



## AuthenWare™ Solutions for Financial Services - Europe

### Background

Every day, financial institutions across Europe face risk management issues that have only been amplified with the introduction of retail and corporate banking services. Obviously, they must recognise and deal with information security risks that could expose the institution and its customers to data theft and fraud. Beyond security, they face compliance risks, especially when the bank, the customer and the transactions are spread across more than one country. Conflicting regulations and reporting requirements across different jurisdictions significantly add to the risk. Reputational risk is an even bigger issue, as customers and organizations are reluctant to do business with a firm whose brand has been damaged due to fraud. Banks are rightly concerned that failure to manage these risks can have significant implications on growth and business continuity.

Strong authentication is the cornerstone of an integrated approach to managing risk and protecting against fraud, since so many instances of fraud are based on the use of stolen credentials. In fact, many of the financial services regulations implemented over the past ten years call for stronger authentication. Basel II (requiring a clear understanding of operational risk), the Market Abuse Directive (to prevent insider dealing and ensure proper disclosure), the Markets in Financial Instruments Directive, or MiFID (to increase transparency for investment services) and the European Data Protection Directive, or EDPD (designed to protect individuals' data) are examples of regulatory requirements that attempt to deal with risk and reduce fraud. Most call for two-factor or multi-factor authentication.


### Challenges

One of the greatest challenges for European financial institutions is to grow the rate at which customers adopt online banking, while balancing the conflicting needs of thwarting fraud and ensuring regulatory compliance. Today, only 35% of Europeans use online banking, compared to more than 54% in the US, and the biggest deterrent is the customers' concern over their bank's ability to adequately protect their information. In recent studies, a majority of people surveyed in Spain, Belgium, Germany and the UK indicated they were very concerned about their financial institution's ability to protect their personal information.

Early attempts to assuage this fear through the use of two-factor authentication – such as hardware tokens and digital certificates – were found by banks and customers alike to be less than satisfactory. For the bank, they present many

### With AuthenWare™ you can be sure that:

- Only authorized users are granted access to applications or data
- Invalid access attempts are detected
- Stolen credentials are rendered useless



hidden expenses including capital and deployment costs, and enormous help desk overhead. For the customer, they are cumbersome and error-prone. Increasingly, customers are asking for an additional layer of biometric identification (such as those based on iris scans or fingerprints.) Recent studies suggest that 58% of EU online banking customers would support biometric identification, especially if it did not call for additional hardware to be installed on their systems.

### **Solution**

AuthenWare™ is a breakthrough approach to meeting this challenge head-on. A second-factor authentication system, it combines keystroke dynamics and other heuristics to cost-effectively meet the needs of both compliance and customer satisfaction. AuthenWare finds and stops fraud in online banking and internal applications through advanced biometrics; working in concert with existing authentication methods, it ensures that the user is the valid owner of the credentials presented. AuthenWare adds a real-time online dimension to existing identity validation methods, yet is completely transparent to customer, and it adds zero impact to the production implementation.

### **How it Works**

AuthenWare incorporates a groundbreaking, multi-dimensional approach to validate identity. Using a series of security algorithms that record and measure a person's unique keyboard typing patterns, as well as other behavioural and environmental heuristics, the product creates a personal security pattern – known as the AuthenWare Singularity Pattern™ – that is as unique as the person's fingerprint. Based on a series of statistical singularities (aspects that distinguish one person from others), the pattern can even adapt to nuances in behaviour such as those caused by too much caffeine, injured fingers, etc. Each time the valid user logs into the online banking system, their login characteristics are compared to the AuthenWare Singularity Pattern, and if it is mathematically similar, the authorised user is granted access. But for an imposter who has obtained usernames, passwords or other authentication information, access will not be granted, since their pattern will not resemble that of the valid user.

This innovative technology overcomes the limitations of other two-factor or multi-factor authentication approaches because it can be deployed instantly to massive numbers of customers, it requires no additional hardware, and it is totally unobtrusive. There is nothing to lose, nothing to forget, and no reason to call the help desk. AuthenWare works in the background, ensuring that the person accessing a particular account is really the account owner and not an interloper.

### **AuthenWare in Action – Widespread Adoption**

A multi-national bank was sending out tokens to online customers as a means of implementing stronger authentication than a simple username/password. The cost of procuring and distributing the tokens was enormous. In addition, many users called the help desk each day to ask for assistance. To avoid the high costs and intense resources required to support the use of tokens, the bank selected AuthenWare. The bank's management team were pleasantly surprised to find that costs dropped, customer satisfaction soared and the incidence of fraud dropped significantly. The widespread adoption of the AuthenWare solution enabled the bank to meet regulatory requirements more reliably and consistently than with previous solutions, and at a lower cost.

## **AuthenWare Reduces Fraud**

Financial institutions find that by adding keystroke dynamics to the authentication process, they can reduce fraud, protect private information, and elevate the security of online banking. Other biometric authentication methods rely on simplistic information such as identification of the client device or geolocation, but are easily spoofed by man-in-the-browser attacks. AuthenWare relies instead on an entire series of biometric security algorithms that reduce the possibility of spoofing to the lowest levels in the industry.

### **AuthenWare in Action – Compliance in the Face of Multiple Regulations**

A European bank that is affiliated with a U.S. financial institution needs to comply with a variety of regulations: some are specific to Europe, such as MiFID and EDPD; some are specific to the U.S., such as Gramm-Leach-Bliley or Sarbanes-Oxley; still others span the globe, such as the Payment Card Industry Data Security Standard (PCI-DSS) that applies to payment account security. Some regulations, such as Basel II, have different compliance requirements depending on the country. After researching a number of approaches to authenticating online banking users, the bank determined that the audit trails within AuthenWare would help it demonstrate internal controls, as well as enforce protection of personal data, enabling it to consistently comply with all of the regulations relevant to its business.

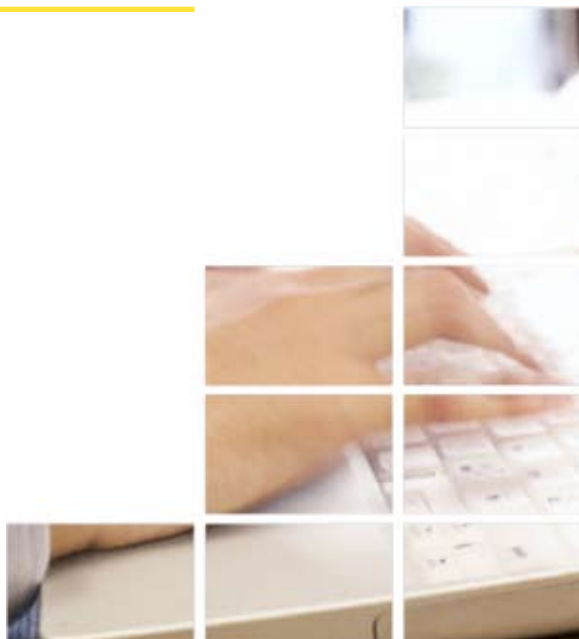
## **AuthenWare Strengthens Security Posture**

The AuthenWare use of multiple factors ensures that any attempted theft or impersonation of one factor is mitigated by the strength of the others. Since AuthenWare relies on a preponderance of evidence, there is no single point of failure. The results of the AuthenWare validation can be tied to secondary rules, such as those based on the value of a specific transaction, creating an even stronger security safety net. In addition, the pattern that is produced through AuthenWare is not closely linked to personal information, so in the unlikely event that the database were to be compromised, the thief would have only have a portion of the information needed to perpetrate fraud. As an additional point of validation, the AuthenWare solution has been certified by the International Biometric Group and Common Criteria.

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## AuthenWare Provides Optimal Customer Experience

AuthenWare boasts an extremely high customer satisfaction rating. Because the technology operates in the background, unobtrusively, without requiring the user to buy, remember or do anything unusual, AuthenWare now has more than 60 million users around the world. Customers see no difference in their everyday interaction with their online banking site or internal applications, but behind the scenes, AuthenWare is checking keystroke patterns and other aspects of their behaviour, and matching against a stored AuthenWare Singularity Pattern. The comparison is so statistically accurate, it can even accommodate nuances in behaviour caused by medication, injury or fatigue.

## AuthenWare Reduces Costs

AuthenWare provides high confidence at a very low cost throughout the lifecycle. Acquisition costs are much lower than other biometric approaches, such as iris scanners or fingerprint readers, and it eliminates the logistical costs with these approaches, digital certificates and others. Implementation is quick and easy: simply install AuthenWare and integrate the rules into existing applications to support existing policies and practices. One of the biggest positive impacts comes with the reduction of help desk costs, by reducing false positives through advanced scoring algorithms. With AuthenWare, help desk calls are significantly reduced.

### **AuthenWare in Action – Low Total Cost of Ownership**

A bank augmented its traditional username/password scheme by adding downloadable digital certificates to a user's home computer. The approach worked until the user decided to log in to his bank account from another computer. Before AuthenWare, this would have triggered the sending of a series of challenge-response questions to the user, or generation and transmission of an out-of-band, one-time password. With AuthenWare, those intermediate steps were not necessary. AuthenWare checked the typing pattern and applied other heuristics, and was able to validate the user. Only when the user attempted a transaction that exceeded a specific value did the bank need to send an out-of-band message.

## AuthenWare Satisfies Regulatory Requirements

AuthenWare not only satisfies the requirements of Basel II and the many European directives that relate to financial institutions, it enables these institutions to comply with international regulations such as PCI-DSS, the Consumer Credit Directive (87/102/EEC), and others that call for strong authentication. Importantly, it does so in a way that fosters user adoption which can lead to increased compliance. The easier an authentication method is to use, the more likely users will embrace it as part of doing business, and will not seek to bypass it. This makes it easier for financial institutions to apply regulations consistently, supporting regulatory compliance at a much lower cost.

## Conclusion

Across the European Union, information handling obligations aim to enhance the stability of the financial services sector, and protect the interests of investors and customers. They take aim at the weakest link: the verification of user identity. AuthenWare™ provides a breakthrough approach to reducing fraud while strengthening the institution's relationship with its online customers. It works in concert with existing products, approaches, policies and practices to achieve the right balance of reducing fraud risk while instilling more customer confidence in online banking.

## About AuthenWare™

AuthenWare Corporation is a leading provider of keystroke biometrics software. The Company's innovative authentication solution, AuthenWare, recognises valid users through a unique personal security pattern coupled with behavioural and environmental characteristics. The solution lets authorised users in while keeping hackers out. AuthenWare is a global company headquartered in Miami, FL with offices around the world. Tens of millions of people use the Company's products every day in a variety of industries including financial services, government, transportation & logistics, manufacturing, telecommunications and retail.



**AuthenWare™**  
Security Redefined.

### **AuthenWare Corporation**

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