

DEFENDING DIGITAL DEMOCRACY PROJECT

Catching Swedish Phish

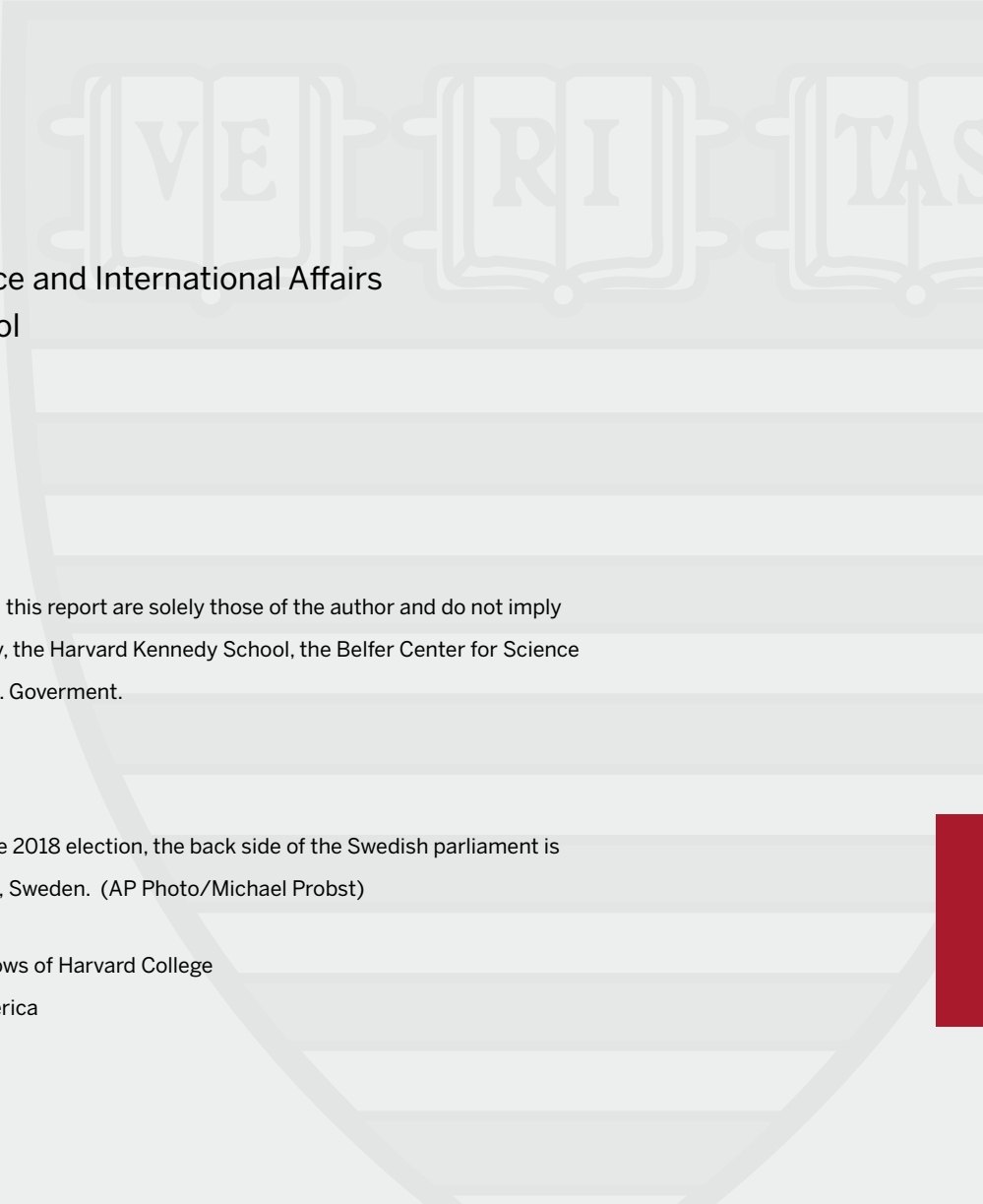
How Sweden is Protecting its 2018 Elections

Gabriel Cederberg



HARVARD Kennedy School
BELFER CENTER
for Science and International Affairs

PAPER
AUGUST 2018



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Cover photo: Eleven days before the 2018 election, the back side of the Swedish parliament is reflected in the water in Stockholm, Sweden. (AP Photo/Michael Probst)

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About the Author

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Table of Contents

Executive Summary	1
Introduction and Project Approach.....	3
Strategic Context.....	4
Threat Overview.....	4
Sweden as a Strategic Target	7
Malign Actors	9
Part 1: Fortifying the Government	11
1.1 Clear Communication Around Cyber Threats	11
1.2 Cyber Defense Investment	13
1.3 A High-Level National Forum for Cyber Coordination	15
1.4 Expanding Military Force Posture	16
1.5 Bolstering Campaign Cybersecurity	19
1.6 Decentralized Election Administration.....	21
Part 2: Strengthening the Traditional Media	23
2.1 Government Coordination with Mass Media	23
2.2 High-Visibility FactChecking	24
2.3 Mitigating Information Operations on Social Media	26
Part 3: Empowering the People	28
3.1 Educating People to be Conscious Media Users	28
3.2 Preparing for the Worst	29
Shortcomings and Challenges	30
Conclusion	33
Glossary.....	35
Endnotes	38



Eleven days before the 2018 election, the back side of the Swedish parliament is reflected in the water in Stockholm, Sweden. (AP Photo/Michael Probst)



Executive Summary

Alarmed by Russia's brazen interference in the 2016 US Election, Sweden began preparing for its September 2018 election in earnest. Over the past year and a half, Sweden has created a comprehensive strategy based on a clear understanding of the threat; it has learned lessons from other targeted elections; and it has developed a whole-of-society defense—mobilizing not just the government, but also the Swedish media and Swedish citizens.

Going forward, countries around the world should study and implement these eight key components of Sweden's whole-of-society election defense:

- **Clear condemnation of election interference.** The Swedish Prime Minister explicitly stated in January 2018 that any foreign interference in the election would not be tolerated. This condemnation set the national tone towards election interference.
- **Prioritizing election infrastructure.** Sweden has designated its election systems as a component of critical infrastructure by appointing the Swedish government's crisis preparation and response agency as the head authority for election coordination. The agency's efforts have included comprehensive threat analysis and penetration testing of election systems, as well as the training of over 10,000 civil servants and election administrators to recognize ongoing influence operations.
- **High-level interagency coordination.** Sweden created a national forum between four key security agencies dedicated to coordinating the 2018 election. While the reporting lines between these organizations have not been altered as a result of the forum, the forum serves as a national platform for election planning, preparation, and protection.
- **Efforts to improve public media literacy.** Sweden's numerous public and private sector efforts to improve media literacy

have bolstered the public's psychological defense to information operations. The nationwide high school "fake news" curriculum is an unprecedented commitment to confronting influence operations long-term.

- **Strengthening military force posture.** By re-introducing military conscription, increasing the military budget, performing large-scale military exercises, and signing new international defense agreements, Sweden has raised the perceived cost of election interference for potential adversaries.
- **Improving cyber detection and response capabilities.** Sweden's National Defense Radio Establishment has evolved into a high-powered cyber detection group. The agency has also begun cooperating with the Swedish Armed Forces on critical cyber threats.
- **Coordination with the traditional media.** The Swedish government's continuous discussion about cybersecurity and crisis-preparation with traditional media outlets has the potential to be a crucial stabilizing force in the event of a national crisis—election related or otherwise.
- **High-visibility fact-checking collaboration.** Five of Sweden's largest media outlets have created a fact-checking collaborative to bring increased attention to each organization's independent fact-checking efforts.

Introduction and Project Approach

For Sweden's 2018 election, the stakes are extremely high. The election is not just about letting a country of 10 million decide which parties they want in parliament for the next four years. It is about determining whether a whole-of-society approach to election security can protect an election that is firmly in Russia's crosshairs.

The objective of this report is to first examine the actions and aspects of Sweden's whole-of-society defense against foreign interference in the 2018 election and then to extract key strategic takeaways for protecting democratic processes going forward.

Over the course of writing this report, I consulted articles, research reports, government publications, and pieces of legislation. I watched interviews, panel discussions, and political speeches. I visited Swedish government agencies, political campaign headquarters, media offices, think tanks, and cybersecurity consultancies to speak with 18 experts and operatives who comprise Sweden's frontline defense from day to day.

Following the Strategic Context, this report is divided into three main sections, corresponding to the three components of Sweden's whole-of-society defense: fortifying the government, strengthening the traditional media, and empowering the Swedish people. Agency names, acronyms, and technical terms are defined in the Glossary.

Strategic Context

In recent years, cyber and information operations have increasingly been used to undermine democratic processes around the world. Because of Sweden's non-membership in the North Atlantic Treaty Organization (NATO), as well as its important role in international diplomacy, Sweden is a tactical target for election meddling. Already experiencing its own domestic tensions, Sweden has had to quickly take stock of the relevant threats and prepare for a societal defensive effort.

Threat Overview

Innovations in information technology have made cyber warfare an ever-expanding battlefield. For years, cyber attackers have weaponized burgeoning technologies to gain access to closed systems to steal, hide, and manipulate information. The tools for these attacks can be as simple as the spear-phishing methods used to steal 46.7 million USD from Ubiquiti Networks in 2015¹ and as complex as the Stuxnet malware that the United States used to slow Iran's nuclear program.² In January 2018, the World Economic Forum named cyber attacks as one of the top three global risks.³ And while cyber crime remains the most common type of cyber attack,⁴ over the last decade we have seen cyber and information operations increasingly being used to target democratic processes.⁵

This is a concerning trend. In addition to Russia's highly-publicized efforts to influence the United States 2016 election,⁶ Russia has also successfully created political instability in Germany, Estonia, France, Ukraine, and the Czech Republic.⁷ However, Russia is *not* the only country capable of conducting highly-influential cyber and information operations. The cyberwarfare landscape and its actors are constantly shifting. Therefore, countries must devote significant resources to deterring and protecting against attackers going forward.

Importantly, election interference is not limited to the hacking of voting systems to change tallies; it also includes a wide array of cyber and

information methods used to sow doubt and distrust towards the integrity of democratic processes as a whole. There are three main attack types used against democratic processes: information operations, cyber operations, and mixed operations, also known as hybrid attacks.

- 1. Information Operations.** Information operations, also referred to as “influence operations,” are efforts to manipulate information channels to distort public opinion and/or influence behavior. Information operations have been deployed by many actors for myriad purposes—from Iran establishing cultural and religious centers to promote its ideology throughout the Middle Eastern region,⁸ to Mexican drug trafficking organizations displaying gruesome corpses in public to build their reputation and deter future rivals and defectors.⁹ Information operations can also be as short-lived as Russia spreading false photos of terrorist attack suspects in London.¹⁰ When targeting elections and other democratic processes, bad actors carry out information operations by using rapid, continuous, and repetitive online messaging to spread disinformation from a high number of sources to targeted audiences.¹¹ These attacks seek to drown out, sow confusion around, and disrupt truthful reporting and messaging. Crucially, these information operations do not need to present a single, cohesive message; the primary goal is to create noise. For example, as tensions over immigration have increasingly shaped the political discussion in Europe, Russian information operations have polarized the debate by criticizing both sides of the immigration argument.¹² Europe was simultaneously described as xenophobic towards refugees and foolish for allowing so many of them to seek asylum. In the lead-up to the 2018 election, Swedish authorities have already reported increases in information campaigns aimed at “polarizing Swedish society, undermining stability, and spreading falsehoods.”¹³
- 2. Cyber Operations.** Cyber space has frequently been called the fifth domain of warfare.¹⁴ Over the past decade, cyber threats have rapidly evolved to the point where they now endanger broad technological systems ranging from mobile networks, to healthcare systems, to entire electrical infrastructures. The “Vault7” leak of CIA hacking tools in March 2017, for instance, gave a dizzying

glimpse into today's vastly powerful cyber capabilities.¹⁵ The leak also made those tools available to all nation-states. Cyber operations are especially dangerous because they can often be carried out without leaving a trace, which makes attribution extremely challenging.¹⁶ Democratic processes are vulnerable to cyber attacks in large part because there are so many potential targets. Public administrators, politicians, campaigns, journalists, contracted private sector organizations, and providers of essential government services are all part of the interconnected system that makes elections and governance possible. Each actor adds another vulnerability. Just last week, a Distributed Denial of Service (DDoS) attack twice brought down the website of Sweden's largest political party, the Social Democrats.¹⁷ The party's IT service traced the internet traffic to five countries: Russia, North Korea, Japan, Spain, and South Africa.¹⁸

3. **Mixed Operations.** Mixed operations, also known as hybrid attacks, employ coordinated, domain-spanning attacks.¹⁹ One type of hybrid attack involves information operations by way of leaking information illegally obtained through a cyber attack. Russia used this hybrid approach in the 2017 French election when it hacked into then-candidate Emmanuel Macron's campaign and leaked nine gigabytes of emails—some genuine and some forged.²⁰ Another type of mixed operations campaign is the combination of traditional warfare with information operations and/or cyber attacks. This multi-pronged method was used by Russia in their annexation of Crimea in 2014.²¹ Swedish Defense Minister Peter Hultqvist confirmed in August 2017 that Russia was carrying out hybrid warfare against Sweden, including military action, "cyber attacks, disinformation, and false news."²²

Sweden as a Strategic Target

Despite its small size and population, Sweden is a strategic target for three main reasons: Sweden's shift toward joining NATO, its key role in high-stakes international diplomacy, and its high per capita rate of immigration over the past five years.

- 1. Sweden's Evolving Relationship with NATO.** Since Russia annexed Crimea in 2014, Sweden's public opinion has shifted in favor of Sweden joining NATO.²³ This shift has challenged Sweden's long-standing tradition of neutrality and alliance-free foreign policy. In October 2014, polling showed that a plurality of Swedes favored NATO membership for the first time.²⁴ The Swedish Armed Forces have also become more closely aligned with NATO.²⁵ Over the past four years under the directorship of Swedish Defense Minister Peter Hultqvist, Sweden has strengthened its international defense cooperation with NATO.²⁶ Hultqvist even stated in October 2015 that Sweden was considering joining NATO.²⁷ This policy of increased coordination with NATO has come to be known as the "Hultqvist Doctrine."²⁸ Another aspect of Sweden's alignment with NATO is the Cooperation Agreement that the Swedish Civil Contingencies Agency (MSB) signed with NATO Stratcom in January 2017.²⁹ Although Sweden's Foreign Minister Margot Wallström stated in 2016 that the government would not seek NATO membership, these cooperative moves have signaled an increasing possibility that Sweden will join NATO sometime in the future.³⁰ And for countries that see NATO as an adversary, Sweden's shift presents a substantial threat.
- 2. Sweden's Role in International Diplomacy.** Sweden has frequently been involved in high-stakes diplomatic discussions. In 2001, Sweden's Prime Minister Göran Persson became the first Western leader to visit North Korea.³¹ In early 2018, Swedish diplomats helped coordinate the summit between President Trump and Kim Jong-Un.³² Dr. Lora Saalman of the EastWest Institute describes Sweden as having a "liminal role in international diplomacy," enabling it to facilitate crucial talks along the edges of intractable

issues.³³ Because of this influence in diplomatic discussions, as well as Sweden's access to highly confidential information, Sweden is a prime target for cyber and information operations.

3. **Immigration.** A key objective of information operations is to exacerbate existing divisions in a society. In 2014 at the height of the Syrian refugee crisis, then-Prime Minister Fredrik Reinfeldt called on the Swedish people to “open their hearts” to refugees seeking shelter.³⁴ A year later, the Swedish population of just 10 million welcomed 165,000 asylum-seekers.³⁵ This gave Sweden the highest per capita refugee immigration rate of any OECD Country.³⁶ Ever since this influx of refugees from the Middle East in 2014, immigration has been one of the most hotly-contested and politically-deployed wedge issues in Sweden. With their staunch anti-immigration stance, the far-right Sweden Democrats quickly rose from being a fringe party to the third largest party in Sweden's parliament.³⁷ Their current 12.9 percent representation in parliament is expected to rise yet further in this year's election.³⁸ From Sweden's immigration surge onward, the national discussion around immigration has been inundated with fabricated news stories framing immigrants for crimes. In 2017, a viral article charged asylum seekers for “seven bombings in twelve days in Sweden,” and another article blamed immigrants for “severely bruising an elderly woman.”³⁹ The bombings never took place, and the article used a stock image of a car fire in Sofia, Bulgaria.⁴⁰ The elderly woman fell at her home in 2014.⁴¹ Because immigration has become such a contentious issue in Sweden, it presents itself as an opportunity for bad actors to wage influence operations.

Malign Actors

Bad actors in cyberspace can be nation states, independent organizations, or highly-motivated individuals. While Russia has been the most active perpetrator of cyber aggressions in recent years, Russia is not the only bad actor with the ability and desire to meddle in Sweden's 2018 elections. Iran and China have both targeted the Swedish government in the past, and Swedish authorities have openly named "Islamist influences" as potential aggressors in the election.⁴²

- 1. Russia.** In December 2016, the head of the Swedish Military Intelligence and Security Service explicitly stated that Russia was the most frequent cyber aggressor against Sweden.⁴³ In February 2016, the Supreme Commander of the Swedish Armed Forces reported that Russian cyber attacks against the country occur daily.⁴⁴ While it is difficult to ascertain the political impact of these Russian operations, the considerable resources devoted to them by the highest levels of Russian intelligence forces suggest that the intended impact is quite substantial.⁴⁵ In a report to the US Senate Foreign Relations Committee, Senator Ben Cardin called Sweden a "favorite target of the Kremlin's propaganda machine."⁴⁶ Russia has several motivations for targeting Sweden. First, simply by drawing up tensions and drama in countries like Sweden, Russia can divert attention away from its activities elsewhere in Europe.⁴⁷ Secondly, Russia sees NATO as a strategic threat and has been working to undermine it for years.⁴⁸ Recently, Russia's Defense Minister Sergei Shoigu threatened to "take response measures" if Sweden joins NATO.⁴⁹ The third reason is general cyber warfare; by gaining access to Sweden's critical infrastructure and information systems, Russia can disrupt Swedish society at any time—including during elections and natural disasters.
- 2. Islamist Influence.** The Swedish Civil Contingencies Agency (MSB) is working to counteract election interference efforts by extremist groups affiliated with Islam in Sweden. MSB monitors both recruitment efforts by groups like ISIS (also referred to as "Daesh") and political mobilization by global Islamic organizations

like Hizb ut-Tahrir that are politically active in Sweden. The presence of these extremist groups in Sweden was widely felt when it was reported that the Uzbek national who drove a stolen beer truck into a crowd of pedestrians in central Stockholm in 2017 had read material published by Hizb ut-Tahrir and other Islamic radical organizations.⁵⁰ Recently, Hizb ut-Tahrir has become politically vocal in Sweden, even urging Swedish Muslim members not to vote in the upcoming election.⁵¹ “That is a case of straight voter interference,” said a Senior Analyst at MSB’s Global Monitoring and Analysis Section.⁵² MSB says its duty is to ensure all Swedish citizens feel encouraged to vote in the election.

3. **Other Potential Actors.** Aside from Russia, Swedish authorities have named China and Iran as the most active intelligence threats.⁵³ In early 2018, the Director of Sweden’s Security Service said that the Swedish government has experienced espionage and cyber-intrusion into the country’s infrastructure by China.⁵⁴ However, Swedish authorities have not named China and Iran as threats to Sweden’s 2018 election.

Part 1: Fortifying the Government

The Swedish Government has engaged in a coordinated, comprehensive campaign to fortify the country's cyber defenses in the lead-up to the 2018 election. Its preparations have been swift, sweeping, and transparent. This section details the six major steps Sweden has taken to help the government secure the 2018 election.

1.1 Clear Communication Around Cyber Threats

In the months before the 2018 election, warnings about potential election interference have been delivered early and stated clearly to the Swedish public. By condemning information operations, publishing cyber strategy documents, and adopting necessary legislative solutions, Sweden's government has unequivocally stated its opposition to election meddling.

1. **Condemning Information Operations.** At a security conference in January 2018, Sweden's current Prime Minister Stefan Löfven set the national tone towards election interference: "To those thinking about trying to influence the outcome of the elections in our country: Stay away!"⁵⁵ Löfven also pledged to "expose without mercy" any attempts to interfere in the election. At all levels of government, the willingness of Swedish officials to discuss the threat of foreign influence has increased public awareness and the potential political cost to hostile attackers.⁵⁶
2. **Broadcasting the National Cyber Strategy.** The Swedish Government has published several strategy documents to increase public awareness of the government's security objectives. In January 2017, Prime Minister Löfven's office released a national security strategy document that placed high importance on the protection of democratic elections and freedom of opinion.⁵⁷ To build upon Löfven's initial report, the Ministry of Justice released the National Strategy for Society's Information and Cyber Security.⁵⁸ This Ministry of Justice report outlines Sweden's whole-of-society approach to election

protection. It focuses on the distinct roles of national, regional, and local actors across the public and private sectors. Also, the Swedish Security Service (SÄPO) dedicated a large portion of its 2017 annual report to discussing information operations.⁵⁹

3. **Information Security Legislation.** Sweden has worked to overhaul its government information security policies and has adopted two European Union regulations to improve information security and transparency. First, the Swedish parliament enacted a new “Protective Security” law to replace the outdated provisions of Sweden’s Security Act from 1996. This new law codifies several information security measures pertaining to the classification, storage, accessing, sharing, and review of government information—spanning all agencies and private sector partnerships.⁶⁰ A key part of the new law mandates that before any government agency can engage in contractual discussions involving confidential information with the private sector, that agency must consult with the Swedish Security Service and Swedish Armed Forces.⁶¹ This will mean that hundreds of government contracts per year will undergo an additional, rigorous early-stage cybersecurity evaluation process.

The European Union recently authorized both the Directive on Security of Network and Information Systems (NIS Directive)⁶² and the General Data Protection Regulation (GDPR).⁶³ The NIS Directive requires member states to develop a Computer Security Incident Response Team (CSIRT), establish a central NIS authority, and engage in strategic information sharing practices with the NIS Cooperation Group. In Sweden, the Civil Contingencies Agency (MSB) has been designated as the central authority.⁶⁴ MSB is responsible for coordinating national cyber response efforts and overseeing the mandated information security changes made by operators of essential services and digital services. MSB can impose sanctions and penalties for operators who do not comply with the ordinance. The second European Union directive that Sweden adopted is GDPR, which requires companies that operate in Sweden to clearly explain how user personal data is collected, stored, used, and how it can be deleted.⁶⁵ Over time, this increased data usage transparency may help decrease the potency of

disinformation campaigns.⁶⁶ GDPR is enforced by the Swedish Data Protection Authority.⁶⁷

1.2 Cyber Defense Investment

After the end of the Cold War, Sweden discontinued its “total defense” approach to information and psychological warfare.⁶⁸ By effectively abandoning its psychological defense capabilities, Swedish authorities left the country vulnerable to tactical information warfare. As a result, Sweden has been forced to devote significant resources to rebuilding its cyber and information operations defenses for the modern age. Since the beginning of 2017, the government has broadened the scope of its security services, planned a new psychological defense agency, and increased funding for the military’s cyber defense.

1. **Strengthening Security Services.** The Swedish Civil Contingencies Agency (MSB) was created in 2009, when the government combined the Swedish Rescue Services Agency (SRSA), the Swedish Emergency Management Agency (SEMA), and the Swedish National Board of Psychological Defense.⁶⁹ MSB is responsible for contingencies ranging from traffic accidents to chemical emergencies, power outages, and natural disasters—like the massive wildfires Sweden experienced this summer.⁷⁰ By designating MSB as the primary authority for protecting the election, Sweden both in name and in practice has made election administration a component of critical infrastructure. MSB’s first directive to counter Russian disinformation came in 2015. With a budget increase beginning in 2017, the agency has now greatly expanded its scope and influence for the election. MSB’s election-related tasks have included continuous engagements with the mass media, cybersecurity briefings and seminars for public administrators, and cyber support via its CERT (Computer Emergency Response Team).⁷¹ The Swedish Security Service (SÄPO) has also coordinated its cyber efforts with international partners and other Swedish government agencies in preparation for the 2018 election.⁷²

2. **Planning a New Psychological Defense Agency.** In January 2018, Prime Minister Stefan Löfven unveiled his plan to protect the elections from interference. A key element of Löfven's plan was to establish a new government agency tasked with improving the psychological defense of the Swedish public.⁷³ However, the first step in creating this agency was to appoint an investigator to determine the eventual scope of the agency. As of now, no investigator has been appointed, and no progress has been made.⁷⁴ The new agency is still projected to be up and running on January 1st, 2021,⁷⁵ but municipal authorities have expressed serious concerns about how such an agency would be funded.⁷⁶
3. **Improving Cyber Defenses.** The Swedish National Defense Radio Establishment (FRA) has a long history of intercepting and decoding radio signals dating back to WWII. But over the last 15 years, FRA has become heavily involved in the cyber domain.⁷⁷ The agency's two main focuses are information security and signals intelligence.⁷⁸ Within the category of information security, FRA performs pen-testing of Sweden's government agencies and equips these agencies with tools to improve their cybersecurity. Within signals intelligence, FRA has received a legal mandate to intercept certain communications that run through underground fiber optic cables in Sweden.⁷⁹ This allows FRA to detect outside threats against Sweden.⁸⁰ In response to heightened regional tensions, the FRA has received a substantial increase in funding and is closely cooperating with other agencies both to increase the country's cyber defense capability and to protect the upcoming election.⁸¹

1.3 A High-Level National Forum for Cyber Coordination

The Swedish Security Service (SÄPO), Swedish Police Authority, the Election Authority, and the Swedish Civil Contingencies Agency (MSB) have established a high-level national forum dedicated to the security of the 2018 election.⁸² While not exactly the kind of interagency cyber fusion cell seen in the United Kingdom, the Swedish national forum has catalyzed collaboration on a number of important initiatives. These include a comprehensive threat analysis, election administrator briefings, and a continuous interagency dialogue. Mikael Tofvesson, Head of MSB's Global Monitoring and Analysis Section and Operational Director of the 2018 Election, praised the effectiveness of this collaborative approach: "Our all-hazards approach has given us an advantage to tie different actors and vulnerabilities together in our monitoring, assessment and cooperation activities."⁸³

1. **Threat Assessment.** The national forum conducted extensive threat analyses and produced a confidential report which instructed government agencies on how to strengthen the security of their operations.⁸⁴ Much of the analysis focused on past cases of election interference in Europe and the United States.⁸⁵ The national forum—primarily through the MSB—has also traveled throughout the country using this threat assessment to prepare civil servants and local election administrators.⁸⁶
2. **SAMFI and NSIT.** Sweden also operates two other interagency cyber coordination groups. The Cooperation Group for Information Security (SAMFI) is a collaboration between the Civil Contingencies Agency (MSB), the Defense Material Administration (FMV), the Police Authority, the Swedish National Defense Radio Establishment (FRA), the Post and Telecom Agency, and the Swedish Armed Forces.⁸⁷ SAMFI provides coordination on regulatory issues, technical standardization, exercises, training, and preparation for IT threats.⁸⁸ Representatives from each agency meet six times per year. The National Coordination against Serious IT Threats (NSIT) is more compact and secretive than SAMFI and

coordinates the government's response to serious, known threats against national security.⁸⁹ NSIT combines the efforts of the SÄPO, the Armed Forces, and FRA.

1.4 Expanding Military Force Posture

Sweden has increased its force posture over the past five years to both prepare for potential conflict and build up the country's deterrence against cyber campaigns. By re-instituting conscription, boosting military investment, engaging in high-visibility military exercises, and increasing military coordination with allies, Sweden has exercised foreign policy tools outside of the technology domain to counteract cyber threats.

- 1. Reintroducing Conscription.** Sweden's need to strengthen its military forces amid rising tensions in the Baltics has been compounded by a preexisting problem of insufficient military reserve retainment. In a 2015 defense report, Swedish authorities voiced concerns about the military's ability to recruit reserve squad leaders, soldiers, and sailors, calling the process "problematic."⁹⁰ According to an IFRI Security Studies Center research paper from 2015, the Swedish Armed Forces then had approximately 52,000 full-time personnel.⁹¹ Roughly 20,000 were permanent military staff, and most of the others were contracted reserve personnel. At the time, Sweden owned 120 tanks but only had the personnel to operate 42 at a time.⁹² The Ministry of Defense appointed former Swedish parliament member Annika Nordgren Christensen to lead a special investigation to address the military's personnel shortages.⁹³ Christensen's fall 2016 report recommended that Sweden reestablish mandatory military service.⁹⁴ In early 2017, the Swedish military followed the report's recommendation and reintroduced mandatory conscription, seven years after it was abolished.⁹⁵ In 2018, 4,000 men and women were called up for military service from an initial pool of 13,000 conscripts and volunteers born in 1999. The 4,000 chosen must serve for 12 months, with the military's end goal being to encourage them to become military professionals or later to join the reserves. Sweden's annual

conscription figure is expected to rise to 8,000 by 2022.⁹⁶ By resuming the conscription requirement, Sweden's military addresses both of its pressing challenges: problematic staffing trends and the need to increase forces in response to new regional threats.

2. **Military Investments.** The total annual budget for the Swedish Armed Forces in 2016 was SEK 44 billion (approximately 5 billion USD).⁹⁷ In recent years, the Armed Forces have stated that in order to fulfill the defense objectives agreed upon in 2004, 2009, and 2015, they would need an additional SEK 4 billion (approximately 450 million USD) per year.⁹⁸ In September 2017, Sweden raised its defense budget an additional five percent over its already planned increase.⁹⁹ This increase means the Swedish Armed Forces will receive an additional SEK 8.1 billion (1 billion USD) by 2020, but it is unclear whether that additional allotment will be sufficient to achieve the military's stated goals.¹⁰⁰ One of the primary defense upgrades that Sweden has already completed is the creation of a functional battlegroup on the strategic island of Gotland.¹⁰¹ Gotland's position in the middle of the Baltic Sea makes it an ideal command center for any counter-operations if Russia were to threaten the Baltic states. Sweden's military has now stationed a mechanized infantry group, an armored company, and command and control elements on the island. Sweden plans to use the island for training and large-scale military exercises. These additional investments aim to narrow the gap between the Swedish Military's ambitions on paper and their actual combat capabilities.
3. **Large-Scale Military Exercises.** In September 2017, the Swedish Armed Forces demonstrated their increased commitment to military preparation through the Aurora 17 military exercise which involved 19,000 men and women from the Swedish Armed Forces and 40 other Swedish agencies.¹⁰² It was Sweden's largest joint-exercise involving the Army, Air Force, and Navy in 23 years. Military units from Finland, Denmark, Latvia, France, Estonia, Lithuania, and the United States were also involved, and international cooperation was strongly emphasized in the exercise. In June 2018, the Swedish Armed Forces carried out another large-scale military exercise when they called up all 20,000 reservists for a nationwide

snap drill training.¹⁰³ The last time Sweden conducted this kind of military drill was in 1975. In October and November 2018, following Sweden's elections, the Swedish military will participate in Trident Juncture 2018, NATO's largest military exercise since 2002.¹⁰⁴

4. **New Military Agreements.** In addition to Sweden's closer alignment with NATO, Sweden has joined two new defensive groups: the military cooperation within the European Union (EU) known as the Permanent Structured Cooperation (PESCO)¹⁰⁵ and a trilateral defense agreement with Finland and the United States.¹⁰⁶ PESCO was created in late 2017 and imposes binding commitments to ensure full contribution from its member countries.¹⁰⁷ It functions similarly to NATO, but focuses on protecting EU countries and their citizens. Sweden's trilateral agreement with Finland and the United States was signed in May 2018 and calls for greater information-sharing, more frequent joint military exercises, and regular trilateral meetings at all levels, including study groups. Although this agreement is non-binding, both the Swedish and Finnish Defense Ministers emphasized that it was a starting point for future strengthened relations. Taken together, these agreements signal a tangible shift in Sweden's neutral foreign policy and raise the calculated costs of an attack for potential opponents, cyber or otherwise.

1.5 Bolstering Campaign Cybersecurity

In early 2017, a security hole in Adobe Flash left the computer systems of all members of the Swedish parliament vulnerable to hacking.¹⁰⁸ Despite repeated warnings, the weakness was left uncorrected for a month. This error highlighted the need for cybersecurity training among political parties and campaigns. In preparation for the 2018 elections, the Swedish Security Service (SÄPO) and the Civil Contingencies Agency (MSB) have been especially active in equipping campaigns with the knowledge and tools to better protect against cyber threats.

1. **Party Leader Briefings.** In the spring of 2017, SÄPO briefed the leaders of all political parties in parliament to prepare them for cyber threats.¹⁰⁹ This initial briefing was based on the joint-threat analysis conducted with the Election Authority, Police Authority, and Civil Contingencies Agency. SÄPO has continued holding meetings with party leaders and will do so through Election Day. All parties have also received briefing materials from MSB and the FBI.¹¹⁰
2. **Campaign Cybersecurity Handbook.** SÄPO also created a “Handbook on Personal Security,” which provides detailed instructions and best practices for political operators to enhance their cybersecurity aptitude.¹¹¹ The agency distributed 50,000 copies of this handbook to campaign officials throughout the country.¹¹²
3. **Information Operations Handbook.** In July 2018, MSB released a handbook on influence operations for political campaign operators and local administrators.¹¹³ The document has helped these operators better recognize influence campaigns being carried out against them and improve their ability to respond to these threats. Prior to its release, the handbook was “field tested” by MSB officials during crisis communication courses with “overwhelmingly positive results,” according to one MSB Desk Officer.¹¹⁴ The handbook provides extensive detail about the different psychological tendencies that information operations target, and it analyzes the verbal techniques commonly used for misinformation, such as ad hominem attacks, whataboutism, gish-gallop, and strawman argumentation.

The document also explains pertinent threats like bots, deepfakes, and phishing.

4. **Campaign Cybersecurity Efforts.** Swedish political campaigns are also taking steps to address information operations and improve campaign cybersecurity. These efforts include counteracting so-called “oönskad påverkan” (unwanted influence) from rival political parties, which often comes in the form of bombarding the rival party’s social media pages with a barrage of negative comments and replies. Sweden’s two largest parties in parliament—the New Moderates (Nya Moderaterna) and the Social Democrats (Socialdemokraterna)—have both been on the receiving end of cyber operations by foreign powers. The New Moderates party, which is staunchly in support of Sweden pursuing NATO membership, has assembled a team of full-time staffers dedicated to monitoring the party’s social media accounts and has circulated a 19-page internal cyber guidebook.¹¹⁵ The guidebook discusses information security measures such as using encrypted messaging services and VPNs, as well as threats like phishing and online harassment. Despite the SÄPO joint-briefings for party leaders, Martin Borgs, the New Moderates Digital Elections Leader, says that his campaign has largely felt that it is operating on its own.¹¹⁶ The Social Democrats, however, have found the SÄPO and MSB briefings to be helpful, according to the Social Democrats’ International Secretary, Johan Hassel.¹¹⁷ In addition to monitoring misinformation efforts, the Social Democrats have also created and maintained a web page that lists all of the party’s paid advertisements to provide greater transparency about their targeted advertising campaigns.¹¹⁸

1.6 Decentralized Election Administration

Although the Swedish Election Authority is in charge of elections at the national level, there are 21 regional and 290 local election authorities that operate independently.¹¹⁹ This decentralization has benefits and drawbacks. On a national level, the regionalized election structure may make Sweden less susceptible to widespread election meddling. However, in the event of a national crisis, the dispersed system poses a significant challenge since individual election districts may not have the resources to fend off cyber threats on their own. With this challenge in mind, MSB has worked to empower local election administrators with the necessary skills to detect influence operations. Another factor that may contribute to Sweden's physical election security is the standardized paper ballot and hand counting system.

1. **Training Civil Servants to Recognize Influence Activities.** As part of Sweden's efforts to bolster awareness of influence activities, MSB has given training on influence operations to over 10,000 public and civil servants at the national, regional, and local levels.¹²⁰ In Sweden's regional system, municipalities have their own communication responsibilities, and local administrators are the primary responders. Because of this decentralization, the MSB training largely seeks to provide local communicators and decision-makers insights so they can better identify threats against them and decide how to respond.
2. **Paper Ballots and Hand Counting.** In the United States, voting laws, devices, databases, vendors, and procedures vary from state to state and even from county to county.¹²¹ In Sweden, the election system is nationally standardized. All eligible voters are automatically registered, and each voter receives an official "röstkort" (voting card) in the mail two to three weeks before the election.¹²² There are three elections on each Election Day—the national Parliamentary election, the County election, and the Municipal Council election. On Election Day, voters must turn in their government-issued voting card in order to submit their three ballot envelopes for the three elections. To complete the ballot envelopes,

voters select the ballots for the party which they want to support, enter the voting booth with the ballots, and seal their ballot choices in the envelopes. Because ballot sheets are selected in wide-open polling places, people often opt to pick up ballots for multiple parties, so that others at the polling site do not know whom they are voting for. Ballot envelopes are color-coded by election level and stored in separate locked containers. At the end of the voting day, containers are unlocked, the envelopes are unsealed, and ballots are hand-counted. This standardized system ensures that each ballot is voter-verified by the person's voting card and that regional tallies are virtually immune to digital manipulation.

The Election Authority works continuously to ensure the security of the technological systems used in the election. These preventive efforts include frequent pen-testing of IT-systems, says Andreas Swärdh, Security Manager at the Election Authority.¹²³ Swedish elections also benefit from having a high participation rate, meaning that information operations must be far more pervasive to have a significant effect on the outcome. In the 2014 election, Sweden's participation rate was 86 percent.¹²⁴ In comparison, the US 2016 election had a 58 percent turn-out rate.¹²⁵ Ultimately, Swärdh believes that "the election has been successfully executed if the election is objective and the public has high confidence in the election results."¹²⁶

Part 2: Strengthening the Traditional Media

The Swedish people have a unique relationship with the media. They have very little trust in social media, but place great trust in traditional media, authorities, and institutions.¹²⁷ Only 12 percent of Swedish Facebook users believe that all or most information on Facebook is trustworthy.¹²⁸ The corresponding number for all information on the internet among internet-users is 40 percent.¹²⁹ Meanwhile, Swedes continue to rate traditional TV stations and newspapers as their top two most important sources of political information.¹³⁰

In the lead-up to the 2018 election, both the Swedish government and Swedish media outlets have been working to discredit untrustworthy sources and build trust in authentic reporting. This concerted effort has led to the creation of several fact-checking efforts, extensive government-media coordination, and the development of social media tools to combat information operations.

2.1 Government Coordination with Mass Media

The Swedish Civil Contingencies Agency (MSB) has coordinated with the mass media in two important ways: through the Media Preparedness Council (Mediernas Beredskapsråd) and government coordination with media outlets to prepare for crises and combat information operations.

1. **Media Preparedness Council.** MSB convenes the Media Preparedness Council four times per year to help Swedish media outlets prepare for potential crises.¹³¹ This cooperation between the state and media started in the 1950s and has facilitated a dialogue on media security and crisis management ever since. The Council's focus on cybersecurity became especially important after a DDoS attack knocked down the web pages of at least seven of Sweden's largest media outlets in March 2016.¹³² Last week, on August 10th,

a US State Department cable was obtained through a Freedom of Information Act lawsuit which confirmed Swedish authorities' prior assessments that Russia was responsible for these coordinated DDoS attacks.¹³³

- 2. MSB-Media Information Sharing.** In preparation for the 2018 election, MSB has engaged in a continuous dialogue with established media outlets focused on informing them how to withstand attempts to influence their reporting and counter disinformation.¹³⁴ However, some of MSB's media outreach efforts have been rebuffed. Martin Jönsson, the Head of Editorial Development at newspaper Dagens Nyheter, believes that MSB's government-media coordination is both unnecessary and potentially harmful. "It's dangerous if people perceive this coordination as the authorities and media conspiring," Jönsson says.¹³⁵ As a result, he says much of the Swedish press has declined MSB's help and tried to distance itself from MSB to prevent people from doubting the independence of their reporting. He adds, "We don't feel that we have anything to gain from MSB in terms of experience and knowledge" when it comes to source verification and recognizing disinformation.¹³⁶

2.2 High-Visibility FactChecking

At first glance, Sweden gained two new Swedish fact-checking outlets over the past two years: "Mediekollen" and "Faktiskt.eu." However, after a while it became clear that the "facts" that these two pages were checking were completely fabricated. Mediekollen was removed by Facebook,¹³⁷ and Faktiskt.eu was taken down as a false imitator of real fact-checker, Faktiskt.se.¹³⁸ The creation and temporary legitimization of these *fake* fact-checking pages underscored the need for authentic, high-visibility fact-checkers. In response to this realization, three genuine fact-checking platforms have stepped up.

- 1. Collaborative Fact-Checking.** In April 2018, five of Sweden's leading media outlets launched a fact-checking collaborative called Faktiskt, which roughly translates to "in fact."¹³⁹ The five news outlets currently involved are the Swedish Public Radio (Sveriges

Radio), the Swedish Public Television (Sveriges Television), a digital media company called KIT, and two major newspapers, *Svenska Dagbladet* and *Dagens Nyheter*. From its inception, Faktiskt was supported by a grant from the Swedish government. Vinnova, the government agency that administers state funding for research and development, authorized up to SEK 1.9 million (approximately 200,000 USD) for the creation of Faktiskt's technical platform.¹⁴⁰ However, the project has assessed that not all of the funding will be used.

Faktiskt was created in the image of Norway's fact-checking collaborative, Faktisk, but operates in a different manner.¹⁴¹ Instead of following Norway's Faktisk's model of having journalists from each outlet working together in a single newsroom, Faktiskt's affiliates each fact-check separately. Each outlet is then responsible for publishing articles on the Faktiskt website, as well as their own web pages and social media accounts. However, some in the general public do not recognize this separation between each affiliate's fact-checking efforts. "If one publishes an article that receives a lot of criticism, people blame all of the organizations in Faktiskt. People don't realize that we work separately and independently," says Maja Lagercrantz, a fact-checker at Swedish Public Radio.¹⁴² This misconception has led some in the public to believe that Faktiskt is the government's method of controlling the major media outlets. But even though a government grant paved the way for Faktiskt's founding, Faktiskt maintains that neither Vinnova nor any other external actor can influence its editorial content.¹⁴³

Faktiskt follows the guidelines set by the International Fact-Checking Network (IFCN), meaning that the involved media companies are politically independent and must be transparent about their methods, sources, and funding.¹⁴⁴ *Dagens Nyheter*, for example, uses tools like Indiana University's Botometer, BotOrNot, Crowd-Tangle from Facebook, and some in-house programs to monitor online information channels.¹⁴⁵ Faktiskt's two main functions are to fact-check politicians' statements and to expose viral fake news. Although the Faktiskt collaboration will end January 1, 2019, some of the affiliates may seek IFCN certification to become verified

third-party fact-checkers going forward. Hugo Ewald, Fact-Checking Editor at Dagens Nyheter, emphasizes the need for reputable fact-checking in the long-term: “I think it’s necessary when we’re seeing a larger flow of this disinformation on Swedish social media, and we’re seeing this echo system of voices that amplify each other writing negative stories about, for example, the media.”¹⁴⁶

- 2. Other Fact-Checking Efforts.** “EU vs. Disinfo” and the Metro newspaper’s “Viralgranskaren” (the viral examiner) are two other fact-checking outlets that have been active in the Swedish election. EU vs. Disinfo is run by the European External Action Service East Stratcom Task Force which was set up by the European Union in response to Russia’s information campaigns. The Task Force’s main focus is the weekly Disinformation Review that highlights pro-Kremlin disinformation that has entered the international media space. Since September 2015, the Review has pointed out over 3,800 cases of disinformation in 18 different languages.¹⁴⁷ EU vs Disinfo says it merely consolidates cases reviewed by the East Stratcom Task Force, so its statements are not official European Union positions. While not specifically focused on Sweden, EU vs Disinfo frequently highlights misinformation in Sweden. Metro started Viralgranskaren during Sweden’s 2014 election cycle to counteract the spread of untrue information.¹⁴⁸ Before Faktiskt.se, Viralgranskaren was the only Swedish fact-checker, and it remains the only Swedish IFCN-certified fact-checker today.

2.3 Mitigating Information Operations on Social Media

The Swedish Government has engaged with social media companies to develop relationships and tools to help combat influence activities on social media platforms.

- 1. Facebook Account Removal Capability.** The Swedish Civil Contingencies Agency (MSB) worked with Facebook to establish a tool for the Swedish agency to “fast-track” deletion requests

for fake accounts used for information operations.¹⁴⁹ Up until now, it has only been used to remove fake accounts that pose as government-run Facebook pages to sow confusion.¹⁵⁰ The tool is commonly referred to as a “hotline,” but is not used to field tips on websites that are spreading false information.

2. **Cooperation with Social Media Companies.** In 2017 Swedish Minister for Digitalization, Peter Ericsson, met with officials from multiple tech firms and organizations in California to discuss the potential for information operations in the Swedish election.¹⁵¹ Facebook pledged to inform Sweden if it detected any signs of manipulation, and Twitter claimed it had increased transparency around the funding of political ads. It is unclear whether Twitter’s pledge to Sweden goes beyond their recently-launched Ads Transparency Center. In general, MSB sees public-private partnerships as essential to a successful strategy for identifying and countering influence activities.¹⁵²

Part 3: Empowering the People

Voters decide elections. Because of this simple fact, the populace is the most important line of defense against election interference.

A 2017 study found that 60 percent of Swedes see fake news weekly, and 3 out of 4 Swedes believe that fake news is distorting the public's perception of basic facts.¹⁵³ But despite this widespread knowledge of and wariness towards fake news, only 1 in 3 Swedes feel confident in their own ability to detect fake news. This prevailing inability to discern real from fake news has spurred Sweden's multiple 'psychological defense' efforts—both from the public and private sectors.

3.1 Educating People to be Conscious Media Users

Several initiatives have been implemented to teach Swedish citizens how to discern real news from fake news. A major focal point has been getting students to practice this discernment.

1. **Nationwide High School Education Program.** In March 2017, the Swedish government announced a nationwide curriculum reform to increase elementary and high school students' computer science skills and ability to recognize fake news.¹⁵⁴ The curriculum was officially launched in July 2018 and is directed by the Swedish Media Council, a government agency tasked with shaping minors into conscious media users.¹⁵⁵ It was developed along with the Internet Foundation in Sweden (IIS), the Swedish Institute, and “Viral-granskaren,” the Metro newspaper's fact-checking initiative.¹⁵⁶ On its website, the Swedish Media Council also provides supplemental guides for teachers to use when discussing online propaganda and image manipulation with students.¹⁵⁷
2. **Initiatives to Encourage Source Criticism.** In a January 2018 statement, Anders Thornberg, the Head of SÄPO, urged all Swedish citizens to “critically evaluate any news or rumours.”¹⁵⁸ The Internet

Foundation in Sweden created an education guide on source criticism meant for broad consumption.¹⁵⁹ Even the Swedish King¹⁶⁰ and popular cartoon character “Bamse” have tried to warn the public of misinformation campaigns.¹⁶¹ Communications company Telenor made a board game based on internet source criticism and called it “The Hunt for Truth.”¹⁶² Together, these private sector initiatives have emphasized the notion that combatting disinformation is a non-partisan issue in Sweden.

3.2 Preparing for the Worst

Sweden has begun preparing for drastic shifts in domestic and foreign affairs amidst growing regional tensions. In addition to its military and cyber investments, the government has begun to prepare its citizens for national crises. MSB, the agency responsible for risk management, has led these public awareness efforts.

1. **Crisis Communication.** MSB runs a crisis communication operation which is responsible for broadcasting salient threats and response measures to the public.¹⁶³ Messages are posted on MSB’s crisis communication website and social media pages. MSB’s crisis website also provides information on how to contact the relevant authorities for urgent emergency assistance. The agency has designated the Swedish Public Radio channel P4 as a source of reliable information during a crisis.¹⁶⁴
2. **Crisis Pamphlet.** In May 2018, MSB produced an emergency preparation pamphlet titled “If Crisis or War Comes” and sent the pamphlet to all 4.7 million Swedish households.¹⁶⁵ In addition to preparing citizens for more conventional threats, a section of the pamphlet instructs Swedish people to “be on the lookout for false information.”¹⁶⁶ MSB’s message echoes Sweden’s overall emphasis on whole-of-society defense: “If you are prepared, you are contributing to improving the ability of the country as a whole to cope with a major strain.”¹⁶⁷

Shortcomings and Challenges

While Sweden's preparation efforts have been commendable for many reasons, there are gaps and operational challenges that the country must confront. There are three salient shortcomings in the current Swedish election defense model, and there are two central challenges for which Sweden must prepare.

The first shortcoming is that there is often a discrepancy between the Swedish government's commitments and the government's implementation of those commitments. The announced "psychological defense" agency was not assembled in time for this election, and officials remain divided on the agency's scope—including whether it is necessary at all. The announcement of the new agency received extensive international media coverage (much of it incorrectly reporting that the agency had already begun working), but has ultimately amounted to no substantial actions. Similarly, Sweden's security agencies have made public their continued engagements with political parties and media outlets in preparation for the election, but campaign officials and journalists have privately complained about the lack of helpful information presented in these meetings. Some have even expressed doubts about the need for these meetings at all. The third inconsistency involves the military. Over the past decade, the Swedish military has repeatedly laid out highly-ambitious plans, but has routinely failed to finance these stated goals. However, not all of these discrepancies are necessarily attempts to embellish government action; these topics are deeply political, and Sweden's coalition government makes unilateral actions extremely difficult.

Second, there currently is no law that makes it illegal for foreign powers to influence Swedish elections.¹⁶⁸ This means that Swedish political parties can legally accept campaign donations from foreign states without disclosing the source of the money. This also means that other countries can legally purchase political advertisements in Sweden. While GDPR may blunt the effectiveness of foreign-funded political ads in Sweden, its effect is far from certain. This legislative omission is less of a loophole than it is a direct invitation for foreign meddling.

The third shortcoming is that Swedish authorities have not committed the same level of effort to combatting cyber and information operations *outside* of the election cycle. Sweden's interagency national forum, the SÄPO and MSB briefings, and Faktiskt have all been designated as election-related projects. Following Sweden's elections in September and depending on how the parliamentary seats are distributed, there will likely be a difficult, drawn-out process to create the next governing coalition in parliament. In many ways, this provides an equally good opportunity to destabilize Sweden's democracy as the election itself, because voters are essentially sidelined during the government-forming process. The risk for this kind of continued influence campaign is real. Researchers at Clemson University found that more Russian bot and troll tweets were posted in the year *after* the 2016 US election than in the year before the election.¹⁶⁹ Information campaigns must be considered an ongoing threat to society. Therefore, Swedish authorities and independent fact-checkers must prepare for these threats to continue after the election.

The first challenge that Swedish authorities must confront is one of free speech: while counteracting foreign information operations in Sweden, authorities must be careful not to stifle the genuine opinions of Swedes on the outer ends of the political spectrum. Leaders of the nationalist and anti-immigrant Sweden Democrats party worry that some efforts to quell Russian information operations could target their campaign content and their followers' posts because the Kremlin advocates similar political stances.¹⁷⁰ Supporters of the Sweden Democrats often see government efforts to combat misinformation as censorship. However, the protection of free speech is a broader challenge that many governments encounter as they seek to counteract influence campaigns.

The second challenge concerns uncertainty about hostile intent. Despite the high threat level described by Swedish intelligence agencies, government authorities must consider the possibility that Russia may *not* attempt to influence the Swedish election beyond its ongoing social media disinformation. This was the case in Germany's 2017 election. German authorities prepared for all kinds of election interference, but on Election Day—aside from anti-Merkel rhetoric spread on social media by bots with little traction—there were no substantial Russian meddling attempts.¹⁷¹ But there are

key differences between Germany's political landscape in 2017 and Sweden's campaign environment today. Most importantly, Germany's politics are less polarized than Sweden's. This is best demonstrated by the "gentleman's agreement" that Germany's major political parties entered into, where each party pledged not to exploit information that may be released as part of a cyber attack.¹⁷² Sweden's parties have no such agreement. There are three main reasons why Russia may choose not to interfere in the Swedish election. First, Russia may fear an electoral backlash against the Sweden Democrats Party whose policy positions they share if there is any perceived connection or coordination between the party and the Kremlin. Second, Sweden may have created a successful deterrence strategy where the perceived cost of interference is greater than the expected benefit. Third, Russia may be more focused on interfering in the US 2018 midterm elections and not devote significant resources to interfering in Sweden. Ultimately, the government must prepare a communication strategy for the possibility that Russia does not attempt to sway the election.

Conclusion

Sweden's whole-of-society defense model has set a strong example of how to protect an election from interference. The government, media, and Swedish citizens have all been given a role in protecting public discourse and the election process. But with weeks left until the election, it is still too early to discern whether Sweden's efforts have been sufficient or have had a significant effect—because attacks and leaks can appear at any time. However, at this point in time, some aspects of Sweden's thorough preparation appear that they will be effective.

After Russia's interference in the 2016 US Election, Sweden swiftly began planning and preparing its election defense for 2018. Authorities quickly condemned election interference and have dedicated significant resources to detecting and countering any interference attempts. These actions have raised the potential political cost to hostile attackers. Authorities have committed extra focus to strengthening Sweden's "psychological defense" capabilities, which were known to be a significant vulnerability. The speed with which the entire Swedish government mobilized to address election interference has effectively given the country a head start.

Even factoring for Sweden's relatively small population, Sweden's public education efforts have been remarkable. The training of thousands of civil servants to recognize influence activities gives local and regional administrators the skills to respond to interference on their own. This increased regional capacity will likely free up bandwidth for national authorities and enable quicker municipality-led responses to local threats. By sending crisis preparation pamphlets to all Swedish households, information operations are no longer an unknown threat to public discourse. This general awareness negates the effectiveness of influence activities. The Swedish Media Council's implementation of a nationwide high school curriculum that teaches students to discern real from fake news signals a lasting commitment to public media literacy.

Sweden's nationally-standardized paper ballot and manual counting processes give an added degree of physical security. The decentralization of Sweden's election administration also makes widespread meddling far

more difficult. The outcome of this transparent election system is that people trust the process. And when people trust voting processes, they vote. As a result, Sweden's high voter participation rate has become a pillar of its vibrant democracy.

Whatever the outcome of Sweden's election preparation, there will be much to learn from the efficacy of Sweden's whole-of-society approach. In the coming years, governmental decision-makers in charge of protecting other potentially at-risk elections should work to identify which of Sweden's defense methods have been effective and then implement them to protect their own democratic processes.

Glossary

Cooperation Group for Information Security (Samverkansgruppen för informationssäkerhet – SAMFI): A cooperative network of six authorities that work to ensure societal information security in Sweden.

Defense Material Administration (Försvarets Materielverk – FMV): An agency which is responsible for the supply of defense materials. FMV is organized under the Swedish Ministry of Defense.

Directive on Security of Network and Information Systems (NIS Directive): A European Union directive which requires member states to develop a Computer Security Incident Response Team (CSIRT), establish a central NIS authority, and engage in strategic information sharing practices with the NIS Cooperation Group.

Distributed Denial of Service (DDoS) Attacks: A malicious attack where multiple systems flood the bandwidth or resources of a targeted system, causing the site to slow down or crash completely.

Election Authority (Valmyndigheten): The Swedish agency responsible for the planning, implementation, and evaluation of elections.

European Union: A political and economic union of 28 member states.

Federal Bureau of Investigation (FBI): The United States government agency that is responsible for law enforcement and domestic intelligence.

Institut Français des Relations Internationales (IFRI): A thinktank dedicated to international affairs based in Paris, France.

International Fact-Checking Network (IFCN): A unit of the Poynter Institute that sets international fact-checking standards and brings together fact-checkers from around the world.

Media Preparedness Council (Mediernas Beredskapsråd): MSB's crisis preparedness council with members of the Swedish media. The Council meets four times per year.

Ministry of Defense (Försvarsdepartementet): The Swedish ministry responsible for national defense policy.

Ministry of Justice (Justitiedepartementet): The cabinet-level ministry of the Swedish government which is responsible for the justice system, law enforcement, and counter-terrorism procedures.

National Defense Radio Establishment (Försvarets Radioanstalt – FRA): The Swedish signals intelligence and computer security agency.

North Atlantic Treaty Organization (NATO): An intergovernmental military alliance made up of 29 European and North American countries.

Organization for Economic Co-operation and Development (OECD): An intergovernmental economic organization with 36 member countries.

Pen-Testing: A method of finding technical vulnerabilities by having IT professionals attempt to breach their own systems. Abbreviated form of “penetration testing.”

Post and Telecom Agency (Post och Telestyrelsen – PTS): The administrative authority responsible for matters relating to electronic communications and postal services.

SEK: The ISO currency code for the Swedish Crown (Krona).

Snap Drill: A no-notice drill meant to increase military readiness. Also called a “snap exercise.”

Swedish Armed Forces (Försvarsmakten): The entire Swedish military force, including the Air Force, Army, Navy, and military reserves.

Swedish Civil Contingencies Agency (Myndigheten för Samhällsskydd och Beredskap – MSB): The agency responsible for all civil protection, public safety, and emergency and crisis management.

Swedish Data Protection Authority (Datainspektionen): The government agency responsible for protecting individual information privacy. It is organized under the Ministry of Justice.

Swedish Media Council (Statens Medieråd): The government agency tasked with educating youth on how to be conscious media users.

Swedish Military Intelligence and Security Service (Militära Underrättelse och Säkerhetstjänsten – MUST): The central command of the Swedish Armed Forces.

Swedish Police Authority (Polismyndigheten): The central administrative authority for the police in Sweden.

Swedish Security Service (Säkerhetspolisen - SÄPO): The security agency responsible for counter-espionage, counter-terrorism, and the protection of dignitaries. Organized under the Ministry of Justice.

Vinnova: A Swedish government agency that administers state funding for research and development.

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