, the Atlantic Council received \$25,000 and \$49,999 directly from the self-described nuclear alliance, NATO.

# Brookings Institution | \$2,460,000 - \$4,974,984

The Brookings Institution is a U.S. think tank. One of the projects of the foreign policy wing of the think tank is the Arms Control and Nonproliferation Initiative, which “addresses global arms control and proliferation challenges, as well as the central negotiations between the United States and Russia.”<sup>366</sup>

According to the Brookings Institution’s 2022 Annual Report, Brookings received between \$2,460,000 and \$4,974,984 from three companies that produce nuclear weapons, three countries that possess nuclear weapons, and five countries that allow the use of nuclear weapons in their security doctrines.

The Brookings Institution received between \$600,000 and \$1,199,997 from three companies that produce nuclear weapons: Leonardo, Lockheed Martin, and Northrop Grumman.<sup>367</sup>

This represents an inflation-adjusted decrease of between \$21,000 and \$49,999 from the previous year’s funding. Brookings reported increased funding from Lockheed Martin and constant funding from Leonardo and Northrop Grumman.



## COMPANIES

- **Leonardo** 50,000 - 99,999
- **Lockheed Martin** 50,000 - 99,999
- **Northrop Grumman** 500,000 - 999,999

In 2022, the Brookings Institution also received between \$1,860,000 and \$3,774,987 from three countries that possess nuclear weapons (France, the United Kingdom and the United States) and five countries that allow the use of nuclear weapons (Canada, Denmark, Japan, Norway and South Korea) in their security policies.

## GOVERNMENTS

- **Canada** 25,000 - 49,999
- **Denmark** 50,000 - 99,999
- **France** 10,000 - 24,999
- **Japan** 50,000 - 99,999
- **Norway** 500,000 - 999,999
- **South Korea** 100,000 - 249,999
- **The United Kingdom** 500,000 - 999,999
- **The United States** 625,000 - 1,249,994

Nuclear Weapons Specialist holds a tag line connected to the Reentry System handling sling. ©Public Domain.

# Carnegie Endowment for International Peace \$2,020,000 - \$4,499,986

The Carnegie Endowment for International Peace is a U.S. think tank with a global network of experts, including centres in Beirut, Brussels, and New Delhi. One of Carnegie’s programs is the Nuclear Policy Program, which “spans deterrence, disarmament, nonproliferation, nuclear security, and nuclear energy.”<sup>368</sup> The program organises a regular International Nuclear Policy Conference.<sup>369</sup>

According to Carnegie’s 2022 Annual Report, in 2021, Carnegie received between \$2,020,000 and \$4,499,986 from one company that produces nuclear weapons, two countries that possess nuclear weapons and seven countries that allow the use of nuclear weapons in their security doctrines.

The Carnegie Endowment for International Peace received between \$25,000 and \$99,999 from one company that produces nuclear weapons: Leonardo.<sup>370</sup>

This represents an inflation-adjusted decrease of between \$2,000 and \$8,000 from past year funding. The Carnegie Endowment for International Peace no longer reported funding from Northrop Grumman and new funding from Leonardo.

In correspondence with ICAN, the Carnegie Endowment for International Peace noted that its Nuclear Policy Program did not receive funding from Leonardo, but that its Nuclear Policy Program did receive funding “from several governments to support the 2022 Carnegie International Nuclear Policy Conference and a project on the future of arms control.”<sup>371</sup>

## COMPANIES

- **Leonardo** \$25,000 - 99,999

In 2022, the Carnegie Endowment for International Peace also received between \$1,605,000 and \$3,274,996 from countries that possess nuclear weapons (the UK and US) and between \$390,000 and \$1,124,991 from countries that allow the use of nuclear weapons (Australia, Canada, Denmark, Germany, Japan, Norway, and South Korea) in their security policies.

## GOVERNMENTS

- **Australia** 10,000 - 24,999
- **Canada** 10,000 - 24,999
- **Denmark** 5,000 - 24,999
- **Germany** 30,000 - 124,998
- **Japan** 25,000 - 99,999
- **Norway** 30,000 - 124,998
- **South Korea** 100,000 - 249,999
- **The United Kingdom** 1,000,000 - 1,999,999
- **The United States** 605,000 - 1,274,997



A Trident II D-5 intercontinental ballistic missile lifts off from the water after being launched from the submerged nuclear-powered strategic missile submarine USS TENNESSEE (SSBN-734). ©Public Domain.

# Chatham House

Chatham House is a British think tank. One of its featured topics of research is arms control, including the regulation of nuclear weapons.<sup>372</sup> Within its International Security Programme, it has a project on the humanitarian impact of nuclear weapons which focuses “on assessing the institutional strength of the nuclear non-proliferation regime and global commitment to disarmament.”<sup>373</sup>

According to its 2022 Annual Report, in 2021, Chatham House received funding from three companies that produce nuclear weapons, three countries that possess nuclear weapons and nine countries that allow the use of nuclear weapons in their security doctrines.

Chatham House received funding from five companies that produce nuclear weapons: BAE Systems, Bechtel, Boeing, Leonardo, and Lockheed Martin.<sup>374</sup> Chatham House did not disclose the particulars or ranges of amounts they received from these companies in their annual report.

In correspondence with ICAN, Chatham House disclosed that the funding they received listed in this report did not go directly towards their nuclear policy research but instead either other research areas in their International Security Program or funding for other programs, research, membership, or conferences. They specified that from 2021-2023, they had received funding “from the United Kingdom, Canada and the Netherlands for work on cyber policy, and from Germany and the United Kingdom for work on conflict,” as well as from the United States “on biosecurity and from Leonardo for work on space security.” In the past ten years, they noted that Chatham House had “received funding from Norway and the United Kingdom and also from the Hiroshima Prefecture in Japan for specific nuclear weapons policy-related projects that were proposed by” Chatham House.<sup>375</sup>

This report did not include Chatham House in previous years. However, Chatham House, in their 2021-2022 Impact Report, reported funding from BAE Systems, Bechtel, Boeing, Leonardo and Lockheed Martin.<sup>376</sup>

In addition, a number of individuals from various states serve on the Council and a Panel of Senior Advisors for Chatham House including Rt Hon Sir, John Major KG CH UK Prime Minister from 1990–97, Lord Davies of Abersoch CBE Partner and Chairman, Corsair Capital; former UK Minister for Trade, Investment, Small Business and Infrastructure from 2009–10, Rt Hon Lord Hammond of Runnymede UK Chancellor of the

Exchequer from 2016–19; Foreign Secretary from 2014–16; Defence Secretary from 2011–14, Sir Mark Lyall Grant GCMG UK National Security Adviser from 2015–17; Ambassador to the UN from 2009–15, Rt Hon Lord Robertson of Port Ellen KT GCMG Hon FRSE PC Secretary General, NATO from 1999–2003; UK Defence Secretary from 1997–99, Hon Kevin Rudd AC President and CEO, Asia Society; Prime Minister of Australia from 2007–10 and 2013; Minister for Foreign Affairs from 2010–12, Sir John Sawers GCMG Executive Chairman, Newbridge Advisory; Chief of the UK, Secret Intelligence Service (MI6) from 2009–14; Ambassador to the UN from 2007–09.

## COMPANIES

- **BAE Systems** no amount publicly available
- **Bechtel** no amount publicly available
- **Boeing** no amount publicly available
- **Leonardo** no amount publicly available
- **Lockheed Martin** no amount publicly available

In 2022, Chatham House also received funding from three countries that possess nuclear weapons (China, UK, US) and nine from countries that allow the use of nuclear weapons (Australia, Canada, Germany, Japan, Netherlands, North Macedonia, Norway, South Korea, Sweden) in their security policies.

## GOVERNMENTS

- **Australia** no amount publicly available
- **Canada** no amount publicly available
- **China** no amount publicly available
- **Germany** no amount publicly available
- **Japan** no amount publicly available
- **Netherlands** no amount publicly available
- **North Macedonia** no amount publicly available
- **Norway** no amount publicly available
- **South Korea** no amount publicly available
- **The United Kingdom** no amount publicly available
- **The United States** no amount publicly available

In 2022, Chatham House also received funding directly from the self-described nuclear alliance, NATO.

# Center for New American Security | \$2,710,001 - \$4,729,975

The Center for New American Security is a U.S. think tank. It does not have a specific program on nuclear weapons, but does regularly produce reports, write articles and provide media interviews on the subject, including on nuclear weapon diplomacy with Iran and on North Korea’s nuclear program.<sup>377</sup>

According to the Center for New American Security’s list of supporters, between 2021 and 2022, the Center received between \$2,710,001 and \$4,729,975 from 11 companies that produce nuclear weapons, two countries that possess nuclear weapons, and nine countries that allow the use of nuclear weapons in their security doctrines.

The Center for New American Security received between \$1,360,000 and \$2,474,991 from 11 companies that produce nuclear weapons: BAE Systems, Boeing, General Dynamics, Huntington Ingalls, L3 Harris, Leidos, Leonardo, Lockheed Martin, Northrop Grumman, Raytheon, and Textron.<sup>378</sup>

This represents an inflation-adjusted decrease of between \$800 and \$15,006 in nuclear weapons producers funding from the past year. The Center for New American Security no longer reported funding from Honeywell, reported increased funding from Boeing and Lockheed Martin, reduced funding from Textron, and constant funding from BAE, General Dynamics, Huntington Ingalls, L3 Harris, Leidos, Leonardo, Northrop Grumman, and Raytheon.

In addition, executives at three companies that produce nuclear weapons sit on the CNAS Board of Advisors: Roger Krone, Chairman and Chief Executive Officer of Leidos; William J. Lynn III, Chief Executive Officer of Leonardo DRS and Leonardo North America; Sally Sullivan, Vice President of Global Public Policy of Raytheon Technologies; and Mike Petters, President and CEO of Huntington Ingalls Industries.<sup>379</sup> On CNAS’ Board of Directors sits Richard J. Danzig, Senior Advisor at Johns Hopkins Applied Physics Laboratory, which conducts nuclear weapons research for the Department of Defense, and Admiral Cecil Haney, USN (Ret.), Former Commander of US STRATCOM, the military agency that oversees U.S. nuclear weapon deployments.<sup>380</sup> On CNAS Board of Advisors also sits a former PM of Australia, Scott Morrison.

## COMPANIES

- **BAE Systems** \$50,000 - \$99,999
- **Boeing** \$100,000 - \$199,999
- **General Dynamics** \$25,000-\$49,999
- **Huntington Ingalls** \$100,000 - \$249,999
- **L3 Harris Technologies** \$25,000 - \$49,999
- **Leidos** \$100,000 - \$249,999
- **Leonardo** \$100,000 - \$249,999
- **Lockheed Martin** \$250,000 - \$499,999
- **Northrop Grumman** \$500,000 and above
- **Raytheon** \$100,000 - \$249,999
- **Textron** \$10,000 - \$24,999

In 2022, the Center for New American Security also received between \$1,050,000 and \$1,599,996 from two countries that possess nuclear weapons (the UK and US) and between \$300,001 - \$654,993 from countries that allow the use of nuclear weapons (Canada, Finland, Germany, Japan, Latvia, Lithuania, the Netherlands, South Korea, and Sweden) in their security policies.

## GOVERNMENTS

- **Canada** \$25,000 - \$49,999
- **Germany** \$1,000 - \$4,999
- **Japan** \$100,000 - \$249,000
- **Latvia** \$50,000 - \$99,999
- **Lithuania** \$50,000 - \$99,999
- **The Netherlands** \$25,000 - \$49,999
- **South Korea** \$50,000 - \$99,999
- **The United Kingdom** \$25,000 - \$49,999
- **The United States** \$1,025,000 - \$1,549,997

## Center for Strategic and International Studies 2,590,000 - \$3,829,987

The Center for Strategic and International Studies (CSIS) is a U.S. think tank. Within its International Security Program, CSIS has a Project on Nuclear Issues, a network for “next generation professionals prepared to meet the nuclear challenges of the future.”<sup>381</sup> “Weapons of mass destruction proliferation” is a key topic of research within the International Security Program.<sup>382</sup>

According to the Center for Strategic and International Studies’ 2020 donor list, the Center received between \$2,590,000 and \$3,829,987 from 10 companies that produce nuclear weapons, two countries that possess nuclear weapons, and two countries that allow the use of nuclear weapons in their security doctrines.

The Center for Strategic and International Studies received between \$1,150,000 and \$1,969,992 from 11 companies that produce nuclear weapons: BAE Systems, Bechtel, Boeing, General Dynamics, Huntington Ingalls, Jacobs Engineering, L3 Harris, Leonardo, Lockheed Martin, and Northrop Grumman.<sup>383</sup>

This represents an inflation-adjusted decrease of between \$110,314 and \$191,259 in past year nuclear weapons producer funding. The Center for Strategic and International Studies no longer reported funding from Raytheon, new funding from L3 Harris, and constant funding from BAE Systems, Bechtel, Boeing, General Dynamics, Huntington Ingalls, Jacobs Engineering, Leonardo, Lockheed Martin, and Northrop Grumman.

Two current and one former CEO of companies that produce nuclear weapons sit on the CSIS Board of Trustees: Brendan Bechtel, Chairman and CEO, Bechtel Group, Inc.; W. James McNerney Jr., Former Chairman, The Boeing Company; and Phebe N. Novakovic Chairman and CEO, General Dynamics. Additionally, present and former members of nuclear endorsing governments sit on the Board of Trustees: Paul Ryan, Former Speaker of the U.S. House of Representatives; Frances F. Townsend, Former Assistant to the U.S. President for Homeland Security and Counterterrorism; and James Winnefeld Jr., Former Vice Chairman of the Joint Chiefs of Staff, U.S. Department of Defense

### COMPANIES

- **BAE Systems:** \$35,000 - \$64,999
- **Bechtel:** \$100,000 - \$199,000
- **Boeing:** \$100,000 - \$199,999
- **General Dynamics:** \$100,000 - \$199,000
- **Huntington Ingalls Industries:** \$100,000 - \$199,000
- **Jacobs Engineering:** \$5,000 - \$34,999
- **L3 Harris:** \$5,000 - \$34,999
- **Leonardo:** \$5,000 - \$34,999
- **Lockheed Martin:** \$200,000 - \$499,999
- **Northrop Grumman:** \$500,000 and up

In 2022, the Center for Strategic and International Studies also received between \$535,000 and \$565,000 from two countries that possess nuclear weapons (France and the US) and between \$905,000 and \$1,294,995 from eight countries that allow the use of nuclear weapons (Australia, Canada, Denmark, Finland, Germany, Japan, Norway, and South Korea) in their security policies.

### GOVERNMENTS

- **Australia** \$35,000 - \$64,999
- **Canada** \$35,000 - \$64,999
- **Denmark** \$100,000 - \$199,999
- **France** \$35,000 - \$64,999
- **Germany** \$35,000 - \$64,999
- **Japan** \$500,000 and up
- **Norway** \$100,000 - \$199,999
- **South Korea** \$100,000 - \$199,999
- **The United States** \$500,000 and up

## Hudson Institute | \$375,000 - \$469,999

The Hudson Institute is a U.S. think tank. A featured topic within its National Security programme is “Arms Control and Nonproliferation,” and the institute regularly publishes on nuclear weapons.<sup>384</sup>

According to the Hudson Institute’s 2021 Annual Report, in 2021, the Institute received between \$2,805,000 and \$3,619,999 from four companies that produce nuclear weapons, no countries that possess nuclear weapons and one country that allows the use of nuclear weapons in their security doctrine.

The Hudson Institute received between \$2,700,000 and \$3,500,000 from four companies that produce nuclear weapons: BAE Systems, Huntington Ingalls, Lockheed Martin, and Northrop Grumman.<sup>385</sup>

This represents an inflation-adjusted increase of between \$18,720 and \$35,900 from past year nuclear weapons producer funding. The Hudson Institute no longer reported funding from Textron, new funding from BAE, and constant funding from Huntington Ingalls, Lockheed Martin, and Northrop Grumman.

### COMPANIES

- **Huntington Ingalls** \$20,000-\$50,000
- **Lockheed Martin** \$100,000 and above
- **Northrop Grumman** \$100,000 and above
- **Textron** \$20,000-\$50,000

In 2022, the Hudson Institute also received between \$105,000 and \$119,999 from one country that allows the use of nuclear weapons (Japan) in their security policies.

### GOVERNMENTS

- **Japan** \$105,000- \$119,999



Inside the Peacekeeper Launch Control Center (LCC). ©Public Domain.



## Observer Research Foundation | \$888,106

The Observer Research Foundation (ORF) is an Indian think tank. Within its Strategic Studies programme is the Nuclear and Space Studies Initiative and the think tank regularly publishes research about nuclear weapons.<sup>386</sup>

According to the Observer Research Foundation's Declaration of Contributions, in 2022 the Foundation received \$888,106 from one company that produces nuclear weapons, three countries that possess nuclear weapons, and three countries that allow the use of nuclear weapons in their security doctrines.<sup>387</sup>

The Observer Research Foundation received \$86,257 from one company that produces nuclear weapons: Lockheed Martin.<sup>388</sup>

This represents an inflation-adjusted and currency constant decrease of \$60,592 from past year nuclear weapons producer funding. The Observer Research Foundation reported decreased funding from Lockheed Martin.

### COMPANIES

→ Lockheed Martin \$86,257

In 2022, the Observer Research Foundation also received \$801,850 from three countries that possess nuclear weapons (France, India, the United States) and three countries that allow the use of nuclear weapons (Australia, Japan, South Korea) in their security policies.

### GOVERNMENTS

→ Australia \$63,588

→ France \$2,0362

→ India \$30,9457

→ Japan \$60,916

→ South Korea \$28,846

→ The United States \$318,680



Chinese DF-16s ICBMs.

## Royal United Services Institute | \$2,488,409 - \$5,431,512

The Royal United Services Institute (RUSI) is a British think tank. RUSI's website explains that it covers a range of nuclear policy issues including: "the UK's nuclear policy, WMD issues around the world, Iranian and North Korean nuclear diplomacy, as well as counter proliferation financing, sanctions and sanction evasion tactics."<sup>389</sup>

According to the Royal United Services Institute's website, between 2020 and 2021, the Royal United Services Institute received between \$2,485,409 and \$5,451,512 from 10 companies that produce nuclear weapons, six countries that possess nuclear weapons and 15 countries that allow the use of nuclear weapons in their security doctrines.

The Royal United Services Institute received between \$485,820 and \$1,159,048 from 10 companies that produce nuclear weapons: Airbus, BAE Systems, Boeing, General Dynamics, L3 Harris, Leonardo, Lockheed Martin, MBDA, Northrop Grumman, and Raytheon.<sup>390</sup>

This represents an inflation-adjusted and currency constant decrease of between \$54,254 and \$110,972 from past year nuclear weapons producer funding. The Royal United Services Institute no longer reported funding from Jacobs Engineering, Bechtel and Leidos, new funding from Boeing and L3 Harris, increased funding from Lockheed Martin, decreased funding from Airbus and Raytheon, and constant funding from BAE Systems, General Dynamics, Leonardo, MBDA, Northrop Grumman.

### COMPANIES

→ Airbus \$30,826 - \$61,651

→ BAE Systems \$246,609 - \$616,521

→ Boeing \$1,233 - \$12,329

→ General Dynamics \$1,233 - \$12,329

→ L3 Harris \$12,330 - \$30,824

→ Leonardo \$1,233 - \$12,329

→ Lockheed Martin \$154,130 - \$308,259

→ MBDA \$1,233 - \$12,329

→ Northrop Grumman \$12,330 - \$30,824

→ Raytheon \$13,563 - \$43,154

In 2022, the Royal United Services Institute also received between \$1,273,736 - \$2,318,111 from six countries that possess nuclear weapons (China, France, India, Israel, the United Kingdom, and the United States) and between \$728,853 - \$1,954,353 from 15 countries that allow the use of nuclear weapons (Australia, Canada, Czech Republic, Denmark, Finland, Germany, Italy, Japan, Latvia, the Netherlands, Norway, Slovenia, South Korea, Sweden, Turkey) in their security policies.

### GOVERNMENTS

→ Australia \$1,233 - \$12,329

→ Canada \$259,062 - \$770,649

→ China \$1,233 - \$12,329

→ The Czech Republic \$1,233 - \$12,329

→ Denmark \$1,233 - \$12,329

→ France \$1,233 - \$12,329

→ Germany \$62,885 - \$135,632

→ India \$1,233 - \$12,329

→ Israel \$1,233 - \$12,329

→ Italy \$1,233 - \$12,329

→ Japan \$62,885 - \$135,632

→ Latvia \$12,330 - \$30,824

→ The Netherlands \$247,842 - \$638,850

→ Norway \$13,563 - \$43,154

→ Slovenia \$1,233 - \$12,329

→ South Korea \$62,885 - \$135,633

→ The United Kingdom \$651,048 - \$1,639,940

→ The United States \$617,775 - \$1,639,940

→ Turkey \$1,233 - \$12,329



Photo by Mathias Reding on Unsplash.

## Stimson Center | \$3,296,369

The Stimson Center is a U.S. think tank. The Stimson Center has Nonproliferation, U.S. Foreign Policy and Asia programs which include research and publications about nuclear weapons.<sup>391</sup>

According to the Stimson Center's 2021 Financial Report, in 2021, the Center received \$3,296,369 from seven companies that produce nuclear weapons, two countries that possess nuclear weapons, and six countries that allow the use of nuclear weapons in their security doctrines.

The Stimson Center received \$52,500 from seven companies that produce nuclear weapons: BAE Systems, Boeing, L3 Harris, Leonardo, Lockheed Martin, Northrop Grumman, and Textron.<sup>392</sup>

This represents an inflation-adjusted increase of \$26,325 from past year nuclear weapons producer funding. The Stimson Center reported new funding from BAE Systems, L3 Harris, Leonardo, and Textron, reported increased funding from Northrop Grumman and constant funding from Boeing and Lockheed Martin.

One current and two former executives from nuclear weapon-producing companies sit on Stimson's Board of Directors: Michael Arthur, President of Boeing International; David Welch, former vice president and partner of Bechtel and Nicole Paisecki, former vice president and general manager of the Propulsion Systems Division of Boeing Commercial Airplanes.<sup>393</sup> Additionally, Sir Michael Arthur who formerly served in the Foreign and Commonwealth Office, UK sits on Stimson Center's Board of Directors.<sup>394</sup>

### COMPANIES

- **BAE Systems** \$5,000
- **Boeing** \$5,000
- **L3 Harris** \$5,000
- **Leonardo** \$5,000
- **Lockheed Martin** \$17,500
- **Northrop Grumman** \$10,000
- **Textron** \$5,000

In 2022, the Stimson Center also received \$2,040,375 from two countries that possess nuclear weapons (the UK and US) and \$1,203,494 from six countries that allow the use of nuclear weapons (Canada, Germany, Japan, the Netherlands, Norway and South Korea) in their security policies.

### GOVERNMENTS

- **Canada** \$585,875
- **Germany** \$124,441
- **Japan** \$96,029
- **The Netherlands** \$108,361
- **Norway** \$167,137
- **South Korea** \$121,651
- **The United Kingdom** \$56,556
- **The United States** \$1,983,819

# Conclusion

This is the fourth annual report documenting massive investments in global nuclear weapons spending. Through an ever-changing and challenging security environment, from security threats of climate change to the COVID-19 pandemic to the Russian invasion of Ukraine, nuclear weapons spending has steadily increased, with no resulting measurable improvement on the security environment. If anything, the situation is getting worse.

As companies throw money at lobbyists and researchers to assert the continued relevance and value of nuclear weapons, the record shows the inutility of weapons of mass destruction to address modern security challenges — and the legitimate fear, backed by peer-reviewed scientific evidence, that they can end global civilisation as we know it.<sup>395</sup>

The Treaty on the Prohibition of Nuclear Weapons is the multilateral response to the irresponsible behaviour of all nuclear-armed states to pour money down their nuclear weapons drains. It is the normative barricade against threats to use nuclear weapons. All countries should join this landmark international instrument to prohibit the development and maintenance of nuclear weapons and prevent their eventual use by ensuring their elimination.

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**The Treaty on the Prohibition of Nuclear Weapons is the multilateral response to the irresponsible behaviour of all nuclear-armed states to pour money down their nuclear weapons drains.**

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Rally to Support Ukraine at Trafalgar Square, London on the 20th of March. Photo by Ivan Bandura on Unsplash.

# Methodology

## COUNTRIES

The estimates for country nuclear weapon spending (rounded to one decimal point) include nuclear warhead and nuclear-capable delivery systems' operating costs and development where these expenditures are publicly available and are based on a reasonable percentage of total military spending on nuclear weapons when more detailed budget data is not available. Currency exchange calculations are based on annual averages, as explained in the companies methodology, and differences from 2021 to 2022 are based on a constant currency basis - meaning that the same exchange rate for the entire year was used to compare 2021 and 2022 spending in USD.

Due to lack of reliable and consistent global information, these estimates do not include the costs to remediate the environment contaminated by nuclear weapons or to compensate victims of nuclear weapon use and testing, although these are also important markers of the added financial and human cost of nuclear weapons.<sup>396</sup>

A 2011 Global Zero cost estimate which added "unpaid/deferred environmental and health costs, missile defences assigned to defend against nuclear weapons, nuclear threat reduction and incident management" found that this "full" cost of global nuclear arsenal was over 50% higher than just the cost of nuclear weapons system maintenance and development.<sup>397</sup> The methodology and sources used to calculate each country's spending on nuclear weapons in this report is detailed in each country section.

## COMPANIES

Places where multiple companies were included: the total contract value has been divided equally across the number of companies, unless there is a clear ownership division published. This is an estimate, to prevent double reporting.

### US CONTRACTS

Department of Defence (DOD) contracts pulled from contract websites may not include all contracts as only those over \$7 million are reported. In places where multiple companies were included, the total contract value has been divided equally across the number of companies (unless details were specified). This is an estimate, to prevent double reporting. Additional contract information was researched using USASpending.gov, wherein searches by contractor name were performed. Subcontract listings were not included unless specifically noted.

Potential award amounts were listed, as opposed to obligated amounts, to illustrate the agreed scope of the contract costs.

U.S. Department of Energy contracts with consortiums (Consolidated Nuclear Security, MSTs, etc) do not have details about the percentage of work done or fees accrued by each of the companies comprising the joint venture, so figures were equally divided among the three entities.

### FRENCH CONTRACTS

French contracts were assessed based on the various company and Joint Venture websites including Airbus, BAE Systems, MBDA, ArianeGroup, Safran, and Thales.

### UK CONTRACTS

For Trident, the UK often does not have contracts directly with the companies themselves. Instead, contract awards are done by the US, and the UK then reimburses the US for costs incurred.

## EXCHANGE RATES

To provide a consistent view, the average 2022 exchange rate of \$1 = €0.951 and \$1 = £0.811 as estimated by the OECD was used in all calculations, a constant currency calculation.<sup>398</sup>

## A NOTE ON SOURCES

All US Lobbying reports were taken either from the US Senate Lobbying Disclosures site (<https://lda.senate.gov/system/public/>), or the US House site (<https://disclosurespreview.house.gov/>), where each lobbyist or defence contractor files quarterly reports and the full list of referenced reports is available upon request.

UK Lobbying information was obtained through the Transparency International UK data dashboard on lobbying activities: <https://openaccess.transparency.org.uk/>.

The French Transparency Register was the source of information on French lobby expenditures: <https://www.hatvp.fr/>. Estimates were required, as French lobbyists are not required to disclose per-client figures, so these figures are estimated based on the number of clients, and total reported amounts. The figures for the defence companies themselves are the median of the reported range.

## THINK TANKS

This report aims to provide an overview of the most recent annual contributions of nuclear weapons producers and governments allowing the possession and use of nuclear weapons to major think tanks which regularly write and research on nuclear weapons.

To select think tanks to include in the report, we started with the University of Pennsylvania's 2019 Global Go To Think Tank Index Report and selected the top Defence and National Security think tanks in nuclear-armed states, and then chose the think tanks with established nuclear weapons programs, or that frequently write and research about nuclear weapons.<sup>399</sup> From these, entirely government- or university-funded think tanks were eliminated from consideration in the report. Think tanks with little to no public information about funding sources were also not included. Think tanks included in previous reports that had not published new financial information since the last report by May 1, 2023, were also not included.



UN Treaty on the Prohibition of Nuclear Weapons reached the required 50 states parties for its entry into force, after Honduras ratified just one day after Jamaica and Nauru submitted their ratifications.

The report considers funding from nuclear weapon-producing companies, countries that possess nuclear weapons, and countries that allow the use of nuclear weapons in their security doctrines in a one-year period for these selected think tanks during the most recently self-reported timeframe. The funding information is all publicly available through think tank annual reports and websites. Funding information for the most recent one-year period available was selected and no information before FY 2020 was considered.

Unlike previous years, this year's report considers funding from nuclear-armed states and states which allow the use of nuclear weapons in their security doctrines, due to recent research about the influence of these funders on the production of knowledge on nuclear weapons.<sup>400</sup> The nuclear-armed countries are: China, France, India, Israel, North Korea, Pakistan, Russia, the United Kingdom, and the United States. The countries which allow the use of nuclear weapons in their security doctrines are Albania, Armenia, Australia, Belarus, Belgium, Bulgaria, Canada, Croatia, Czech, Denmark, Estonia, Germany, Greece, Hungary, Iceland, Italy, Japan, Latvia, Lithuania, Luxembourg, Montenegro, The Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, South Korea, Spain, and Turkey. While Finland was a member of NATO at the time of publication of the report, making its security doctrine part of a self-described nuclear alliance, they were not included as the report covers 2022 and previous years. This year's report also tracked funding and think tank contributions from self-described nuclear alliances, which includes NATO.

Where nuclear weapons producing companies changed from last year's version of the report, this was noted in the section, and the change in think tank funding was recalculated in the

previous year to allow for accurate comparison. All previous years were adjusted for inflation corresponding to the year the latest report from the think tanks was released. Many think tanks have official policies on intellectual independence from funders, including the Atlantic Council, the Carnegie Endowment of International Peace, the Chatham House, and the Stimson Center among others. While most think tanks do not provide program-specific funding, where available it is noted, although all funding from nuclear weapons companies and states to the think tank is included. All think tanks were contacted prior to publication to provide corrections and comments.

When available, the report notes formal partnerships or membership structures between nuclear weapon producing companies and think tanks, given that these partnerships give companies access and participation in think tank work and may entail a financial contribution. The report also notes when a member of a board of the think tank, including the Board of Trustees, Board of Directors or Advisory Board, held a current or former senior position at a nuclear-weapon-producing company, or in a nuclear-armed or nuclear-alliance government.

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**The report considers funding from nuclear-weapon-producing companies, and a few nuclear-weapon specific governmental agencies" with "and countries that allow the possession and use of nuclear weapons.**

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*UN Treaty on the Prohibition of Nuclear Weapons reached the required 50 states parties for its entry into force, after Honduras ratified just one day after Jamaica and Nauru submitted their ratifications.*

# About the ICAN and the Authors

The International Campaign to Abolish Nuclear Weapons (ICAN) is a global campaign working to mobilise people in all countries to inspire, persuade and pressure their governments to sign and ratify the Treaty on the Prohibition of Nuclear Weapons. ICAN comprises more than 650 partner organisations in over 100 countries. More information about ICAN can be found at [www.icanw.org](http://www.icanw.org).

Magritte Gordaneer, Alicia Sanders-Zakre and Susi Snyder co-authored this report.

Alicia is the Policy and Research Coordinator of ICAN where she directs and coordinates research on the Treaty on the Prohibition of Nuclear Weapons, the humanitarian impact of nuclear weapons and general nuclear weapons policy. Previously, she was a research assistant at the Arms Control Association and at the Brookings Institution and she has published over 100 news articles, editorials and reports on nuclear weapons, and is the author and co-author of previous ICAN reports on nuclear weapons spending. She can be reached with any comments or questions at [alicia@icanw.org](mailto:alicia@icanw.org).

Susi is the Programme Coordinator of ICAN, her responsibilities include facilitating the development and execution of ICAN's key programmes, including the management of ICAN's divestment work and engagement with the financial sector. She coordinated the Don't Bank on the Bomb research and campaign while working for the Dutch organisation PAX since 2013. Susi was a Foreign Policy Interrupted/ Bard College fellow in 2020 and one of the **2016 Nuclear Free Future Award Laureates**. Previously, Susi worked with PAX and before that served as the Secretary General of the **Women's International League for Peace and Freedom** at their Geneva secretariat. She was named Hero of Las Vegas in 2001 for her work with Indigenous populations against US nuclear weapons development and nuclear waste dumping. She can be reached with any comments or questions at [susi@icanw.org](mailto:susi@icanw.org)

Magritte is a Policy and Research Intern at ICAN where she assists the Policy and Research coordinator in targeted research to support the implementation of the TPNW. She is a student at McGill University graduating in 2023 with a Bachelor's in Political Science and has previously worked with organisations such as Forum on the Arms Trade and International Physicians for the Prevention of Nuclear War Canada. Magritte is the Policy Co-Coordinator of Youth for TPNW and has worked in youth and disarmament campaigning for over six years. She can be reached with any comments or questions at [magritte@icanw.org](mailto:magritte@icanw.org).

# About the Treaty on the Prohibition of Nuclear Weapons

On 7 July 2017 – following a decade of advocacy by ICAN and its partners – an overwhelming majority of the world's nations adopted a landmark global agreement to ban nuclear weapons, known officially as the Treaty on the Prohibition of Nuclear Weapons (TPNW). The TPNW prohibits nations from developing, testing, producing, manufacturing, transferring, possessing, stockpiling, using or threatening to use nuclear weapons, or allowing nuclear weapons to be stationed on their territory.

It also prohibits them from assisting, encouraging or inducing anyone to engage in any of these activities. A nation that possesses nuclear weapons may join the treaty, so long as it agrees to destroy them in accordance with a legally binding, verifiable, time-bound plan. Similarly, a nation that hosts another nation's nuclear weapons on its territory may join, so long as it agrees to remove them by a specified deadline. Nations are obliged to provide assistance to all victims of the use and testing of nuclear weapons and to take measures for the remediation of contaminated environments. The preamble acknowledges the harm suffered as a result of nuclear weapons, including the disproportionate impact on women and girls, and on Indigenous peoples around the world. The TPNW reached 50 states parties in October 2020, entered into force on 22 January 2021 and held its First Meeting of States Parties in June 2022, adopting the landmark Vienna Action Plan and Declaration.

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