Information Society perspectives for Communities
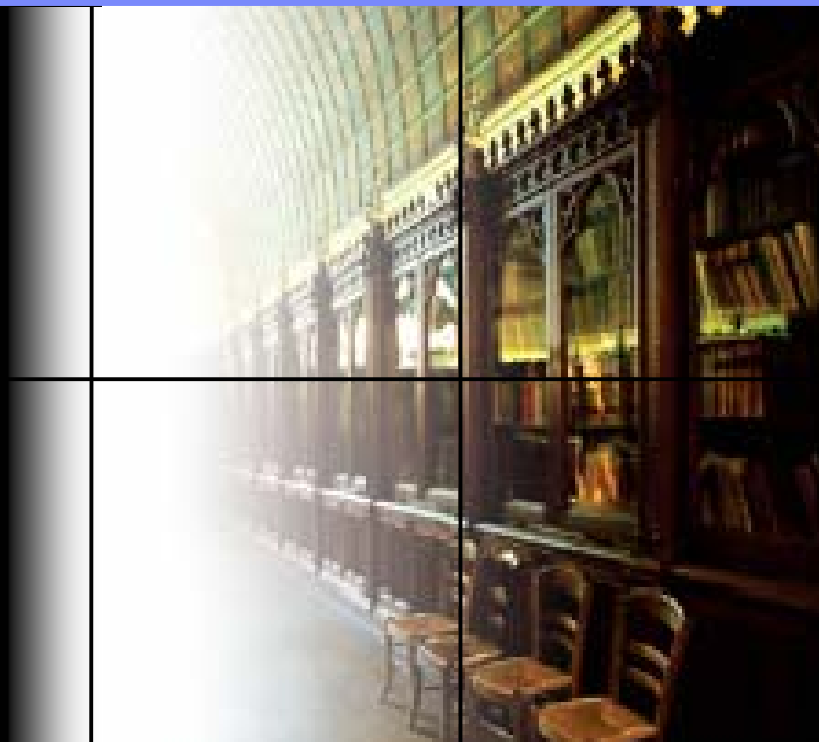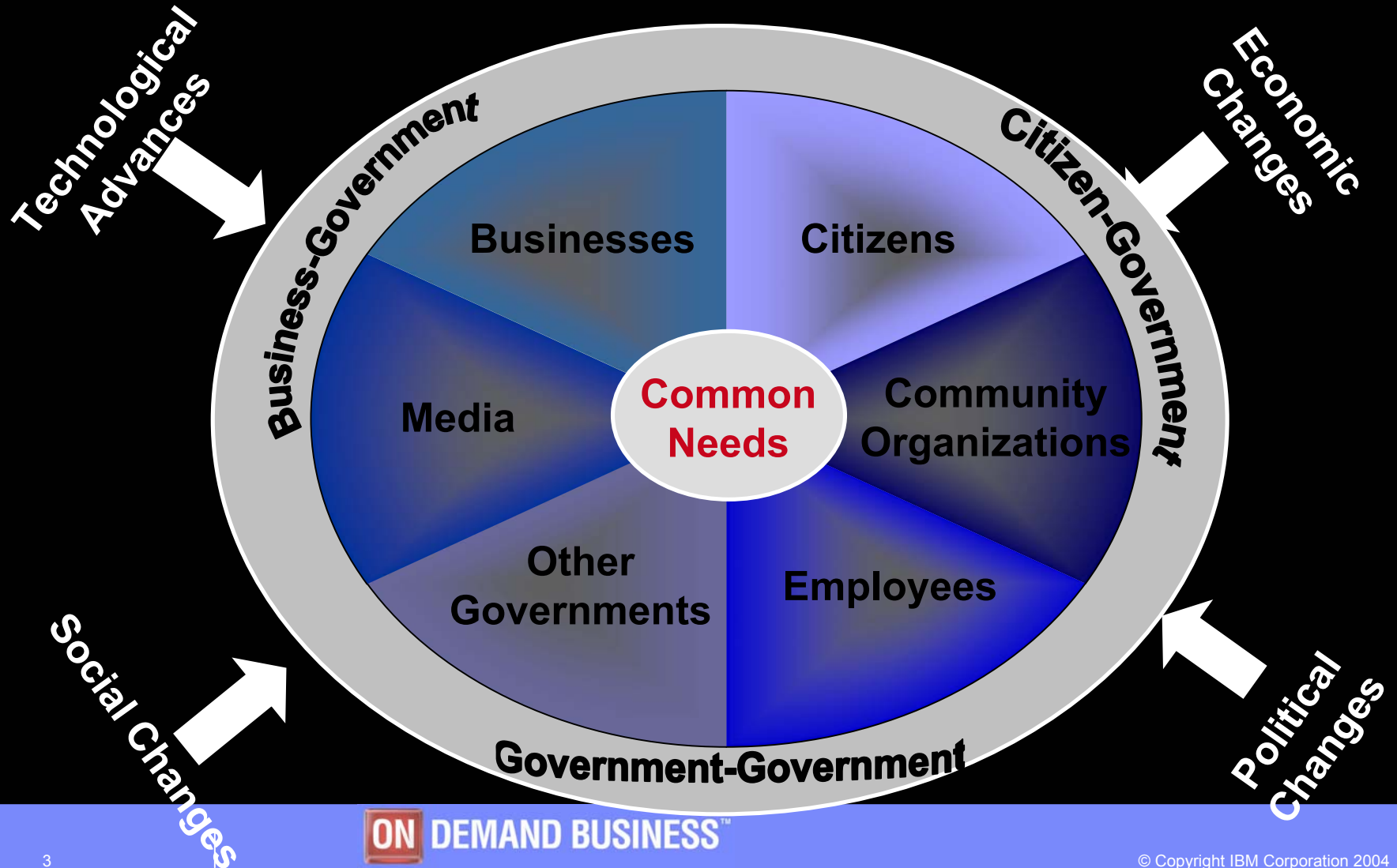
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Agenda

❏ *The digital/information age: barriers and progresses*

❏ The "Caring Government": evolution to on Demand

   ✓ Economy: Grid Computing for economic development: the North Caroline example

   ✓ Society: the Charter of e-rights

   ✓ Emergency Management: the Capwin example

❏ Conclusion

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The digital/information age profoundly effects needs and socio-economic environment

Technological Advances

Economic Changes

Business-Government

Citizen-Government

Businesses

Citizens

Media

Common Needs

Community Organizations

Other Governments

Employees

Social Changes

Government-Government

Political Changes

eEurope 2005 and Beyond

"*to become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion.*"
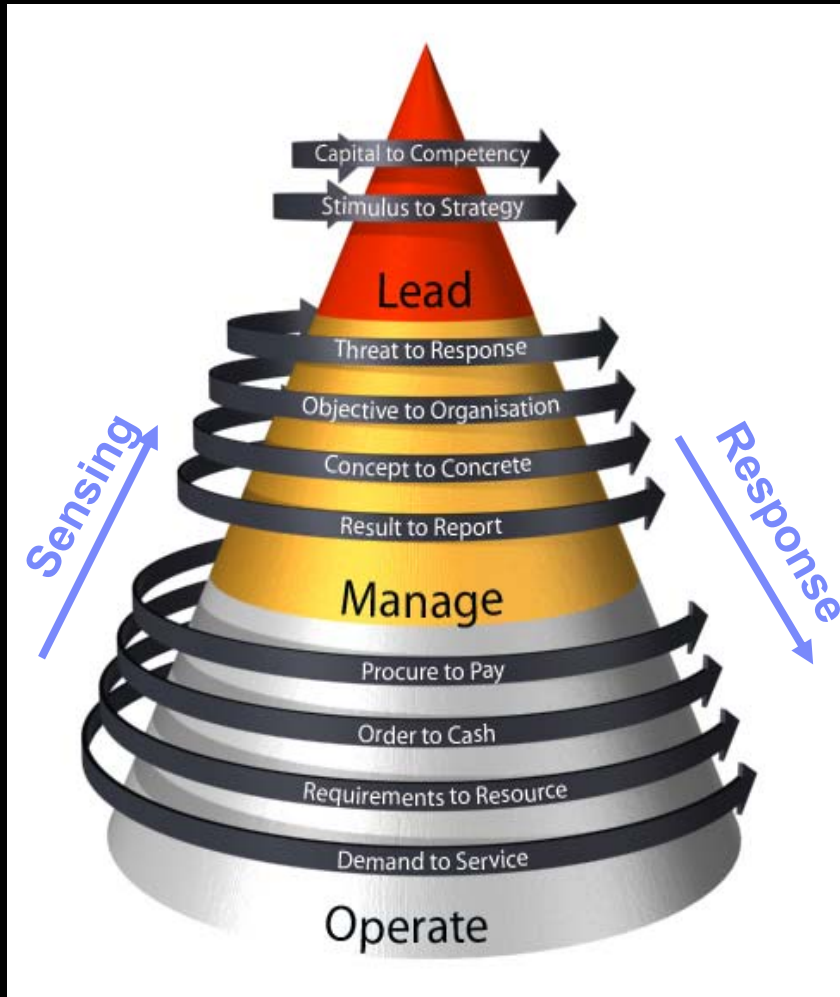
The strategic goal for 2010 set for Europe at the Lisbon European Council March 2000

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Position for Government Transformation:
➔ towards *On Demand Government*

Examples

- Interactive Policy Making
- Demand Management
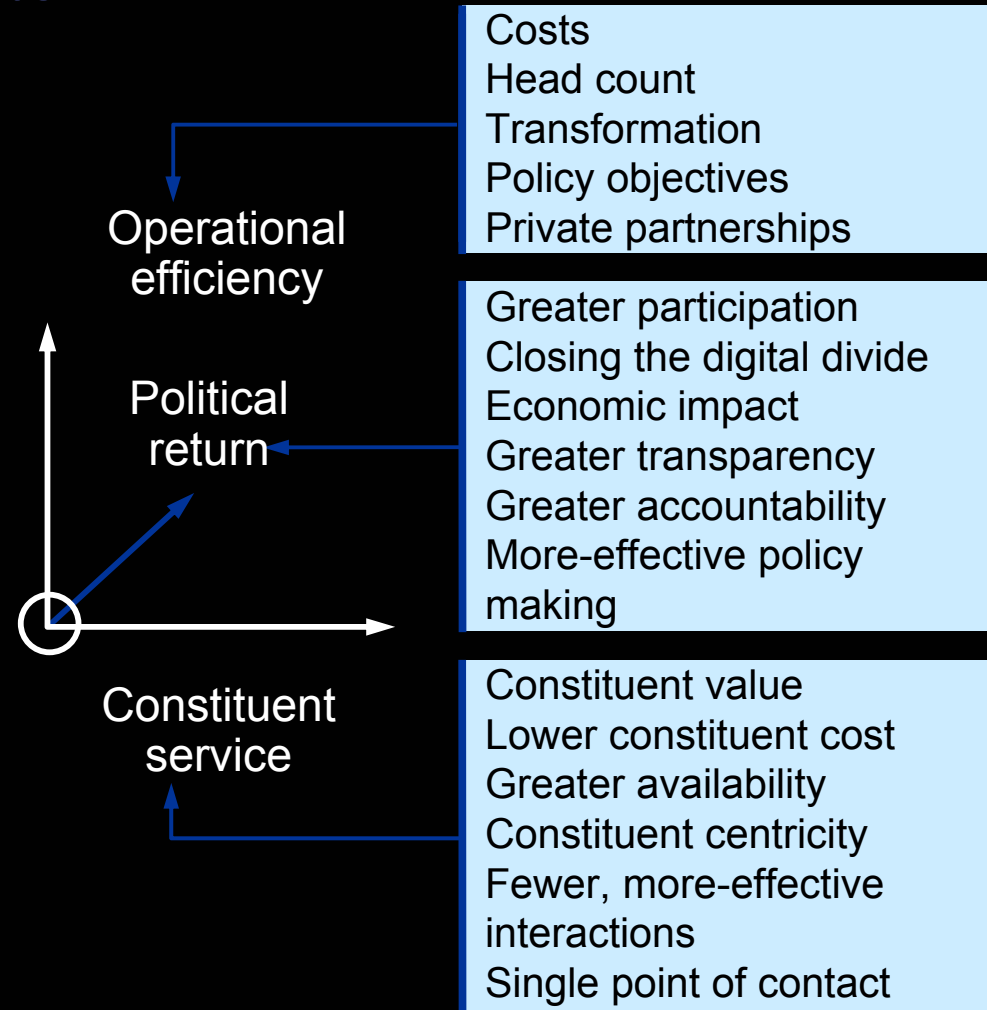- Corporate Performance Management
- Emergency Management

An On Demand Government….is a Government whose business process - integrated end-to-end across the organization and with other government organizations, partner institutions and citizens – can respond with speed to citizen and business demands, changing economic conditions, policy changes and legislative priorities or external threats…..

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Demonstrating Value of IT:
A Hot Topic for Governments Worldwide

- **Reduced costs/enhanced revenue collection**
- **Economic development**
- **Reduced redundancy**
- **Fostering democratic principles**
- **Improved service to constituencies**

- **Value to investors**
- **Value to users**
- **Value of employees**
- **Value of infrastructure**

- **Conformity with policies**
- **IT project efficiency**
- **IT spending optimization**
- **Business process effectiveness**
- **Constituent service levels**

- **Mission and business results**
- **Customer results**
- **Processes and activities**
- **Technology**
- **Human capital**
- **Other fixed assets**

- **Agency benefits (reduced cost, increased revenues)**
- **Consumer financial benefits (user cost savings)**
- **Social benefits (service improvement, increased knowledge)**
- **Contribution to broader government objectives**

Use the Public Value of IT to Make Business Cases for Government Projects

What problem exists that must be solved?

What stakeholders does this problem affect?

What solutions are available?

What are the benefits of each solution?

What is the relative cost of each solution?

What stakeholders are affected by the solution?

How can these stakeholders affect my political future?

How shall this solution be funded?

What other problem goes unsolved?

Operational efficiency

Political return

Constituent service

Costs
Head count
Transformation
Policy objectives
Private partnerships

Greater participation
Closing the digital divide
Economic impact
Greater transparency
Greater accountability
More-effective policy making

Constituent value
Lower constituent cost
Greater availability
Constituent centricity
Fewer, more-effective interactions
Single point of contact

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The Vision:
From a Bureaucratic to a
Caring Government Organisation

Imagine a public services environment in which…

- **you will receive from a tax agency your completed personalised tax forms for your check and approval**

- **you can quickly register a business and get help with other services for opening, staffing and operating it**

- **you can fully collaborate within your emergency response team, get and share information immediately and respond to a case of emergency without any delays**

- **you can easily be directed to a service provider that will effectively meet your needs (eg. to get a new job, child support, education, adequate heathcare, ...)**

Government is the catalyst for economic growth and social cohesion e-Government is the mean to achieve it

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Why Should Regions and Business Communities be Interested in Grid computing?

To improve their own use of IT resources and the cost of providing services

- States are coping with a range of IT efficiency issues including the use of multiple computer networks for different agencies and multiple CIOs to manage different compute and data resources
- This morass of computing and networking needs to be managed more efficiently and at lower cost
- Grid computing offers a solution
- If states could gain the same efficiencies as firms, they could save roughly 10%-15% of operating costs by 2010!

State economic development will be impacted by firms and universities using grids. These impacts are not being integrated into state economic strategies and policies.

Main Finding of North Carolina Study

Given: 1) adequate access to broadband infrastructure and 2) a sufficient IT workforce,

The deployment of high performance grid computing and Web services applications would contribute significant gains to North Carolina's economy over 2010 baseline growth forecasts

Therefore, State economic policy makers will need to prepare to meet these needs or they may stifle the adoption of grids

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The Significant Gains to North Carolina's Economy by 2010

❑ An additional $10.1 billion in output - 2% over forecast

❑ An additional 1.5 percent in aggregate labor productivity - 1.5% over forecast

❑ An additional $7.2 billion in personal income - 3% over forecast

❑ An additional 24,000 new jobs, the net result of 55,700 new jobs created from increased industrial growth and 31,700 jobs lost due to the adoption of new grid and Web services technologies and downsizing

❑ An additional $1.2 billion in expenditures for communications services, with 80 to 90 percent of the new spending devoted to the purchase of broadband access

❑ These gains will have a major impact on the state economy!

Why Clusters and Grids Are Important

Cluster computing and grids change the economics of doing complex computations since they lower costs so dramatically.

- Cluster software lets firms use interconnected small computers to do work that previously required a large supercomputer.
- Grids connect different clusters across a corporate firewall.
- Web services are software that supports sharing of incompatible data.

When firms use clusters or grids, they can complete compute-intensive tasks in hours that previously required days.

- This helps firms <u>save costs</u> -- less compute time is needed, as well as less time from programmers and software developers.
- They also benefit from <u>getting results faster</u>, so that <u>products can get to market sooner.</u>
- These cluster/grid users become *<u>more productive</u>* "<u>growth centers</u>" because they are more *efficient* and *more competitive*.
- These <u>firms are more dynamic.</u> They **spark growth in the state!**

Definitions of Clusters and Grids

❑ **Clusters connect many computers and allow computations to run in parallel.**

❑ **Data grids connect storage centers using communications links.**

❑ **Enterprise grids connect clusters in a number of centers in the firm and permit decentralized control of the grid.**

❑ **Partner grids let suppliers or collaborators connect to an enterprise grid.**

Broadband and the Growth of Clusters and Grids

❑ **Initially, firms deploy clusters in a specific business area, such as drug discovery. They then begin to expand the use of clusters in different departments.**

❑ **Later, firms want to link centers where complex computing takes place to tap into the compute power of the entire firm -- an enterprise grid -- or to link data centers -- a data grid.**

❑ **This requires linking offices using <u>broadband connections</u>**

  ✓ **Auto, drug and health service firms are already setting up grids to support complex computing operations.**

  ✓ **These broadband links will grow as firms send more data over the Internet.**

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Ways that Region and Cities can Use Grids to Cut Costs, Improve Services

To share resources within a city or region, so that agencies around a Region could use the compute and data storage resources the Region already has or accounting systems that the Region has used

- This could create multi-county or multi-city groups to deal with accounting or government resource management issues

To let water authorities share remote monitoring and management across a region

  ▸ To model floods and their impact on specific elevations
  ▸ To identify where unforeseen flooding may occur after a hurricane

To share Emergency Room skills and supplement information available on a patient in an emergency situation.

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TeleCities: Charter of eRights

1.Accessibility Rights:

-Guarantee access to broadband – public policy eg. Broadband network of public access points

-Ensure security and user protection – confidence in ICT

2. Information Rights:

-Accessibility to user-friendly, highly understandable, complete, diversified, up to date, transparent public information

-Citizens personalise their relation with an innovative networked public service

3. Education and Training Rights:

-Rights to training for all to enable people to effectively benefit from services and information through ICT

-Stress on tailored training teachers and specific groups

4. Participation Rights:

-Right to a transparent Public Administration at all levels of decision making – eParticipation

-Benefit from a Public Administration that is committed to fostering citizen participation and strengthening civil society

City of Naestved:
**The declaration of a new kind of**
administration – 10 years ago

First of all you have to have the understanding that administration

In local government is not a classic terminology of "cases". In many ways administration is more like handling the demands, terms and possibilities of the society for human beings. Human beings seen as a whole person – and focussing to put the individual in the centre.

Every individual citizen and the possibilities of his/hers family to experience transparency, overview and understanding of their life situations – and the rights and duties concerning the possibilities offered by the society (the decision makers).

People, who understand the demands and options for their personal improvement in life, will feel themselves empowered to handle their own life situations – and will make more contributions to the society and the democracy – locally, nationally and globally – in other words: active citizenship

The future vision for the administration will be: from bureaucracy to be communicator of the policies, legislation and common sense.
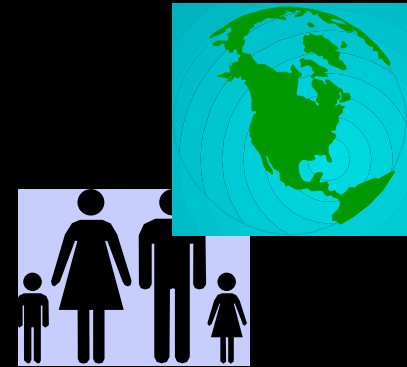
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Risk management: the Challenge

Effective public safety incident response and management requires coordination and information sharing in the field among multiple responder agencies.

Incident response and management are often hampered by the inability of mobile responders from different organizations to communicate.
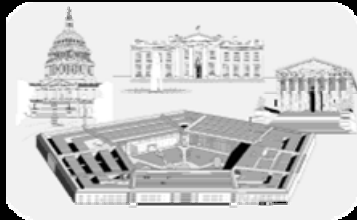
Major highway traffic incidents

Train or aircraft crashes

Multi-alarm fires

Hazardous materials spills

Hostage situations

Extreme weather events

Earthquakes

Contagious disease outbreaks

Terrorist attacks

The major amount of hazardous events happen in cities

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The „4 Cs": Key to risk management

Central Government

Region & Local Government

Travel & Transportation

Communication: The basic capabilities of accessing and sharing accurate and timely information required to accomplish the customer's safety and security mission.

Coordination: The capability for multiple individuals within an organizations, and for multiple organizations, to take appropriate, synchronized actions to implement the decisions taken in a collaborative environment

Collaboration: The ability for multiple individuals within an organizations, and for multiple organizations, to work together to effectively process shared information and make appropriate, informed decisions.
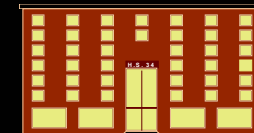
Control: The capability to control
 - access to borders
 - access to sensitive information
 - access to secure physical locations
 - access to secure physical devices

Healthcare
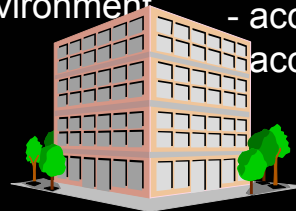
Private Sector

Education

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In Summary: Governments need to move into the on demand era to quickly respond to changing environments

CHALLENGES

Reshape citizen/business services

Customer issues
- Managing citizens' expectations
- Improve democracy/ economic development
- Security & Data protection

Organisational effectiveness

Customer issues
- Addressing skills shortage (massive retirement waves)
- Attract/train and maintain skills

Financial performance

Customer issues
- Providing more with less
- Dealing with a deficit budget
- Dealing with fraud

HOW

Become an "On Demand" Government

Responsive, Focused, Variable, Resilient

Through

Process Transformation

- From silos to integrated
- Cross-agency, cross-government processes

Cultural change

- Supporting the citizen focus vision

IT infrastructure

- Integrated, Open, Virtual, Autonomic
- Security and Data protection

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Thank you !

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