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AWARDS

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2020 BEST PRACTICES AWARD

COBWEBS TECHNOLOGIES

2020 GLOBAL AI-POWERED WEB INTELLIGENCE TECHNOLOGY INNOVATION LEADERSHIP AWARD

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Background and Company Performance

Industry Challenges

Since the attacks on the World Trade Center on September 11th, 2001, the United States (US) government and its agencies have implemented advanced security technologies to prevent terrorists from harming or killing innocent civilians or committing other forms of destruction and sabotage. In 2002, the US government created agencies to help with new tighter-security initiatives, including the US Department of Homeland Security, with the goal of "keeping America safe." In September 2006, the United Nations (UN) General Assembly adopted the UN Global Counter-Terrorism Strategy to fight the continuing rise of (often politically-motivated) terrorist organizations, such as Al-Qaeda and ISIS. The UN realized the need for a coordinated and collective strategy to combat terrorism as terrorist groups around the globe continued to gain traction with sympathizers and add adherents. Subsequently, in June 2017, the UN developed the Office of Counter-Terrorism.

Moreover, hate groups span the globe and maliciously target people based on their ethnicity, gender, gender identity, nationality, religion, or sexual orientation, and advocate, practice, and promote hatred or violence towards individuals differing from the group's members. Such groups include the Ku Klux Klan, a white supremacy group that primarily targets black individuals; and the Boogaloo Boys, an anti-government and anti-law enforcement extremist group eager for societal collapse in the US. In the US, hate groups infiltrate Black Lives Matter (BLM) protests (the fight to eradicate systemic racism and police brutality) to discredit the BLM movement and accelerate social disorder and collapse.

Additionally, international organized criminal enterprises (e.g., the Bratva Russian mob, the Yakuza Japanese criminal organization, and Cosa Nostra Italian mafia) and violent street gangs (e.g., 18th Street and rival gang MS-13) traffic drugs, humans, and weapons commit financial fraud and intellectual and physical property theft, and extort citizens for monetary gain. Such nefarious criminal organizations abuse, displace, or murder anyone who resists or interferes with their operations. Regions where organized criminal enterprises and gangs operate suffer some of the world's highest homicide rates, thus government organizations and law enforcement agencies must track down and eliminate these brutal forces. However, traditional manual methods cannot keep pace with organized criminal enterprises' and gangs' daily activities, plans, or social circles; therefore, agencies must implement automated solutions to aid this on-going global battle.

Criminal organizations use the dark web to hide their illegal activities (e.g., terrorism planning and recruiting and child abductions) and advertise their "goods and services," such as drugs-for-sale or murder-for-hire. Malicious actors use the dark web to allow individuals to remain anonymous while uploading or accessing illegal or sensitive content (e.g., media or confidential data) in the digital realm. Dark web users correspond in a secure and clandestine digital environment, allowing criminals to conduct illicit activities in the physical world without alerting law enforcement. The dark web continues to survive as it consists of digitally isolated darknets that host data in remote physical locations due to

more lenient laws in less technologically-regulated countries, enabling users to avoid extradition, arrest, or other litigation.

While there is currently no way to shut down the dark web, law enforcement personnel access the dark web to investigate cases and conduct sting operations by posing as a buyer or seller of illegal goods or services. However, such manual processes waste valuable time and operational expenditures. Subsequently, technology developers created solutions that can search the dark web; however, many such solutions monitor various sources in siloed systems, making it challenging to piece together an incident's information. An artificial intelligence (AI)- and machine learning (ML)-equipped web intelligence (WEBINT) platform can detect the correlation between events or relationships among people that may go unnoticed or take months or years to piece together with traditional manual processes. Therefore, it is vital for law enforcement and government agencies to implement such state-of-the-art solutions.

Technology Leverage and Business Impact of Cobwebs Technologies

Founded in 2015, New York-headquartered, Cobwebs Technologies (Cobwebs) leverages AI- and ML-powered analytics to deliver revolutionary WEBINT solutions for comprehensive investigations and data analysis. The company serves global clients, including corporate security, financial institutions, law enforcement, national security, and public safety agencies. Frost & Sullivan proudly recognized Cobwebs as the 2019 Global Technology Innovation Leader in the AI-powered Web Intelligence market and continues to be impressed with the company's continuous evolution in the industry through game-changing solutions.

Cobwebs' Game-Changing Solutions: The New Standard for Web Intelligence

Cobwebs' innovative and comprehensive WEBINT solutions include a web investigation platform, threat intelligence solution, secured analyst assistant, active web intelligence, financial investigation platform, and location intelligence system. The company's cloud-hosted solutions and on premise, collects and aggregates data from all web layers to enable operators to piece together an entire event and relationships among various individuals. Cobwebs allows law enforcement to conduct investigations quickly and take "bad guys" and their network off the dark web and the streets. Cobwebs' solutions pull information from the open web (i.e., publicly available data that anyone can collect for intelligence context), the deep web (i.e., password-protected websites and applications), the dark web, social media platforms, and mobile applications. The company's automated platforms enable organizations to save significant time and operational expenditures and allow analysts to focus on more cognition-intensive tasks.

The dark web consists of data that individuals cannot access via the open (or surface) web, which consists of only 10% of all Internet content type, allowing users to search content via Google or other search engines. At the core of Cobwebs' solutions is its WEBINT search engine equipped with proprietary AI and ML algorithms that dig beneath the surface web to reach 90% of hidden Internet content. The solution enables law enforcement to investigate cases with data from the deep web and dark web and interact

with threat actors through an secured analyst assistant tool, all while maintaining complete anonymity. Operators can pre-define searches (e.g., hashtags, locations). Cobwebs' WEBINT solutions will automatically monitor the open, deep, and dark webs, social media platforms, and mobile applications for Big Data related to a case. Cobwebs can then generate critical insights that the solution saves in a digital case profile. Moreover, the company's solutions alert operators of real-time events through live data analysis, providing operators with superior situational awareness. Cobwebs' solutions also provide operators with an interactive connections graph that displays the relationships between disparate events (cyber or physical), different individuals, and the links between such incidents and social circles.

The company's user-intuitive platforms are highly scalable, flexible, and robust, enabling an any-sized organization to search, detect, and piece together events and cases from the copious amounts of information available on the open, deep, and dark webs. Cobwebs platform scans and monitors a myriad of sources, including social media platforms and applications, provide operators with information that meets their search parameters. The WEBINT solutions use AI and ML analytics to list found case information on a relevance scale, i.e., positive, neutral, and negative. Moreover, the operator can manually change the presented data's relevancy level, if necessary, which will prompt the platform to search for real-time and future information based on the adjusted relevancy levels for that particular case or incident.

Cobwebs' social analysis capabilities track threat actors (e.g., a hate group member), view their connections with other people, and reconstruct various social circles to gain a holistic view of a group and its activities. Furthermore, operators can investigate the results in detail and "remove" individuals that do not have a criminal connection to a threat actor. For instance, a person may have 50 mutual friends with someone else on a social media platform, but those connected persons may be family members or co-workers. Alternatively, those 50 mutual connections could indicate a drug trafficking ring or other criminal organization. Impressing Frost & Sullivan's research analysts, the company's platforms can identify and locate an individual through real-time analysis of billions of digital and real-world data points. Cobwebs' solutions can identify where a social media photo was taken by recognizing background images (e.g., street signs and landmarks), and then mapping out the location (in real-time, if applicable). Cobwebs' AI-Powered platform enables users to identify connections between data points across different geographies, and generate insights to predict potential threats.

Innovation and Operational Strategies Drive Customer Value

Cobwebs recognizes that financial crimes, such as money laundering and fraud, supply the financing that hate groups, terrorists, and organized criminal enterprises require to expand their destabilizing operations and influence through harmful and illicit activities. In response, the company's research and development team created Weaver, its revolutionary financial investigations platform. Weaver provides financial professionals, including those with little investigative background, with a comprehensive search engine for queries regarding Know Your Customer (KYC), Anti-Money Laundering (AML), and

Combatting the Financing of Terrorism (CFT) regulations, making the onboarding process safe, secure, and more comprehensive than ever before. Demonstrating Cobwebs' innovative spirit and ability to evolve its solutions, Weaver goes above and beyond the Global Financial Action Task Force's mandates that require financial institutions to investigate consumers and companies for signs of money laundering and terrorism financing. Weaver enables financial institutions to conduct and obtain automated in-depth research surrounding their new customers, employees, and partners, including their risk level, wealth and wealth source, reputational background, and social network analysis, without having to risk excessive resources or overextended onboarding times. The platform automatically correlates data, provides the operator with AI-driven insights (e.g., behavioral trends), and generates a report, allowing financial institutions to meet KYC, AML, and CFT standards and avoid steep non-compliance penalties.

Cobwebs' new WebLoc location intelligence platform assists governments, law enforcement, and national security agencies with combatting real-world threats to public safety (e.g., natural disasters). WebLoc detects the spread of COVID-19 through geo-located intelligence to monitor and manage coronavirus response and public health guidance (e.g., ensure individuals practice social distancing) to help return the world to pre-COVID-19 conditions. Moreover, the company's Prediction for Decision platform predicts future outbreak locations, empowering decision-makers to take proactive measures to halt the spread of COVID-19.

Clients can layer Cobwebs' solutions with their existing systems for greater situational awareness. Cobwebs' solutions can operate via any cloud platform (e.g., Microsoft Azure, Amazon Web Services). On September 1st, 2020, the company has launched an open-source intelligence training center, where individuals can obtain certifications. Cobwebs aims to have its WEBINT solutions available to designated academy programs for students to search for case information and provide hands-on training to the next generation of security intelligence professionals. Frost & Sullivan's research analysts believe Cobwebs positions itself to gain significant market share in the AI-powered WEBINT industry.

Conclusion

With organized criminal enterprises (e.g., gangs, terrorist groups, hate groups) growing in numbers and expanding globally, law enforcement, governments, and national security agencies must detect and halt illicit activities. Cobwebs Technologies delivers ground-breaking web intelligence solutions that allow clients to search for and access data from the open web, deep web, dark web, social media platforms, and mobile applications to conduct case investigations. The company's newest solution helps financial institutions to gain actionable insights (beyond competing platforms' capabilities) into customers, employees, and partners during the onboarding process. Moreover, Cobwebs Technologies' WebLoc and Prediction for Decision platforms monitor and predict the spread of COVID-19, allowing decision-makers to respond proactively.

For its innovative spirit, customer-centric solutions, and strong overall performance, Cobwebs Technologies earns Frost & Sullivan's 2020 Global Technology Innovation Leadership Award in the AI-powered web intelligence industry.

Significance of Technology Innovation Leadership

Technology-rich companies with strong commercialization strategies benefit from the increased demand for high-quality, technologically-innovative products. Those products help shape the brand, leading to a strong, differentiated market position.

Understanding Technology Innovation Leadership

Technology Innovation Leadership recognizes companies that lead the development and successful introduction of high-tech solutions to customers' most pressing needs, altering the industry or business landscape in the process. These companies shape the future of technology and its uses. Ultimately, success is measured by the degree to which a technology is leveraged and the impact that technology has on growing the business.

Key Benchmarking Criteria

For the Technology Innovation Leadership Award, Frost & Sullivan analysts independently evaluated two key factors—Technology Leverage and Business Impact—according to the criteria identified below.

Technology Attributes

Criterion 1: Industry Impact
Requirement: Technology enables the pursuit of groundbreaking ideas, contributing to the betterment of the entire industry.

Criterion 2: Product Impact
Requirement: Specific technology helps enhance features and functionalities of the entire product line for the company.

Criterion 3: Scalability
Requirement: Technology is scalable, enabling new generations of products over time, with increasing levels of quality and functionality.

Criterion 4: Visionary Innovation
Requirement: Specific new technology represents true innovation based on a deep understanding of future needs and applications.

Criterion 5: Application Diversity
Requirement: New technology serves multiple products, multiple applications, and multiple user environments.

Future Business Value

Criterion 1: Financial Performance
Requirement: Potential is high for strong financial performance in terms of revenues, operating margins, and other relevant financial metrics.

Criterion 2: Customer Acquisition
Requirement: Specific technology enables acquisition of new customers, even as it enhances value to current customers.

Criterion 3: Technology Licensing
Requirement: New technology displays great potential to be licensed across many sectors and applications, thereby driving incremental revenue streams.

Criterion 4: Brand Loyalty
Requirement: New technology enhances the company's brand, creating and/or nurturing brand loyalty.

Criterion 5: Human Capital
Requirement: Customer impact is enhanced through the leverage of specific technology, translating into positive impact on employee morale and retention.

Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices

Frost & Sullivan Awards follow a 10-step process to evaluate Award candidates and assess their fit with select best practice criteria. The reputation and integrity of the Awards are based on close adherence to this process.

STEP	OBJECTIVE	KEY ACTIVITIES	OUTPUT
1 **Monitor, target, and screen**	Identify Award recipient candidates from around the globe	• Conduct in-depth industry research • Identify emerging sectors • Scan multiple geographies	Pipeline of candidates who potentially meet all best-practice criteria
2 **Perform 360-degree research**	Perform comprehensive, 360-degree research on all candidates in the pipeline	• Interview thought leaders and industry practitioners • Assess candidates' fit with best-practice criteria • Rank all candidates	Matrix positioning of all candidates' performance relative to one another
3 **Invite thought leadership in best practices**	Perform in-depth examination of all candidates	• Confirm best-practice criteria • Examine eligibility of all candidates • Identify any information gaps	Detailed profiles of all ranked candidates
4 **Initiate research director review**	Conduct an unbiased evaluation of all candidate profiles	• Brainstorm ranking options • Invite multiple perspectives on candidates' performance • Update candidate profiles	Final prioritization of all eligible candidates and companion best-practice positioning paper
5 **Assemble panel of industry experts**	Present findings to an expert panel of industry thought leaders	• Share findings • Strengthen cases for candidate eligibility • Prioritize candidates	Refined list of prioritized Award candidates
6 **Conduct global industry review**	Build consensus on Award candidates' eligibility	• Hold a global team meeting to review all candidates • Pressure-test fit with criteria • Confirm inclusion of all eligible candidates	Final list of eligible Award candidates, representing success stories worldwide
7 **Perform quality check**	Develop official Award consideration materials	• Perform final performance benchmarking activities • Write nominations • Perform quality review	High-quality, accurate, and creative presentation of nominees' successes
8 **Reconnect with panel of industry experts**	Finalize the selection of the best-practice Award recipient	• Review analysis with panel • Build consensus • Select recipient	Decision on which company performs best against all best-practice criteria
9 **Communicate recognition**	Inform Award recipient of Award recognition	• Announce Award to the CEO • Inspire the organization for continued success • Celebrate the recipient's performance	Announcement of Award and plan for how recipient can use the Award to enhance the brand
10 **Take strategic action**	Upon licensing, company is able to share Award news with stakeholders and customers	• Coordinate media outreach • Design a marketing plan • Assess Award's role in future strategic planning	Widespread awareness of recipient's Award status among investors, media personnel, and employees

The Intersection between 360-Degree Research and Best Practices Awards

Research Methodology

Frost & Sullivan's 360-degree research methodology represents the analytical rigor of our research process. It offers a 360-degree-view of industry challenges, trends, and issues by integrating all 7 of Frost & Sullivan's research methodologies. Too often companies make important growth decisions based on a narrow understanding of their environment, leading to errors of both omission and commission. Successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. The integration of these research disciplines into the 360-degree research methodology provides an evaluation platform for benchmarking industry players and for identifying those performing at best-in-class levels.

360-DEGREE RESEARCH: SEEING ORDER IN THE CHAOS
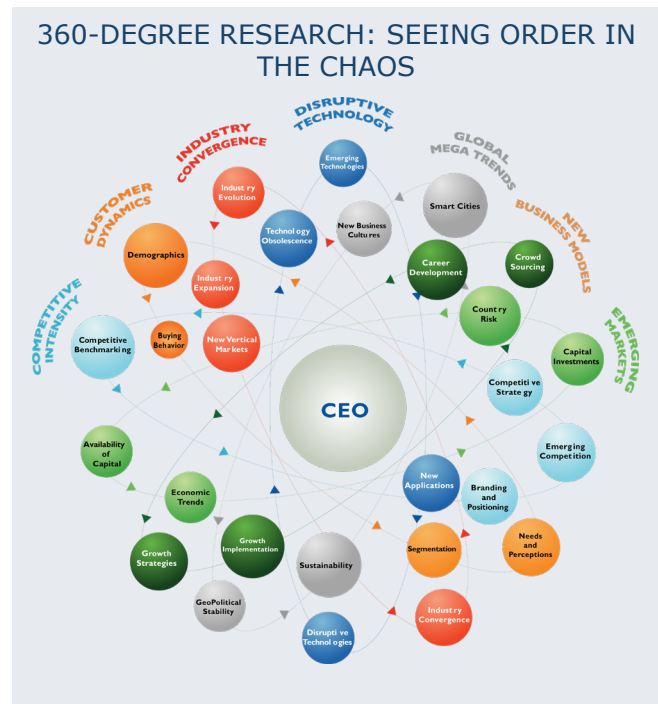
About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, enables clients to accelerate growth and achieve best-in-class positions in growth, innovation and leadership. The company's Growth Partnership Service provides the CEO and the CEO's Growth Team with disciplined research and best practice models to drive the generation, evaluation and implementation of powerful growth strategies. Frost & Sullivan leverages more than 50 years of experience in partnering with Global 1000 companies, emerging businesses, and the investment community from 45 offices on six continents. To join our Growth Partnership, please visit http://www.frost.com.