FROST & SULLIVAN

HID®

2014 Global Consumer Authentication in Online Financial Services New Product Innovation Leadership Award

FROST & SULLIVAN

50 Years of Growth, Innovation & Leadership

Background and Company Performance

Industry Challenges

Password authentication once provided acceptable identity assurance. In the early stages of computing, the majority of computer system users had one password, and that password could only be used in one place: at a stationary workstation within the physical confines of a place of employment. The risk of a user not being who he or she claimed to be merely by presenting a username and passwords was quite low.

The world has changed. Access systems are no longer limited to one's place of employment. Frost & Sullivan notes that the financial lives of individuals are increasingly moving online.

Here are specific examples, as captured by Frost & Sullivan independent research:

- In the United States by 2020, there could be more than 30 million regular users of mobile wallets.

- In APAC in 2012, there were 298 million mobile commerce users.[1]

- In Brazil, the most relevant market in Latin America, mobile payment transactions are likely to grow from 7.2 million in 2012 to 49.8 million in 2020.[2]

- In Poland, penetration of online banking among adults was around 80.8 percent in 2012. A solid strategy for online and mobile banking services has been the cornerstone of this success.[3]

An individual's financial life is not the only aspect moving online. Users access numerous distinct systems in their work and personal lives, and each system requires credentials — typically a username and password. Coping with an onslaught of system credentials, it is no surprise that users revert to tactics that invalidate the intended security strength of passwords in the name of greater convenience (for the user).

Furthermore, users can now access systems from anywhere with any browser-enabled device. Line-of-sight observation that indicates who is requesting system access does not currently exist. Consequently, the Internet has given way to a higher risk of identity theft via phishing schemes and keyboard logging malware.

As social, financial, and work lives move online, users are increasingly vulnerable to unauthorized access due to the weak authentication relying solely on a username and password. As cyber miscreants identify the possibility to exploit vulnerabilities in

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[1] "Analysis of the APAC Mobile Commerce Market 2013," Report #P7A4-01, June 2014.
[2] "Latin American Mobile Banking and Payment Services Markets, 2012," Report #9846-65, February 2013.
[3] "Marketing Strategies are Key to New Technology Deployment in the Banking Sector - An Insight from Poland," Report #9817-00-79, May 2013.

authorization procedures and systems for financial gain, financial institutions must provide stronger authentication options to their customers. Stronger authentication will help financial institutions provide the secure financial transaction environment customers expect from their trusted financial institutions.

Visionary Innovation and Product Excellence of HID Global

Criterion 1: Design

Frost & Sullivan appreciates the fact that the ActivID® Threat Detection Service simplifies the process of implementing layered authentication for end users. The service begins with HID Global's ActivID Authentication platform and augments it with contextual-based authentication to provide advanced device identification and malware detection, improving security as customers access online services. Importantly, the strengthened authentication is invisible to the end user, making it unobtrusive so that it does not interrupt the online experience. The solution also allows for further implementation of out-of-band authentication methods, such as via SMS and email, as risk scores increase, allowing financial institutions to match the authentication strength with the level of risk needing mitigation.

Criterion 2: Use of Mega Trends

In developing the ActivID Threat Detection Service product offering, HID Global clearly anticipated two Frost & Sullivan-identified Mega Trends:

1. The continuing global growth of online commerce

2. The increasing aggressiveness and effectiveness of cyber miscreants capitalizing on vulnerabilities in user devices and user inclinations for convenience over risk avoidance

Cyber thieves are increasingly capitalizing on the growing cyber theft opportunity by using a model of operational sophistication to maximize financial return. The ActivID Threat Detection Service enables a higher level of security and minimizes the size of the potential threat attack vector.

Criterion 3: Unmet Needs

What happens in instances when a business, such a financial institution, has a strong need to authenticate a user (customer) and securely provide services and conduct financial transactions?

The financial institution has little to no control over the endpoint being used. In addition, when serving customers, user convenience is a priority. There is a need for a complete and easy way to implement a solution for financial institutions to allow enhanced authentication and security for provisioned services to customers - while not burdening

those customers with inconvenient processes. Frost & Sullivan firmly believes that HID Global truly addresses this need with its ActivID Threat Detection Service.

Criterion 4: Match to Needs

HID Global ActivID Authentication with its ActivID Threat Detection Service offers a complete solution to address the need for enhanced authentication and security for provisioning services to financial service customers, preventing malware from stealing sensitive information and improving user and transaction authentication. This solution protects against today's nasty cyber threats including man-in-the-middle Trojans, viruses, key-loggers, rootkits, browser redirections, and zero-day malware. Additionally, multi-factor authentication provides trusted online transactions, utilizing industry best practices and complying with regulatory guidances.

Criterion 5: Aspirational Ideals

HID Global clearly embraces the ideal of improved security without inconvenience to the customer. The ActivID Threat Detection Service uses fingerprinting to detect threats residing on the customer's device. Also, fingerprinting extends beyond just the device to include the page structure of the interface. This dual fingerprinting approach not only strengthens authentication, but also detects the existence of man-in-the-middle Trojans and other forms of malware on the customer's device. This enhanced security is enabled invisibly to the customers and does not require additional end-user interaction.

Criterion 6: Product/Service Value

In authentication, there is not a single cost/benefit analysis to perform. There are analytics to perform, all of which can exist within a single organization.

Frost & Sullivann notes that the specific product attributes to be considered are:

- Degree of irrefutability: how strongly associated a factor is with the factor-presenting user

- Flexibility: the strength of authentication methods vary to manage different levels of risk

- User convenience: whether authentication conforms to a user's experience expectations

- Administrative ease: the authentication can be easily managed and not add hidden administrative costs

As in any offering, attributes must be balanced against costs. A clear and definable return on authentication investment must also exist. The financial loss that is prevented by

stronger authentication must be measurably higher than the cost of implementing an authentication-strengthening method.

By combining ActivID Authentication and ActivID Threat Detection Service into a single offering, HID Global provides a unique approach to elevate the integrity of online financial transactions for both customers and financial services providers. HID Global leverages multiple authentication methods to provide a flexible service to dynamically match the degree of irrefutability to the significance of the transacation. For example, the irrefutability that is appropriate for a balance transaction inquiry is less than a balance transfer transaction to an external account. Multiple authentication methods are available from which to choose and are provided in an integrited platform that is easy for financial institutions to implement. The simplicity of the product model, combined with a compelling offering, makes the product/service value readily apparent to Frost & Sullivan.

Conclusion

HID Global is among the innovative companies leading the market with new authentication solutions that deliver easy to use, strong, and robust authentication for consumer-facing applications. HID Global has identified that financial institutions have a strong need for authentication for their customer's online interactions, while maintaining user convenience as priority. HID Global properly addresses this market need through the ActivID Threat Detection Service. Foresight and execution have earned HID Global the 2014 Frost & Sullivan Global New Product Innovation Leadership Award.
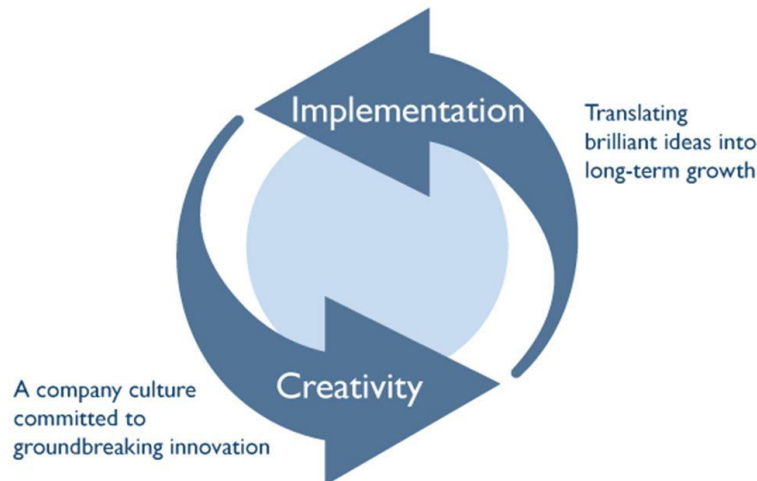
Significance of New Product Innovation Leadership

Ultimately, growth in any organization depends upon continually introducing new products to the market, and commercializing those products to the greatest extent possible. For these dual goals to occur, a company must be best-in-class in three key areas: understanding demand, nurturing the brand, and differentiating from the competition.

- Acquire competitors' customers
- Increase renewal rates
- Increase upsell rates
- Build a reputation for value
- Increase market penetration

- Earn customer loyalty
- Foster strong corporate identity
- Improve brand recall
- Inspire customers
- Build a reputation for creativity

DEMAND

BRAND

New Product
Innovation
Leadership

COMPETITIVE
POSITIONING

- Stake out a unique market position
- Promise superior value to customers
- Implement strategy successfully
- Deliver on the promised value proposition
- Balance price and value

Understanding New Product Innovation Leadership

Ultimately, innovation is about finding a productive outlet for creativity – for translating ideas into things people want to buy, and doing it over and over again. Even a great idea will amount to nothing without successful implementation at each stage of development and commercialization. Creativity and implementation are therefore two sides of the same coin.

Key Benchmarking Criteria

For the Global New Product Innovation Leadership Award, Frost & Sullivan analysts independently evaluated the total client experience and strategy implementation excellence according to the criteria detailed below.

Visionary Innovation

    Criterion 1: Unmet Needs

    Criterion 2: Use of Mega Trends

    Criterion 3: Pioneering Best Practices

    Criterion 4: Blue Ocean Strategy

    Criterion 5: Aspirational Ideals

Product Excellence

    Criterion 1: Match to Needs

    Criterion 2: Reliability and Quality

    Criterion 3: Product/Service Value

    Criterion 4: Positioning

    Criterion 5: Design

# 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

Decision Support Scorecard and Matrix

To support its evaluation of best practices across multiple business performance categories, Frost & Sullivan employs a customized Decision Support Scorecard and Matrix. This analytical tool compares companies' performance relative to each other. It features criteria unique to each award category and ranks importance by assigning weights to each criterion. The relative weighting reflects current market conditions and illustrates the associated importance of each criterion according to Frost & Sullivan. This tool allows our research and consulting teams to objectively analyze performance, according to each criterion, and to assign ratings on that basis. The tool follows a 10-point scale that allows for nuances in performance evaluation; ratings guidelines are illustrated below.

9–10 Excellent
7–8 Good
4–6 Fair
1–3 Poor
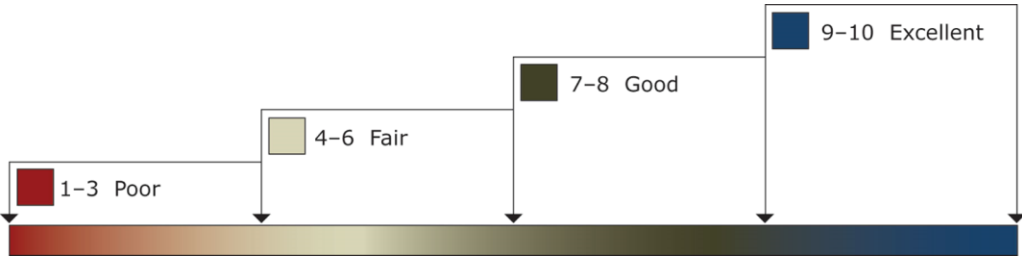
Best Practice Award Analysis for HID Global

Decision Support Scorecard: Visionary Innovation

The Decision Support Scorecard illustrates the relative importance of each criterion and the ratings for each company under evaluation for the New Product Innovation Leadership Award. The research team confirms the veracity of the model by ensuring that small changes to the ratings for a specific criterion do not lead to a significant change in the overall relative rankings of the companies.

Finally, to remain unbiased and to protect the interests of all organizations reviewed, we have chosen to refer to the other key players in as Company 2 and Company 3.

DECISION SUPPORT SCORECARD FOR TECHNOLOGY INNOVATION LEADERSHIP AWARD (ILLUSTRATIVE): VISIONARY INNOVATION

Measurement of 1–10 (1 = poor; 10 = excellent)	Award Criteria					
Visionary Innovation	Unmet Needs	Use of Mega Trends	Pioneering Best Practices	Blue Ocean Strategy	Aspirational Ideals	Weighted Rating
Relative Weight (%)	20%	20%	20%	20%	20%	100%
HID Global	10	10	10	9	9	9.6
Company 2	9	10	6	9	9	8.6
Company 3	9	10	8	6	7	8.0

Criterion 1: Unmet Needs
Requirement: A clear understanding of customers' desired outcomes, the products that currently help them achieve those outcomes, and where key gaps may exist

Criterion 2: Use of Mega Trends
Requirement: Ability to incorporate long-range, macro-level scenarios into strategic plans, thereby anticipating and preparing for multiple futures that could occur

Criterion 3: Pioneering Best Practices
Requirement: A nothing-ventured-nothing-gained approach to strategy implementation that results in processes, tools, or activities that generate a consistent and repeatable level of success.

Criterion 4: Blue Ocean Strategy
Requirement: Proven track record of creating new demand in an uncontested market space, rendering the competition obsolete

Criterion 5: Aspirational Ideals
Requirement: A willingness to look beyond the simple goal of generating a profit to embrace a more powerful ideal of bringing greater value to customers or the planet

Decision Support Scorecard: Product Excellence

DECISION SUPPORT SCORECARD FOR PRODUCT LEADERSHIP AWARD (ILLUSTRATIVE): PRODUCT EXCELLENCE

Measurement of 1–10 (1 = poor; 10 = excellent)	Award Criteria					
Product Excellence	Match to Needs	Reliability and Quality	Product/Service Value	Positioning	Design	**Weighted Rating**
Relative Weight (%)	20%	20%	20%	20%	20%	100%
HID Global	**10**	**9**	**9**	**9**	**10**	**9.4**
Company 2	8	10	9	8	9	8.8
Company 3	7	8	8	7	8	7.6

Criterion 1: Match to Needs
Requirement: Customer needs directly influence and inspire a product's design and positioning

Criterion 2: Reliability and Quality
Requirement: The product consistently meets or exceeds customer expectations for performance and length of service

Criterion 3: Product/Service Value
Requirement: Products or services offer the best value for the price, compared to similar offerings in the market

Criterion 4: Positioning
Requirement: The product or service delivers a unique, unmet need that competitors cannot easily replicate or replace

Criterion 5: Design
Requirement: The product's visual presentation makes it easy to use, and makes customers happy to use it

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 almost 50 years of experience in partnering with Global 1000 companies, emerging businesses and the investment community from 31 offices on six continents. To join our Growth Partnership, please visit http://www.frost.com.