

F R O S T & S U L L I V A N

FROST & SULLIVAN BEST PRACTICES AWARD

SMART CARDS - GLOBAL

Growth, Innovation & Leadership
Frost Radar 2019



FROST & SULLIVAN

2019

BEST
PRACTICES
AWARD



FROST RADAR

CONGRATULATIONS!

Frost & Sullivan is proud to present IDEMIA with this year's Frost Radar Best Practices Award for Growth, Innovation & Leadership (GIL) in the Global Smart Cards Market.

Frost & Sullivan's global team of analysts and consultants continuously research a wide range of markets across multiple sectors and geographies. As part of this ongoing research, we identify companies that consistently develop new growth strategies based on a visionary understanding of the future, and thus more effectively address new challenges and opportunities. This involves extensive primary and secondary research across the entire value chain of specific products. Against the backdrop of this research, Frost & Sullivan recognizes IDEMIA for these valuable achievements.

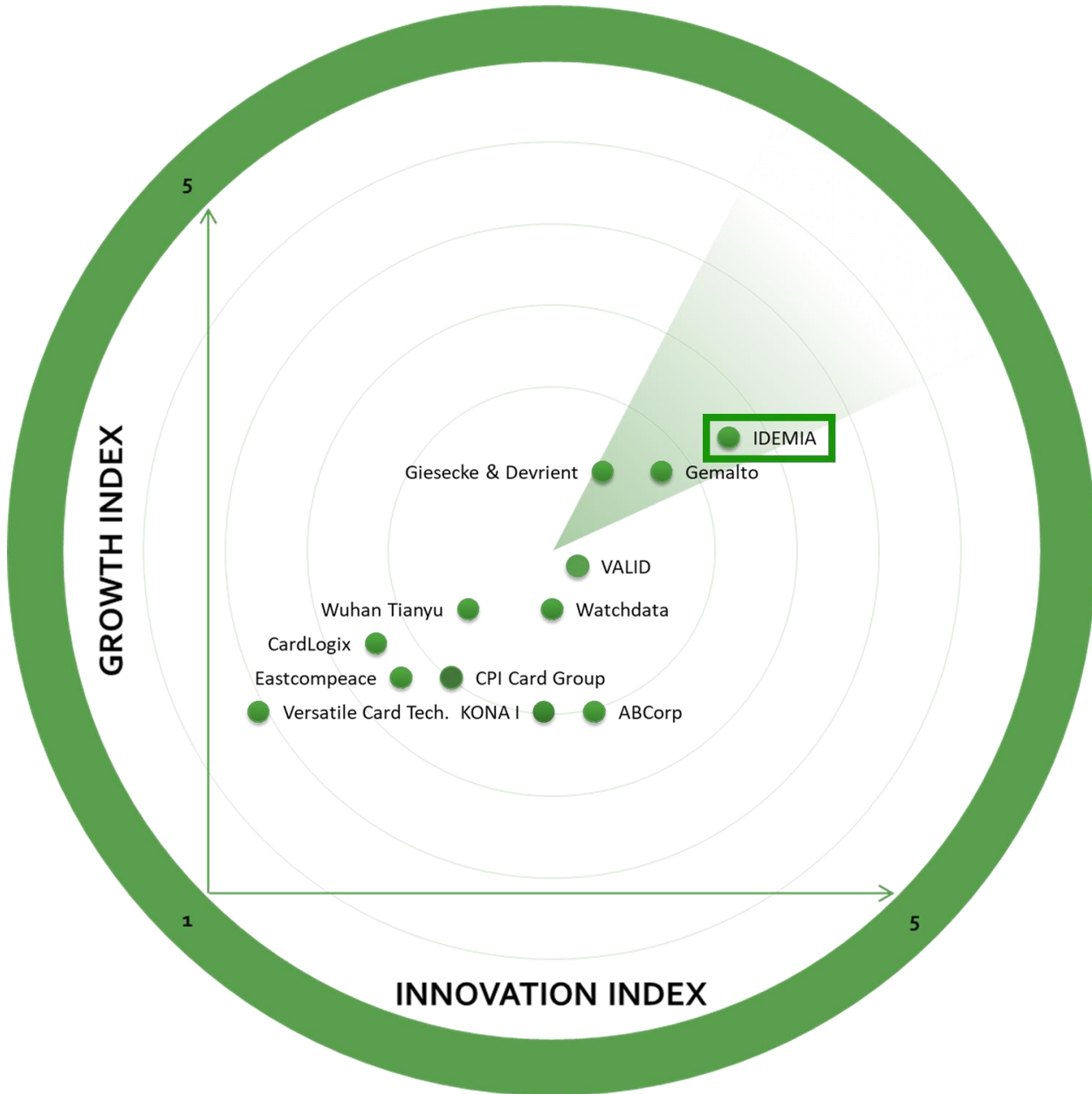
This recognition is strictly reserved for companies that are market leaders and are at the forefront of innovation. These companies consolidate or grow their leadership position by continuously innovating and creating new products and solutions that serve ever-evolving customer needs. These companies are also best positioned to expand the market by strategically broadening their product portfolio. Achieving Growth, Innovation & Leadership (GIL) is never an easy task, but it is one made even more difficult considering today's intensely competitive environment, customer volatility, economic uncertainty, and rapid technology evolution. Within this context, IDEMIA's receipt of this Award signifies an even greater accomplishment.

Moreover, this recognition is the result of many individuals (employees, customers, and investors) making daily choices to support the organization and meaningfully contribute to its future. Frost & Sullivan enthusiastically acknowledges and celebrates these achievements. Once again, congratulations on your accomplishments and we wish you great success in the future.

Sincerely yours,

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In a field of +80 global industry participants, Frost & Sullivan has independently ranked the top 12 companies in the above Frost Radar analysis.

The key parameters independently analyzed by Frost & Sullivan include:

- Innovation Scalability
- R&D
- Product Portfolio
- Mega Trends Leverage
- Customer Alignment
- Growth Pipeline
- Vision and Strategy
- Sales and Marketing

Frost & Sullivan studies related to this independent analysis:

- Global Smart Cards Market Study (2019)

Industry Overview

The global smart cards market is mature with a high rate of adoption worldwide. The use of smart cards across industries has been growing globally. Growth in the use of banking cards, government eIDs, SIM cards, and ticketing are the key drivers for the growth of the smart cards market. There is also increasing adoption of RFID cards or contactless cards and smart cards with embedded biometrics or dynamic security code. Such technological advancements are to enhance the security factor of smart cards and protect them from potential identity and data theft.

With high-volume deployment of smart cards, the price point of the cards has reduced over the years. Nevertheless the reduced profit margins for smart card manufacturers and suppliers due to continued price reduction has been partially offset by migration to more value added products and adoption of new services. In the payment market, alternate modes of payments such as digital/mobile wallets, QR codes, Internet banking, and mobile banking are complementing credit/debit cards, or payment cards, which remain a key link between banks and end-customers. Even Digital banks, Fintechs as well as Big Techs are launching physical cards, seeing them as an opportunity in the relationship between them and their customers.

In this highly competitive market, which is also impacted by the quickly evolving nature of digital connectivity, IDEMIA has managed to remain the market leader by adopting organic growth strategies, inorganic growth strategies, and product innovation.

Frost Radar Award IDEMIA

COMPANY DIAGNOSTIC

IDEMIA is the market leader in the global smart cards market. The company is known for its biometric technology and smart card capabilities worldwide. IDEMIA was formed by the coming together of Oberthur Technologies and Morpho — two major global smart card and identity companies. It has a mature product portfolio and an excellent track record of innovation and customer service.

FROST RADAR POSITIONING

- IDEMIA is plotted at the top right of the Radar.
- IDEMIA is the leader in the global smart cards market. The coming together of two industry-leading companies with intelligent technology and solutions has allowed the company to reach a global customer base in various applications across industries. The company has a longstanding history of product innovation, resulting in high demand for its products and solutions.
- The company focuses on product innovation and has strong expertise in smart cards and biometrics technology.
- It has recently developed a smart card solution that comes with asymmetric post-quantum cryptography that makes it impossible for quantum computers to break its security.

COMPANY STRENGTHS

- IDEMIA's core strengths lie in both organic and inorganic growth. Oberthur Technologies was a leader in smart cards technology, while Morpho was a market leader in biometric technology. The technology expertise of these two companies perfectly complement each other and create cutting-edge products and solutions such as high-security smart cards and biometric smart cards, which are in high demand by industries. The company also recently acquired the metal payments card business and associated patents of X-Core Technologies. This will allow IDEMIA to expand its contactless payments solutions for consumers looking for premium products reflecting a high-end lifestyle and status.
- The company has recent product innovation in terms of introducing asymmetric post-quantum cryptography in smart cards, creating an unforgeable signature, resistant to quantum computers.
- The company has signed a patent license agreement with IDEX Biometrics to develop, manufacture, and sell on-card enrollment devices.
- The company has recently signed an exclusive partnership and distribution agreement with Zwipe in order to develop a disruptive biometric payment card platform and reduce the complexity of the production process for biometric payment cards, integrating in a single chip the functions that previously required a Secure Element.
- The company also offers Smart Services for financial institutions that allow them to streamline their operations, expand issuance horizons, and serve their consumers on-the-go. This enhances the customer experience and allows the company to reach a wider end-user base.
- For the telecom industry, the company's 5G SIM cards protect mobile subscriber privacy, provide faster access to 5G services and optimized use of radio resources in case of network congestion.
- The company provides advanced eID cards embedding by design state-of-the-art security features that protect individual's identity and enable citizens to access securely government or private e-services.
- With its strong technical expertise, R&D capabilities, and go-to-market strategies, IDEMIA is well placed to lead the market in terms of product offerings and services.

COMPANY OPPORTUNITIES

- IDEMIA enjoys the leading position in the smart cards market. IDEMIA is also known for its strong expertise in biometric and security solutions. The company expects to continue its steady growth in these product segments with its continuous product and technology innovation.
- The company's strategy of forming partnerships with start-ups and big companies that offer cutting-edge technology has enabled IDEMIA to offer high-end products across diverse sectors.
- With high demand in the global biometric and contactless payments sector, the company is expected to have significant growth opportunities in digital applications such as payments, identity, and mobile applications.

What is the Frost Radar?

A Practical, High Impact, Scalable C2A (Companies to Action) Tracking Solution

WHAT IS IT?

A robust analytical tool that benchmarks companies' innovation focus and growth performance in a given market.

HOW IS IT BUILT?

Through in-depth analysis built on our 360-degree research methodology (primary and secondary research) and objective rating of companies in any given market.

WHY DO WE NEED IT?

To understand how companies benchmark against each other in their ability to innovate and grow against a backdrop of industry transformation and evolution.

WHAT WILL IT ACCOMPLISH?

Enable companies to gain an objective, independent perspective of their innovation and growth strategies, including their robustness, effectiveness, relative competitive strength, and implications on their long-term success.

HOW TO USE IT?

Frost Radar is a dynamic tracking tool that offers frequent rating and positioning of companies that are leading the industry on growth, innovation or both. Due to changes in operating environment and internal changes within these organizations, their positioning in Frost Radar will change over time. It is important to leverage Frost Radar to ensure that companies are aware of changes to their ecosystem and their relative positions to it.

WHAT DOES IT MEAN TO BE ON THE FROST RADAR?

Every company that finds itself on the Radar has been chosen because they have proven themselves to be worthy by demonstrating excellence in either growth, innovation, or both, and are able to translate that into proven solutions that benefit their clients. At times, companies with high market share may not place on the Radar. Companies are chosen because they are already doing great things, or because they are poised to do great things.

All companies on the Frost Radar could be C2A. Best Practice recipients are the companies that Frost & Sullivan considers the **Companies to Act On Now**.

GROWTH EXCELLENCE AWARD

The Growth Excellence best practice award is bestowed on companies that are achieving high growth in an intensely competitive industry. This includes emerging companies making great strides in market penetration or seasoned incumbents holding on to their perch at the pinnacle of the industry.

INNOVATION EXCELLENCE AWARD

The Innovation Excellence best practice award is bestowed on companies that are industry leaders reinventing themselves through R&D investments and innovation. These may be companies that are entering a new market and contend for leadership through heavy investment in R&D and innovation.

GROWTH, INNOVATION & LEADERSHIP AWARD

The Growth Innovation Leadership (GIL) best practice award is bestowed on companies that are market leaders that are at the forefront of innovation. These companies consolidate or grow their leadership position by continuously innovating and creating new products and solutions that serve the evolving needs of the customer base. These companies are also best positioned to expand the market by strategically broadening their product portfolio.

Frost Radar

2 Major Indices, 10 Analytical Ingredients, 1 Platform

VERTICAL AXIS – THE GROWTH INDEX

Growth index is a measure of a company's growth performance and track record, along with its ability to develop and execute a fully aligned growth strategy and vision; a robust growth pipeline system; and effective market-, competitor-, and end-user focused sales and marketing strategies.

- **G11: Market Share (previous 3 years):** Market share relative to its competitors in a given market space for the previous three years.
- **G12: Revenue Growth (previous 3 years):** Revenue growth rate for the previous three years in the market/ industry/category that forms context for the given Frost Radar.
- **G13: Growth Pipeline:** This is an evaluation of the strength and leverage of the company's growth pipeline system, to continuously capture, analyze and prioritize its universe of growth opportunities.
- **G14: Vision and Strategy:** This is an assessment of how well a company's growth strategy is aligned with its vision. Are the investments the company is making in new products and markets consistent with the stated vision?
- **G15: Sales and Marketing:** This is a measure of the effectiveness of a company's sales and marketing efforts in helping the company drive demand and achieve its growth objectives.

HORIZONTAL AXIS – THE INNOVATION INDEX

Innovation index is a measure of a company's ability to innovate products/services/solutions that are developed with a clear understanding of disruptive Mega Trends, are globally applicable, are able to evolve and expand to serve multiple markets, and are aligned to customers' changing needs. Key elements of this index include:

- **I11: Innovation Scalability:** This determines whether the organization's innovation(s) is/are globally scalable and applicable in both developing and mature markets, and also in adjacent and non-adjacent industry verticals.
- **I12: Research and Development:** This is a measure of the efficacy of a company's R&D strategy, as determined by the size of its R&D investment and how it feeds the innovation pipeline.
- **I13: Product Portfolio:** This is a measure of the product portfolio of the company, focusing on the relative contribution of new products to its annual revenues.
- **I14: Mega Trends Leverage:** This is an assessment of a company's proactive leverage of evolving long-term opportunities and new business models, as the foundation of its innovation pipeline.
- **I15: Customer Alignment:** This evaluates the applicability of a company's products/ services/ solutions to current and potential customers (7-year horizon), as well as how its innovation strategy is influenced by evolving customer needs.