



Strategic Vision

Public e-ID Programs in GCC Countries

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Partners in Building the Security and Economy of the Emirates

Federal Authority | هيئة اتحاديّة

Our Vision: To be a role model and reference point in proofing individual identity and build wealth informatics that guarantees innovative and sophisticated services for the benefit of UAE

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Agenda

- Introduction: Global Challenges
- e-Government in GCC Countries
- Identity Management Infrastructure
- GCC Identity Management Programs
- National Certification Authority
- Interoperability
- Some Reflections

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Governments: Significant Challenges



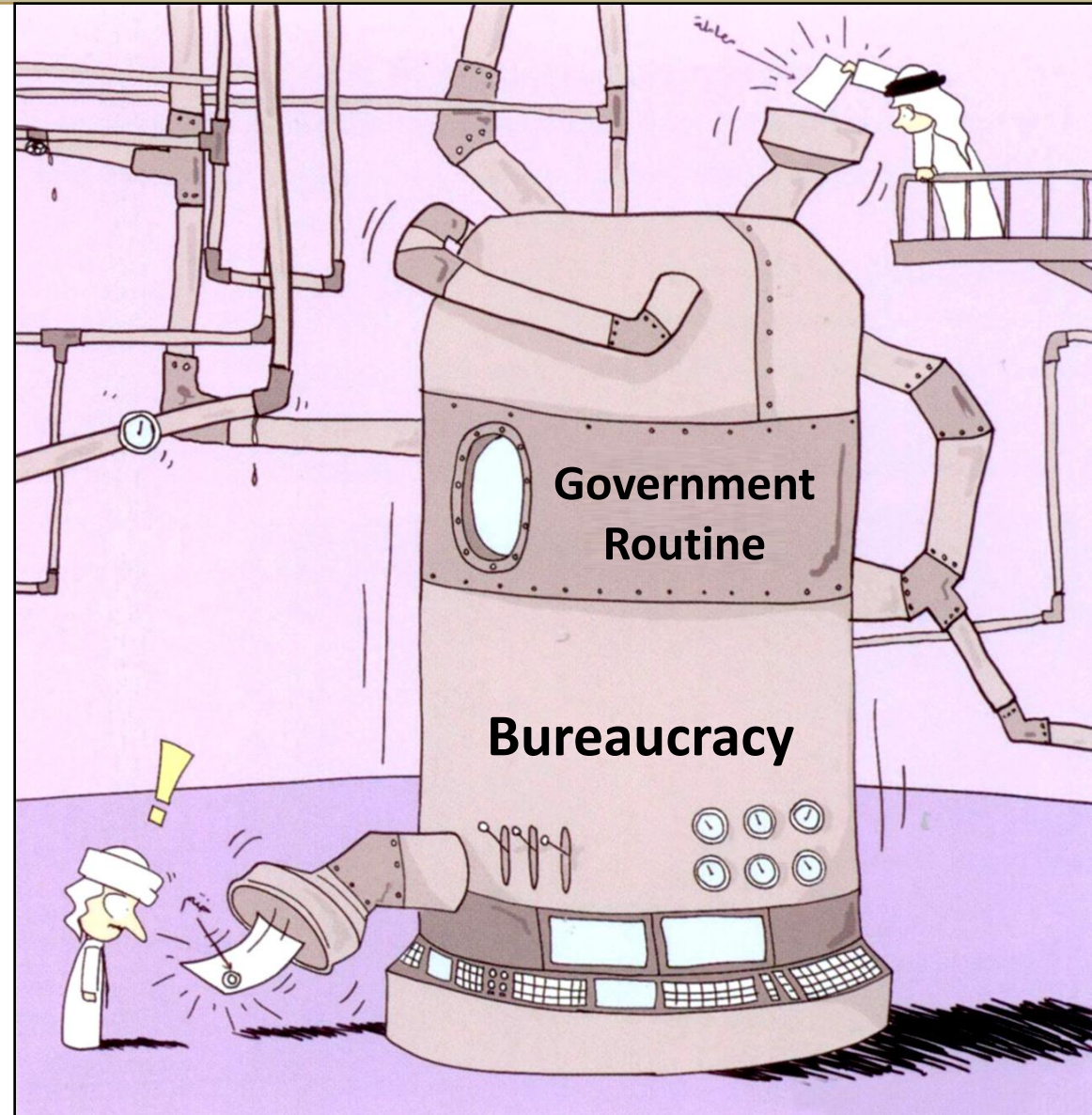
In a changing world characterised by the accelerating globalisation, governments are faced with multiple challenges and development issues that are complex, controversial and multi-disciplinary :

- Demographic transition
- Climate Change
- Evolution of the global economic landscape
- International Terrorism
- Public Service Delivery



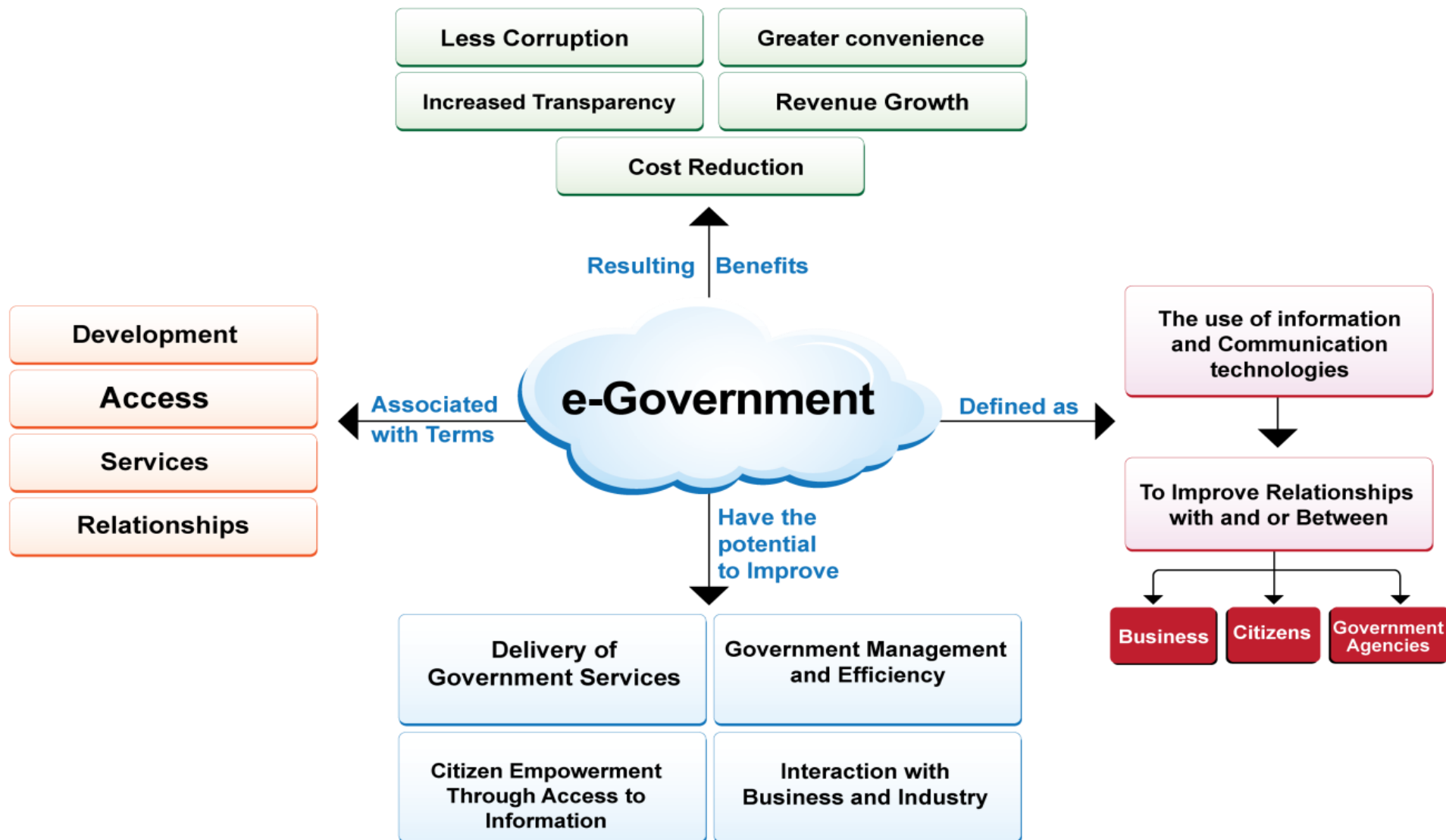
Need to re-inventing Government ?

fundamental changes
that ripple throughout
the bureaucracy;
changing everything



E-Government

... Using the Internet
and ICT to develop
better government .



... strong **ideological** base in government sector,

motivated by **political imperatives**

with the **belief** that e-Government would address many of the today's challenges.



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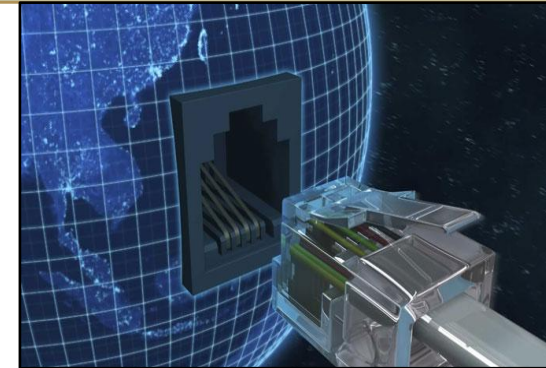
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- Strong leadership backing and funded initiatives to modernising existing public service delivery infrastructures .
- Regional ICT Infrastructure is growing exponentially, with gigantic investments .
- GCC governments have taken a Whole-Government and people-centred development approach .



- Some of the key initiatives launched in the recent years to support citizen-centric e-government development in these countries are related to :

1. Network readiness,
2. Infrastructure readiness,
3. Service availability,
4. Citizen inclusion, and
- 5. Development of a national identity management infrastructure .**



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All GCC countries have initiated modern Identity management systems to develop a

**new personal
identification card**

that would act as the trusted identification document .



Key Strategic Drivers





ID-card registration in
GCC countries is a
compulsory process
but phased in stages..

19 million (40%)
have been registered to-
date.

Identity Cards in GCC Countries



Authentication:
Largely visual aspects .

Identification:
Law enforcement;
Forensic databases .

GCC Citizen **traveling**
between borders .

e-Gate .

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ID Card Background

- Start Year: 2004 .
- Multos OS card
64K contact Chip
- PKI: Entrust
- 2 x flat prints
- Registered: 4.5 million
out of 29 million total population



Smart Identity Card Applications:

1. Working on enabling ID card for e-Health .
2. Working to implement ID card-based e-Government Services .

Ministry of Interior

- Issuing Identity Cards .

Ministry of Communications and IT

- National Centre for Digital Certification:
- Issues 2-factor authentication .
- credentials for government employees .



ID Card Background

- Start Year: 2004 .
- 72KB Smart Card .
Planning for 144KB end of 2012
- PKI from Keynectis
- 2 x flat prints
- Registered: 3.5 million
(not all with biometrics)
out of 3.7 million total population



Smart Identity Card Applications:

1. Driving License.
2. e-Gate .
3. e-Purse .
4. e-Payment .

Customs – Royal Police
Bank ..



ID Card Background

- Start Year: 2009 .
- Java card 64K EEPROM chip combi contact/contactless .
- PKI from VeriSign
- Rolled ten fingerprints
- Registered: 1 million out of 2.7 million total population



Smart Identity Card Applications:

1. e-Payment .
2. e-Voting .
3. e-Gate .
4. e-Health (ongoing) .
5. e-Gov using PKI to facilitate e-use, Digital Authentication, Digital Signature, Email & document encryption .



ID Card Background

- Start Year: 2005 .
- Java card Hybrid Smart card consisting of 64K EEPROM contact chip and 1K EEPROM contactless mifare chip
- 2x Flat fingerprints
- Registered: 800K (80%) out of 1.1 million total population



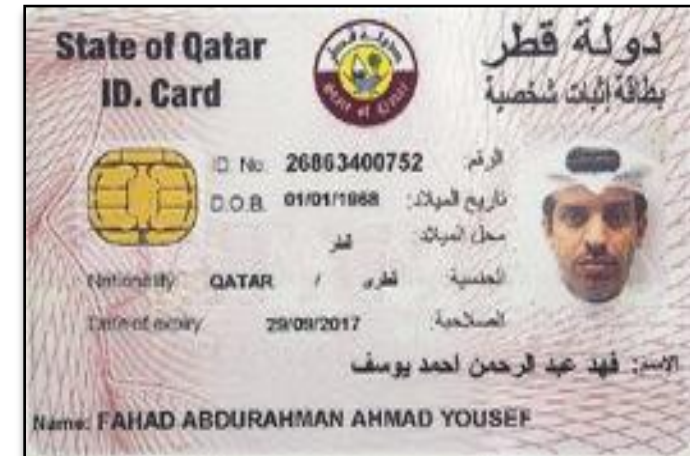
Smart Identity Card Applications:

1. e-Payment
2. e-Gate
3. e-Health
4. Driving License
5. Access Control
6. E-Government



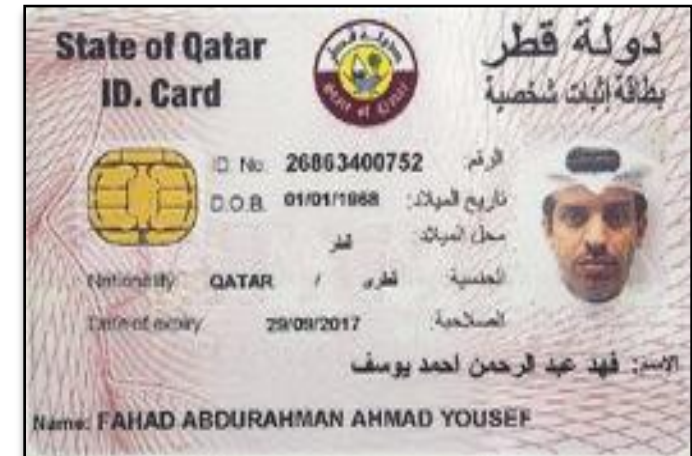
ID Card Background

- Start Year: 2007 .
- Two chip one Contact 64 K and one contactless 4K.
- PKI from Entrust (v6; migrating to v8.1)
- 2x Flat fingerprints & iris .
- Registered: 300K (380 citizens)
1.5m Residents carry plastic residency ID, and eID is optional



Smart Identity Card Application:

1. e-Gate
2. e-Government Services
3. MOI e-Gov PKI (visa services)



ID Card Background

- Start Year: 2005 .
- 144KB combi Smart Card .
- PKI from Entrust
- Rolled 10 prints, palm, writer .
- Registered: 8.2 million (97%)
out of 8.4 million total population



Smart Identity Card Application:

1. e-Gate: all airports
2. e-Voting: FNC elections
3. i-Voting (ongoing)
4. e-Government services:
online authentication;
digital signature.



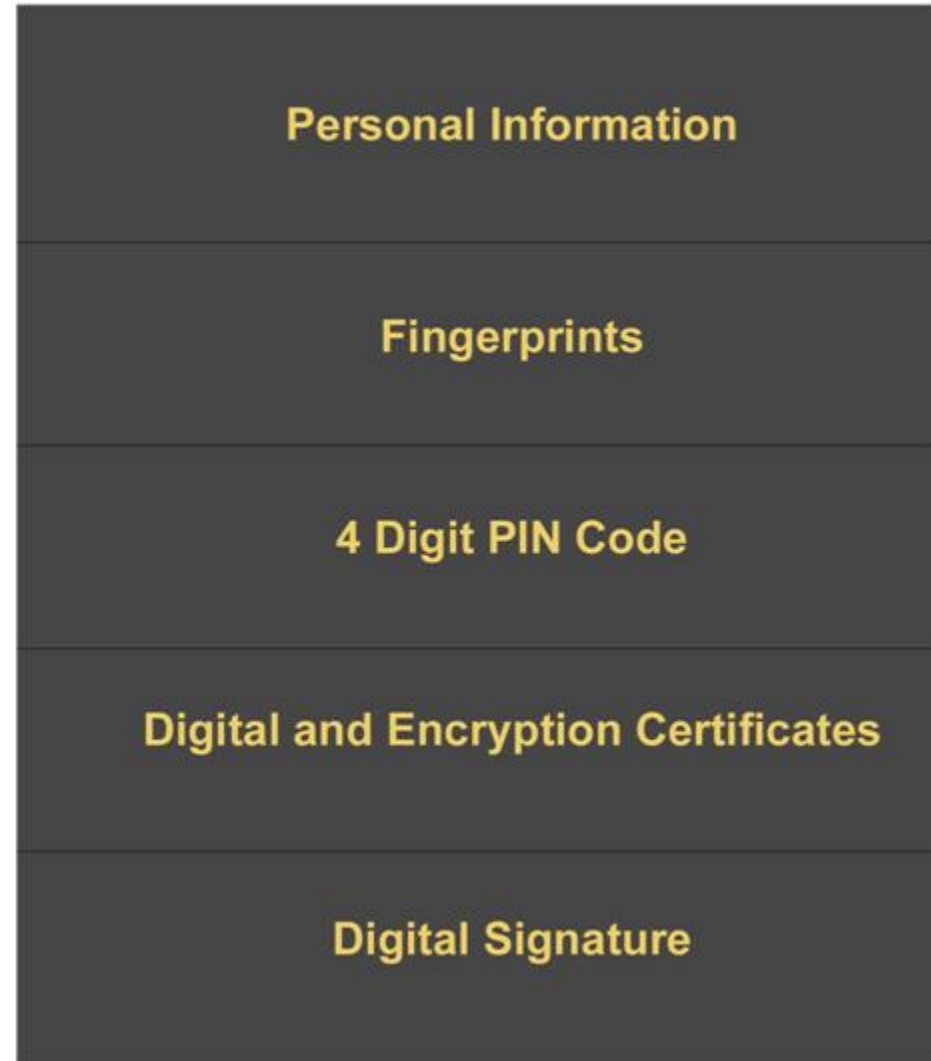
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ID Card: Not just another plastic card!



Smart Chip





Digital Certification Authority - Validation Gateway



Primary Goals

(promote confidence and trust)

- **Authenticating ID card holders**
- **ID Validation**
- **Digital Signature and Time Stamp**

Strategic initiative designed to support the development of **digital & knowledge economy** ... and envisaged to introduce a radical change in how **G2C services** are provided both in Public and Private sectors.

ID Card Readers



ID Card contains a smart chip which holds biographical identity information, photo, biometrics & digital signature.



144K Memory smart card contact & contactless data access



ID Card contains a smart chip which holds biographical identity information, photo, biometrics & digital signature.



Study1:

Readers will yearly save **2 million working days**

Study 2:

PKI authentication yearly savings **\$1 trillion**

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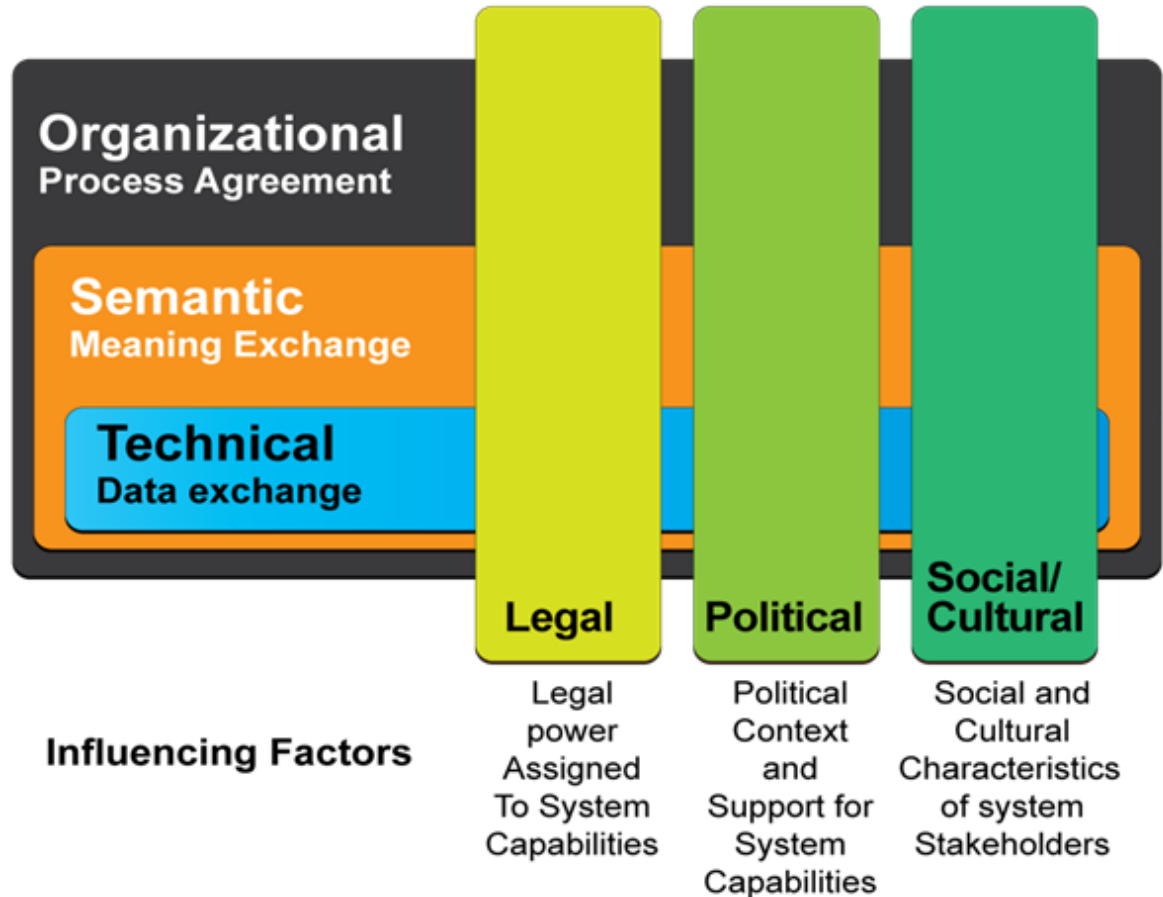
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Interoperability between GCC countries is an objective that the six countries are working since years ..

Interoperability Model

A framework for understanding interoperability in its different contexts and how to **address requirements and challenges** from **policy making and system development perspectives**.

The model pays attention to **data exchange, information exchange, communication protocols, networks interoperability, and process integration** .



Navakouski & Louis (2012)

Identity management integration is envisaged as a major contributor to interoperability.

GCC **identity management infrastructures** are envisaged to play a key role to **standardise how people will access information and be authenticated** across GCC countries.

Interoperability



Phase I :

Reading data electronically from chips at borders .

All GCC borders are currently equipped with this functionality .

Phase II :

Ability to Authenticate GCC citizens through:
Digital Certificates, Biometrics, PIN

Online card validation & authentication: **Qatar & UAE.**

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Reality ...

- Identity Card programs are largely IT-driven .
- Systems Design influenced by Supplier/Vendor .
- Architecture is not designed to be user friendly .
- Inability to create effective services .



Value Creation ...

- Current applications simply not comprehensive .
- Heavy reliance on visual features for authentication.
- Return on investment ?
Business Case ?
- Citizen Centricity ?




E-Government ...

- Heavy dependence on traditional variables: usernames, passwords, email, etc.
- Unfocused efforts / Strategy ?
- No attention to legislation: eSignature, privacy protection act, etc.
- Clear-cut cloud services / citizen centric mindset to provide major impetus to e-Governance programs and services .



Serious considerations ...

- Modernisation is a long-term task, requiring tenacity and innovative thinking.
- Public administration needs to shake its assumptions to re-arrange its mental furniture and to achieve a radical transformation (modernising the nation and building stronger economy). 



Serious considerations ...

- Governments need to treat themselves as service delivery organisations, where citizens become customers and are integrated in the delivery system design and development.
- Such delivery systems need to be designed to provide citizens with multiple and integrated interfaces and channels to transact with the government through a single window system.

Serious considerations ...

- Governments need to plan to offer identity authentication as a service over public and private clouds .
- International Standards ...
- ID card toolkits need to be disseminated to universities and available online to promote applications development .
- Mobile PKI ?

We need to change our thinking hats more dynamically, and in sync with the rapid changes we face in today's world.



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Thank you