



“Virtual Planners” in the Arsenal of Islamic State External Operations

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Abstract. This article explores virtually planned attacks, an innovation by the Islamic State (IS) in its global campaign of terrorism. It argues that the United States and its allies have successfully combined military, intelligence, and law enforcement activities with border security measures in Turkey to reduce IS’ ability to send foreign fighters home to conduct attacks against the West. IS leaders have responded by relying on a team of virtual planners. These individuals use encrypted online messaging applications, such as Telegram Messaging or WhatsApp, to gather local recruits, provide them with technical expertise, and pick the target. Historically, virtually planned attacks in Europe and the United States have not been as successful as those executed by foreign fighters. But attacks in Southeast Asia may provide a forewarning of what is to come.

In August 2016, the U.S. military killed Abu Muhammad al-Adnani, the primary spokesman for the Islamic State (IS), in Syria’s Aleppo Province.¹ Prior to his death, al-Adnani oversaw a team responsible for external operations or attacks conducted outside of Iraq, Syria, and the other 25 IS provinces (*wilayah*).² This team, referred to as the Amniyat al-Kharji, recruited and trained foreign fighters in Syria with the intention of sending them home to conduct terrorist attacks.³ IS fighters

¹ Courtney Kube and Alex Johnson, “U.S. Says it Killed Abu Muhammad al-Adnani,” *NBC News Online*, Sept. 12, 2016, <http://www.nbcnews.com/storyline/isis-terror/u-s-says-it-killed-abu-muhammad-al-adnani-isis-n647066>.

² Robin Wright, “Abu Muhammad al-Adnani, the Voice of ISIS, Is Dead,” *The New Yorker*, Aug. 30, 2016, <http://www.newyorker.com/news/news-desk/abu-muhammad-al-adnani-the-voice-of-isis-is-dead>.

³ Daveed Gartenstein-Ross and Nathaniel Barr, “Recent Attacks Illuminate the Islamic States’ Europe Network,” *Hot Issues*, Washington, D.C.: Jamestown Foundation, April 27, 2016, <https://jamestown.org/program/hot-issue-recent-attacks-illuminate-the-islamic-states-europe-attack-network/>; and Anne Speckhard and Ahmet S. Yayla, “The ISIS Emni: Origins and Inner Workings of ISIS’s Intelligence Apparatus,” *Perspectives on Terrorism*, Feb. 2017, pp. 2-16, <http://www.terrorismanalysts.com/pt/index.php/pot/article/view/573/html>.

conducted 132 external operations—76 successful attacks and 56 disrupted plots—between March 2014 and August 2016, while al-Adnani oversaw Amniyat al-Kharji. Fifty-two percent of these involved foreign fighters. Sixty percent were conducted in the West. The most devastating operation killed 129 individuals in Paris on November 13, 2015.⁴

In response, the United States and its allies initiated an international effort aimed at reducing the flow of foreign fighters into Syria and Iraq. The UN Security Council passed resolutions 2170, 2178, and 2253, which encouraged member countries to strengthen their laws against recruiting, financing, or otherwise supporting foreign fighters.⁵ Interpol developed a database of foreign fighters.⁶ Turkey began construction on a fence along its border with Syria.⁷ The U.S. military and its allies also conducted a series of strikes against individuals in Syria and Iraq responsible for foreign fighters.⁸ As a result, the volume of foreign fighter flow into Syria dropped from its height of 1,500 to 100 individuals per month, according to U.S. General Joseph Dunford, Chairman of the Joint Chiefs of Staff.⁹ So did the

⁴ Kim Cragin, “The November 2015 Paris Attacks: The Impact of Foreign Fighter Returnees,” *Orbis: FPRI’s Journal of World Affairs*, Spring 2017.

⁵ “Security Council Adopts Resolution 2170 (2014) Condemning Gross, Widespread Abuse of Human Rights by Extremist Groups in Iraq, Syria,” United Nations Meetings Coverage and Press Releases, Aug. 15, 2014, <http://www.un.org/press/en/2014/sc11520.doc.htm>; “Security Council Unanimously Adopts Resolution Condemning Violent Extremism, Underscoring Need to Prevent Travel, Support for Foreign Terrorist Fighters,” United Nations Meetings Coverage and Press Releases, Sept. 24, 2014; and, “Unanimously Adopting Resolution 2253 (2015), Security Council Expands Sanctions Framework to Include Islamic State in Iraq and Levant,” United Nations Meetings Coverage and Press Releases, Dec. 17, 2015, <http://www.un.org/press/en/2015/sc12168.doc.htm>.

⁶ “Interpol Expanding Foreign fighter Database,” Associated Press, Sept. 26, 2014, <http://www.dailymail.co.uk/wires/ap/article-2770606/Interpol-expanding-foreign-fighter-database.html>; and see, also, R. Kim Cragin, “Why the United States Needs Foreign Law Enforcement to Succeed Against the Islamic State,” *Lawfareblog*, June 18, 2017, <https://www.lawfareblog.com/why-united-states-needs-foreign-law-enforcement-succeed-against-islamic-state>.

⁷ Nabih Bulos, “Turkey to build 500-mile wall on Syria border after Isil Suruc bombing,” *Telegraph*, July 23, 2015, <http://www.telegraph.co.uk/news/worldnews/europe/turkey/11758050/Turkey-to-build-wall-on-Syria-border-after-Isil-Suruc-bombing.html>.

⁸ Adam Goldman and Eric Schmitt, “One by One, ISIS Social Media Experts are Killed as a Result of FBI Program,” *New York Times*, Nov. 24, 2016, <https://www.nytimes.com/2016/11/24/world/middleeast/isis-recruiters-social-media.html>; “ISIS leader who aided foreign fighters killed in Coalition airstrike,” *CBS News*, July 2, 2015, <http://www.cbsnews.com/news/isis-leader-who-aided-foreign-fighters-killed-in-coalition-airstrike/>; W.J. Hennigan, “The U.S. military is targeting Islamic State’s virtual caliphate by hunting & killing its online operatives one-by-one,” *Los Angeles Times*, May 5, 2017, <http://www.latimes.com/world/middleeast/la-fg-isis-online-20170502-story.html>; and Thomas Jocelyn, “Tabqah, Syria Liberated from the Islamic State,” *The Long War Journal*, May 11, 2017, <http://www.longwarjournal.org/archives/2017/05/tabqah-syria-liberated-from-the-islamic-state.php>.

⁹ Ellen Mitchell, “Mattiis: Trump strategy aims to ‘annihilate’ ISIS,” *The Hill*, May 19, 2017, <http://thehill.com/policy/defense/334337-mattiis-trump-strategy-aims-to-annihilate-isis>.

ratio of IS external operations conducted by foreign fighters returning home: fifty-two percent before al-Adnani's death; twenty-nine percent afterwards.¹⁰

Yet, IS did not abandon external operations against the West or elsewhere. It simply adapted its approach and used more virtually planned attacks.¹¹ Virtual planners use encrypted messaging applications to gather local recruits, provide them with technical expertise, and pick the target, all remotely from Syria, Iraq, or another IS province. This article examines this innovation in detail and the potential threat it poses to the United States and the West. To do so, it begins with an overview of the pattern of external operations conducted by IS fighters since 2014. Next, it explores the emergence of virtually planned attacks and their effectiveness or lack thereof. It also provides a detailed analysis of the Islamic State plot against the Presidential Palace in Indonesia. The paper argues that virtually planned attacks in Indonesia have been more sophisticated than those in Europe and may forecast a potential trend.

Data Sources and Methods

A mixed-methods approach is used here to examine the threat posed by virtually planned attacks. Primarily, the article draws on an in-depth case study analysis of a December 2016 plot against the Presidential Palace in Jakarta, Indonesia to explore how virtual planners have innovated in response to counter-terrorism pressure. The data sources for this case study include newspaper and journal articles gathered through LexisNexis and other search engines. These sources also inform a timeline of events leading up to the arrest of the perpetrators by Indonesia's Detachment 88 counter-terrorism force.

The case study also draws on the results of a series of semi-structured interviews conducted in Indonesia during the fall of 2016. These interviews were designed to learn more about the foreign fighter threat from the perspective of local academics, non-governmental organizations, and government officials.¹² Less structured discussions and email exchanges with subject matter experts on Southeast Asia, held in July 2017, also helped to fill in some of the gaps in the timeline and case study analysis.

Additionally, this article incorporates a review of trends in external operations by IS fighters. The purpose is to contextualize virtually planned attacks as one of many weapons in the arsenal of IS external operations. It utilizes a database, built at the National Defense University, of all IS external operations—successful

¹⁰ These data on IS external operations are relevant through December 2017. The database is maintained by the author at the National Defense University. For more information, see, also, R. Kim Cragin, "Foreign Fighter Hot Potato," *Lawfareblog*, Nov. 26, 2017, <https://lawfareblog.com/foreign-fighter-hot-potato>.

¹¹ Rukmini Callimachi, "Not 'Lone Wolves' After All: How ISIS Guides World's Terror Plots from Afar," *New York Times*, Feb. 4, 2017, https://www.nytimes.com/2017/02/04/world/asia/isis-messaging-app-terror-plot.html?_r=0.

¹² For more information, see *Mothers to Bombers: The Evolution of Indonesian Women Extremists*, Institute for Policy Analysis of Conflict, Jan. 31, 2017.

attacks and disrupted plots—between January 1, 2014 and December 31, 2017. The database includes information from the University of Maryland’s Global Terrorism Database, a list of IS external operations provided by the *New York Times*, official statements released by counter-terrorism officials worldwide, newspaper and other news sources, as well as statements released by the Islamic State through social media.¹³ This external operations database summarizes basic information on successfully executed attacks and disrupted plots, as well as whether the individuals involved were directed, enabled, or inspired by IS. The database also tracks whether the individuals involved had been processed through refugee channels, as they made their way from Syria and Iraq to Europe, North America, or Australia.

For this article, a subset of the external operations database was created with not only attacks guided by virtual planners, but also more detailed information on the individuals involved in these attacks. Examples of the type of information in this sub-dataset include how perpetrators came to be associated with the Islamic State and other individuals in their social networks. The dataset informs a network diagram of the perpetrators responsible for the Presidential Palace attack, as well as relevant associates. Notably, in some instances, police and other counter-terrorism authorities released the names of all of the operatives for virtually planned attacks. In other instances, authorities only released the names of one or two perpetrators. The network analysis, therefore, was validated to the extent possible through interviews with counter-terrorism officials and academics who study the phenomenon. But some individuals may be absent.

Patterns of External Operations

On May 24, 2014, Mehdi Nemmouche opened fire at the Jewish Museum in Brussels, Belgium, killing four individuals. Nemmouche, a French national of Algerian descent, had travelled to Syria in 2012 to fight against the Bashar al-Assad regime. But he returned to Europe in early March 2014 to conduct the Islamic State’s first successful external operation. Upon Nemmouche’s arrest in Marseilles, French authorities discovered a Kalashnikov rifle and an Islamic State flag in his possession. They also learned that Nemmouche had been in touch with Abdelhamid Abaaoud, the man assigned responsibility for IS attacks in Europe by al-Adnani.¹⁴

Significantly, this external operation took place between two key dates in the the Islamic State’s evolution: its very public split with al-Qaeda (April 2013) and its declaration of an Islamic caliphate in Syria and Iraq (June 2014).¹⁵ The operation

¹³ R. Kim Cragin, “The November 2015 Paris Attacks.”

¹⁴ “How a Secretive Branch of ISIS Built a Global Network of Killers,” *Asharq al-Awsat*, Aug. 5, 2016; and “Tracking ISIS Ambitions in Europe. A Threat Years in the Making,” *CNN Wire*, April 3, 2016, <http://fox40.com/2016/04/03/tracking-isis-ambitions-in-europe-a-threat-years-in-the-making/>.

¹⁵ “ISI Leader Rebrands ISI and al-Nusrah Front as ‘Islamic State in Iraq and the Levant,’” translated and released by SITE Intelligence Group, April 16, 2013; and John Muir, “Al-Nusra Pledges Allegiance to al-Qaeda,” *BBC News*, April 10, 2013, <http://www.bbc.com/news/world-middle-east-22095099>.

also predates U.S. military airstrikes in Iraq and Syria (August 2014). Some commentators have noted the strategic distinctions between Islamic State and al-Qaeda. Namely, unlike al-Qaeda, the Islamic State prioritized its territorial caliphate above external operations until it fled its Raqqah headquarters in October 2017. Others have argued that the Islamic State is more likely to turn to external operations now that it has lost control over territory in Syria and Iraq.¹⁶ But Nemouche's attack suggests that, despite rhetoric emphasizing its so-called caliphate, IS leaders always have wanted to attack the West.¹⁷ Other attacks soon followed Nemmouche's operation. The following list highlights some of the terrorist attacks and plots by IS fighters outside Syria, Iraq, or its 25 provinces.

- *July 2014.* A man named Mohamed Ouharani was arrested in Creteil, Paris. He had trained with IS in Syria and allegedly was planning to carry out a shooting attack, modeled after Nemmouche;
- *February 2015.* Omar Abdel Hamid El-Husein attacked a Jewish cultural center in Copenhagen, Denmark, killing two people. He radicalized in jail and pledged his allegiance to IS on Facebook;
- *May 2015.* Elton Simpson and Nadir Soofi attempted to strike an event in Garland, Texas. The British foreign fighter Junaid Hussein was in touch with Simpson prior to the attack;
- *December 2016.* A truck rammed into a Christmas market in Berlin, Germany. According to police, the driver, Anis Amri, had the phone numbers of IS operatives in Syria and Libya on his cellphone; and,
- *May 2017.* Salman Abedi conducted a suicide attack against concert-goers in Manchester, England, killing 22 individuals. He had met with IS fighters in Libya prior to this attack.

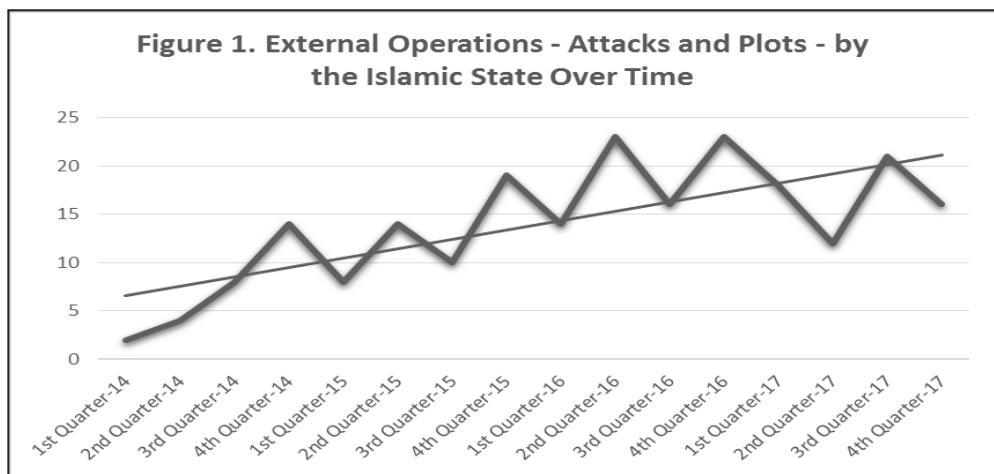
These five examples illustrate IS leaders' determination to attack the West. But they are only a small selection of IS operations outside Syria and Iraq. Islamic State fighters conducted approximately 596 operations—412 successful, 184 disrupted—outside Syria and Iraq between January 1, 2014 and December 31, 2017. Of these attacks, 323 took place in one of the 11 countries with IS provinces. IS has declared 25 provinces in 11 countries, including Libya, Egypt, Yemen, Saudi Arabia, Nigeria, Afghanistan and the Philippines. So, it seems logical that a significant portion of its attacks would occur inside these 11 countries' borders. Yet, 273 or forty-six percent of all of IS attacks outside Syria and Iraq have been external operations. In other words, they have not occurred in or near IS safe havens. This number is surprisingly high. Comparatively speaking, less than 10 percent of al-

¹⁶ "Attacks Increase as ISIS Loses Territory in Iraq and Syria," *NPR*, May 23, 2017, <http://www.wbur.org/herewhen/2017/05/23/attacks-isis-losing-territory>.

¹⁷ Abu Muhammad al-Adnani, "This is the Promise of Allah," statement released by al-Hayat Media Center, June 30, 2014.

Qaeda attacks between 2007 and 2010 were external operations, taking place outside of countries with al-Qaeda havens.¹⁸ The numbers, therefore, reinforce the conclusion that IS leaders have a substantial interest in having a global presence and impact, beyond gaining control over territory.

Further, if examined over time, it is clear that the number of IS fighters' external operations has continued to rise, despite the loss of its headquarters in Raqqah and Mosul. This increase appears to be independent of military operations against IS territory in Iraq and Syria. IS fighters do not turn to external operations only when the caliphate is under threat, nor do they appear to devote more resources towards external operations under these circumstances. Instead, as illustrated in *Figure 1*, IS leaders have dedicated time and resources to achieving a steady increase in the number of IS attacks outside Syria, Iraq, and its 25 provinces.



IS external operations fall into one of three basic categories: directed, inspired, or enabled. First, directed attacks are initiated by the Amniyat al-Kharji—once overseen by al-Adnani and now most likely led by Abu Suleyman al-Faransi—from within Syria.¹⁹ They are executed by individuals who previously received training or combat experience within Syria and Iraq. For example, of the nine operatives responsible for the November 2015 attacks in Paris, seven were foreign

¹⁸ The data on attacks by al-Qaeda and al-Qaeda-affiliated groups come from the Global Terrorism Database, which can be downloaded at <http://www.start.umd.edu/gtd/>. These numbers do not include attacks by al-Shabaab, which did not officially join al-Qaeda until after Osama bin Laden's death in 2011.

¹⁹ Daveed Gartenstein-Ross and Madeleine Blackman, "ISIS' Virtual Planners: A Critical Terrorist Innovation," *War on the Rocks*, Jan. 4, 2017, <https://warontherocks.com/2017/01/isils-virtual-planners-a-critical-terrorist-innovation/>; and "State Department Terrorist Designations," Nov. 22, 2016, <https://www.state.gov/j/ct/rls/other/des/266471.htm>.

fighter returnees, and two were Iraqis sent by IS to assist with the attack.²⁰ As a point of comparison, thirty-nine percent of all IS external operations between January 2014 and December 2017 have been conducted by foreign fighters. This demonstrates the importance of foreign fighters in the Islamic State's global strategy.

Second, inspired attacks are executed by so-called "homegrown terrorists" without any guidance from the Amniyat al-Kharji or other IS operatives based abroad.²¹ These individuals function independently of the IS organizational structure. For example, in June 2016, Omar Mateen shot 49 individuals at a nightclub in Orlando. He reportedly pledged allegiance to IS leader Abu Bakr al-Baghdadi, but did not have any direct contact—online or in person—with the organization.²² Thirty-nine percent of all IS external operations can be categorized as "inspired" attacks or plots. Significantly, despite having no control over inspired attacks, IS leaders view them as an important weapon in their arsenal of external operations. In a May 2016 speech, al-Adnani urged sympathizers to conduct attacks anytime, anywhere, and not wait for permission.

Determination! You – on behalf of the Ummah – are fighting against all nations. If you are resolute, you will win. If you flinch, you will fail and lose. . . . Ramadan has come near, and it is the month of raids and jihad, the month of conquest. Prepare yourselves and get ready. . . . Let all of you make it, by Allah's permission, a month of suffering for the kuffar [unbelievers] everywhere; and we specifically direct this to soldiers and supporters of the Khalifah [caliphate] in Europe and America.²³

Third, enabled attacks fit somewhere in between directed and inspired attacks. They tend to be executed locally with planning guidance and other assistance from the Amniyat al-Kharji or foreign fighters in Syria and Iraq.²⁴ For example, in January 2015, British foreign fighter Junaid Hussein hacked into Pentagon computer systems and distributed a list of US soldiers, sailors, and airmen to IS sympathizers, proposing them as potential targets for an attack.²⁵ Or, more directly, in January 2016, four IS operatives attacked a shopping mall and Starbucks in Jakarta, killing two individuals. They reportedly received funds from Indonesian foreign fighter

²⁰ Cragin, "The November 2015 Paris Attacks."

²¹ Lorenzo Vidino and Seamus Hughes, "ISIS in America: From Retweets to Raqqa," George Washington University's Program on Extremism, Dec. 2015, <https://extremism.gwu.edu/reports>.

²² "Orlando Shooting: 49 killed, Shooter Pledged ISIS Allegiance," CNN, June 13, 2016, <http://www.cnn.com/2016/06/12/us/orlando-nightclub-shooting/>; and Rukmini Callimachi, "Was Orlando Shooter Really Acting for ISIS? For ISIS, It's all the Same," *New York Times*, June 12, 2016, <https://www.nytimes.com/2016/06/13/us/orlando-omar-mateen-isis.html>.

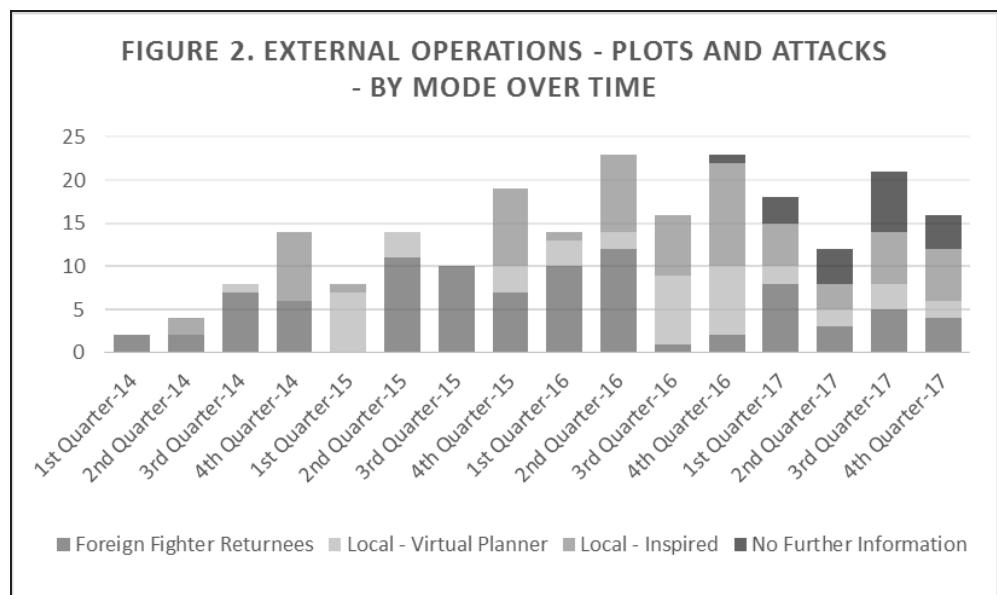
²³ Abu Muhammad al-Adnani, "They Live by Proof," Video Statement by ISIL Spokesman, translated and released by al-Hayat Media Center, May 22, 2016.

²⁴ Bridget Moreng, "ISIS' Virtual Puppeteers," *Foreign Affairs*, Sept. 21, 2016.

²⁵ "British Hacker is No. 3 on Pentagon 'Kill List,'" *Sunday Times*, Aug. 2, 2015.

Abu Jandal, who was based in Syria.²⁶ Virtually planned attacks, in this sense, are considered enabled attacks. Eighteen percent of all IS external operations between January 2014 and December 2017 were enabled attacks.²⁷

Although virtually planned attacks, historically, have represented the smallest proportion of IS external operations, their numbers have been increasing since July 2016. *Figure 2*, below, depicts the distribution of these attacks—directed, enabled, inspired—over time. It uses attacks conducted by foreign fighter returnees as a proxy for directed attacks. Virtually planned attacks are those conducted outside of IS territory but enabled by IS operatives based in Syria, Iraq, or one of the other 25 provinces. Inspired attacks are those with no evidence of ties to IS in Syria, Iraq, or the other 25 provinces. *Figure 2* reveals that, beginning in the third quarter of 2016 (July, August, September), the proportion of IS external operations by foreign fighter returnees dropped dramatically. It was replaced by an increase in the number of inspired and virtually planned attacks.



What caused this shift? Interestingly, it predates both the Mosul Offensive in Iraq (fourth quarter 2016), as well as Coalition forces efforts to isolate IS fighters based in Raqqah, Syria (first quarter 2017). Thus, it seems likely that the combination of law enforcement activities—encouraged by the aforementioned UN Security Council Resolutions—security measures along Turkey’s border, and military operations against Amniyat al-Kharji operatives made it difficult for IS to exfiltrate foreign fighters from Syria. IS was forced to rely increasingly on enabled and inspired attacks.

²⁶ Francis Chan, “ISIS Funded Attack in Jakarta,” *Straits Times*, March 5, 2016.

²⁷ The remaining four percent (39 percent directed, plus 39 percent inspired, plus 18 percent enabled) are unaccounted for or noted as “no further information available” (NFI) in the NDU database.

Questions remain, however, on the extent of the threat posed by these types of attacks and virtually-inspired attacks, in particular. It seems logical that virtually planned attacks would be easier for intelligence and law enforcement officials to disrupt, given their reliance on remote communication technologies. Moreover, al-Qaeda struggled previously to create a sustain campaign of inspired or enabled attacks.²⁸ But IS has proven itself to be adaptive. The introduction of encrypted messaging applications also provides IS and other terrorists with a new method for communicating in a protected environment. This shift in IS operational planning, therefore, requires further analysis.

Virtually Planned Attacks

The Islamic State's virtual planners sponsored 51 external operations—19 successful attacks and 32 plots—between January 2014 and December 2017. As discussed in the previous section, this represents eighteen percent of the total number of external operations during that time period. One third of IS' virtually planned attacks (17, or thirty-three percent) were conducted in the West. These relatively high numbers can be attributed to the ambitious planning by two European foreign fighters—Junaid Hussain and Rachid Kassim—who together account for 10 of the virtually planned attacks against the West. That said, Indonesia has witnessed more virtually planned attacks than any single country: 14 in total. The following list highlights these attacks.

- *December 2015.* Bahrun Naim contacted Ibadurrahman (online) and asked him to put together a team to attack a Buddhist Temple, church, and police station in Solo, Indonesia;
- *June 2016.* A police captain and his companion were killed at their home in a small town northwest of Paris. The perpetrator was in touch with Rachid Kassim prior to the attack; and
- *August 2016.* Security authorities arrested IS operatives who were plotting to attack Independence Day celebrations in Malaysia. Two had been communicating with Mohamad Wanndy Mohamad Jedi.

Interestingly, virtually planned attacks have a higher rate of failure, overall, than other IS attacks outside Syria and Iraq. Of the 51 virtually planned attacks in the dataset, 32 (or sixty-three percent), failed. Comparatively speaking, only thirty-one percent of all IS attacks outside Syria and Iraq have failed. Only fifty-two percent of those attacks conducted outside Syria, Iraq, and the 25 IS provinces have failed. Yet, IS planners continue to pursue this mode of operation, even with relatively high rates

²⁸ Thomas Jocelyn, “Awlaki’s Emails to Terror Plotter Show Operational Role,” *Long War Journal*, March 2, 2011, http://www.longwarjournal.org/archives/2011/03/anwar_al_awlakis_ema.php.

of failure. This approach reinforces the observation that IS planners pursue multiple avenues for attacking their enemies outside the so-called caliphate and declared provinces. It also suggests that the shift by IS and the Amniyat al-Kharji towards virtually planned attacks was driven more by the increasing futility of exfiltrating foreign fighters from Syria, rather than the appeal of virtually planned attacks in isolation of all other options.

Beyond the numbers, it also seems clear that the viability of virtually planned attacks for the Islamic State is personality-dependent. That is, only a handful of virtual planners within the Amniyat al-Kharji have been able to identify recruits, provide them with the capability to build an explosive device, and hide operations from security officials on a consistent basis. Authorities have linked Bahrn Naim to at least 11 of the 14 external operations in Indonesia. As such, he is the single most active virtual planner for the Islamic State to date. Bahrn Naim, 34, studied computer science at the *Universitas Sebelas Maret*, before joining the Islamist group called Jamaah Ansharut Tauhid (JAT). JAT was designated a foreign terrorist organization by the U.S. State Department in February 2012.²⁹ Naim was arrested by Indonesian security officials in November 2011 and sentenced to two-and-a-half years in prison for the illegal possession of firearms and ammunition.³⁰ Prison authorities released him in June 2012, and he departed for Syria, along with his wife, in January 2015.³¹

Other virtual planners include British foreign fighter, Junaid Hussain, who was killed by U.S. forces in August 2015 after enabling at least six operations in Europe and the United States.³² Rachid Kassim used Telegram Messaging to plan four attacks before he was killed by a drone strike in Syria in February 2017.³³ And, Muhammad Wanndy Mohamed Jedi, who reportedly assisted three different operational cells in Malaysia before his death in Syria, which was confirmed by authorities in May 2017.³⁴

Table 1, below, lists the most active virtual planners within the Islamic State, as well as some of their most well-known plots or attacks.

In summary, IS leaders and the Amniyat al-Kharji shifted from being almost entirely dependent on foreign fighters to virtually planned (and inspired) attacks in mid-to-late 2016. This shift was driven by difficulties in exfiltrating IS foreign fighters from Syria. It also corresponded with a drop in the overall effectiveness in IS external operations. And, indeed, virtually planned attacks, thus far, have

²⁹ “Designation of Jemah Ashorut Tauhid,” U.S. State Department, March 13, 2012, <https://www.federalregister.gov/documents/2012/03/13/2012-6045/the-designation-of-jemahashorut-tauhid-jat-also-known-as-jemahashorut-tauhid-also-known-as>.

³⁰ Joe Cochrane and Thomas Fuller, “Jakarta Attack Raises Fear that ISIS Is Spreading in Southeast Asia,” *The New York Times*, Section A; Column 0; Jan. 15, 2016.

³¹ *Mothers to Bombers*, p. 11.

³² Thomas Joscelyn, “The future of counterterrorism: Addressing the evolving threat to domestic security,” *Long War Journal*, Foundation for Defense of Democracies, Feb. 28, 2017.

³³ W.J. Hennigan, “The U.S. military is targeting Islamic State’s virtual caliphate by hunting & killing its online operatives one-by-one,” *Los Angeles Times*, May 5, 2017.

<http://www.latimes.com/world/middleeast/la-fg-isis-online-20170502-story.html>.

³⁴ Nur Azlin Mohamed Aslin, “Who’s Next After Wanndy?” *NST Online*, May 18, 2017.

witnessed a higher rate of failure than other types of external operations. But some virtual planners have been more successful than others. Indonesian Bahrun Naim stands out among his colleagues in this regard. The following section explores one of his failed operations in detail to identify potential weaknesses in virtually planned attacks.

Table 1. Most Successful Virtual Planners for the Islamic State

Name	Date of Departure for Syria	Plot or Attack
Bahrun Naim	January 2015	Presidential Palace Plot (DEC 16)
Junaid Hussain	July 2013	Garland Attack (MAY 15)
Rachid Kassim	May 2015	Notre Dame Cathedral (SEP 16)
Maxime Hauchard	August 2013	Normandy Church (JUL 16)
Neil Prakash	February 2013 ³⁵	Anzac Day Plot (APR 15)
Muhammad Wanndy	January 2015	Nightclub Attack (JUN 16)
Mohamed Jedi		
Abu Issa al-Amriki	2015	Hyderabad Plot (JUL 16)

The Plot against the Presidential Palace, Indonesia

On Saturday, December 10, 2016, Indonesia's counter-terrorism police force, Detachment 88, arrested four individuals for plotting to detonate a bomb outside the Presidential Palace in Jakarta. According to newspaper reports, the plan was for a suicide bomber to join the crowds on Sunday as they watched a changing of the Guards ceremony outside the palace. The attacker would then run towards the Guards and detonate the bomb, killing as many people as possible.³⁶ The plot was developed by Indonesian foreign fighter Bahrun Naim in close coordination with Muhammad Nur Solikin in Solo, Indonesia. Bahrun Naim created a Telegram Messaging Group, Kuluk Tahu, so he could oversee the attack remotely.³⁷ The following sections explore the perpetrators, mechanics of the attack, and the operational timeline in greater detail.

Perpetrators. The Presidential Palace operation included only one core operative—Dian Yulia Novi—a woman recruited to be the suicide bomber for this attack. She was introduced to Bahrun Naim by Muhammad Nur Solikin, who helped to organize the operational cell for Bahrun Naim. Muhammad Nur Solikin ran a non-governmental organization, *Azzam Dakwah Center*, from his home in West Java.³⁸ He apparently tried for over six months to reach Bahrun Naim in Syria via Telegram

³⁵ Note: sources say that Neil Prakash arrived in Syria in early 2013.

³⁶ Kusumasari Ayuningtyas, “Indonesia: Female would-be Suicide Bomber Gives TV Interview,” *Benar News*, Dec. 14, 2016, <http://www.benarnews.org/english/news/indonesian/suspects-talk-12142016164242.html>.

³⁷ “Teror Jaringan Kuluk Tahu,” *Tempo*, Dec. 19, 2016.

³⁸ *Mothers to Bombers*, p. 22.

Messaging and other encrypted applications.³⁹ Once they met virtually, in early 2016, Solikin expressed his desire to become a suicide bomber.⁴⁰ But Bahrun Naim instead used Muhammad Nur Solikin as his local representative and coordinator for two different plots in Indonesia.

Khafid Antoni, a university student, built the bomb for the Presidential Palace plot out of a pressure cooker and explosives. He was brought into the operational cell by Muhammad Nur Solikin and was taught how to build a bomb remotely by Bahrun Naim.⁴¹ In fact, Naim, unlike the other virtual planners in Amniyat al-Kharji, apparently has attempted to cultivate a team of skilled bomb-makers in Indonesia to assist with local attacks.⁴² They do not function as core operatives. That is, they are not supposed to become directly involved in the attack and, thus, theoretically, are in less danger of being arrested or killed. This “reserve force” of bomb-makers represents one of the more interesting IS innovations in Indonesia.

Four other individuals contributed to the Presidential Palace plot. Suyanto housed the bomb-making materials for Khafid Antoni as he built the weapon. Agus Supriyadi rented a local car for transportation and accompanied Solikin as he transferred the bomb from Solo to Jakarta. Wawan Prasetyawan, a construction worker, reportedly helped Antoni and Suyanto obtain or prepare the explosive materials for the bomb, depending on the news source for this attack. Finally, Tutin Sugiarti recruited Dian Yulia Novi—the intended suicide bomber—via Facebook and introduced her to Muhammad Nur Solikin.⁴³

Figure 4, below, depicts the network built virtually by Bahrun Naim with assistance from Muhammad Nur Solikin to perpetrate this and other attacks. There are three foreign fighters in the network diagram: Bahrun Naim, Abu Jandal, and Bahrumsyah. As of June 2017, Bahrun Naim was alive. Both Bahrumsyah (Syria) and Abu Jandal (Iraq) reportedly died while fighting in the Levant although Indonesian authorities have yet to confirm the death of Bahrumsyah.⁴⁴ All of the others in this network diagram reside in Indonesia. The diagram also identifies each individual according to his or her operation in parentheses. Dotted lines indicate virtual relationships between individuals and solid lines face-to-face or in-person relationships. Individuals with expertise in explosives or bomb-making are indicated by bold font in Figure 4.⁴⁵

³⁹ Wayan Agus Purnomo and Danang Firmanto, “Terror Behind the Veil: Indonesian Women Become Suicide Bomb Recruits for the First Time,” *Tempo English*, Dec 19-25, 2016, p. 16.

⁴⁰ *Mothers to Bombers*, p. 23.

⁴¹ Purnomo and Firmanto, “Terror Behind the Veil,” p. 17.

⁴² “Anti-Terror Squad Arrests Two Alleged Terrorists in Central Java,” *Antara News*, May 30, 2017, <http://www.antaranews.com/en/news/111135/anti-terror-squad-arrests-two-alleged-terrorists-in-central-java>.

⁴³ *Mothers to Bombers*, p. 23.

⁴⁴ Francis Chan, “Indonesian Commander Killed in Syria,” *Straits Times*, March 15, 2017, <http://www.straitstimes.com/asia/se-asia/indonesian-commander-killed-in-syria>.

⁴⁵ Gigih Rahmat Dewa (Marina Bay, 8/16) was an IT expert, not an explosives expert.

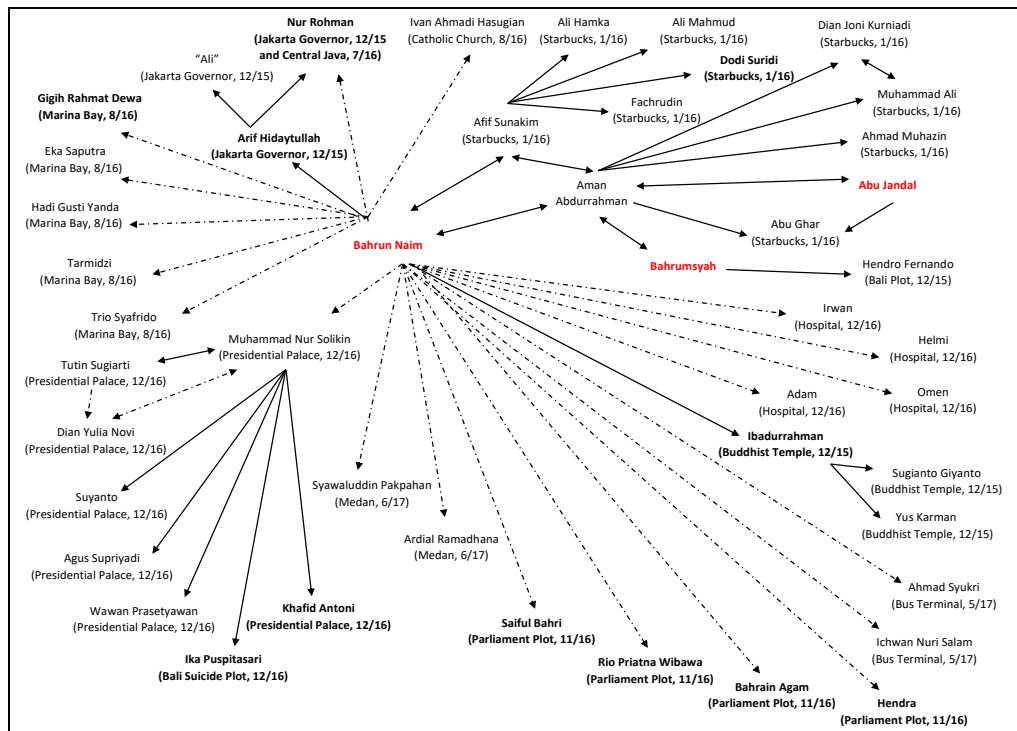
Figure 4: Network Analysis

Figure 4 displays all of the 11 attacks attributed to Bahrun Naim as a virtual planner for the Islamic State, as well as the January 2016 attack at the Starbucks in Jakarta. It highlights the central role that IS foreign fighters can play in seemingly local or lone actor attacks. Indeed, in examining Figure 4, and especially the dotted lines, it is easy to see how law enforcement officials or other analysts could conclude that most of the attacks were being conducted by lone actors or isolated cells. And yet, Bahrun Naim recruited the operatives, planned, and essentially orchestrated these attacks from IS territory abroad.

Equally important, it also is clear from Figure 4 that IS foreign fighters, as virtual planners, pursue multiple avenues for recruiting and guiding external operations. Bahrun Naim stands out in this regard. He reached out to a former acquaintance, Arif Hidayullah, in a plot against the governor of Jakarta in December 2015. Alternatively, Bahrun Naim also built a team entirely through virtual outreach for the August 2016 plot against Marina Bay in Singapore. And, finally, the December 2016 plot against the Presidential Palace incorporated a team whose members evidence a mix of virtual and in-person relationships. This complexity allows virtual planners to obscure or hide one category of external operation, as security officials focus on another. As such, these multiple avenues pose a challenge

to intelligence and other security officials as they attempt to identify patterns in operational planning and pre-empt external operations by the Islamic State.

Finally, *Figure 4* illustrates the wide range of tactics and targets used by IS virtual planners as they pursue external operations back home. Targets for Bahrun Naim included government officials, tourist sites, police, religious minorities, and transportation systems. And IS fighters were prepared to use multiple tactics to attack these sites, such as suicide bombings, armed assaults, knife attacks, as well as an attempted stand-off attack on Marina Bay in Singapore. This strategy represents somewhat of a contrast to al-Qaeda, which focused on high-impact attacks, often to the exclusion of lower-casualty external operations. But while IS attacks might cause fewer casualties per attack, the feeling of seemingly constant threat, in many ways, presents a difficult challenge as authorities attempt to mitigate these threats without creating a stifling environment for citizens and residents. The following paragraphs present the timeline and mechanics of the Presidential Palace plot.

Mechanics of the Attack. The mechanics of this attack reveal both the strengths and weaknesses of a virtually planned attack. With respect to strengths, seven individuals were involved directly in this operation, which allowed the cell to maintain some degree of operational security. Only Dian Yulia Novi had to re-locate to Jakarta and rent a room in a boarding house prior to the attack. She did this four days before the intended date of the attack.⁴⁶ And only one car, reportedly, was rented in support of this operation.⁴⁷ The operation cost \$400 dollars. Comparatively speaking, the terrorist cell responsible for the November 2015 attacks in Paris rented eight safe houses and 11 vehicles. Thirty individuals were involved directly in this operation with a total cost of \$87,000 dollars.⁴⁸ So, the Presidential Palace attack was much less costly and complex from the perspective of operational logistics.

That said, the Presidential Palace attack also reveals some significant weaknesses in virtually planned attacks. Namely, Dian Yulia Novi first got in touch with Tutin Sugiarti on Facebook. The team also communicated with Bahrun Naim over Telegram Messaging. The use of social media, in particular, provides opportunities for law enforcement and intelligence agencies to identify prospective bombers. This attack also required five months of planning: two months longer than the more complicated Paris attacks. This pattern does not appear to hold true for all virtually planned attacks, but it could point to a weakness in the ability of virtual planners to coordinate a local operational team. In this case, it appears that it took Bahrun Naim and Muhammed Nur Solikin fairly long to identify the team members and assign them with tasks. This timeframe allowed Detachment 88 to identify and surveil Dian Yulia Novi, leading to the eventual disruption of the plot.

⁴⁶ Charlie Campbell, “ISIS Unveiled: The Story Behind Indonesia’s First Female Suicide Bomber,” *Time*, April 4, 2017, <http://time.com/4689714/indonesia-isis-terrorism-jihad-extremism-dian-yulia-novi-fpi/>.

⁴⁷ Purnomo and Firmanto, “Terror Behind the Veil,” p. 17.

⁴⁸ Cragin, “The November 2015 Paris Attacks.”

Timeline for Presidential Palace Plot and Investigation

January 2016. Bahrun Naim posted a message on the Telegram Messaging application for Indonesian IS followers, “calling them to form command cells of seven to eleven people, either decentralized or centralized.”⁴⁹

February 2016. After multiple attempts to reach Bahrun Naim remotely, Mohammad Nur Solikin contacted him via the Telegram Messaging group “Warpok,” where Naim used the screenname “bakul gude.”⁵⁰ Dian Yulia Novi found Tutin Sugiarti through Tutin’s pro-IS charity, Kitchen of Prisoners’ Wives. She reached out to Tutin via Facebook to express her desire to participate in a terrorist attack. Dian Yulia Novi was living in Taiwan. She worked as a caretaker for an elderly woman and supported her family in Indonesia financially.⁵¹

March 2016. Dian Yulia Novi returned to her hometown of Cirebon, Indonesia, from Taiwan.⁵²

August 2016. After several months of communication with Bahrun Naim, Muhammad Nur Solikin volunteered to conduct a suicide operation. Naim suggested using a female suicide bomber instead to avoid detection. Naim also suggested an attack against the Presidential Palace in Jakarta.⁵³

September 2016. Dian Yulia Novi travelled to Ciamis, West Java to meet with Tutin Sugiarti in person for the first time.⁵⁴ After the meeting, Tutin recommended Dian Yulia Novi to Mohammad Nur Solikin as a potential suicide bomber for the Presidential Palace attack and gave Solikin’s number to Dian. Mohammad Nur Solikin initiated contact with Dian Yulia Novi for the first time via Telegram Messaging.⁵⁵

October 2016. Dian Yulia Novi married Mohammad Nur Solikin, becoming his second wife.⁵⁶ Dian Yulia Novi was not present at the wedding, but sent a

⁴⁹ Beatrice Gorawantschy, Rohan Sarmah, and Patrick Megha Rueppel, eds, *Countering Daesh Extremism: European and Asian Responses*, Konrad-Adenauer-Stiftung, International Centre for Political Violence and Terrorism Research, 2016, p. 8.

⁵⁰ “Teror Jaringan Kulak Tahu,” *Tempo*, Dec. 19, 2016.

⁵¹ “Woman Suicide Bomber Driven by Poverty,” *Tempo English*, Dec. 19, 2016, <https://en.tempo.co/read/news/2016/12/19/055828892/Woman-Suicide-Bomber-Driven-by-Poverty>.

⁵² *Mothers to Bombers*, p. 22.

⁵³ *Mothers to Bombers*, p. 23.

⁵⁴ Purnomo and Firmanto, “Terror Behind the Veil,” p. 16

⁵⁵ Purnomo and Firmanto, “Terror Behind the Veil,” p. 16.

⁵⁶ Ayuningtyas, “Female would-be Suicide Bomber.”

representative in her place. The marriage was an attempt to keep the operation a secret. The wedding was officiated virtually by Lir Ilir, an inmate at Madiun prison.⁵⁷

Early December 2016. Bahrun Naim used Bitcoin to transfer money to Mohammad Nur Solikin on two different occasions. The total amount was IDR 5 million or \$375 dollars. Mohammad Nur Solikin used these funds to purchase the explosive materials and bomb components with the assistance of Wawam Prasetyawan. Wawam worked as a construction worker. According to news reports, the materials were stored initially at the Azzam Dakwah Center and Wawam Prasetyawan's house.⁵⁸

Detachment 88 officers also began surveillance on Dian Yulia Novi in early December, before she moved to Jakarta in preparation for the attack.

December 7, 2016. Dian Yulia Novi received a message from Bahrun Naim via Telegram, informing her that the target for her suicide attack would be the Presidential Palace in Jakarta.⁵⁹ She paid cash to rent room 104, a 20-square meter room in a lodging house in Bekasi, east of Jakarta.⁶⁰ Mohammad Nur Solikin also bought three kilograms of five-centimeter nails for the bomb on this date.⁶¹

December 8, 2016. The explosive materials and bomb components were moved to Suyanto's (Abu Iza) parent's house in Karanganyar. This transfer was done in an effort to avoid detection from Detachment 88. Khafid Antoni (Toni bin Rifai), Wawam Prasetyawan, and Suyanto began building the pressure-cooker bomb with instructions from Bahrun Naim via Telegram Messaging. The bomb was made overnight with a rice cooker, TATP (triacetone triperoxide) explosives, and nails.⁶²

December 9, 2016. Agus Supriyadi rented a car and drove with Muhammad Nur Solikin from Solo to Karanganyar. They met Suyanto, who brought the bomb from his parent's house to a gas station.⁶³ The bomb had been hidden in a black backpack.

December 2016. Agus Supriyadi and Mohammad Nur Solikin travelled from Solo to East Jakarta to meet Dian Yulia Novi. But, despite efforts at operational security, the two men were followed from Solo by Detachment 88 officers. Agus Supriyadi and Muhammad Nur Solikin picked Dian Yulia Novi up at her apartment near Jakarta and drove her to a post office. At the post office, Dian Yulia Novi sent a package to

⁵⁷ “Teror Jaringan Kulak Tahu,” *Tempo*, Dec. 19, 2016.

⁵⁸ Purnomo and Firmanto, “Terror Behind the Veil,” p. 19; and “Police Arrest 14 Members of MNS’ Suspected Terrorist Network,” *Antara News*, Dec. 19, 2016, <http://www.antaranews.com/en/news/108489/police-arrest-14-members-of-mns-suspected-terrorist-network>.

⁵⁹ “1st Would Be Female Suicide Bomber Goes on Trial,” *Kyodo News*, June 1, 2017.

⁶⁰ Campbell, “ISIS Unveiled.”

⁶¹ Purnomo and Firmanto, “Terror Behind the Veil,” p. 16.

⁶² Purnomo and Firmanto, “Terror Behind the Veil,” p. 17.

⁶³ Purnomo and Firmanto, “Terror Behind the Veil,” p. 17.

her parents in her hometown of Cirebon. Detachment 88 intercepted the parcel at the post office and discovered a farewell letter to her parents, some clothes, and her will.⁶⁴ The will expressed Dian Yulia Novi's desire to engage in *amaliyah*, or a martyrdom operation.

After taking her to the post office, Mohammad Nur Solikin and Agus Supriyadi drove Dian Yulia Novi to her rented room. She reportedly exited the car with a black backpack. Mohammad Nur Solikin and Agus Supriyadi then drove to the Presidential Palace to surveil the area.⁶⁵ The two men chose a bus stop as the ideal place for Novi to detonate the device. Solikin and Supriyadi were arrested by Detachment 88. Dian Yulia Novi also was arrested in her rented room. Detachment 88 officers found her reading the Quran.⁶⁶ The pressure-cooker bomb was in the room. Those living within 300 yards of the lodging house were evacuated, and police safely detonated the pressure-cooker bomb. Suyanto also was arrested in Sabrang Kulong, Karanganyar.

December 11, 2016. Detachment 88 searched Mohammad Nur Sholikin's house in Solo.⁶⁷ They arrested Arida Putri Maharani, the first wife of Mohammad Nur Solikin. They also arrested Khafid Antoni in an apartment in Ngawi, East Java. Wawan Prasetyawan was arrested in Klanten, Central Java.

December 15, 2016. Ika Puspitasari (Tasmina Salsabila) was arrested in a mosque near her home in Purworejo, Central Java. She had ties to Mohammad Nur Solikin and was planning to carry out her own suicide operation in Bali. Tutin Sugiarti was arrested in Tasikmalaya, West Java in a rented room with her husband. Turkish authorities also deported Bahrumsayah's wife. She was transferred to Indonesian authorities along with 74 other individuals in mid-December 2017 and housed in Bambu Apus deradicalization center.⁶⁸

March 30, 2017. The U.S. Treasury Department designated Bahrun Naim as a global terrorist "for acting for or on behalf of ISIS" by providing "financial and operational support for ISIS's recruitment and attack plotting in Indonesia."⁶⁹

⁶⁴ Campbell, "ISIS Unveiled."

⁶⁵ Campbell, "ISIS Unveiled."

⁶⁶ Campbell, "ISIS Unveiled."

⁶⁷ Ganug Nugroho Adi, "Densus 88 Seizes Documents from Suspected Terrorist in C. Java," *The Jakarta Post*, Dec. 12, 2016, <http://www.thejakartapost.com/news/2016/12/12/densus-88-seizes-documents-from-suspected-terrorist-in-c-java.html>.

⁶⁸ Haeril Halim, "Bahrun Naim's Wife Amongst Deportees Housed in Shelter," *Jakarta Post*, Feb. 7, 2017.

⁶⁹ "Treasury Designates Indonesian and Malaysian ISIS Operatives and Leaders," U.S. Department of the Treasury, March 30, 2017, <https://www.treasury.gov/press-center/press-releases/Pages/sm0037.aspx>.

The Future of External Operations

This article explores virtually planned attacks as one weapon in the arsenal of Islamic State external operations. It argues that, while IS leaders have prioritized the so-called caliphate in their rhetoric, they also have devoted substantial time and resources to external operations. Further, in pursuing external operations, IS planners historically have relied on foreign terrorist fighters to return home to conduct attacks. But this dynamic changed in the third quarter of 2016: the number of successful attacks and failed plots by IS foreign fighters dropped significantly. Findings suggest that improved law enforcement, intelligence, and border security measures against foreign fighters, as well as military operations aimed at the Amniyat al-Kharji, led to this drop.

IS leaders and planners in Syria, in turn, responded with more and more virtually planned attacks. But these types of external operations have not been as successful as directed or inspired attacks. Virtually planned attacks appear to have two chokepoints or hurdles in the planning process. First, virtual planners struggle to identify reliable recruits for their operations and this recruitment process, especially via social media, leaves their plots vulnerable to detection. This struggle was evident in the above case study: it took Bahrun Naim three months to identify both a suicide bomber and someone with sufficient skill that he or she could be taught how to build an explosive device remotely and quickly.

Second, virtual planners also struggle to communicate consistently with team members in secure environments and train local operators in how to maintain operational security. Mohammad Nur Solikin was forced to relocate the explosive materials from his office due to safety concerns. He and other members of the team eventually were arrested after Dian Yulia Novi mailed a martyrdom letter to her family prior to the attack. Importantly, as a result of these collective struggles, the planning process for the Presidential Palace plot took two months longer than the November 2015 Paris attacks: three versus five months. It also provided Detachment 88 with multiple opportunities for detection and intervention.

That said, this case study arguably foreshadows future innovations in virtually planned attacks by the Islamic State. Namely, Bahrun Naim worked through an intermediary (Mohammad Nur Solikin) to identify reliable and skilled recruits. It is imaginable that underground networks of individuals sympathetic to the Islamic State could also take on this role of intermediary and shorten the planning cycle for these types of attacks. Additionally, as mentioned, Bahrun Naim used encrypted messaging applications to communicate with the local operatives and Bitcoin to transfer funds. Finally, one of the more interesting innovations by Bahrun Naim has been his attempt to develop a cadre of bomb-makers. It appears that he had done this, at least in part, to overcome the hurdle of identifying and training skilled operatives in a timely manner.

This case study, in many ways, illustrates the typical punch-counter-punch between terrorists and counter-terrorism security forces. Terrorists innovate. Security forces respond. And so on. Yet, IS has demonstrated its ability to adapt more effectively than its predecessor, al-Qaeda, which could not execute a sustained

campaign of inspired or virtually planned attacks. The Islamic State has been able to do this in a relatively short amount of time and on a global scale. To counter this degree of adaptation, security officials must identify innovations, develop counter-measures, and communicate successful techniques, tactics, and procedures to allies more rapidly than ever.

