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BEST PRACTICES

AWARDS

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2019

BEST
PRACTICES
AWARD

THALES

2019 GLOBAL
MOBILE ID WALLET SOLUTIONS
COMPANY OF THE YEAR AWARD

Contents

Background and Company Performance	3
<i>Industry Challenges</i>	3
<i>Visionary Innovation & Performance and Customer Impact</i>	3
<i>Conclusion</i>	6
Significance of Company of the Year	7
Understanding Company of the Year	7
<i>Key Benchmarking Criteria</i>	7
Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices.....	9
The Intersection between 360-Degree Research and Best Practices Awards.....	10
<i>Research Methodology</i>	10
About Frost & Sullivan	10

Background and Company Performance

Industry Challenges

While controversy surrounds who should receive credit as the true inventor of the telephone—Alexander Graham Bell, Anthony Meucci, Elisha Gray, or others—it does not diminish the fact that it remains one of the most revolutionary inventions of the modern era.^{1,2} In 1946, the world's first commercial mobile phone service launched through radio wave transmission, furthering telephonic innovations toward today's smartphone.³ In 2019, more than 2.5 billion people globally used a smartphone.⁴

Recent technological advances enable smartphone users to utilize credit cards via secure smart wallet apps reducing the need to carry any other means of payment. However, a physical photo ID (e.g., a passport or driver's license) is still required in many situations that require identity or age verification. Governments and citizens see a need for more efficient, flexible, and secure ways of verifying identity and exchanging information.

Governments, banks, and many other organizations require holistic identity-focused solutions to combat the ever-increasing incidences of counterfeit IDs to protect their ecosystems, clients, and reputations.

Frost & Sullivan notes the benefits of electronic identification (eID) as an efficient, flexible, and secure replacement to conventional paper and plastic IDs such as passports, healthcare cards, and driver's licenses. Governments and enterprises that use eID solutions realize more secure transactions with citizens and consumers and a decrease in identity theft. Frost & Sullivan's independent analysis confirms that mobile, digital ID solutions will continue to gain traction globally.

Visionary Innovation & Performance and Customer Impact

La Défense, France-based Thales finalized the acquisition of Gemalto in 2019 and is nearing the completion of merging the two companies' technologies and services. Gemalto leveraged its extensive expertise in digital security credentials to develop its mobile government-to-citizen identification solution, Gemalto Digital ID Wallet. The company safeguards governments, businesses, and billions of consumers globally against data breaches and identity theft, and also offers biometric hardware and software, government document readers, and identity and access management solutions that are fortified with Thales' cybersecurity technologies. Frost & Sullivan recognized Gemalto as the 2018 Company of the Year in the global identity verification and authentication solution market and continues to be impressed by how Thales is bolstering Gemalto's digital solutions with its own competitive strategies, technological innovations, and best practices.

Game-Changing Government-to-Citizen Mobile ID Technology

Mobile options add a level of convenience to routine tasks. Thales views a mobile ID solution as a proliferating market need to strengthen conventional ID document standards'

¹ <https://www.theguardian.com/world/2002/jun/17/humanities.internationaleducationnews>

² <http://www.uh.edu/engines/epi1098.htm>

³ <http://www.nationalitpa.com/history-of-telephone>

⁴ <https://www.pewresearch.org/global/2019/02/05/smartphone-ownership-is-growing-rapidly-around-the-world-but-not-always-equally/>

security and legitimacy. The company collaborates with government agencies to ensure that the Gemalto Digital ID Wallet technology truly meets the needs of clients, citizens, and industries by fulfilling identity and security standards and regulations while remaining both flexible and customizable. Thales' app allows governments to issue a digital electronic version as well as derived digital credentials of state and national ID documents, such as driver's licenses, ID cards, vehicle registration cards, passports, and health insurance cards. Gemalto Digital ID Wallet users can conduct in-person or online transactions through Know Your Customer, Anti-money Laundering, and Customer Due Diligence standards with unrivaled convenience, security, and privacy through any smartphone. The company's platform allows users to prove who they are online to register with new eService providers, open a bank account remotely, and sign documents securely. Moreover, Gemalto Digital ID Wallet's Signed Doc feature allows citizens to carry digitally signed documents, such as a doctor's prescription.

Advanced Mobile Software Security and Data Privacy Features

Thales protects a citizen's personally identifiable information (PII) by equipping its mobile based digital identity with unmatched, multi-layered security techniques that are part of the Gemalto Mobile Security Core, including encryption, obfuscation, jailbreak detection, and advanced white-box cryptography solutions. It is the first company to achieve the highest level of the international Common Criteria security standard for a mobile ID software solution: EAL 3 augmented with AVA_VAN.3, ADV_FSP.4, ADV_TDS.3, ADV_IMP.1, and ALC_TAT.1.

The Gemalto Digital ID Wallet app safeguards a user's private information yet allows for complete control of sharing specific data with certain individuals or authorities. For instance, if a law enforcement officer pulls over a Gemalto Digital ID Wallet user, the citizen chooses the eID verification option that provides information relevant for the situation while concealing non-essential PII, and then the app generates a quick response (QR) code. The officer scans the QR code with an eID verifier app (the user must give consent to share the data), and only then will the Gemalto Digital ID Wallet relay the information to the officer through either Bluetooth Low Energy, NFC or Wi-Fi Aware.

The buyer of an age-restricted product can generate a QR code that a vendor can scan to verify the individual's legal age, yet birthdate and other PII remain private. The eID verifier device shows a merchant the individual's ID photo with easy-to-read results via a green checkmark and the text "overage" or a red X and words "underage" on the display.

Gemalto Digital ID Wallet does not require citizens to disclose their name, birthdate, home address, ID number, or any unnecessary confidential PII. If verification fails multiple times, the platform will lock the account and notify the registered user that something is abnormal—possibly that someone is attempting to fraudulently use the eID—and offer instructions on how to reinstate the eID account. Frost & Sullivan points out another key differentiator of the Gemalto Digital ID Wallet: if an individual's credentials are suspended for any reason, the government can trigger the platform to reflect an "invalid" status in real time. Physical IDs cannot provide verifiers with an up-to-date validity status.

Thales' platform significantly reduces human error, such as a verifier accepting a fraudulent ID. Gemalto Digital ID Wallet offers verified and electronic proof of ID authenticity; scanner operators only need to confirm that the information presented via the Digital ID Wallet meets the situation-specific criteria.

Users can lock out the Gemalto Digital ID Wallet over the air to prevent identity theft if a smartphone is lost or stolen, and easily obtain a replacement digital ID on another device.

Frost & Sullivan applauds how Thales truly goes above and beyond to protect a user's confidential information, including integrating artificial intelligence and machine learning into its identity credentials and biometric modality authentication functions and complying with strict mandates including those of the European Union (the Electronic Identification, Authentication, and Trust Services regulation and the General Data Protection Regulation); the National Institute of Standards and Technology; and other regional or industry standards.

The company offers a wide range of convenient mobile ID onboarding options, allowing a user to simply and securely complete the process fully remotely via smartphone, PC or self-service kiosk, whereas many competing technologies still rely on face-to-face onboarding only. Citizens can register to a mobile ID by reading a contactless electronic document through their NFC smartphone or alternatively, taking a picture of their non electronic physical ID for the backend solution to check the authenticity of the document then take a selfie to authenticate the owner of the document. They also can set up the credentials (fingerprint, facial, or personal identification number) that will allow them to access their eID via the app on their smartphone, and register to use the platform on multiple devices, such as both their personal and professional smartphones.

Exceptional Customer references and Flexible Business Model approach

Thales serves more than 30,000 entities with its authentication and data encryption technologies, more than 50 countries. With its ID solutions, and more than 200 clients with biometrics deployments in over 80 countries—and has contributed to more than 20 successful digital identity services and mobile ID initiatives around the world. Gemalto Digital ID Wallet use is growing among governments and citizens around the world. With the global smartphone penetration reaching 44%, Thales' mobile ID solution will enable citizens to do more online, stem the flow of people visiting public administration desks and allow smooth online public services delivery, enabling more efficiently, and enabling users to onboard to new online private services and go through online identification processes at a faster pace; more importantly, Gemalto Digital ID Wallet reduces identity theft.

Thales analyzes industry and consumer trends, predicts technology needs, and has revolutionary solutions in place to meet those demands; in the result is customer loyalty and satisfaction. Thales' world-renowned technology allows it to remain on the cutting edge of innovation and offer a flexible business model approach with digital ID platforms available as a solution or as a service to address the increasing need for Identification-as-a-Service and Authentication-as-a-Service.

Conclusion

Smartphones have given users access to mobile banking and email, and they continue to push the limits of innovation—most recently with eID apps.

Frost & Sullivan appreciates how Thales has taken mobile security to a new height using advanced white box cryptography techniques to reach the highest level of Common Criteria standard certification for its mobile ID software solution. The Gemalto Digital ID Wallet platform and services provide governments and citizens around the world with an unparalleled government-to-citizen mobile ID solution that offers superior security, unique flexibility, and remarkable convenience. The Digital ID Wallet, orchestrated by a powerful and modular backend platform, allows a citizen to share situation-relevant data to a third-party ID verifier device while keeping personal data private.

With its innovative technology, advanced features, certified security, and strong overall performance, Thales earns the 2019 Frost & Sullivan Global Company of the Year Award for its mobile ID and Digital ID Wallet portfolio.

Significance of Company of the Year

To receive the Frost & Sullivan Company of the Year Award requires a market participant to demonstrate excellence in growth, innovation, and leadership. This excellence typically translates into superior performance in three key areas—demand generation, brand development, and competitive positioning—that serve as the foundation of a company's future success and prepare it to deliver on the 2 factors that define the Company of the Year Award: Visionary Innovation and Performance, and Customer Impact).



Understanding Company of the Year

Driving demand, brand strength, and competitive differentiation all play critical roles in delivering unique value to customers. This three-fold focus, however, must ideally be complemented by an equally rigorous focus on Visionary Innovation and Performance to enhance Customer Impact.

Key Benchmarking Criteria

For the Global Company of the Year Award, Frost & Sullivan analysts independently evaluated each factor according to the criteria identified below.

Visionary Innovation & Performance

- Criterion 1: Addressing Unmet Needs
- Criterion 2: Visionary Scenarios through Mega Trends
- Criterion 3: Implementation Best Practices
- Criterion 4: Blue Ocean Strategy
- Criterion 5: Financial Performance

Customer Impact

- Criterion 1: Price/Performance Value
- Criterion 2: Customer Purchase Experience
- Criterion 3: Customer Ownership Experience
- Criterion 4: Customer Service Experience
- Criterion 5: Brand Equity

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

Frost & Sullivan analysts 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Hold 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Review analysis with panel • Build consensus • Select winner 	Decision on which company performs best against all best-practice criteria
9 Communicate recognition	Inform Award recipient of Award recognition	<ul style="list-style-type: none"> • Present 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 able to share Award news with stakeholders and customers	<ul style="list-style-type: none"> • 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 participants 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>.