



CASE STUDY

1.7m Todos eCode devices protecting Nordeas customers online



Summary

- Eliminated phishing and malware attacks
- Sustainable mitigation of advanced fraud, including Man-in-the-Middle/Man-in-the-Browser
- Enhanced CAP specifications developed - introducing Dynamic Signatures for true transaction authentication
- 1.7 million card readers distributed

Key Challenges

- Malware and phishing
- Future fraud attacks
- Bad media publicity
- Reduced customer confidence
- Loss of goodwill

Objectives

- Protect customers
- Increase trust
- Regain goodwill
- Eliminate fraud

Solution

- Todos eCode system
- Nordea-branded card reader, the C200
- Using already rolled-out EMV-capable smart cards
- Quick roll-out of generic devices
- Logging of support workflows eased migration



“We are really proud and satisfied with the result – a huge number of customers migrated in a short period of time. Todos has proven to be a very reliable and innovative vendor.”

Olov Brandt, VP Nordea

Nordea is the largest financial services group in the Nordic countries and the Baltic Sea region. With 33,000 employees and total assets of €474 billion, the firm serves more than 10 million retail customers and 700,000 businesses out of which 5.1m bank online.

BACKGROUND

“We are under attack!”

During 2006, Nordea’s authentication solution – scratch cards with one-time passwords – came under sustained attack by online criminals. They used malware and fake ‘phishing’ emails to harvest passwords. Customers began to lose trust in the bank and the tidal wave of bogus emails undermined the bank’s reputation with severe loss of goodwill in media as a consequence.

In the short term, Nordea opted for the costly strategy of offering security advice and free anti-virus software to its customers. However, in the long term, the bank started looking for a more secure way to authenticate its customers.

BUSINESS DRIVERS

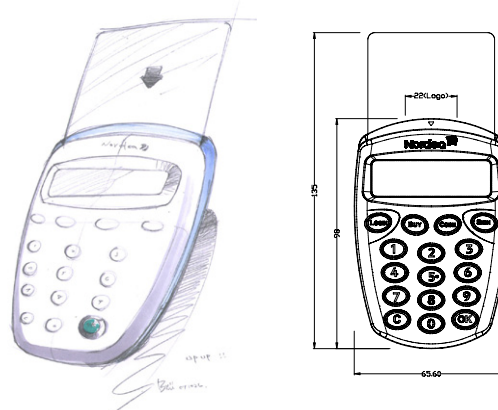
Rebuilding Trust

The bank’s fundamental business needs were to reduce fraud and the fear of fraud and, in doing so, increase its customer’s trust. These business requirements demanded an authentication system that was:

- Immune from malware such as viruses and trojans
- Highly resistant to phishing and ‘man-in-the-middle’ attacks
- A single system for Nordea’s entire e-banking needs
- Easy to maintain
- Easy for customers to use
- Cheap to support
- Able to link the level of security to the level of risk in every transaction



- 32,000 Employees
- 10,000,000 Consumer customers
- 700,000 Corporate customers
- 1,400 Branches
- Local markets: Nordic countries - Denmark, Finland, Norway and Sweden. Baltic countries - Estonia, Latvia and Lithuania. Poland



“Developing the C200 together with Nordea has provided us with invaluable knowledge on how to mitigate advanced fraud for years to come.”

Ove Wedsjö, CEO Todos

1 Todos’s concept **Dynamic Signatures** is a risk-based authentication solution allowing banks to easily and seamlessly control the risk in each and every transaction using pre-set templates. **Secure Domain Separation** maximizes user-friendliness by introducing multiple function buttons. Read more at www.todos.se or request white papers from info@todos.se

» Early sketches and blueprints from the creation of Todos C200

RESULTS

Enhanced CAP technology

From a technical perspective, Nordea now has a system that supports secure authentication through CAP and Nordea's PKI infrastructure. It also supports sign-what-you-see in both unconnected and connected mode. With the introduction of Dynamic Signatures, Nordea was guaranteed a future-proof solution - or in their own words "Todos improved the CAP specification".

As part of a fulfillment contract, Todos distributed 1.7 million card readers against a very tight schedule. The distribution and delivery process was smooth and painless. Thanks to high-quality design and manufacturing, only a tiny handful of devices were 'dead on arrival'. This contributed to the success of the deployment.

From a business perspective, Todos was able to help Nordea implement and deploy a more secure authentication system quickly; overcoming the reputation damage caused by attacks in 2006 and more general concerns about internet fraud.

The overall result is a much more trustworthy method of authentication and increased user confidence and security. Thanks to Todos, Nordea managed to dust themselves off and get back in the saddle in no time. The loss of goodwill was quickly replaced with a new and sustainable position as eBanking security market leaders - not only nationally, but also globally.

THE SOLUTION

Using existing smart cards

Nordea selected Todos to supply its eCode system and card readers. The solution uses EMV-capable smartcards so that customers could use their existing Nordea-issued credit and debit cards. Todos's solution had several unique benefits for Nordea, including:

DYNAMIC SIGNATURES

Todos enhanced the standard CAP specification with the addition of Dynamic Signatures which allows the bank to vary the level of security (and with it the demands on the user) to match the level of risk.

SECURE

Because the customer needs both the card reader and a card (something they have) and their card's PIN number (something they know), it is highly resistant to fraud, phishing and impersonation. Part from standard 2-factor authentication, Todos also enhanced the CAP specification by adding Dynamic Signatures, and thus

linking the level of security to the level of risk in every transaction. This ruled out all possibilities of man-in-the-middle and other advanced fraud instantly - and forever.

The 'login' button is used for authentication

The 'buy' button is your highway to secure eCommerce



Press 'sign' to create a digital signature for transactions etc.

'Code' generates One-Time Passwords whenever needed

CUSTOMER-BRANDED DESIGN

The card readers, designed from scratch in just a few months, were branded with

Nordea's logo and feature a large LCD display, four function buttons and clear, easy-to-read labels.

DOMAIN SEPARATION

Nordea C200 card reader was one of the first Todos products to have Secure Domain Separation. It features four function buttons - 'login' for authentication, 'buy' for e-commerce, 'sign' for digital signatures and 'code' to generate one-time passwords. This keeps the different functions of the device separate and makes it easier for users to access them.

USER-FRIENDLY

Customers can use the card reader, in conjunction with an EMV-capable smartcard, to login to their online accounts. Because it relies on familiar items such as PIN codes and existing credit or debit cards, it is easy to use.

ROLL-OUT SUCCESS

One key dimension to any eBanking deployment is the actual roll-out process. In the case with Nordea, Todos leveraged on years of experience and delivered a flawless project. Every aspect was taken into serious consideration, allowing Nordea to effectively foresee any potential speed-bumps. For instance, shipping out completely generic smart card readers proved to be a very cost-effective decision that also added an extra dimension of security.

tomers ment migration was initiated quickly and without difficulties. By logging support workflows effectively, Nordea was able to anticipate questions and provide answers to Frequently Asked Questions on their website in good time.

The decision to roll-out devices first to younger members of a family ment that these individuals could learn the device and then teach their parents when the roll-out phase reached their age bracket.

Thorough education of firstly the staff and secondly the cus-

All in all, millions of customers migrated within months.



>> Best possible migration thanks to quick roll-out of generic devices

FUTURE-PROOF

The decisions made with regards to design and roll-out strategy also rendered Nordea with a very future-proof position. The choice of eCode setup and device means Nordea has the tools to switch on more functionality whenever without any costly obstacles.

The rolled-out devices are prepared for anything. In 2008, for instance, Nordea switched on the 3-D Secure eCommerce functionality. For the end-user this just ment using the "Buy" button. For the bank, eCommerce security sky-rocketed.

Meet Todos

Todos helps banks and other businesses create trusted, secure relationships with their customers online. Founded in 1987, Todos designs, develops, delivers and supports security solutions for remote authentication.

Todos provides end-to-end security solutions, offering everything from design to delivery and logistics. Todos's eCode system includes a broad range of authentication devices and mobile solutions backed up by its unique Versatile Authentication Server.

Todos benefits from long-term financial stability because it is majority-owned by The Sixth Swedish National Pension Fund. Similarly, the company is committed to long-term relationships with its investors, clients and employees.

Today, Todos is represented at seven locations throughout Europe and Asia, with partners and clients all over the world. Todos has delivered 19m products to 100+ financial institutions in more than 30 countries. When trust matters, trust Todos.

