

**NOKIOS 2010**

**Innovasjon i offentlig sektor**

**Sitra, Finnish Innovation Fund  
Municipal Program  
27.10.2010**

**SITRA**

Teppo Sulonen, Senior Advisor

# Teppo Sulonen

- Born in Tampere 1951
  - University of Tampere, 1970-1974
  - Post Bank, System analyst, 1975-1979
  - Nokia Data, Group manager 1980-1989
  - Soft Group Oy, Department manager 1990-1991
  - Avasta Transactions Oy, CEO 1992-1999
  - Stonesoft Oyj, Director, 2000-2001
  - eTampere, Information Society Program, Consultant 2002-2004
  - City of Tampere, CIO, 2005 – 2010
  - Sitra, Finnish Innovation Fund, Senior advisor 2010 ->
- 
- Next week "Grand seminar for 40 years with IT business"



***We are building up***

***Service Center for municipalities in  
Finland***

***It is a company owned totally by  
municipalities***

***Our goal is***

***To improve official services and  
processes using information  
technology together with IT vendors***

***We are CIO office for our stakeholders***

# ERP in Finnish municipalities until now

- Bigger cities have 250-350 applications, smaller 50-100
- ERP is located in many operative applications
  - Silo's
  - Separate customer databases
  - No open and standard interfaces
  - Many point-to-point interfaces
  - eBusiness case by case
  - Some monopolistic vendors
- Low integration
- Master Data Management (MDM) is missing
  - Customers, services, codes, concepts

# ERP in Finnish municipalities in future

- Higher integration
  - Open standard interfaces
  - Service oriented architecture (SOA) between vendors and municipalities
- Centralized customer databases
  - Customer : citizen, employee, companies, tourists, students, state
  - Services and life cycle management
  - Centralized and standardized product (service) databases
- Business intelligence and reporting are easier and online
- Master Data management is working
- ERP = Administrative management + operative level management
- Mobile work and green IT

## We have 342 municipalities in Finland

- Nb of ICT positive 108 – 36,3 % from population
- Nb of ICT negative 47 – 6,1 %

Service center for ICT services

- Nb of THH positive 66 – 18,7 % from population
- Nb of THH negative 71 – 18,2 %

Service center for financial administration services

# Public sector needs and trends

## Hopes from municipalities

### **Business intelligence**

- Customer and service data, human resource information
- Data integration and availability in real time
- More quality and efficiency for management and administration

### **Customer based processes**

- Citizen life cycle management
- Customer-based eServices and processes
- More self service
- Automated and integrated service processes

### **Transition from technology-based development to services and processes**

- Consolidating procurement
- Outsourcing
- More development, less update work

## Technology trends and goals

### **Cloud services, SaaS (Software as a Service),**

- Outsourcing
- Transaction based costs
- No more heavy investments for municipalities
- Rules for competition

### **Open architectures**

- Open national architecture based on SOA-clouds
- Master data management
- Standard interfaces
- More reusable and open web services

### **Green IT**

- Ecological services and solutions
- Mobile work



# Our goal is to reduce total costs of municipalities using information management and IT technique in "right" way

## Challenges

### Too many applications

- Low integration
- Data is duplicated in many databases
- Old techniques

### Silo's

- Sectors have been very independent concerning IT solutions
- Shortsighted eSolutions

### Local specialities

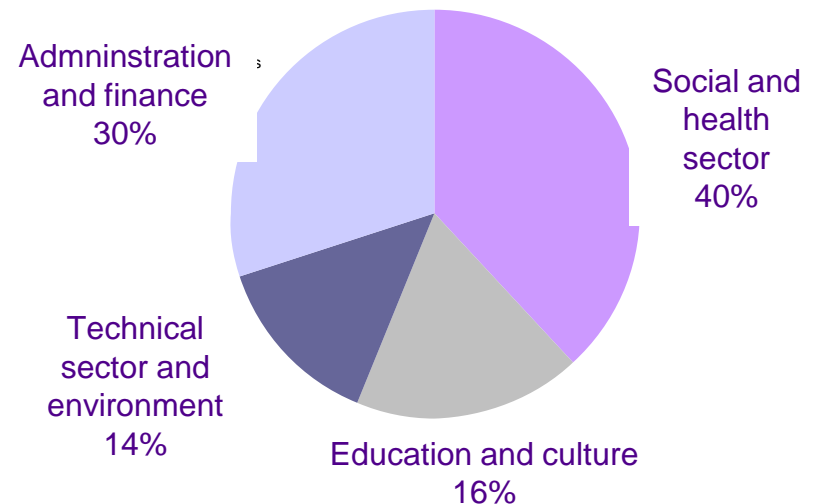
- Low cooperation level
- Too much tailoring
- The same application, many versions
- Separate license politics

### Cost are growing

- Update costs 70 %, development only 30 %

## ICT-costs / municipalities

### Costs in 2007



### Costs 2010-2015

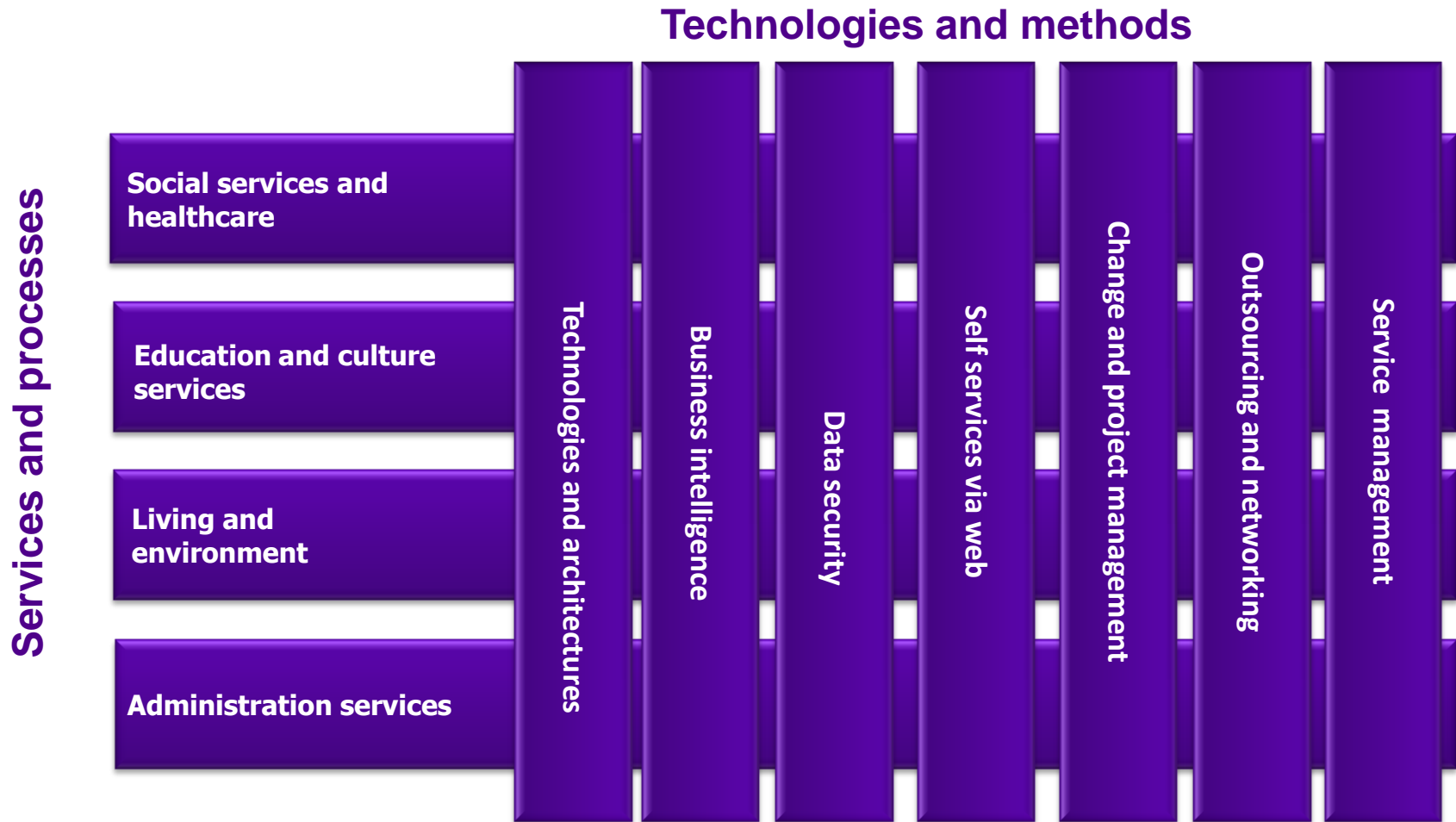
6,30 mrd. €

### Potential saving

0,64 mrd. €



# Competences of Service center company



## Our service portfolio

### **Customer process development**

Process and service development  
together with customers

### **ICT consultation**

Technical consultation, architecture, data security, identity and access  
management ....

### **Application development**

Application development together with vendors and municipalities. Procurement  
and purchasing.

### **ICT Infrastructure services**

Arranging clouds and SaaS services, telecommunications, licenses and hardware.

# Total Architecture concept, four parts

## - **Process architecture**

- Strategy, concepts
- User groups, roles, services
- Process model, process bank

## - **Data architecture**

- Conceptual model, data models
- Master data
- Databases, integration principles

## - **Application architecture**

- Applications
- Integration services
- Basic services, component bank

## - **Technical architecture**

- Technical components
- Administrative tools

# Total SOA architecture concept, basic elements

- **Three levels**

- Conceptual level
  - **WHY**
- Logical level
  - **HOW**
- Physical level
  - **WHAT**

- **Basic elements**

- Architecture principles
- Integrated architecture
- Bounds and limits
- Data security
- SOA principles
- Standards

## **SOA steps**

- 1. Services**

- Service oriented reusable services

- 2. Technology**

- Platforms, process engines, modelling tools, repositories

- 3. Administration**

- Development
- Life cycle management
- Measuring
- Change management

- 4. Strategy**

- Connected to the strategy of the municipality

# Principles for architecture

## Principles

Open standard interfaces

Service oriented development

Public standards and  
recommendations.  
JHS-standards (JUHTA)

## Sister architectures

Total Architecture Concept for State  
(VM)

Total Architecture Concept for  
municipalities (VM)

SOA-concepts for municipalities  
(VM)

VALTASA-architecture

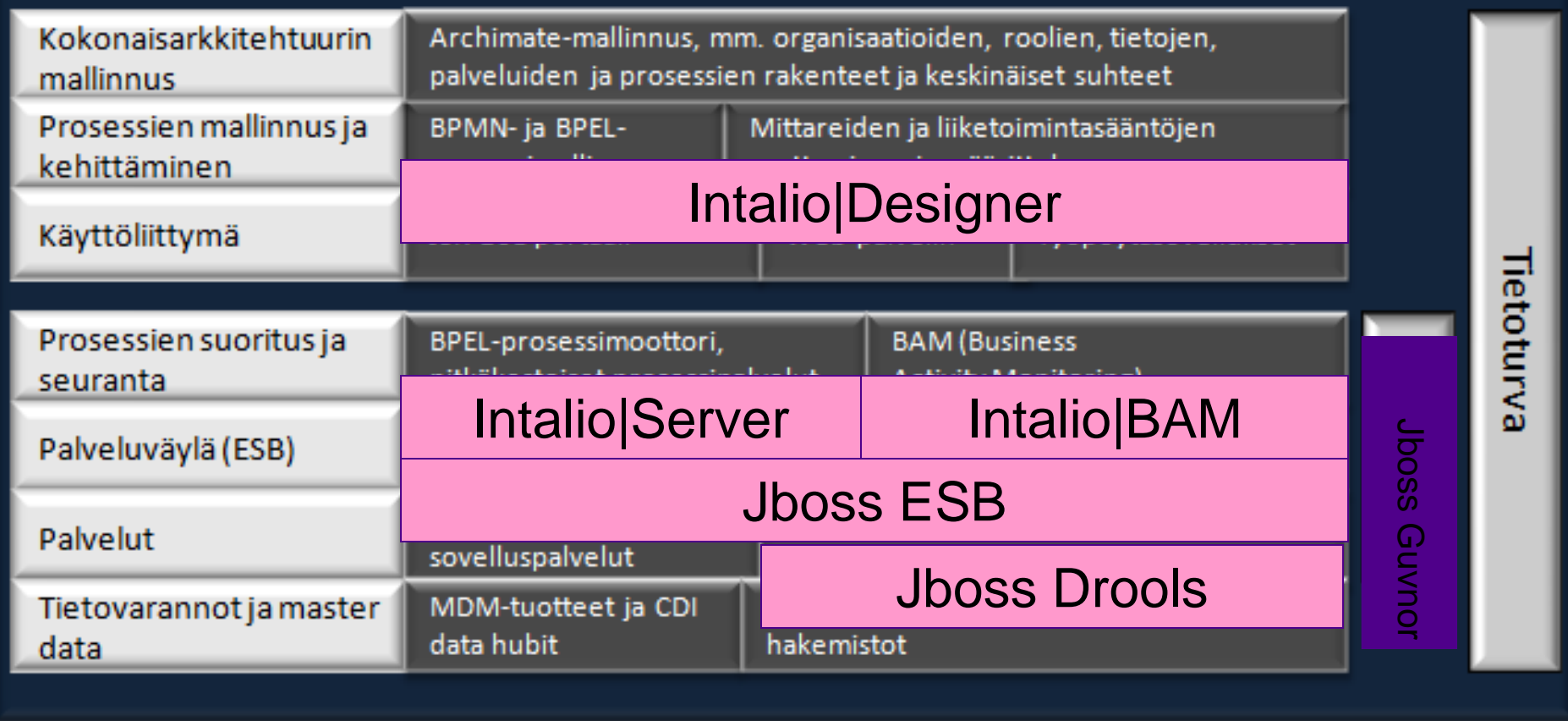
National projects(KANTA, SADE)

# Our SOA technology stack

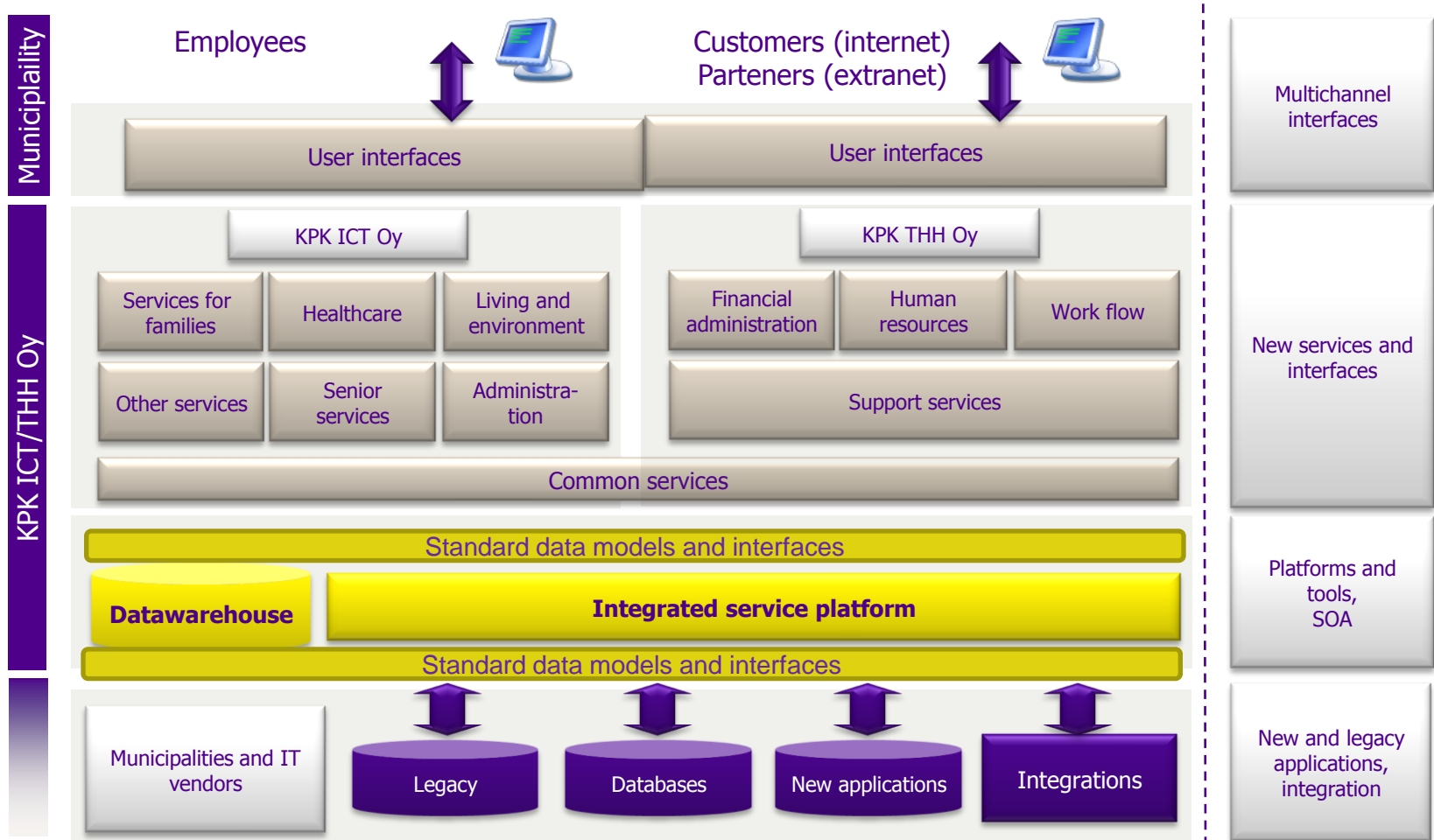
- **Architecture modelling**
  - Organization, user groups, roles, data flow
  - Archimate
- **Process modelling and development**
  - BPMN, BPEL
- **User interface**
  - JSR 168 portal
- **Process flow and measuring**
  - BAM (business activity monitor)
  - BPEL process engine
- **Enterprise service bus**
  - Service and integration platforms
- **Service components**
  - Reusable web services
  - Component bank
- **Databases and Master Data Management**

Some words also in Finnish

## KuntaIT:n SOA-teknologiapino



# New municipal architecture in brief





# Open, a very good word

- Many kind of openness
  - Open source
  - Open architecture, SOA (Service Oriented Architecture)
  - Open standard interfaces
  - Open cooperation
  - Open data
  - Open mind
- Advantages
  - Social communities, cooperation, friends
  - Quality (not automatically)
  - Agile work, more development, less update work
  - Cost benefits (strict project management needed)
  - New ideas, innovations

# Business Intelligence in municipalities

- CIO is not responsible for BI process, it is just business work
- Many points of view
  - Cost analysis, operative management, statistics, forecasting, effect measurement
- Look forwards, not backwards
- Integrated data architecture is needed
- Master Data Management must work
- Business intelligence is a part of business culture and strategy
  - Everyday work
- Municipalities need realtime overview of situation

# We have met 215 Finnish It-vendors expectations for them

- Process and service development together with customers
  - Open cooperation
- Customer business knowledge, not only technique
- Listening customers
- We want results, not only pay by the hour
- Agile methods
- More development, less update work
- Open architecture, open interfaces, open source
- Networking between vendors
- Cooperation between municipalities
- Friendly atmosphere

Our goal

"From cradle to grave"

Services for citizens, employees, companies, visitors based on the life cycle

Internet services

Public services

Global cooperation

Local cooperation

Integrated operative applications

Cooperative and safe technical infrastructure

SITRA

# IT business is open teamwork



Thanks !

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