

Securing the e-economy  
We have the key



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## Adding Digital Identity to Corporate Applications

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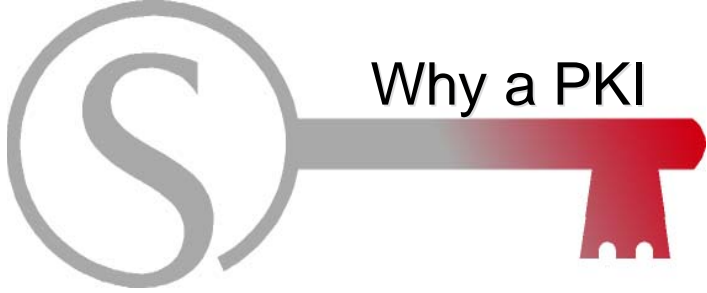
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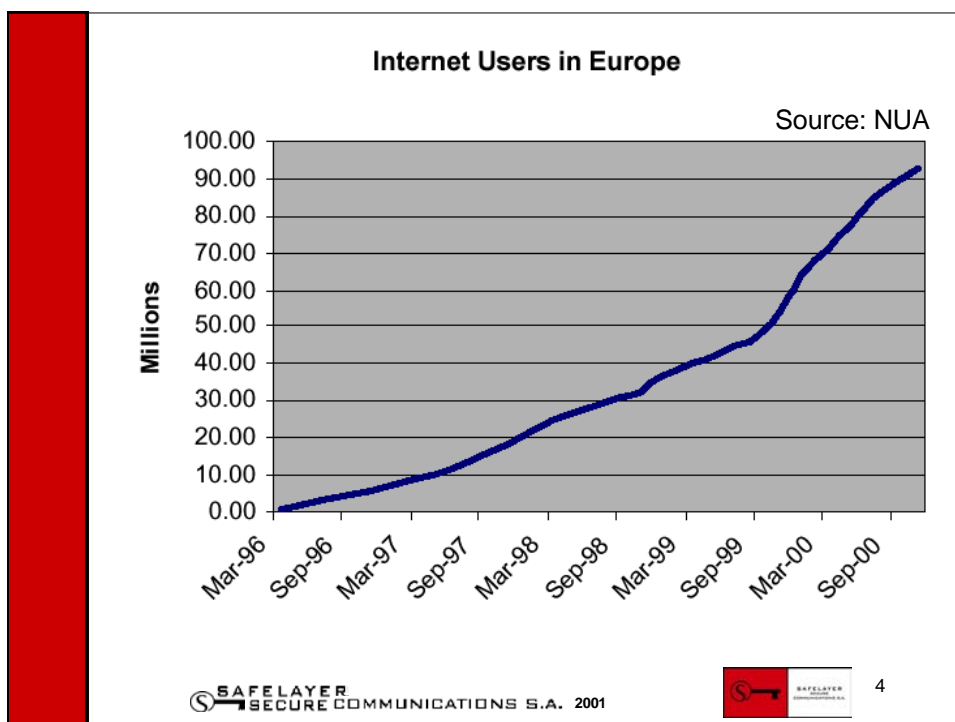
# Why a PKI



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e-Business is not about changing the business you are in, but *changing the way that you do business ...*

We have had “e-business” ...



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... since many years ago

## A bank is able to reduce costs a 90%...

- Forrester Research reported that the cost of a bank transactions was around:
  - Branch office: 1,13USD
  - Telephone: 0,60USD
  - ATM machine: 0,40USD
  - Internet: 0,12USD
- So, using the internet a bank is not only able to reduce costs a 90%, but also to offer a better service to its customers.

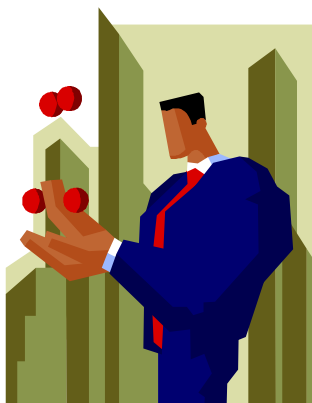
## ... Increasing the amount of the average transaction

A spanish financial institution has realized that those customers using digital certificates instead of login and password to access the electronic banking service have doubled the amount of the average transaction.

## This is what “e-business” is about

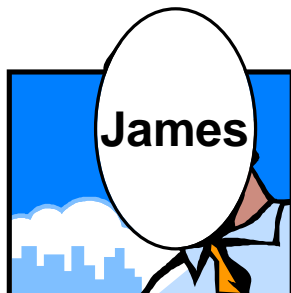
- **Customer Relationship Management**
  - Improving customer satisfaction
- **Supply Chain Management**
  - Reengineering all the processes in the value chain
- **Knowledge Management**
  - Building the intelligent organization
- **e-Commerce**
  - Selling products and services

## Exercise I



- The foodstore where you usually buy.
- All the shop assistants are wearing a hood on their head.
- They have changed completely the organization of the store. It is hard to find the products you usually buy.

## Exercise II



- Then we go to visit one of our most important customers.
- All the workers are also wearing a hood on their head, and their names printed.
- We are negotiating a “big contract”, but we do not feel comfortable.

## Exercise III



- An order has been turned down by the customer.
- The purchasing director confirmed us that none of his employees has placed the order.
- But we can not loose a customer because our authentication system is not trust worthy!!!

## Exercise IV



- Our wife is very nervous because someone has been paying over the internet using her payment card during the last 6 months.

## Fiction or reality?

... All this won't happen unless  
**someone provides security and  
trust...**

Drawing by Peter Steiner © 1993 The New Yorker Magazine, Inc. All rights reserved



*"On the Internet, nobody knows you're a dog."*

All this won't happen unless someone provides security and trust

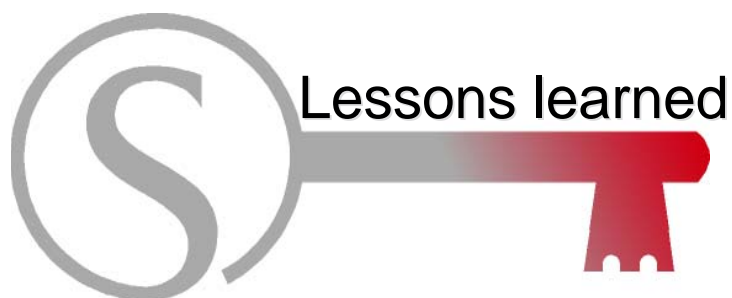


- Identity supplanting
  - **Authenticity**
- Information gathering
  - **Confidentiality.**
- Information modification
  - **Integrity.**
- Information negation
  - **Non Repudiation**

**Dangerous Nets**



**Security**



## Lessons learned

- To implement a PKI is more than installing a new infrastructure: it has strategic impact and top management should be involved in the process.
- Experience is needed before real deployment: most PKI projects start with a pilot.
- End users must participate from the beginning
- The most important part of the process is the integration or development of PKI enabled applications.
- There is a low-cost way to get into production

## Recommendations

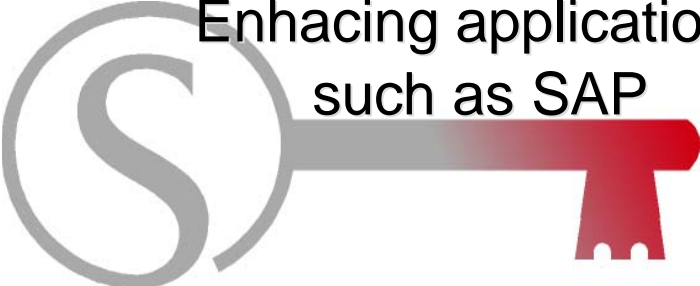
## Recommendations

- Look for a partner that offers a cost effective approach.
- Start with a “small” pilot: low number of users and applications.
- Involve your management team from the beginning.
- Check end user behaviour

... Do not start a PKI project  
implementing a CA, **but defining the  
applications and services using  
digital certificates**

... Do not start a PKI project developing new applications, **but** integrating current applications and services with digital certificates

Enhancing applications  
such as SAP

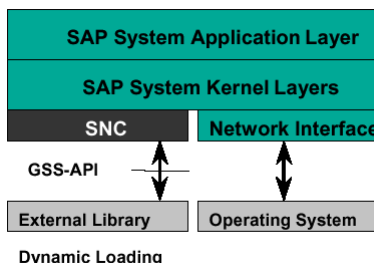


## Introduction

- SAP
  - Market leader in ERP software solutions
  - 36,000+ installations / 10+ million users
- Security mechanisms:
  - Authentication and authorization
  - SNC (Secure Networks Communications)
  - SSF (Secure Store and Forward Mechanisms)

## SNC: Secure Networks Communications

- A software layer in the SAP system architecture that provides and interface to an external security product.
- Provides protection for the communication links between the distributed components of an R/3 system.
- End-to-end security at the application level
- Can implement Single Sign-On

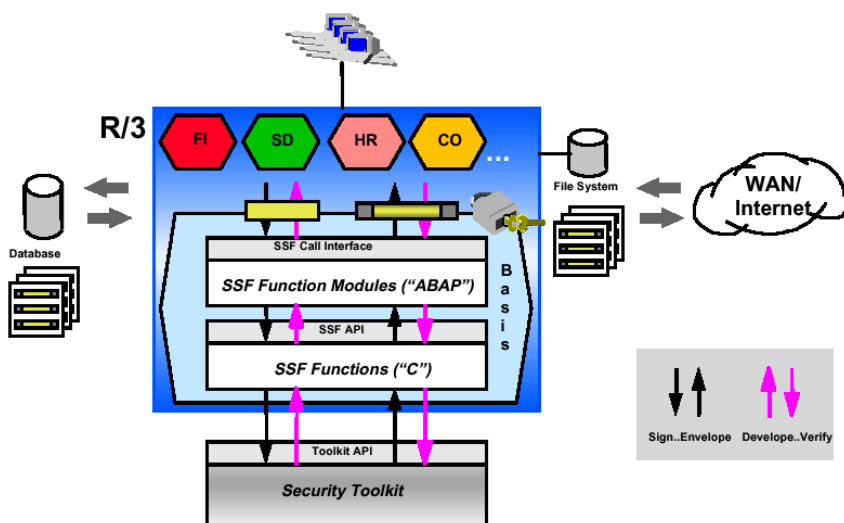


Overview

### SSF: Secure Store & Forward

- An external security library that provides the required support to protect R/3 data and documents as independent data units.
  - When data is leaving the R/3 system
  - When data is stored in unsecure media
  - When data security is associated with persons and individuals
- Provides data authentication, confidentiality, integrity, and non-repudiation
  - Digital signatures
  - Digital envelopes
- Standardized format used: PKCS#7
- Security mechanisms independent from:
  - Type or content of the data
  - Transport mechanism, service and protocol
- Can implement Single Sign-On

### SSF: Secure Store & Forward



## Which are the benefits?

- SSO and web access control using strong authentication.
- Communicate online with providers, customers, partners, etc in a SECURE way.
- Reduce costs and increase productivity, integrating new processes.
- To be compliant with regulation.

## Conclusions

- e-Business is not about changing the business you are in, but ***changing the way that you do business ...***
- It won't happen unless **someone provides security and trust...**
- Do not start a PKI project implementing a CA, **but defining the applications and services using digital certificates**



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