



2019-2020

Annual Report

C4ADS
innovation for peace

About C4ADS

Our mission is to move **from advocacy to action** through data driven analysis and evidence based reporting on global conflict and transnational security issues.

C4ADS is a digital-age think tank dedicated to providing data-driven analysis and evidence-based reporting on global conflict and transnational security issues.

We use cutting-edge technologies to manage, integrate, and analyze disparate open data from diverse languages, regions, and sources, incorporating our own field research from conflict zones and fragile states. We seek to engage with local and international audiences and produce compelling evidence-based analysis. In doing so, we fill a critical gap left by traditional public sector and profit-driven institutions to move beyond advocacy to action.

Our Technology Partners

ANALYSIS POWERED BY



WINDWARD[®]

All photos used in this report were taken by C4ADS analysts during their travels in 2019.
Cover photo taken by C4ADS analyst in Sunda Kelapa Port, Jakarta, Indonesia.

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Letter from the Executive Director

David Johnson

State-sponsored and non-State illicit networks are the greatest threat to the free world today. These networks poison the trusted systems of trade, finance, communications and transportation that power prosperity for billions around the globe. They perpetrate the official corruption, transnational crime, and political violence that destabilizes states, prevents development, and devastates the environment. Illicit networks thrive in periods of peaceful competition short of declared war. Globalization and emerging technologies continue to erode state power and empower social networks.

“Traditional think-tanks, staffed by senior veterans of the State bureaucracy and academia, fail to recognize a world where States are not the agents, but the terrain across which these social networks flow.

They still attempt to influence State policy from the top down, to counter eco-system threats generated from the bottom up.

Over the past year, C4ADS has demonstrated a different approach. Focused on the emerging causes of conflict, our talented, young analysts exploit disruptive technology and the vast volume, variety and velocity of sharable Publicly Available Information (PAI). We have continued to implement C4ADS strategy to counter the threat of illicit networks from the bottom up:

- *Reduce Local System Energy*- Impact the facilitators and enablers.
- *Understand Vector Vulnerabilities*- Map the systems of trade, transportation, communications and finance used to transfer value between licit and illicit worlds.
- *Shape the Ecosystem*- Empower an opportunistic network of government, civil society, industry, academia and media organizations.

The security challenge posed by illicit networks is poised to explode in the near future. The world is facing a technology driven information tsunami with near simultaneous maturity of 5G communications, quantum computing, machine learning, brain-computer interface, Internet of Things, 3D printing, and democratized manufacturing. New data sovereignty and privacy laws can further obscure the activities of illicit actors. The governments of open, pluralistic societies will fall further behind without assistance, creating an important historical inflexion point.

“To address this need, C4ADS will integrate disruptive technologies to get ahead of the information tsunami; enhance our products to train the next generation of PAI analysts; develop concepts to build the new digital age think-tank; and create strategic alliances that assist the public and our partners to rapidly adopt and adapt.

In the coming year, your support will be essential. Our projects and technology are structured around cross-program campaigns. We will seek philanthropic funding, data, and partners around these campaigns to overcome this important inflexion point.

Letter from the Chief Operating Officer

Varun Vira

We recognize that the challenge ahead lies in globalized, intertwined systems and social networks. Therefore, we have restructured into six overlapping programs: Environmental Crimes Fusion Cell, Natural Resources, Conflict Finance and Irregular Threats, Counterproliferation, Organized Crime and Grand Corruption, and Data & Technology. We engaged our program directors with additional authorities to enhance organizational agility and are driving our mission forward along four lines of operation: technology integration, type and granularity of analysis, strategic alliances, and thought leadership.

Integrating Disruptive Technology

We are enhancing our ability to develop software in-house to exploit rapidly emerging data sets. We continue to adapt best-of-class machine learning, natural language processing, and computer visualization tools to scale our efforts and support new forms of analysis. We provide analysts with technology to support full spectrum, multi-domain awareness, and partners with access to high advantage data through shared portals and our proprietary “Seamless Horizons” data lake to improve information sharing and collaboration.

Pushing the Boundaries of PAI Analysis

We seek to understand system dynamics, beyond individual networks, to align our work for maximum impact. We seek out the most data sparse environments to discover unique ways to uncover illicit activity and are rebuilding our data infrastructure to manage even the most overwhelming data environments to sort signal from the noise. In the next year, we will create greater capability for predictive and causal analysis.

In conclusion, 2020, and the decade ahead, will be our most challenging and, potentially, rewarding. We hope you will join us for this journey, as we adopt and adapt to support the security and prosperity of open, pluralistic societies.

Scaling A Global Alliance Network

Through collaboration, we can scale to global impact. Therefore, we continue to expand training partners in full-stack PAI analysis to shape proactive communities of interest and action. We share our data and tools responsibly to enable partner success. We create shared projects and community solutions, and provide our analysts with “IRAD” (Internal Research & Development) time to support unfunded critical challenges. Finally, we are deploying and embedding teams with key partners to enhance trust and collaboration..

Redefining the Think-Tank in the Digital Age

We use quantitative analysis to spotlight young thinkers, differing perspectives, and innovative approaches. We continue to modernize the mediums, design, and structure of our work to ensure we reach a broad range of international audiences. In the next year, we will further embed design into our products to pioneer effective communications strategies, and will launch new product lines to better share our technology, tradecraft, and analytic processes.

Reach in 2019

Data Access

12.1 billion
data rows collected
and processed
across all C4ADS
projects in 2019

600 million
new documents
ingested and structured
in C4ADS's high context
data lake, Seamless
Horizons

5.2 million
relationships between
identified illicit actors
in C4ADS' Palantir
Gotham base realm

High-Context Analysis & Investigative Support

874
analytical
products
created and
shared

15
languages
spoken

648
analyst
travel days

Partner Network

37
foreign
government
agencies

65
US government
agencies

38
global media
organizations

Public Engagement

10
articles a day on
average written
about C4ADS in
online or print
media

78%
growth in top
tier outlet
coverage

121%
growth in twitter
followers

Technology Partnerships

WINDWARD®

ANALYSIS POWERED BY
Palantir

aws

167
NGOs and activist
organizations

76
private-sector
banks, insurance,
and multinational
corporations

Work

Visualizing Sanctions Data

Building intuitive dashboards to better visualize the enactment and effect of sanctions programs over time, providing empirical rigor to longitudinal studies.

Global

Building Machine Learning Models for Proliferation Detection

Using manifest level customs data and C4ADS body of network knowledge to identify trade-based anomalies that can facilitate machine-enabled detection of high-risk proliferation activities.

Global

Maritime Trends and Typologies for Regulatory Guidance

Looking across sanction ecosystems including North Korea, Iran, Venezuela, and Russia to identify common patterns that can be used to strengthen maritime security.

Global

Illegal Timber Trafficking Networks

Mapping illicit timber harvesting and trafficking networks and supply chains in South American, African, and Asian ecosystems. To date actionable research has facilitated over \$300M by seizure value.

Global

Global Transparency for IUU Fishing Fleets

Improving transparency of global fishing fleets by large-scale mapping and aggregation of beneficial ownership information for private industry and non-profit watchdog organizations.

Global

Global Air Domain Awareness

Development of C4ADS's proprietary Icarus platform to integrate aircraft ADS-B sensor data into an analytical platform to support real-time air domain awareness in opaque jurisdictions

Global

Building Data Sharing Portals

Development of proprietary C4ADS data-sharing portals built to facilitate collaboration with, and between, major industry actors and key watchdog organizations around the world

Global

Aggregating Wildlife Trafficking Trends and Typologies for Predictive Enforcement

Maintaining a database of now over 350,000 entities related to wildlife trafficking to identify trends, routes, and typologies to inform private sector, NGO, and government-led enforcement.

Global

Luxury Real Estate as a Chokepoint Asset Class

Conducting screening for politically exposed persons and other criminal actors to the identify the proceeds of corruption through luxury real estate worldwide.

Global

China Belt and Road Initiative in Latin America

Identifying Chinese port investments throughout the Western Hemisphere and mapping the beneficial ownership of all commercial entities involved to identify involvement of Chinese state-linked actors and identify trends in investments.

Uruguay, Venezuela, Mexico El Salvador, Panama, Jamaica, Ecuador, Peru, Brazil, Suriname

Enhanced Due Diligence for Minerals Supply Chain Traceability

Designing new industry standards for the identification and resolution of grievances as related to illicit mining and minerals trafficking networks and supply chains.

Global, Peru, Brazil, United States, Canada, United Kingdom, UAE, Suriname, Colombia

Threat Finance and Sanctions Evasion in Venezuela and Nicaragua

Tracing elite corruption, and trade-based money laundering networks originating from Latin America into the United States, particularly as related to Venezuelan regime activities.

Venezuela, Nicaragua, Panama, Mexico, Colombia

Mapping the Precursor Supply Chains for Syrian Chemical Weapons

Mapping the precursor supply chains for chemical weapons supporting the al-Assad regime in Syria.

Syria, Belgium, Germany, UAE, Lebanon

Mapping the War Economy in Libya

Maintaining maritime domain awareness around key Libyan ports to monitor fuel shipments related to key conflict actors.

Libya, Malta, Turkey, UAE

Russian Grey Zone and Malign Influence Activity

Mapping the intersection between foreign influence, financial crime, and other Russian organized crime and state-sponsored illicit networks in Europe.

Russia, Ukraine, Europe

Illicit Asset Flight and War Economies in Sudan and South Sudan

Mapping the financial and procurement chains that support asset flight in Sudan and conflict in South Sudan.

South Sudan, Kenya, Sudan, UAE, Ethiopia, Eritrea, South Africa, Moldova, Ukraine

Geo-locating State-Sponsored GPS and GNSS Spoofing from Sensor Data

Using open sensor data to identify instances of GPS spoofing activities in Russia, Iran, and China, including for likely VVIP close protection.

Russia, Iran, China, Norway, Finland, Estonia

Tracking Russia's Mercenary Armies Abroad

Tracking the private-military companies used to support deniable Russian state sponsored activities abroad, and particularly in Africa.

Russia, Central African Republic, Sudan, Madagascar, Mozambique, Ukraine, Syria

North Korea's Overseas Financial Networks

Monitoring over 1,000 vessels related to North Korea in near real time, and building out commercial networks related to DPRK overseas procurement activities.

North Korea, China, Russia, Vietnam, Malaysia, Singapore

Chinese Defense and R&D Supply Chains

Analyzing trends in Chinese civil military fusion strategy to develop screening tools to identify and grade PLA technology procurement risk.

China, United States, European Union, United Kingdom

Mapping Wildlife Markets in China and Southeast Asia

Maintaining a data fusion center for NGOs and local law enforcement across ivory, rhino horn, and pangolin supply chains to support real-time enforcement.

China, Vietnam, Laos, India, Malaysia

Tracking Opioids and Emerging Narcotics Supply Networks into the United States

Mapping the supply chains for fentanyl and NPS precursors into the United States through China, India, and Central America.

China, Mexico, India, Honduras, Guatemala, Canada, United Kingdom

Human Trafficking and Forced Labor in Commercial Supply Chains

Mapping human trafficking/forced labor networks and building local NGO partner capacity, with a focus on the Southeast Asian fisheries sector.

Indonesia, Thailand, Burma, Philippines, South Africa, Taiwan, Japan, China,

Iranian Sanctions Evasion & Procurement Networks

Mapping Iranian sanctions evasion networks including monitoring restricted goods exports, but with a focus on WMD and ballistic missile procurement.

Iran, UAE, Turkey, Europe

Mapping Iranian IRGC Currency Smuggling Networks

Building out foreign exchange houses and counterfeiting networks related to the IRGC and proxies including Lebanese Hezbollah and Hamas.

Iran, Bahrain, Afghanistan, UAE

War Economy in Yemen

Mapping the financial and procurement supply chains driving conflict activity behind both the Houthis and GoY conflict actors.

Yemen, Saudi Arabia, UAE, Iran

Wildlife Trafficking Global Intelligence Fusion Center

Maintaining a data fusion center for NGO's working on the ground at poaching and trafficking sites to support real-time enforcement.

Global, Zambia, Malawi, Uganda, Kenya, Nigeria, Tanzania, South Africa, Botswana, Namibia, Laos, Vietnam, China

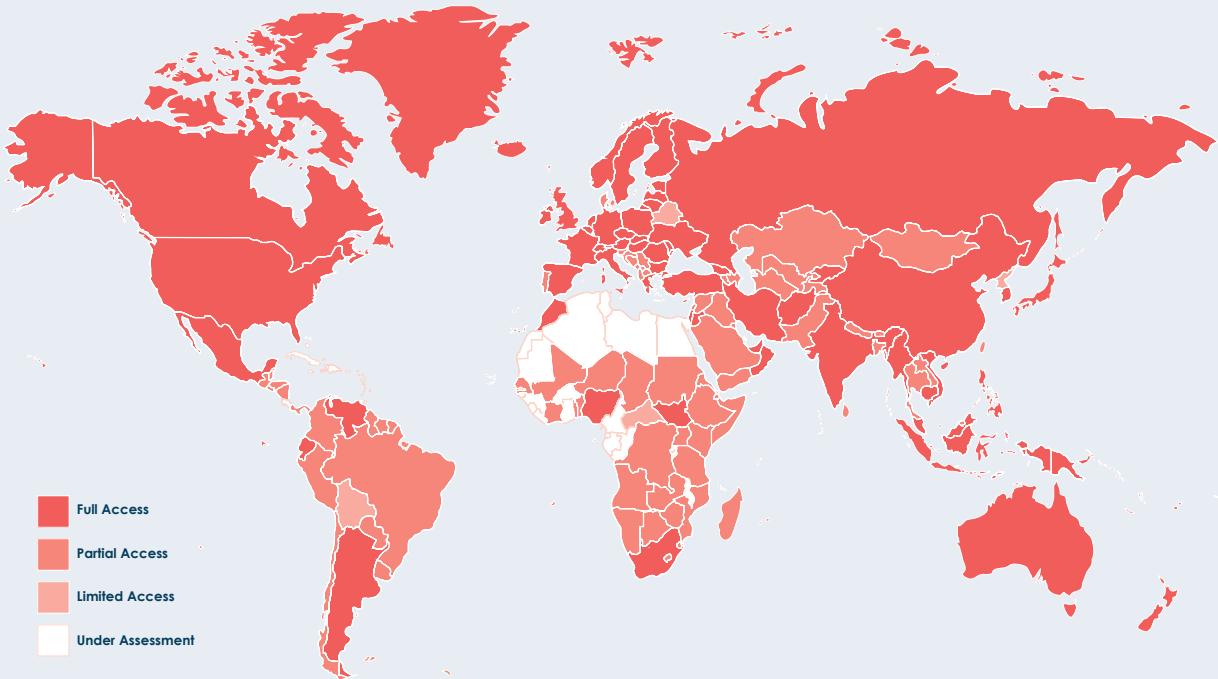
Somali Terror Finance Networks

Investigating al-Shabaab's role in broader regional conflict economies, including in weapons, charcoal, and intimidation.

Somalia, Kenya, UAE

Data

C4ADS Public Records Access

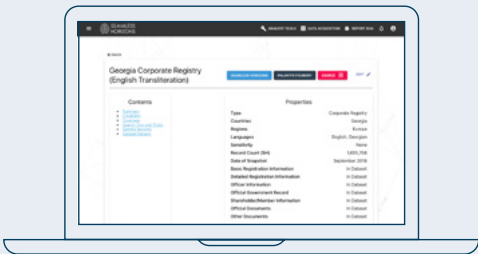


Creating Outsized Impact by Sharing the High Context Data Platform that Powers C4ADS Investigations



For the first time ever, C4ADS is sharing the power of its investigative platform with partners

in government, civil society, and finance who are dedicated to disrupting illicit networks and protecting the peace. This free resource provides unprecedented access to over 1.1 billion corporate, trade, judicial, and property records from over 95 jurisdictions around the world. Seamless Horizons provides a secure, collaborative environment for partners to discover new insights and supercharge their data analysis.



1.1B
records

200+
data sources in 95
jurisdictions

150
languages of OCR
functionality

Using Data Visualizations to Reduce Time to Insight

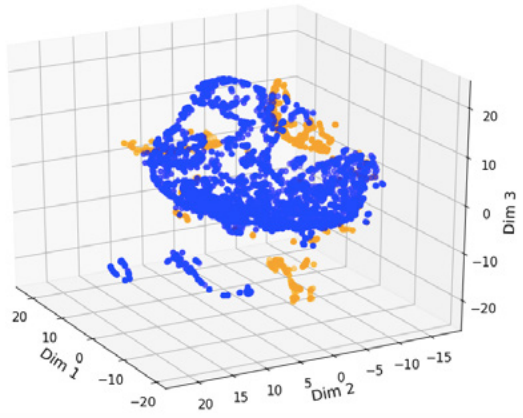
Finding and Conveying Trends in Wildlife Trafficking from Raw Data



In 2019, C4ADS moved beyond data visualizations to build 8 analytic dashboards. These support internal decision-making as well as transform raw datasets into interactive public portals. In our ongoing partnership with the USAID ROUTES program, we built a dashboard to host all seizure data on wildlife trafficking through the air sector for a consortium of airlines and sector employees to navigate.

Integrating Data Science into National Security Use Cases

Machine Learning for Weapons and WMD Proliferation Detection



C4ADS explored the use of various machine learning techniques to detect patterns of illicit trade in certain high-risk jurisdictions. We used supervised and unsupervised learning techniques augmented by our analysts' domain knowledge on large bulk datasets – for example a 170GB dataset encompassing 65 million rows of Russian import and export data between 2016-2018. To facilitate this, the team also had to overcome a range of other data obstacles, for example building custom Natural Language Processing (NLP) entity extraction models to auto-extract names and companies from Russian and Farsi language unstructured text.

Conflict Finance and Irregular Threats

The Conflict Finance and Irregular Threats (CFIT) cell at C4ADS focuses on conflict economies as key drivers of global conflict and insecurity. We examine the networks that profit from human suffering – and the corporate, financial, and logistic infrastructure that enables them. Our research focuses on civil wars, conflict economies, and gray zone competition with a priority focus on the Middle East and Africa. Current priority countries include South Sudan, Somalia, Yemen, and Syria.

In 2019, CFIT contributed research and analysis to US and UN agencies and drove direct enforcement action on multiple illicit networks in Yemen, Somalia, Libya, South Sudan, Syria, and Bahrain.

IDENTIFIED
\$1.1B

of Houthi fuel revenue and 80+ trans national networks supporting the Yemeni war economy

MONITORED
100%

of Libyan ports with algorithms to detect irregular maritime activity

SUPPORTED
4

international law enforcement actions with original analysis

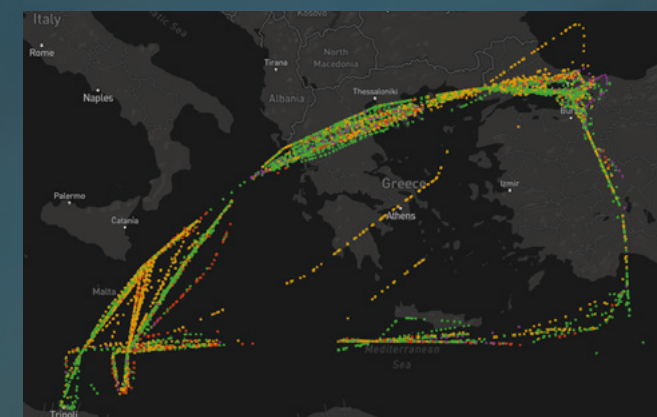
ANALYZED
\$1.42B

in South Sudanese government contracts linked to foreign military equipment acquisition

Photo taken by C4ADS analyst in Dar Es Salaam, Tanzania

DEEP DIVE: FLIGHT TRACKING

Our flight analysis methodology uses open data to expose the often-hidden role of commercial air providers as conflict-enablers in some of the most data-restrictive regions of the world. In 2019, CFIT analyzed the aerial traffic of commercial air freight providers identified by the UN Panel of Experts as potentially involved in the illicit transfer of prohibited military equipment to Libya. Our analysis publicly exposed the use of foreign commercial air freight providers in the supply and re-supply of warring factions inside Libya. We uncovered a broad network of Eastern European commercial air freight companies operating through the UAE, Turkey, and Libya, some of which have a history of logistics support to military operations in Libya as well as Somalia.



ECONOMIC DRIVERS

War is generally a competition for resources. C4ADS maps entire conflict economies to quantitatively understand the economic drivers behind leadership decisions. In Yemen, C4ADS supported key stakeholders in the conflict with actionable analysis on Houthi finances, Government of Yemen procurement, and Coalition operations.



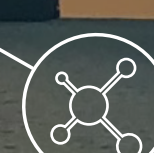
ARMS FLOWS

Weapons do not just appear on the battlefield. C4ADS maps the networks of logisticians who drive supply. In South Sudan, C4ADS focused on both heavy weaponry in large-scale government procurement as well as the spread of light weapons across the battlefield. Our analysis supported multiple high-profile designations by the US Department of the Treasury, targeting regime-linked weapons procurement agents including those linked to the National Security Service (NSS).



RESOURCE TRAFFICKING

Our analyses of Iranian illicit finance operations led to prosecutions and convictions of high levels officials involved in moving billions of dollars through the international banking system in direct violation of international sanctions. Our maritime analysis was also publicly credited with the public exposure of a Libyan criminal network that illicitly trafficked Libyan fuel to European commodity traders through commodity traders in Malta.



TERROR NEXUS

Terrorist groups thrive in ungoverned spaces. C4ADS analysis focuses on the convergence and dependence of terrorist and insurgent operations on transnational organized crime. The 2019 UN Panel of Experts reports highlight our research into weapons and drone procurement networks supplying militant groups in Yemen and Somalia.

MAPPING WAR ECONOMIES

Our Cells

Counterproliferation

The Counterproliferation Cell exposes illicit state-sponsored procurement and financial networks that trade in technologies for chemical, nuclear, and missile programs. Current projects include Chinese defense and intelligence modernization, North Korean sanctions evasion, Iranian ballistic missile development, Russian arms exports, Pakistani Weapons of Mass Destruction procurement networks, and Syrian chemical weapons supply chains.

In 2019, the Cell focused on bulk data integration and developed machine learning applications to enable collection and analysis at scale, which supported law enforcement action and investigations in at least 15 jurisdictions.

125M

trade records collected & integrated

2,300+

vessels monitored in real-time

102

government agencies briefed

National Chiang Kai-shek Memorial Hall taken by C4ADS analyst in Taipei, Taiwan

CHINESE DEFENSE MODERNIZATION

China's civilian economy increasingly supports the country's defense and intelligence modernization efforts, which creates new risks for businesses and universities in the United States and its allies. In 2019, C4ADS developed an approach for using publicly available information to identify high-risk companies in China's defense-industrial base. In 2020, C4ADS is operationalizing this risk model as a scalable due diligence tool that supports our core partners in hardening U.S. and allied supply chains in strategic sectors.

IRANIAN WMD PROCUREMENT

Iran's military develops its missile program through networks of people and companies with significant international exposure. In 2019, C4ADS developed bulk data collection and analysis tools to map the domestic operations of Iran's military and illicit nuclear program. In 2020, C4ADS is developing machine learning approaches to improve data integration and accelerate analysis on the planes, vessels, banks, and bonyads that support Iran's procurement apparatus.

DEEP DIVE: MARITIME DOMAIN AWARENESS

C4ADS produces real-time reporting on vessels engaged in illicit activity in North Korea, Iran, Russia, Syria, and the South China Sea. For example, in February 2019, C4ADS assessed that the VIET TIN 01, a Vietnam-flagged oil tanker, may be engaged in an illicit fuel shipment to North Korea – in the midst of its voyage from Southeast Asia. Before it arrived in Nampo, C4ADS had produced and disseminated analysis to partners, who published media stories and open investigations into the case. The UN Panel of Experts later conducted its own investigation, and in December 2019, Malaysian authorities boarded the vessel to detain the lone crewman onboard for questioning.

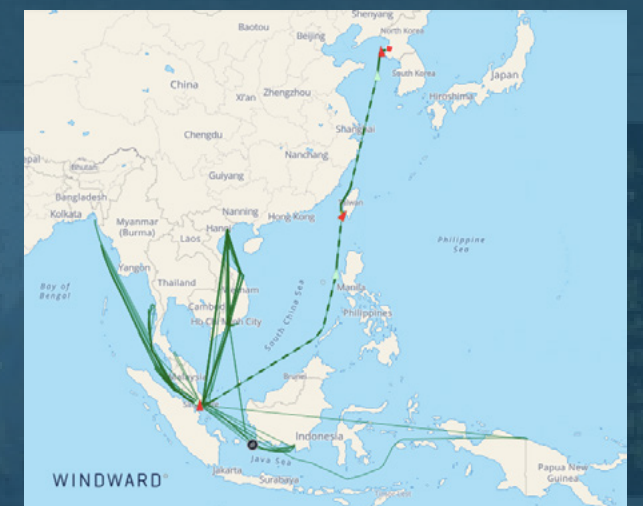
NORTH KOREAN SANCTIONS EVASION

North Korea's intelligence apparatus raises funds and procures WMD components through sophisticated operations overseas. In 2019, C4ADS traced high-end luxury goods supply chains to expose North Korean procurement networks, including two armored Mercedes limousines delivered to Kim Jong Un, and developed machine learning tools for monitoring maritime sanctions compliance. These efforts informed an award-winning visual investigation with the *New York Times* and supported new law enforcement action by partner authorities around the world.

EMERGING TECHNOLOGY & HARD TARGETS

RUSSIAN GNSS SPOOFING

Disruptive emerging technologies like GNSS spoofing pose new threats to not only the U.S. military but also the global economy – and American adversaries are deploying them at home and abroad. In 2019, C4ADS exposed systematic GNSS spoofing activity in Russia and Syria for military operations and VIP protection. In 2020, C4ADS is scaling its capability to monitor and investigate GNSS spoofing activity around the world, including China and Iran.



Our Cells

Environmental Crimes Fusion Cell

The Environmental Crimes Fusion Cell combats the global illicit wildlife trade as a data interface connecting a global network of 120 organizations across conservation, law enforcement, financial intelligence, and regulatory communities.

With over 100+ analyst days on-site in Africa in 2019, C4ADS support has expanded to focus on increasing real-time intelligence sharing and collaboration, bulk data integration, and best practices dissemination around a core coalition of trusted partners.

40

major cases

115

partners engaged

210

analytical products shared

100+

analyst days on-site

58+

cross-border leads generated

1,346

arrested individuals recorded

Photo taken by C4ADS analyst in Lower Zambezi National Park, Zambia



C4ADS was among the first organizations to systematically map and document ivory trafficking as a transnational organized crime enterprise in 2015. Today, C4ADS maintains one of the world's largest databases on wildlife crime networks. We coordinate a data-sharing infrastructure that connects organizations in every range state and major transit and destination country across the ivory, pangolin, and rhino horn supply chains.

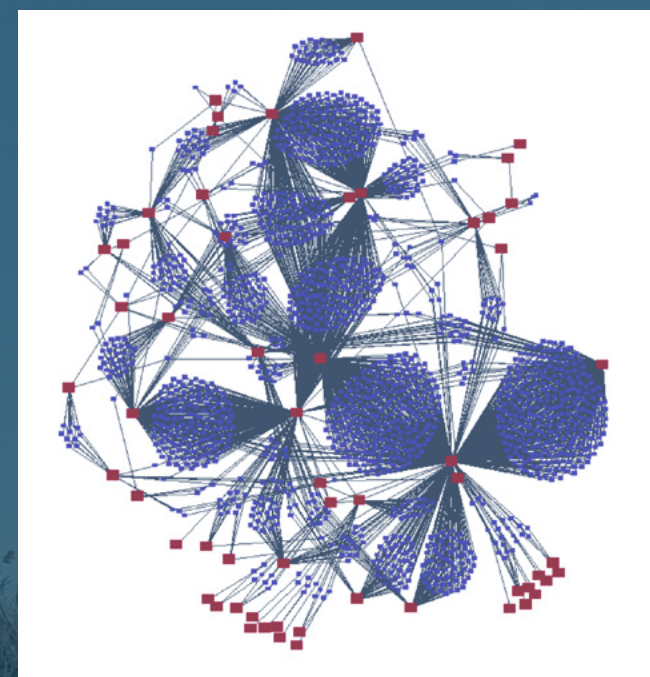
We provide:

- *Direct Case Support* across the investigative value chain from field support for anti-poaching rangers to case support for anti-trafficking prosecutors
- *Long-Term Capacity Building* for trusted local partners to scale and manage their investigative and digital security infrastructure
- *Ecosystem Assessments* for industry regulators enabled by our global data access and granular entity-specific investigations

DEEP DIVE:

DATA PROCESSING TO COMBAT WILDLIFE TRAFFICKING

To strengthen ECFC's partnerships and to ensure that valuable insights can be derived from wildlife trafficking data, C4ADS analysts spent 23 days on-site with counterparts from Rooikat Trust and the Blue Rhino Task Team (BRTT) in Namibia. C4ADS worked to understand Rooikat's workflows and advise both partners on improving data processing workflows through a combination of internally-developed and existing software solutions. These tools have allowed Rooikat and BRTT to enhance current data by automatically enriching over 2,300 rows with additional information. They were then able to explore previously unanalyzed data with added geolocation information to identify traffickers' movements. This streamlined analysis has automated what was previously 3 days of work, to just a 20-minute process. Rooikat and the Blue Rhino Task Team's new and innovative workflows have already led to demonstrable impact against wildlife trafficking in Namibia, including the rapid identification and arrest of poachers mere hours after a poaching event—or even before poaching occurs.



Natural Resources

The Natural Resources Cell focuses on the supply chains that launder illegal and illicit goods into the homes of consumers.

In 2019, the Natural Resources Cell mapped illegal and vulnerable supply chains for timber, fish, minerals, and pharmaceuticals around the world. Our analysis formed the basis of several pioneering reports on issues ranging from South Sudan's teak trade to the onshore networks of illegal, unreported, and unregulated (IUU) fishing, and led to policy change and action in support of several enforcement cases. Our supply chain traceability work with major multinational companies also helped to support a push towards accountability in the fishing and minerals industries.

1st

ever private industry portal to collect, review, and share conflict mineral grievances

1500

vessels' beneficial ownership mapped by the end of 2019, with an estimated 2,000 more to come in 2020

\$340M

of illicit timber seizures supported in partnerships with law enforcement

9

US and international agencies, including the UNODC, were supported with actionable intelligence on global synthetic drug trafficking

Photo taken by C4ADS analyst in Kampung Cisadon, Indonesia



MINERALS

Minerals are critical to modern consumer goods, used in everything from jewelry to popular electronics. But mine sites are often vulnerable, and have historically been linked to armed conflict, corruption, and even modern slavery. With opaque and often insufficient regulation in common mineral source countries, downstream companies struggle to ensure that they are purchasing from legally compliant and ethical mining companies. To address this problem, C4ADS coordinates directly with the minerals industry to enhance and expand due diligence efforts for mineral supply chains.



TIMBER

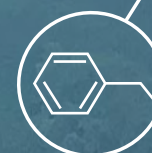
Illegal logging devastates important ecosystems and nets up to \$100 billion annually, often benefiting from systemic corruption and little on-the-ground transparency. But due to limited awareness and poor traceability products made of illegally logged timber frequently end up in major retail chains in the United States, Europe, and China. C4ADS maps the companies and routes used by timber traffickers to launder illegal products from four countries in South America into prominent demand markets around the world.



FISHERIES

Illegal, unregulated, and unreported (IUU) fishing garners up to \$40 billion annually, equivalent to half the entire U.S. market for seafood. While other organizations focus on trying to stop IUU fishing at sea, C4ADS follows fishing networks on-shore, identifying the individuals responsible for at-sea activity and driving unprecedented transparency in the fishing industry.

MAPPING WAR ECONOMIES

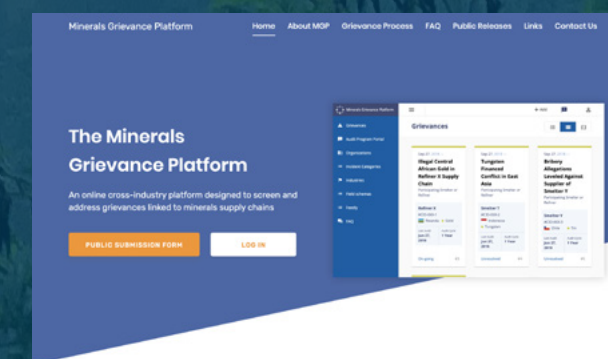


FENTANYL & PRECURSOR CHEMICALS

The flow of precursor chemicals from Asia into the United States fuels the current opioid epidemic and kills over 75,000 Americans each year. C4ADS tracks the movement of opioids and precursors into the United States, focusing on identifying trafficking trends and the networks of individuals involved in purchasing and selling precursors at home and abroad. C4ADS analysis is used by law enforcement to support ongoing investigations, and by the media to raise awareness and expose those profiting from the deadliest trade in America.

DEEP DIVE: SOFTWARE DEVELOPMENT

Three of the biggest challenges for enhanced due diligence in natural resource supply chains are transparency, distinguishing high-risk from low-risk suppliers, and a lack of communication and coordination between stakeholders purchasing from the same upstream companies. To address these varied roadblocks, C4ADS has had to look outside existing mechanisms and use our in-house software development team to build new web portals from scratch. In 2019, we officially launched the Minerals Grievance Platform (MGP) with the Responsible Minerals Initiative (RMI). The MGP represents the first-ever mechanism for industry and audit programs to participate in a collaborative process designed to detect and mitigate high-risk activity in their supply chains. To date, the MGP counts 37 participating organizations, including multiple Fortune 500 companies.



Our Cells

Organized Crime and Grand Corruption

The Organized Crime and Grand Corruption (OCGC) cell focuses on the convergence between serious organized crime, large-scale corruption, and the facilitators who help it cross borders. We focus on how large-scale corruption weakens societies and enables illicit networks in both origin and destination countries.

In 2019, OCGC contributed analysis to law enforcement in the US and abroad, helping lead to the dismantling of human trafficking networks in Southeast Asia, the seizure of airplanes used in narcotics trafficking in Latin America, and the identification of millions of dollars' worth of Eastern European money laundering.

45 Latin American ports mapped to Chinese Belt and Road Initiative-linked investments or construction

46 partners ranging from the US government, the UN, foreign governments, and NGO's supported with actionable case info on forced labor networks

300+ tankers analyzed and tracked after they were identified as visiting Venezuelan ports in potential violation of sanctions

Port of Sunda Kelapa, taken by C4ADS analyst in Kaohsiung, Taiwan



TRACING THE GENERATION OF ILLICIT FUNDS
In 2019, C4ADS's Trafficking in Persons initiative focused on forced labor in the seafood sector. We partnered with local advocates to investigate cases involving the exploitation of migrant workers in industrial fishing fleets around the world. Our investigations supported the efforts of individuals and organizations to seek justice for victims of trafficking, and our analysis of typologies supported sector-wide efforts to combat trafficking in persons.

EXPOSING CORRUPTION THROUGH COLLABORATION
Investigative journalists play an important role exposing corruption, organized crime, and human rights violations around the world. In 2019, C4ADS worked to expand the investigative capacity of journalists throughout Latin America, Europe, and Asia. We provided in-depth training on cutting-edge PAI techniques and directly collaborated with local and regional journalists, empowering on-the-ground investigations with innovative technology solutions and our data-based approach. Our efforts resulted in stories covering issues ranging from corruption to money laundering to forced labor.

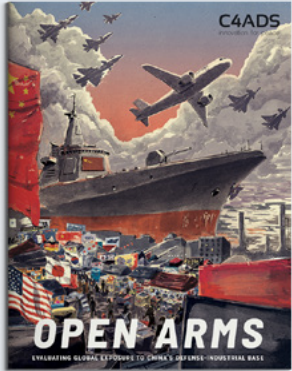
TRACKING THE OFFSHORING OF ASSETS
C4ADS' Latin America Initiative in 2019 focused on tracing the proceeds of corruption from Venezuela into luxury assets and property abroad. We worked closely with local journalists to identify global trade relationships facilitating corruption within Venezuela, while mapping the global corporate and asset footprints of corrupt elites.

IDENTIFYING INTEGRATED ASSETS OFFSHORE
As part of our ongoing efforts to map real estate as an asset class of money laundering concern, C4ADS partnered with the Carnegie Endowment to support the identification of at least 800 offshore holdings in Dubai linked to Nigerian political elites. These properties are estimated to be worth over \$400 million, or more than one third of the Nigerian Health Ministry's reported 2020 budget.

DEEP DIVE: COLLABORATIVE INVESTIGATIONS TO LINK EVIDENCE TO ACTION

In 2019, C4ADS conducted 20+ investigations into networks engaging in, and profiting from, forced labor around the world in partnership with local organizations. One of these cases involved dozens of Indonesian migrant fishermen recruited to work on 13 industrial fishing vessels. The fishermen were subject to a variety of forced labor indicators, like denial of potable water, excessive working hours, and incomplete payment of salaries. C4ADS partnered with an Indonesian organization working with these fishermen upon their return to Indonesia to investigate the on-shore corporate networks associated with this case. Using Palantir software to conduct comprehensive network analysis of corporate records, we uncovered the recruitment agency in Indonesia as well as the vessel owners and their global supply chains.

Public Profile



HIGHLIGHTED COVERAGE
The Wall Street Journal exclusive investigation featured in print edition and front page of online edition



In 2019, C4ADS produced six long-form reports, including the third in our ongoing partnership with the **World Customs Organization (WCO)** to provide a more visually appealing way to interpret and understand customs data for its 182 customs administrator members in its capstone annual Illicit Trade Report (ITR).



HIGHLIGHTED COVERAGE
Front page of BBC & NBC News, featured on The Daily Show with Trevor Noah



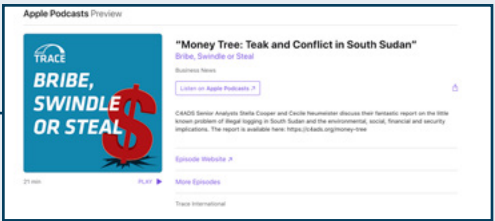
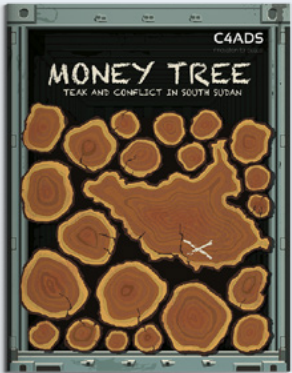
The New York Times Visual Investigations Lab won the prestigious George Polk Award in 2019
for reporting that included its partnered story with C4ADS on North Korea and our “Lux and Loaded” report.



HIGHLIGHTED COVERAGE
New York Times Visual Investigations collaboration featured on front page of New York Times print edition, Front Page of New York Times online edition, NYT Push Notifications and NYT Youtube Channel, gaining 3.5M Views on Youtube alone.



HIGHLIGHTED COVERAGE
Exclusive interview with Undercurrent News



HIGHLIGHTED COVERAGE
Exclusive coverage with Thomson Reuters

HIGHLIGHTED COVERAGE
Dedicated episode of Trace International podcast “Bribe, Swindle or Steal”

Culture

Washington, DC runs on its young staff, but they reap little of the visibility or reward.

Our culture inverts this paradigm to prove that committed young analysts empowered by the right tools, technologies, and training can achieve outsized mission impact.

Our analysts are our greatest asset.

The average C4ADS analyst is 25 years old, speaks 2 or 3 languages fluently, has worked internationally, and is driven to execute on our mission.

Analyst Development

We invest in our analysts so that we have the skills we need today and the workforce the world will need tomorrow. We provide learning opportunities, skills development, and teambuilding opportunities.

Diversity

High-context analysts require diverse backgrounds and experiences to make sense of an increasingly complex and interconnected world. We seek to support the participation of women and minorities in the international security workforce.

Joy

We seek to develop a rewarding, welcoming, and collaborative culture to better accomplish our mission.

Our favorite cultural values



Trying new things and creating space for it!

The sense that analysts look out for each other and will support each other when they can.

Analysts are given independence to pursue their own projects.

The people (of course) and the mission. I'm constantly proud to tell people where I work, what I work on, and the impact we have. It makes every day of work feel purposeful.

I love that we are free to be silly and informal, even though the topics we work on are very serious. It makes the workplace a unique and fun place to be.

Our community works when we all participate, we all go the extra mile, and we all see each other as equals. We have a pretty flat organization as a result. Always sticking to these values helps us to respect each other daily.

- Anonymous feedback from our analysts

Internships

26
interns in 2019

4.12%
acceptance rate

100%
of 2019 interns said they
would recommend a
C4ADS internship to
peers

Analyst
Investigative
Training
Program

Developing future change-makers is a core part of our ethos. That's why we invest in our interns with extensive educational sessions led by our Executive Director, training them on cutting-edge research methods, technologies, and career skills. Interns are then paired with an analyst and mentored on impactful projects.

Why Our Interns
Love Their
Experience



There is almost like an ah-ha moment when [Director] Johnson breaks things down

Fantastic.

I learned so much

Beyond expectations

I learned that I would like to do this type of work professionally

Favorite internship ever

I think it was perfect

Never had an internship where I took away so much from it

Compared to other spaces in the international security/IR realms, C4ADS is diverse and inclusive. I never felt excluded or disrespected due to any parts of my identity, and it was cool to have a lot of female role models among the staff.

- Anonymous feedback from our 2019 class of interns



Marcelo Guerra González
BA Econometrics,
BA International Relations
University of Rochester
Class of 2020

Investigative Analyst
Internship



From all my internship experiences, C4ADS was the one that had the most thorough and interesting training. I learned how to use software like Windward, OpenCorporates, Veritrade, Panjiva, and Palantir. I think the most unique part of interning at C4ADS is that it actually challenges you and helps you grow professionally.

C4ADS heavily increased my analytical and research skills in ways that I am sure will have a lasting impact on my career. C4ADS challenged me to approach problems differently. The data-driven approach at solving problems and the constant quest to innovate are mentalities that I will take anywhere.



Matt DeButts
MA, Communication
Stanford University
Class of 2021

Investigative Analyst
Internship



C4ADS invests the time and resources into thoroughly training their interns for the duration of their internship. The investigative techniques I learned there have been, and will continue to be, invaluable in my journalistic career. The team is young, collaborative, and innovative. Like in a Silicon Valley start-up, the team's first instinct is to say "Yes."

I now have a better idea of what is possible — and as importantly, what isn't possible — with open source data today. I work as a journalist; we often investigate unanswered questions; sometimes those questions have answer-able questions and sometimes they don't. Differentiating between the two is key. At the same time, C4 equipped me with the analytic toolset to try 15 different approaches to finding an answer — meaning that I answer more questions now. My time at C4 has been immensely useful in my career thus far.



Ilona Gomez
BA, Business Administration
Towson University
Class of 2020

Nonprofit Finance
Internship



During my experience at C4ADS the most unique aspect was the culture. The culture at C4ADS is very collaborative and encourages interns to learn as much as you can. Another memorable aspect is the time that senior and executive level individuals are willing to take with you, to sit with you on topics you are interested in like career development. As I start my new role as an Operation Analyst, being able to think about the "Whole Picture" when it comes to projects will allow me to identify the issue and solve it. Through workshops at C4ADS and working directly with my manager, having this internship has helped me recognized areas I need to improve professionally and areas I have strengths in.

Financials



Photo taken by
C4ADS analyst in
Dakar, Senegal

2019
was C4ADS' best year to date

C4ADS is among the
top 0.1%
of US nonprofits in financial
disclosure transparency
according to GuideStar



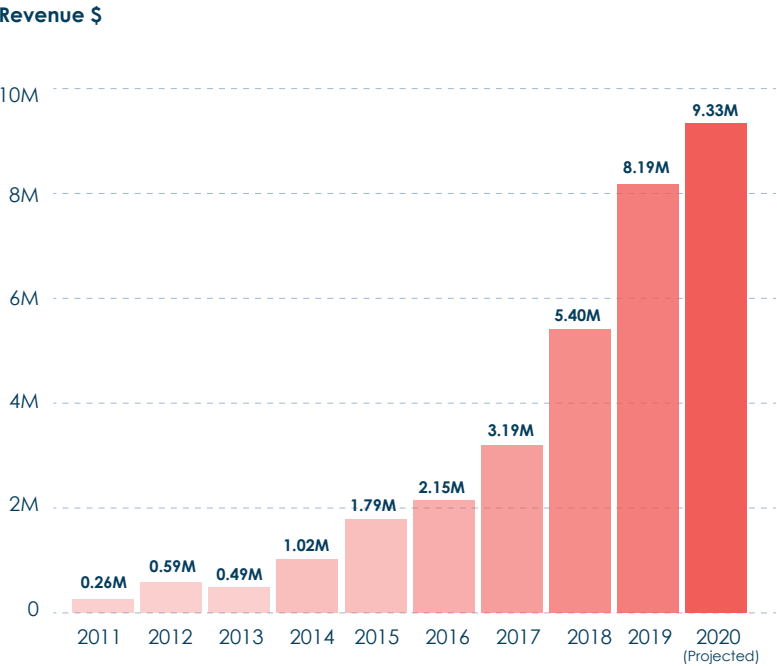
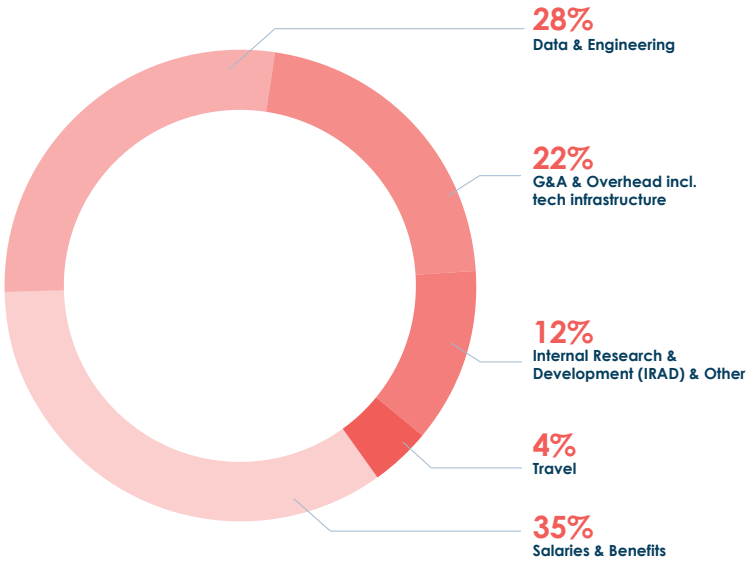
6 Consecutive Years of
positive net revenue growth
behind us and a bright
financial future ahead

C4ADS is committed to
maximizing **impact**
from its donor investments

88% Program Efficiency
means that the vast majority
of donor funds are invested in
research activities

4,520%
return on donor investment

Calculated in value of enabled enforcement seizures,
indictments, and forfeitures in 2019



2019 and 2020 numbers are based on un-audited financials and
internal projections

Board Members

The Board of Directors of the Center for Advanced Defense Studies (C4ADS) provides essential guidance and oversight in support of our mission. Their leadership ensures that we remain mission focused. Under their oversight C4ADS is professionally, ethically, and transparently governed. Our Board of Directors is committed to the long-term sustainment of C4ADS, its mission, and its culture. They are always seeking committed candidates to rotate into Board positions, who are driven to add their diverse talents to our team.

The current directors include eleven (11) voting members and a non-voting Executive Director, responsible to them for the strategic direction, leadership, and daily management of the Center. These members have selflessly donated their time, money, advice and connections to support "Innovation for Peace".



RICHARD WIRT, PHD
CHAIRMAN OF THE BOARD

Dr. Richard Wirt is an Intel Senior Fellow, former Vice President and General Manager of Intel Corporation's Software and Solutions Group, and former Chief Technology Officer for In-Q-Tel.



JOHN R. PEARCE
MEMBER OF THE BOARD

Mr. Pearce is VP of Cyber Operations at SOC, LLC, with over 40 years of experience within the Defense and Intelligence Communities.



LTC (RET.) CHRIS KAMMERMANN
MEMBER OF THE BOARD

Colonel Kammermann is CEO and President of CLK Executive Decisions, a consulting firm specializing in defense and security contracting.



HON. APRIL FOLEY
MEMBER OF THE BOARD

The Hon. April H. Foley is a former US Ambassador to Hungary and former First Vice President of the Export Import Bank of the United States. She served as an executive for PepsiCo for 17 years.



NEWTON HOWARD, PHD, HDR
MEMBER OF THE BOARD

Dr. Newton Howard serves as Professor of Computational Neurology and Functional Neurosurgery at the University of Oxford and Nuffield Department of Surgical Sciences at John Radcliffe Hospital.



LTG (RET.) DAVID P. FRIDOVICH
MEMBER OF THE BOARD

Lieutenant General David P. Fridovich is a former Deputy Commander of U.S. Special Operations Command with more than 37 years of service in the U.S. Army.



Lt. Col. (RET.) STEPHEN HOMOKI
MEMBER OF THE BOARD

Colonel Stephen Homoki is a retired executive with experience in data services and start-ups with 22 years of service in the United States Air Force, earning a Silver Star, two Distinguished Flying Crosses, and 13 Air Medals.



JOHN CALLERY, SSA
MEMBER OF THE BOARD

John Callery is a Special Agent in Charge (SAC) with the US Department of Justice with over 30 years of law enforcement field experience.



SERGEY KANAREYKIN
MEMBER OF THE BOARD

Sergey Kanareykin, CTO of C4ADS from 2005-2008, is an entrepreneur and technologist, with over 15 years of experience spanning software development, early stage technology investments, and startup management.



HON. SUE KELLY
MEMBER OF THE BOARD

The Hon. Sue Kelly is a former member of Congress, who represented the 19th District of New York from 1995 to 2006, serving on Financial Services, Small Business, Transportation and Infrastructure committees.



Retiring Board Member
LESTER S. HYMAN
C4ADS BOARD 2004 – 2019

The Honorable Lester S. Hyman, Esq, JD, is retiring from our board this year, after over 15 years of service. During this time, he served as a member of the governance committee, nominating sub-committee, legal counsel, and Vice Chairman. We have been honored to spend time with him and look forward to maintaining our friendship.

Lester S. Hyman is a Washington, D.C. attorney with more than 50 years of experience in law, business, politics, the arts and international affairs. After serving in the federal government as a protege of John F. Kennedy, he was Chief Assistant to the Governor, Secretary of Commerce and Development, and Chairman of the Democratic Party of that State. He also has taught at the Kennedy School of Government at Harvard University.

In Washington he was a founder of the prominent law firm of Swidler Berlin and has been very active in international peace resolution work in Africa and Central America where he has worked closely with former President Jimmy Carter and the International Negotiating Network. He was President Clinton's representative at the signing of the Guatemala Peace Treaty as well as Clinton's appointee to the Franklin D. Roosevelt Memorial Commission. He is the author of the 2003 book "U.S. Policy Towards Liberia", as well as the 2019 book "JFK...the Kennedys...and Me". Mr. Hyman has served on the Boards of the Truman Center for National Policy, the Center for Advanced Defense Studies (C4ADS), and the International Intellectual Property Institute (IPI). He additionally served on the D.C. Arts and Humanities Council, and the Boards of the Norton Simon Museum of Art and the Dana Tai Soon Burgess Dance Company. In education, he was a member of the Board of the University of the District of Columbia and for 30 years served on the Board of the H. Lavity Stoutt Community College in the British Virgin Islands.

Devoted to our mission and team, Lester was always the first to reach out to friends and contacts in media and legal circles in support of C4ADS and its mission.



C4ADS

innovation for peace

C4ADS is a digital-age think tank dedicated to providing data-driven analysis and evidence-based reporting on global conflict and transnational security issues.

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