



National IT and Telecom Agency

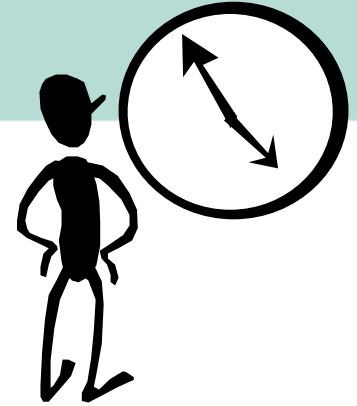
Ministry of Science
Technology and Innovation

From 15 to 100 million UBL messages: Status and future infrastructure

UBL International 2006
November 16th
Allerød, Denmark



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National IT and Telecom Agency
Ministry of Science Technology and Innovation



Agenda

- Implementation of electronic invoicing
 - How we did it...
- A new infrastructure for eProcurement
 - How we will do it now...
- UBL 2.0 Danish localization and customization
 - What we have done.....
- Recommendations



Electronic invoicing in DK: - The ingredients



- **Legislation**

- February 1st 2005
- All invoices to the public sector has sent electronically

- **Infrastructure** – for exchanging invoices

- Secure network
- Addressing mechanism

- **Scanning agencies**

- Digitize paper based invoices

- **Invoice standard**

- OASIS Universal Business Language



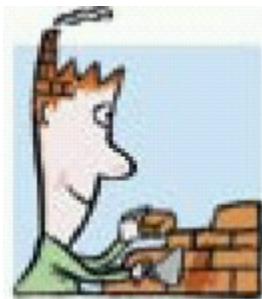
The business case (invoicing)

- Each minute saved in invoice handling of 18 million invoices equals 12 million Euro saved
- 10 minutes handling time is saved using an electronic invoice
 - 120 million Euro
- It is estimated that if ordering is also made electronic as much as 17 minutes will be saved in the handling of each invoice
 - Potential savings: 200 million Euro



The Scanning agencies

- Receive paper based invoices
- Scan the invoices (throw the paper away)
- Do intelligent pattern matching
- Produce a reduced electronic invoice
- Certified companies may act as Read In Bureaus
- A maximum of 5 days processing time



Private business



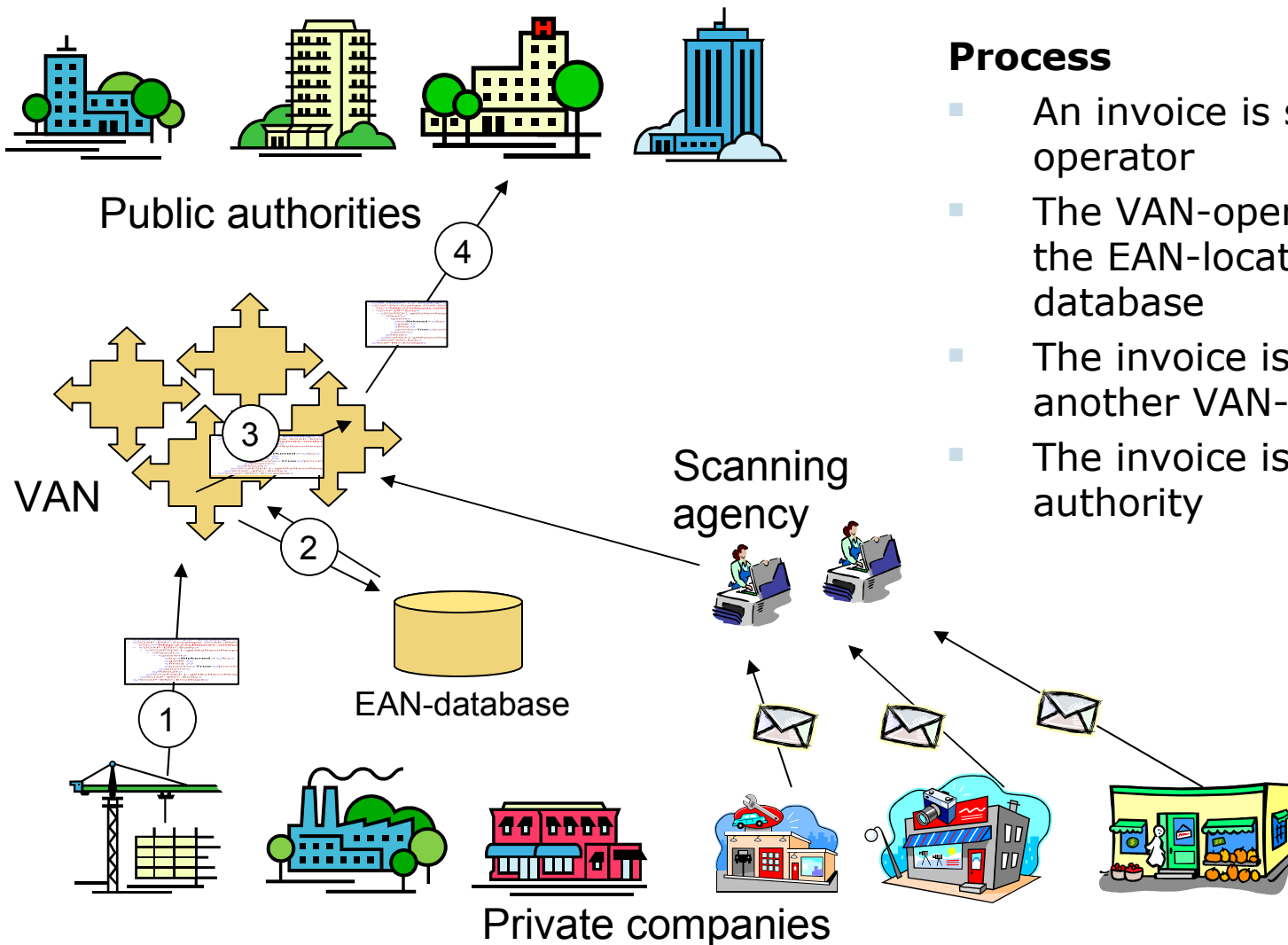
Scanning agency



Public authority



The VAN Infrastructure

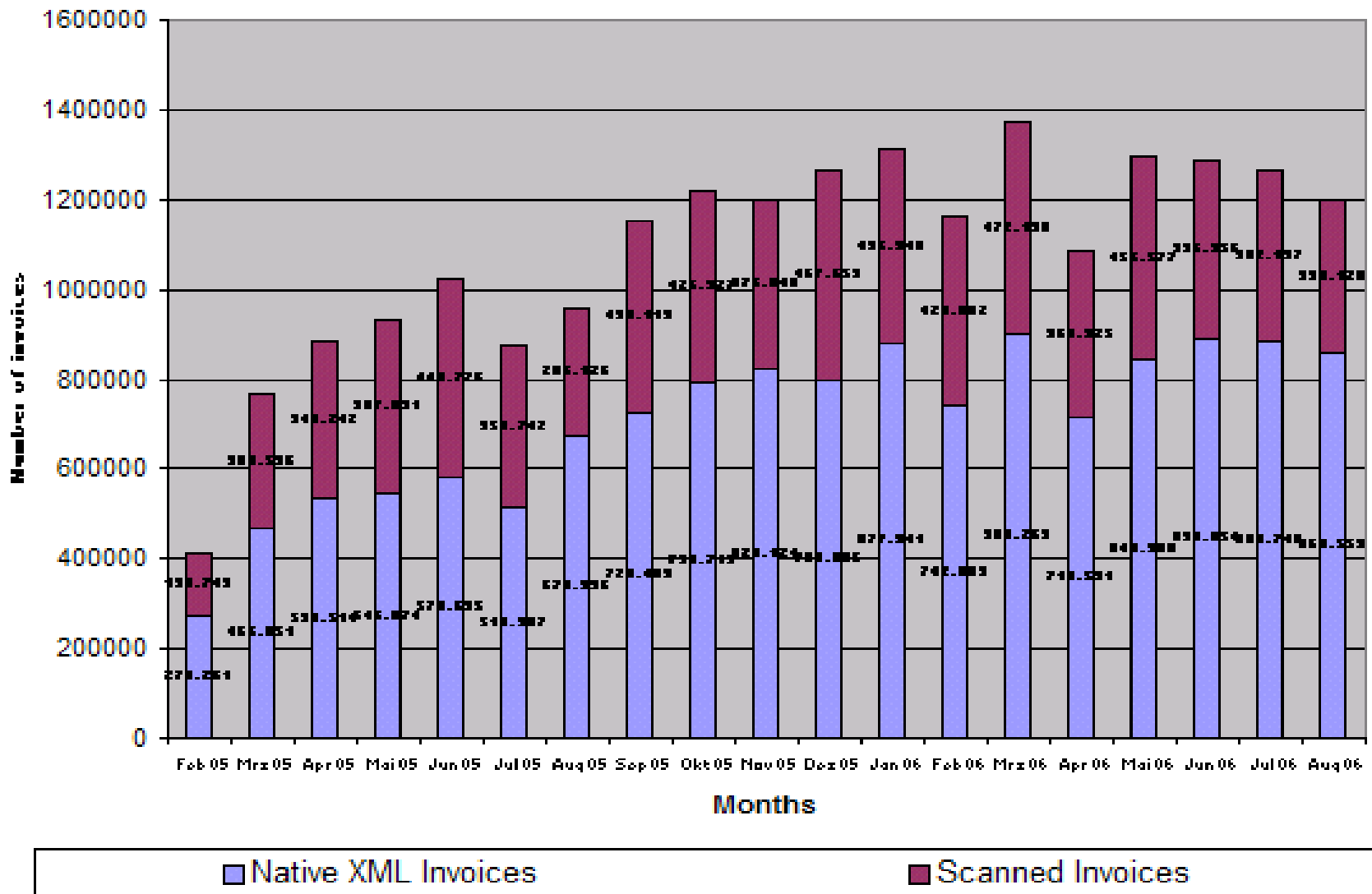


Process

- An invoice is sent to a VAN-operator
- The VAN-operator looks up the EAN-location number in a database
- The invoice is perhaps sent to another VAN-operator
- The invoice is sent to a public authority



Development in e-invoices





eEurope Award for Government readiness

<http://www.e-europeawards.org/>



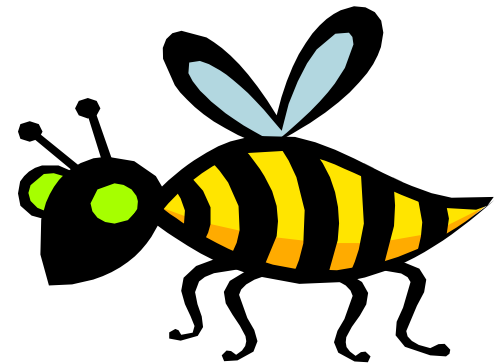
Jury's appreciation:

The project is a good example for all European governments: **electronic invoicing was mandated by law and put into practice with an XML based standard.** Business processes both in government and business have been improved significantly, since it was introduced in early 2005 achieving 95% take-up rate. An important value-added is that provision was made for SME's to comply with the eInvoicing through service providers.



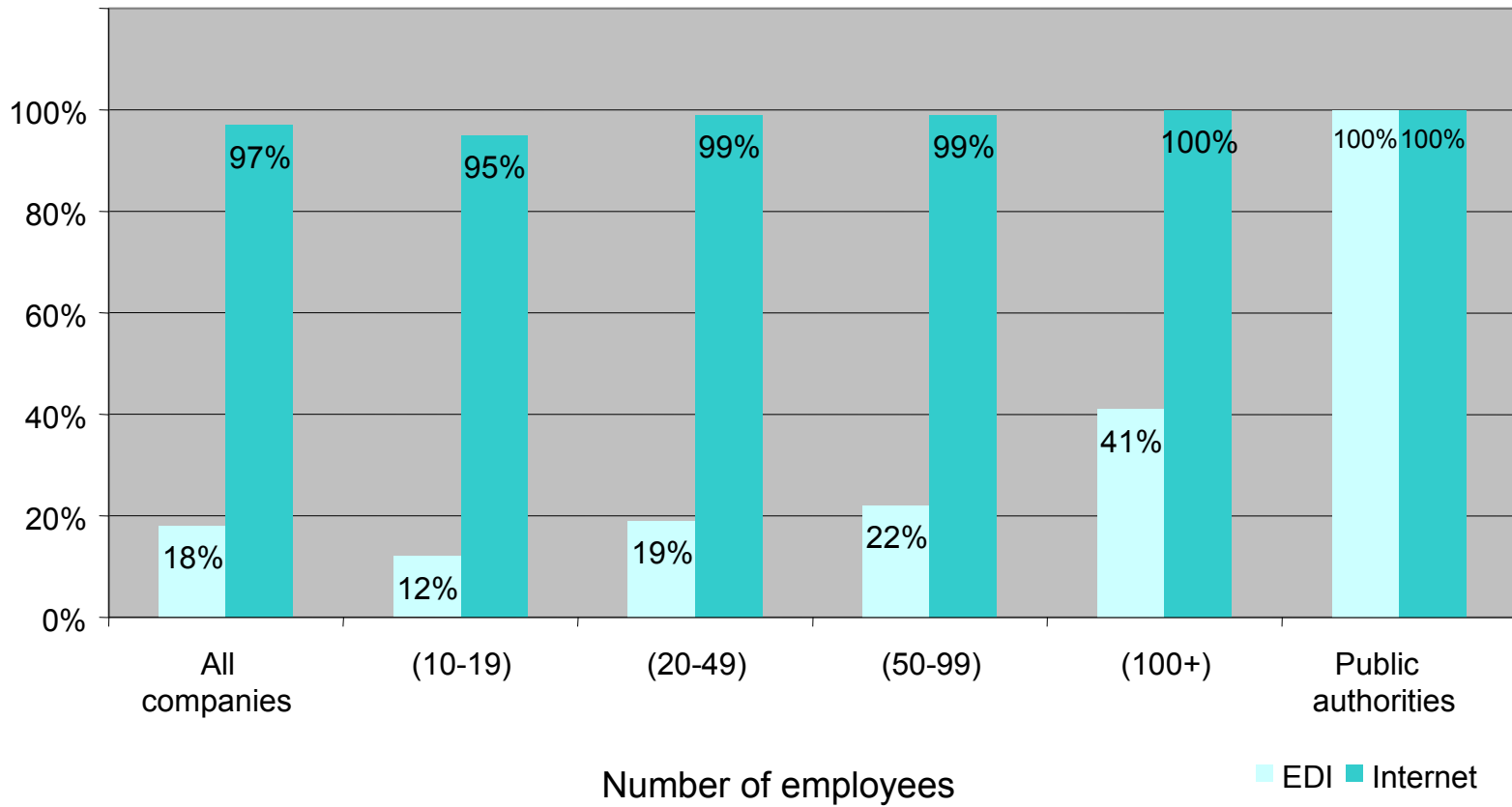
The reality at launch

- Big bang – no pilot
- Extremely tight schedule
- Poor localization
- Untested software
- Immature infrastructure
- Unskilled developers
 - XLM what?
- Unvalidated messages
- Messages sent to non existing endpoints
- A patchwork of infrastructures
- Unprepared public organizations





EDI is a substantial barrier

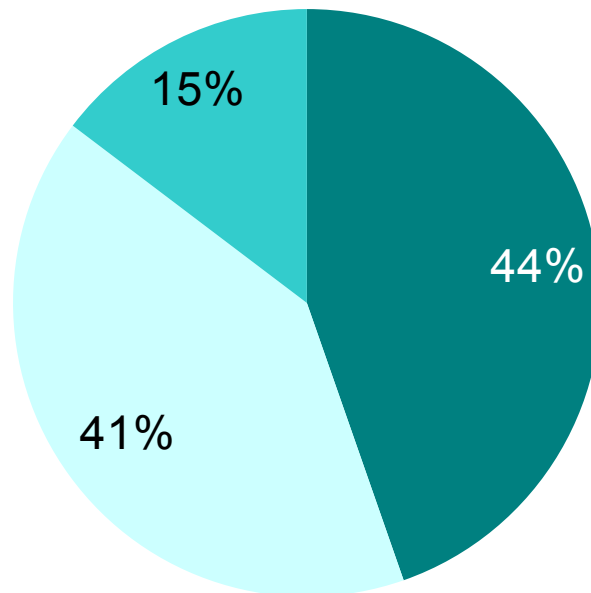




But why are the SME's important?

(it's about lowering the barriers for participation, not ignoring the SME's)

Distribution of transaction volume for companies between 10 and 99 employees. (Total volume is 191 million orders and invoices)



KPMG 2005

■ 10-19

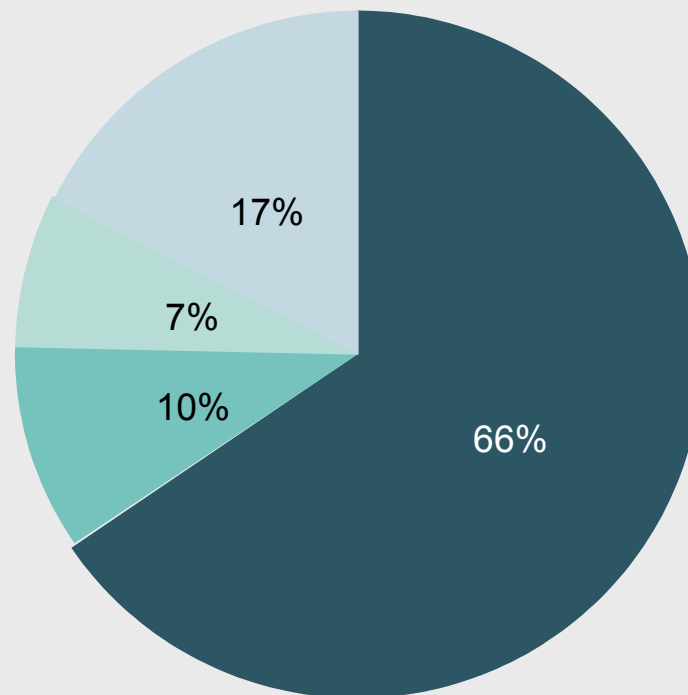
■ 20-49

■ 50-99



The biggest volume is in the private sector

Invoices - by sector



191 million invoices and orders are exchanged in companies with 10-99 employees

■ B2B ■ B2B foreign ■ B2G ■ B2C

Source: "Analyse af besparelses- og innovationspotentiale ved digitalisering af forretningsprocesser" udarbejdet af KPMG, december 2005.



Strategy forward

- Attack infrastructure barriers
- Expand procurement process



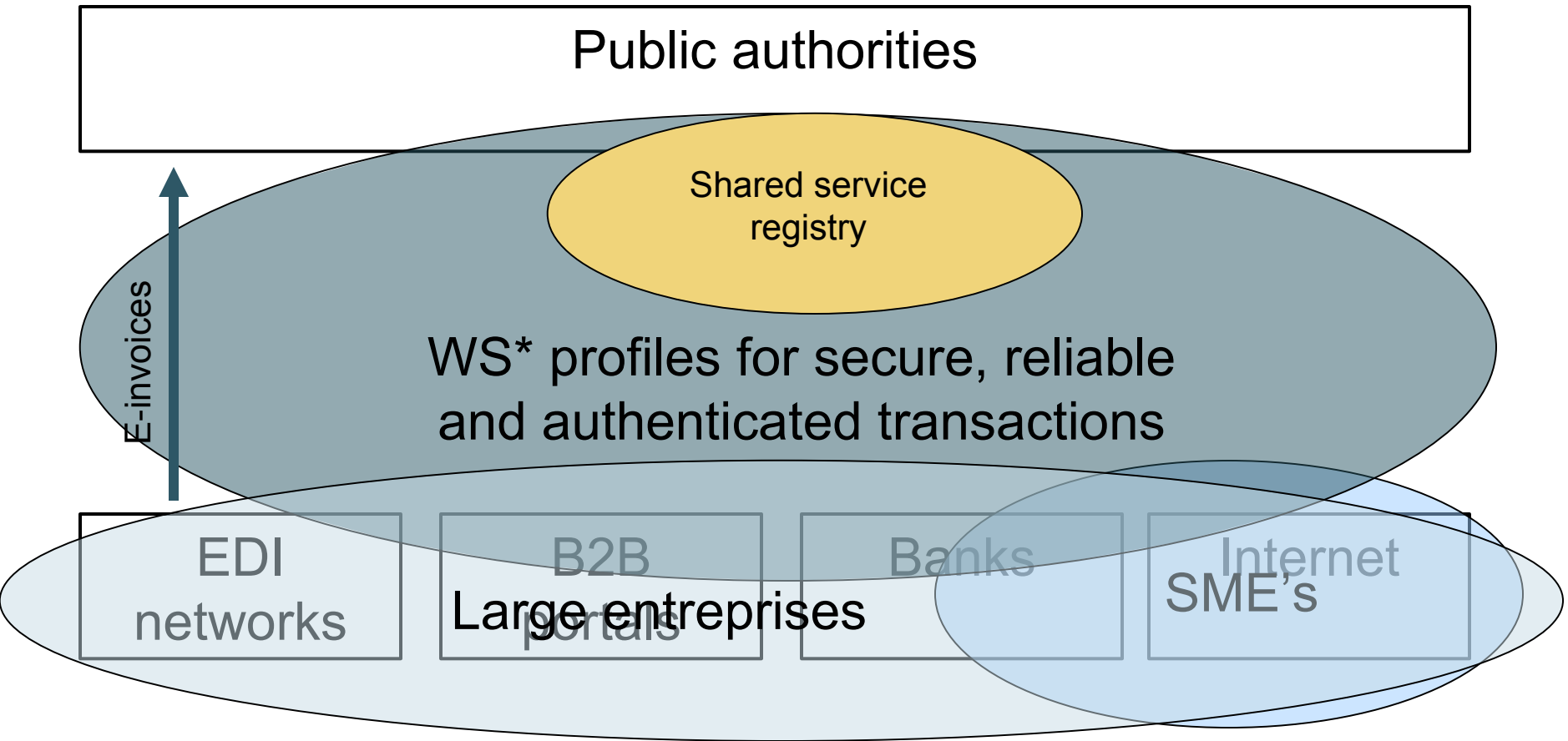
Vision:

- It should be just as easy to exchange a business document electronically as it is to send an email.





Bridging the gap between networks





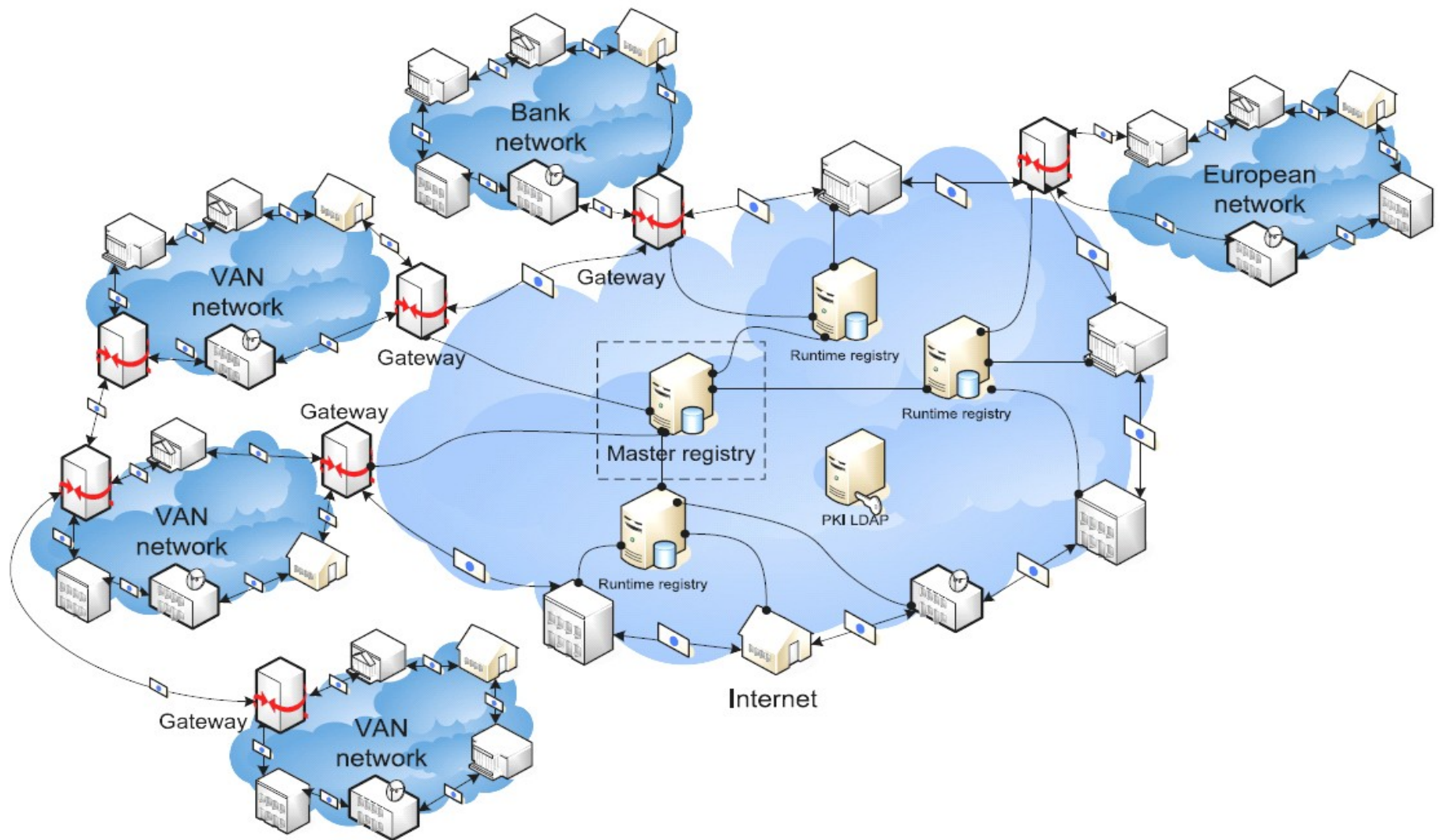
Goal: A Service Oriented Infrastructure

- Build an open, secure, reliable and service oriented internet based infrastructure.
- Must encompass the business requirements of both the private as well as the public sector.
- Scalable with the ability to handle up to 200+ million transactions per year.

Estimated savings 550-700 million € per year in the private sector, in average half a man year per company.



Implementing the vision





A simple client

POC klient [Minimér] [Maximer] [Luk]

Funktioner Opsætning Hjælp

Dokumentmapper

- Udgående dokumenter
 - Ikke afsendte dokumenter (8)
 - Under afsendelse (1)
 - Kvitterede (250)
 - Returnerede (0)
- Indgående dokumenter
 - Indbakke
 - Slettede dokumenter

Afsend valgte dokument(er) [Slet] [Vis] [Udskriv]

Type	Dok ID	Til	Adresse ID	Tidspunkt
Faktura	1001	Økonomistyrelsen	CVR 35744796	10-08-2006 08:51
Faktura	1002	Finansministeriet	CVR 63637828	10-08-2006 09:21
Faktura	1003	Globaliseringsrådet	EAN 15396572	10-08-2006 11:15
Kreditnota	75	Erhvervs- og S		08-08-2006 15:43
Kreditnota	76	Skat		08-08-2006 16:11
Ordre	110	Kontorforsynin		07-08-2006 13:00
Ordre	111	IDA-kantine		08-08-2006 10:37
Ordre	112	Frugt distribution	EAN 81321629	09-08-2006 11:59

Vis hjælpetekst

8 dokumenter



A simple client

POC klient

Funktioner Opsætning

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 - Indbakke
 - Slettede dokumenter

POC klient: Faktura, ID 1001 (til: Økonomistyrelsen)

Afsend dokument Slet Udskriv faneblad Luk vindue

Status: Ikke afsendt Dokument sti: c:/økonomi/fakturaer/1001.xml

Dokument Statusinformation

Customer
Økonomistyrelsen
SE12345678
Street Name 12
DK-1234 City Name

Delivery
Street Name 12
DK-1234 City Name

Faktura
Company Name A/S

Invoice number 1001
Issue date 10-08-2006
Contract/order 1234
Delivery date 2006-01-01
All amounts in DKK
Payment means Cash

Item	Quantity	Unit price	Total
FE-Element type 12345-67	10 pcs.	500,00	5.000,00
Eventual extra taxes ReasonCode			0,00
VAT basis			6.000,00

[Vis hjælpetekst](#)

8 dokumenter



Infrastructure strategy summary



■ **Technical**

- National authoritative service registry
- Standardization of a web service profile
- Development of an OSS toolkit which supports the profile
- Reference implementation

■ **Organizational**

- Public sector as a locomotive
- Take advantage of the current window of opportunity

■ **Legal / Legislative**

- Umbrella multilateral contract signed when registering
- Alternative: Passing a law

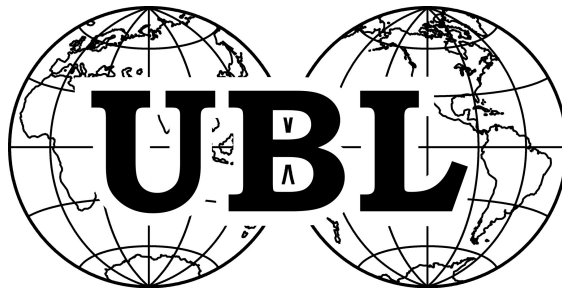
■ **Cost vs. benefit**

- Start with business transactions that have a good balance between cost and benefit



UBL 2.0 in Denmark

- The use of e-invoices in Denmark has lead to an increasing demand for an open XML based standard covering the entire e-business process, from catalogue to invoice.
- UBL 2.0 has been able to fulfil that demand, and is now seen as an important driver to reach our visions and goals for e-business in Denmark.





The shared vision:

State, Regions, Local government, private sector

- Profits need to be gained
 - Both small and large companies and public organisations must harvest the benefits from exchanging business documents electronically.
- Processes need to be digitalized
 - Paper based business processes and manual typing of data must be replaced by electronic exchange and registration of data.
- Standards and IT need to be in place
 - In six years all trade between the public and private sector should be done using IT and open standards.



Milestones

- By November 2006 there must be a Danish customization of UBL 2.0 (OIOUBL), supporting basic procurement.
- By the end of 2007 the basic procurement process using OIOUBL documents shall be implemented in all parts of the procurement process - business to government.
- By the end of 2008, 50 % of the e-business documents exchanged between the private and public sector must be based on OIOUBL.
- By the end of 2012, 95% of the e-business documents exchanged between the private and public sector must be based on OIOUBL.



The process of OIOUBL

- We have set up a formal committee with members from private and public sector
- In a public/private partnership they decided on goals for e-procurement and scope for OIOUBL
- We have held more than 20 workshops and a public hearing involving:
 - ERP-vendors, procurement portals, buyers and suppliers
- To gather requirements, ideas and experiences
- By involving people we hope to obtain ownership and commitment



Documents in OIOUBL





Documents in OIOUBL

Sourcing:

Request for quotation*
Quotation*
Catalogue
CatalogueDeletion
CatalogueItemSpecification
CataloguePricingUpdate
CatalogueRequest

Ordering:

Order
Order Response Simple
Order Response
Order Change
Order Cancellation

Billing:

Invoice
Credit Note
Self Billed Invoice*
Self Billed Creditnote*
Reminder
Statement

Other:

Application Response
Attachment*

*May 2007



Procurement profiles

Profile	Document												
	Order	OrderResponse	OrderResponseSimple	OrderChange	OrderCancellation	Invoice	CreditNote	Reminder	Statement	CatalogueRequest	Catalog	CatalogItemSpecificationUpdate	ApplicationResponse
Billing Basic						X	X						X
Billing Simple						X	X	X					X
Order Simple to Billing Simple	X		X			X	X	X					X
Ordering Advanced to Billing Simple	X	X	X	X	X	X	X	X					X
Ordering Extended to Billing Simple	X	X	X	X	X	X	X						X
Catalogue Basic											X		X
Catalogue Simple										X	X		X
Catalogue Extended											X	X	X
Catalogue Advanced										X	X	X	X



Deliverables

- By the end of 2006 we will publish:
 - Document guidelines
 - Specific class guidelines – endpoint, tax, profiles etc.
 - Scenario descriptions
 - Code lists
 - Validation for each document (beta)
 - Stylesheets (beta)

- All material will be made available in English by the end of 2006.



Adoption of UBL

Tomorrow we will announce:

- That if you wish to do eProcurement with the public sector in the future, the standard used must be the Danish customization of UBL.
- The purpose is to assure ERP-vendors and suppliers that when they implement e-procurement based on UBL they will not be backing the wrong horse!
- International adoption is very important for the competitiveness of Danish companies and for the adoption of UBL by international ERP-vendors.
- The North European collaboration and the convergence work with UN/CEFACT is seen as very important in that respect.
- Therefore we strongly support it!

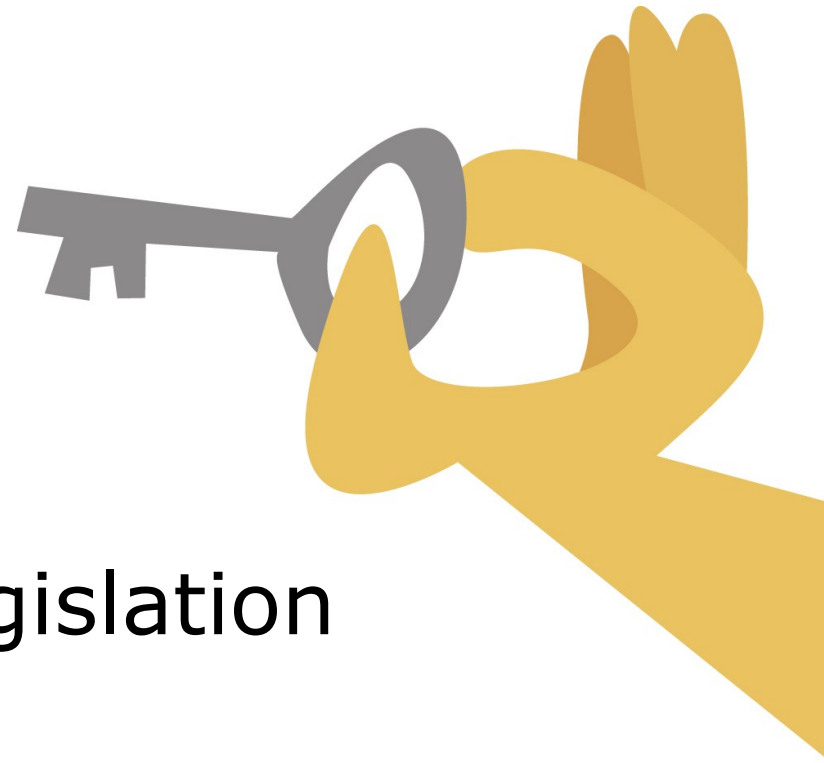


Summary

- Get going
- Involve
- Set targets

- And if everything fails...

Use brute force = legislation





Questions

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Legislation and statute on electronic invoicing

<http://www.oio.dk/XML/standardisering/eHandel/materialer/OIOXMLInvoice>

Service Oriented Infrastructure:

<http://www.oio.dk/arkitektur/soa/infrastruktur/english>

UBL International 2006

<http://www.ublconference.com>

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Source for presentation slides (updated 2006-11-24):

<http://www.ublconference.com/200611/UBLInternational2006Presentations-20061124.zip>

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<http://www.ublconference.com/200611/index.html>

UBL International 2006 is running its inaugural event in Copenhagen Denmark (Scandinavian Trade Building in Allerød) the week of November 13-17, 2006.

UBL International is a training summit bringing together worldwide Universal Business Language expertise to deliver full-day and half-day lectures and hands-on courses from commercial training companies, and a full day of free symposium presentations, this year marking the launch of UBL 2.0!