Trentino e-government System

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meeting with the Palestinian Authority
Trento - 29 March 2012
Outline

- “Where is” Trentino?
- How did we reach there
  - Principles (→ Laws)
  - Actors
  - Actions/Plans
- Some pieces of the mosaic (consolidated and ongoing)
- Future directions
• Trentino is an autonomous Province in the heart of the Alps
• Legislative and administrative powers awarded by Italy’s Constitution and a special statute from the year 1948
• Direct administration of 90% of tax revenue
• Area: 6,233 sq. km. (2,06% of Italy)
• Territory:
  • 20% above 2,000 meters
  • 10% below 500 meters
  • 65% forest
• Inhabitants: 529,457
• 217 municipalities, 5 with more than 10,000 inhabitants
• Combination of different cultures and lifestyles:
  • Linguistic minorities
  • Mountain/Rural/Urban areas

Sources: Autonomous Province of Trento & ISTAT
## ICT indicators (2010)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
<th>Pos.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC in households</td>
<td>61.2%</td>
<td>6</td>
</tr>
<tr>
<td>PC in businesses</td>
<td>93.0%</td>
<td>1</td>
</tr>
<tr>
<td>BB in households</td>
<td>49.8%</td>
<td>1</td>
</tr>
<tr>
<td>BB in businesses</td>
<td>89.0%</td>
<td>3</td>
</tr>
<tr>
<td>PC in public sector (*)</td>
<td>89.3%</td>
<td>11</td>
</tr>
<tr>
<td>BB in public sector (**)</td>
<td>82.0%</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: Telecom Italia White Paper “Progetti Speciali Territoriali”
elaborated on data from ISTAT, CISIS, EU, et al.
ICT and citizens

interaction index Citizens ↔ Public Administration (2010)

Fonte: elaborazione RIIR su dati ISTAT, Cittadini e nuove tecnologie, 2010
ICT and businesses

interaction index Businesses ↔ Public Administration (2010)

Fonte: elaborazione RIIR su dati ISTAT, Le tecnologie dell’informazione e della comunicazione nelle imprese, 2008 (tavola 21)
The guiding principles (1)

... and their transposition in law ...

- Shared governance (involving the whole local public system)
- Development of broadband (2004 → 2009)
The guiding principles (2)

- Administrative simplification (through digital administration) (1992 – 2007)
- Program agreements with the research centres to develop research and innovation in Trentino (2005)
- Measures to promote employment of researchers in local businesses (1999 – 2010)
The Province, is adopting an **integrated approach involving 5 local institutions**, to achieve the pre-set goals with maximum efficiency and effectiveness, ensuring the innovative nature of technology and service developments.

**Trentino Network**
Public company that develops and manages the telecommunications infrastructure and provides communications services to the Province and to all public bodies.

**Informatica Trentina**
Point of reference for public administrations and bodies of Trentino for solutions in information technology.

**University of Trento**
Research and innovation center in the Province.

**Bruno Kessler Foundation**
Research institute of the Autonomous Province of Trento that operates in the science technology and humanities.

**Create Net**
Research and innovation center aimed at creating synergy between academic institutions, business and international research centers with the aim to make the best benefits for the Province.
From principles to plans

1. Programme of investments for SIEP (Provincial Information System)
2. Guidelines for the Geographical Data Information System
3. Guidelines for services innovation enabled by ICT
4. Telecommunication development plan
1. Investments for the Provincial Information System

- Plan defined at the beginning of legislature (2009 – 2013)
- Updated yearly
- Covers:
  - Structural Projects
  - Horizontal Projects
  - Vertical Projects
- Value: about 250 Million Euro
2. Geographical Information System guidelines

- Evolution of the geographical data management toward a “Spatial Data Infrastructure”
- From silos to shared infrastructure (SOAP architecture)
- Roles identifications
  - Decision makers
  - Data producers
  - Users
3. Service innovation driven by ICT

- Legislature strategy
- Identification of:
  - Service areas more sensible to ICT innovation
  - Enabling technological platforms
- Role of the users (especially the public sector) in generating innovation demand
- Two expected effects:
  - Innovation in services
  - Growth of economic sector (especially innovation)
4. Infrastructure plan

To turn Trentino into a land of innovation and enable all citizens and businesses to benefit from it, the Province of Trento has been implementing a medium-long term plan based on three steps:

1. Fast actions to overcome the 1st generation Digital Divide with the aim of providing urban areas with a connection speed of up to 2 Mbps.

2. Improving the usability of services for citizens, by deploying a network capable of providing 100% of the population with a connection speed of at least 20 Mbps (peak downstream bandwidth).

3. Deployment of a Next Generation Access Network, with a fiber optic link to residential users and companies (FTTH).
The system view

Horizontal applications
- Accounting
- Human resource management
- ...

Platforms and services
- Multichannel
- Authentication
- Cooperation
- Protocol and document management

Network

Health services
Education
Social services

...
Benefits of the system view

- Mutual evolution of the system and the legislative support
- Consolidate the baseline for long term strategies
- Provide the framework for short-medium term actions
The system view allows ...

- Robustness with respect to context changes (political and organizational)
- Technological neutrality
- Look at the current innovation and take into account possible/future ones
- To have a clear view of the target (even moving) to dominate the technological trends (rather than “being dominated”) and avoid buzzwords
From “theory” to practice (... what we have done)
A normal day of work ...

- Figures about the Provincial Information System
  - 6,000 PC in the network of the Trentino public administration (only the Province)
  - 160 application running
  - 55,000 function points in operation
- And the support (one year)
  - 35,000 calls for support service
  - 9,000 on site intervention on hardware
The geographical data Information System

Support and coordination

Dip. Innovazione

Segreteria

Dip.A

Stazione A

Responsible Stazione

C Direttore Generale

Dip.B

Stazione B

Responsible Stazione

C Direttore Generale

Dip...

Stazione...

Responsible Stazione

C Direttore Generale

Decisions

Data production and update

Trento - 29 March 2012
Towards the Spatial Data Infrastructure

SDI Europe level (INSPIRE)

SDI National level

SDI Provincial level

SIAT PAT

Data – Metadata PAT (Data models/Rules)

Services & Agreements

- Organisation in Trentino
- Businesses/Professionals
- Universities / Research Centres
- Geographical data producers

Organisation in Trentino

Businesses/Professionals

Universities / Research Centres

Geographical data producers
P.I. Tre - Trentino Digital Protocol

- Transform paper-based processes into digital ones
- Improve document management and control
- High level of security
- Quick availability of documents
- Multiple access to documents
- Savings in time, materials, resources
A multi-organization system

13 Valley’s Communities
5 Museums
93 Municipalities

4 Schools
10 Altri enti

Municipalities
Valley’s Communities
Other organizations
Trento University
Health Agency
Province
Trento Municipality

Users

1.255
605
983
2.332
1.626
3.898
202

TOTALE
10.901

130 organizations
## Impact

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012 (2 months)</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipalities</td>
<td>28,895</td>
<td>208,908</td>
<td>439,455</td>
<td>67,690</td>
<td>744,948</td>
</tr>
<tr>
<td>Valley's Communities</td>
<td>19,797</td>
<td>72,096</td>
<td>120,212</td>
<td>19,298</td>
<td>231,403</td>
</tr>
<tr>
<td>Other organizations</td>
<td>23,338</td>
<td>37,086</td>
<td>130,942</td>
<td>17,761</td>
<td>209,127</td>
</tr>
<tr>
<td>Trento University</td>
<td>66,885</td>
<td>80,841</td>
<td>79,181</td>
<td>7,872</td>
<td>234,779</td>
</tr>
<tr>
<td>Health Agency</td>
<td>210,197</td>
<td>220,505</td>
<td>213,097</td>
<td>27,936</td>
<td>671,735</td>
</tr>
<tr>
<td>Province</td>
<td>233,472</td>
<td>710,867</td>
<td>1,235,834</td>
<td>134,436</td>
<td>2,314,609</td>
</tr>
<tr>
<td>Trento Municipality</td>
<td></td>
<td>1,062</td>
<td>38,133</td>
<td>10,312</td>
<td>49,507</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>582,584</strong></td>
<td><strong>1,331,365</strong></td>
<td><strong>2,256,854</strong></td>
<td><strong>285,305</strong></td>
<td><strong>4,456,108</strong></td>
</tr>
</tbody>
</table>
Impact (2)

147,856 registrations
12,970 pages
26 files
weight 65 kg (paper only, without binding and toner)
height 130 cm (paper only, without binding)
Digital mandate to pay

It’s the order to the bank of paying someone

- The Administration sends the mandate to pay (digitally signed) to the treasurer (bank) and receive the notification of payment “done”
Advantages

- Faster payments
- Paperless process
- Timely control over expenses
- Dramatic reduction of errors (0.4%)
- Automatic verification of control bodies (Court of Auditors)
- Interoperability with the accounting system of the Province
- Simple use (Browser)
Impact

- System fully operational since January 2002
- Usage data (Province and its agencies):
  - Digital mandates: 2009 = n. 204,000
  - Digital mandates: 2010 = n. 200,159
- Time reduction (data of 2006)
  - Settlements 15/20 days → 4 days
  - Digital mandates 4/5 days → 1 day
Interoperability and application cooperation

- The participation of the Province in the implementation of interoperability principles at Inter-regional level

- INF 3 – Sistema federato di autenticazione
- INF 2 – Gestione di strumenti interregionali di service level agreement
- INF 1 – Infrastruttura di base per la cooperazione applicativa interregionale
Interchange of citizens data

- One of the tasks of the Interoperability project

- A relevant case involving:
  - National administration (Ministry of Interior)
  - Regional/Provincial administration
  - Local authorities

- Ensure the “alignment” of citizens data in all specific database, to guarantee reliability of administrative processes
On what we are currently working
### Citizen service portal

The entry point for the citizens to access information and services delivered by the Province, the Municipalities and the Health Agency

<table>
<thead>
<tr>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>• About 300 web sites of the public administration in Trentino, with different organization of content, and not searchable uniformly</td>
<td>• Single search point</td>
</tr>
<tr>
<td>• No advanced online services</td>
<td>• Semantic search (natural language) and not only by keywords</td>
</tr>
<tr>
<td>• No strong authentication mechanisms</td>
<td>• Single platform for online service delivery</td>
</tr>
<tr>
<td></td>
<td>• First set of services aimed at being expanded continuously</td>
</tr>
<tr>
<td></td>
<td>• Portal access with strong authentication</td>
</tr>
</tbody>
</table>
Step 1: Access to portal

Step 2: Request for authentication

Step 3: Confirmation of credentials

Step 4: (if OK) Use of the portal services
Service access card

Micro-chip card to identify each citizen when accessing services.

Before

- No single identification document for health services available for all
- No document to be used both at the counter (physical presence) and for online services authentication

After

- Each citizen of Trentino has the provincial Service card (CPS)
- Secure access to the citizen portal
- Other public bodied can deliver their services through the portal, being citizens authenticate through the CPS
Dematerialization and digital signature

ICEF declaration prepared by the front-office operator in support to the citizen.

The citizen “sign” the declaration. The system recognises specific parameters of the signer, and include them in the digital document.

Document transmission

Digital Archive

ICEF declarations stored with time stamp and encrypted with Province public key
Future directions
Digital archiving and storage centre

- Given the huge efforts in dematerialization of documents and processes

- The issue:
  - Preserve in time the accessibility of documents by users

- It is a strategic solution, even if not perceived as such at the moment

- It needs strong political mandate

- An ICT solution is NOT enough!
Digital archiving and storage centre

- **Actions**
  - Design the archiving and storage centre as a permanent technical and organizational structure
  - Connect the project with all the current initiatives on dematerialisation
  - Engage in a short term solution (for urgent needs) taking into account the long term objectives
Modernizing the administration

- Citizen involvement, not only in democratic processes but also in service design and delivery
- Open data and open standards (... and open source)
- Enforcing the mutual relations of public sector and research
Further promoting the system view ...
With the goals ...

- Better services to citizens
- Growth opportunities for the territory
Trentino e-government System