ITAPA 2002
DREAM, VISION, REALITY

SECTION C
"Data and Information Transfer and Infrastructure Government and Information Systems in Canadian Public Administration"

John A. Gilbert
Canada

Bratislava, Slovak Republic
12 November 2002

Presentation Agenda

- The E-Government Context
- E-Government Planning
- Layers of the Common Infrastructure
- Underlying Principles:
  - Cooperation
  - Procurement
  - Managing and Standardization
  - Privacy

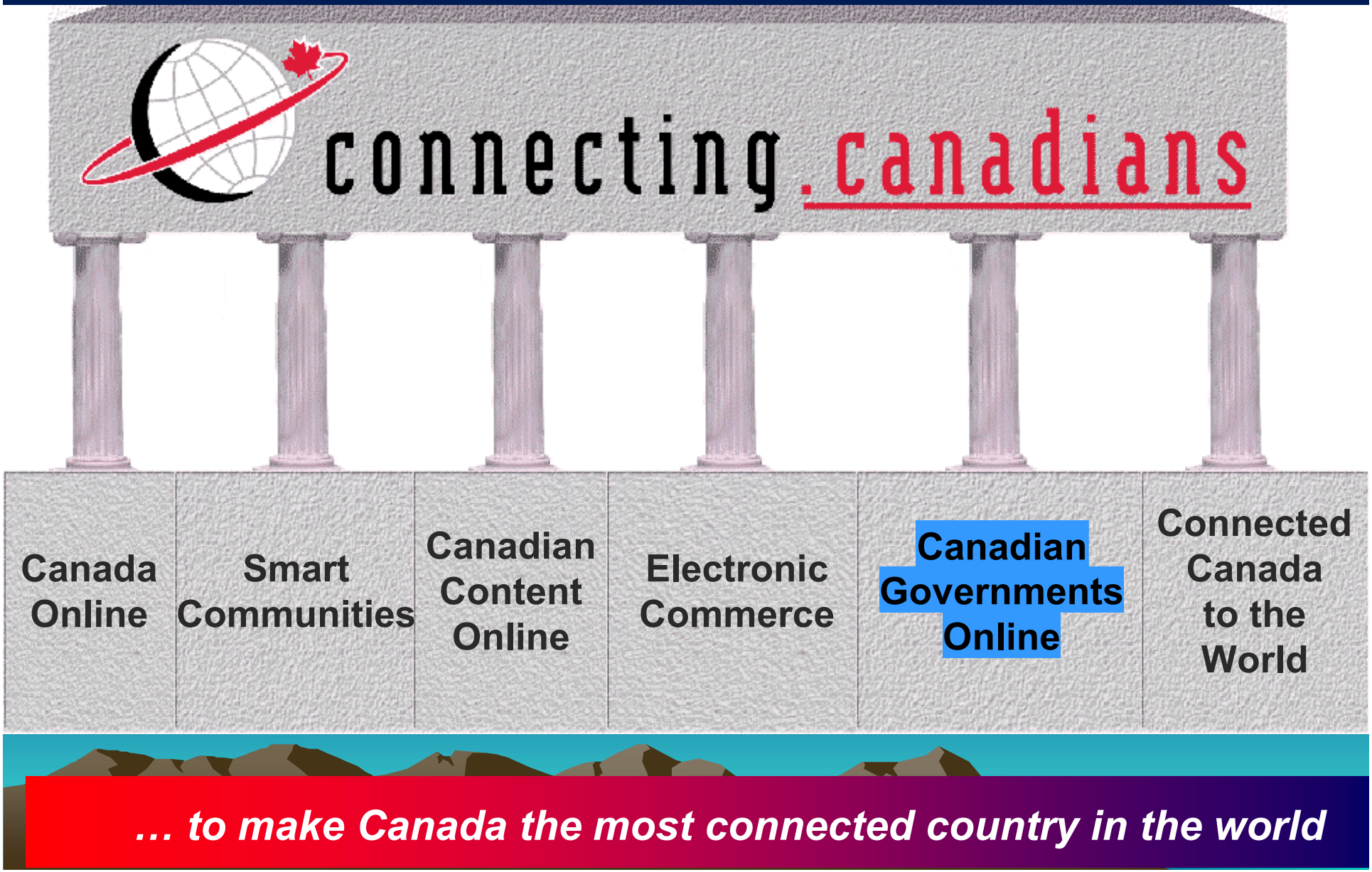
We Are Now in the Network Age

"Today's technological transformations are intertwined with another transformation - globalization - and together they are creating a new paradigm: the network age."

United Nations Human Development Report, July 2001

- Instant access to knowledge
- Transformation of business
- Borderless, global economies
- New ways of citizen – government engagement

The Comprehensive Strategy

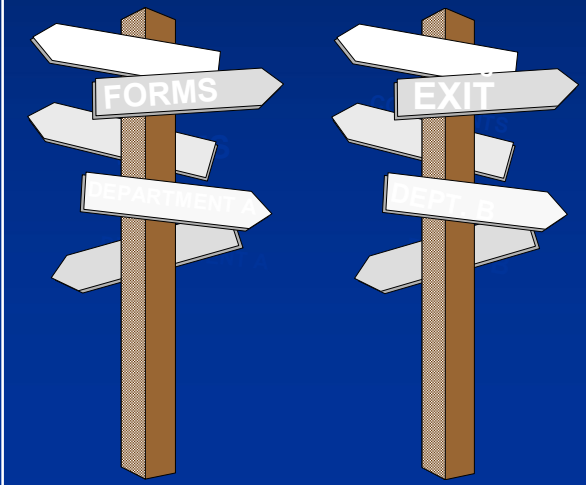


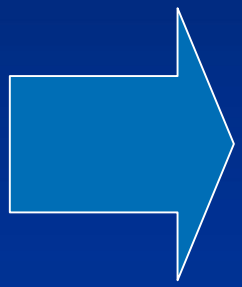
E-Government Planning Principles

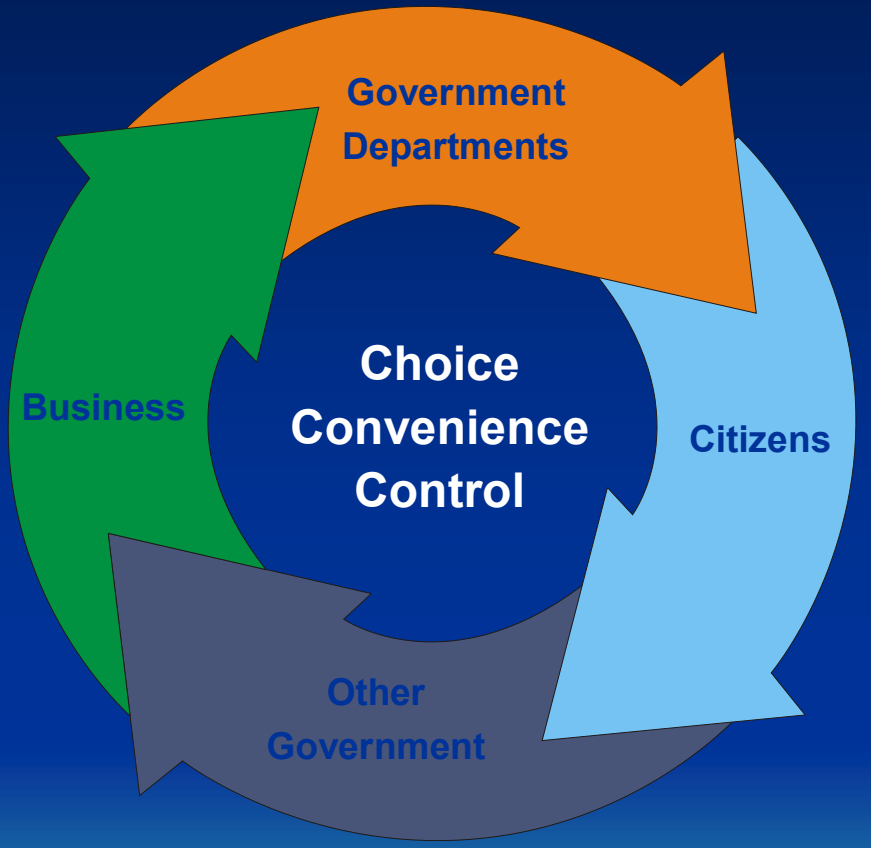
- Work from a Vision & Business Case
- Build Trust: Confidentiality, Privacy & Security
- Make good technology choices: Growth potential & User-friendly
- Manage Access Channels – Optimize Value
- Right balance of Sourcing vs. Outsourcing
- Prepare Investment Plans – Funding Cycles
- Understand the Fees vs Transaction relationship
- Implement a Change Management Program
- Work through the right institutions based on the best legal and administrative mechanisms.

Governments Must Become Model Users

The Disconnected Government







The Evolution of Govt on Line

1. Information
   - Publishing & dissemination of information to citizens
2. Two-way Transactions
   - Secure transactions, digital signatures
3. Multi-purpose Portals
   - Single-point services across multiple departments
4. Portal Personalization
   - Each client can customize portal to his needs
5. Clustering of Common Services
   - Seamless clustering of services along common lines
6. Full Integration & Transformation
   - Full service centre, customized to each client's needs

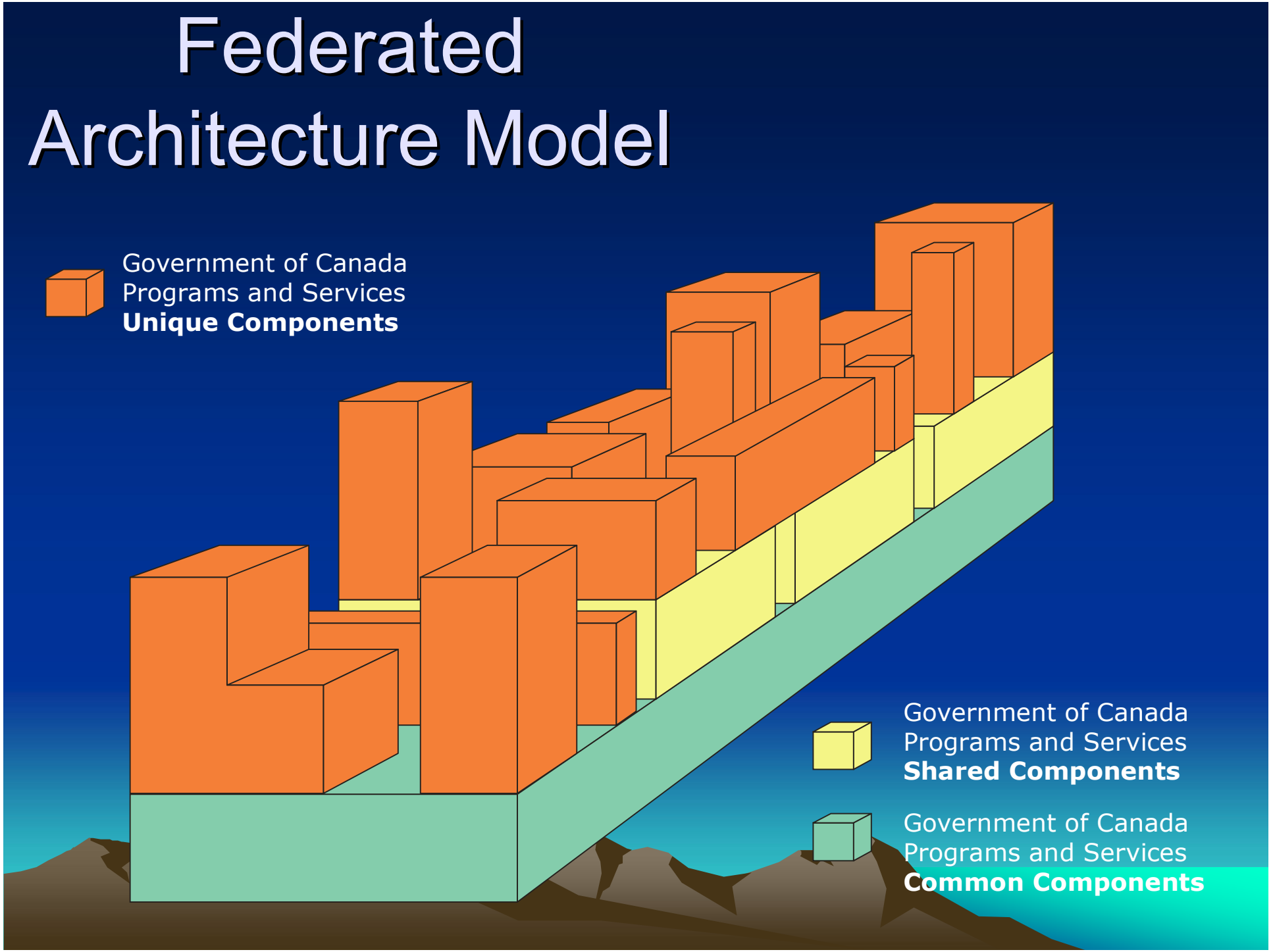
Principles of Govt on Line

- Citizen-driven
  - single window to information, organized by citizen needs
- Convenient, accessible and bilingual
  - 24x7 access from home, work or public sites
- Faster
  - improved and predictable turnaround times
- Privacy & Security
  - safeguards will be introduced across the board
- Choice
  - complements existing service delivery channels (phone, counter)
- Government as Catalyst for e-commerce and knowledge economy in Canada

GOL Messages

GOL is much more than a technological challenge, it is also a cultural and management challenge, and a substantial change to the way the government operates

Federated Architecture Model



Layers of Common Infrastructure

- Application Integration Services
- Security & Authentication Services *
- Messaging Services
- Directory Services
- Network Services *
- Architecture and Planning Services *
- Common Infrastructure Services
  - Secure Channel *

Security & Authentication Services

- Enable secure, confidential and trusted transactions within Government
- Deliver the security components required to implement the policies of Departments
- The key services are:
  - Identity management
  - Protection
  - Accountability
  - Certificate management

Security & Authentication Services

Lessons Learned

- Implications of large scale deployment
- Not the solution for all security needs
- Business process dependencies
- Community effort required

Network Services

- Provides the underlying infrastructure for Canada's e-platform
- Provides a secure, scalable and survivable service for communications with departments, citizens, businesses & trusted partners
- Supports media-rich content and guarantees transmission of mission-critical systems and applications
- Enables well-integrated security

Network Services

Lessons Learned

- Need for scalability
  - Throughput & Reliability
- Retain accountability
  - Get involved in the initial design and ongoing evolution
  - Performance monitoring capability

Architecture & Planning Services

Common Service Agency (GTIS) provides:

- Support for the Federated Architecture Program (FAP)
- Centres of expertise to aligned to FAP domains
- Plays an Implementation agent role
- Participates in the architectural development of major govt projects

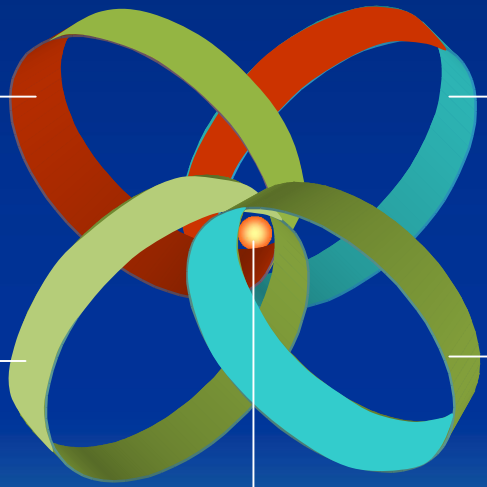
Architecture & Planning Services

Lessons Learned

- Business level architectural specification is fundamental
- Target architecture specification must precede implementation efforts
- Target architecture specifications must undergo technology validation prior to large-scale deployment

Common Infrastructure Services - The Secure Channel

Primary Services



Security Services

Network Services

Directory Services

Operations Services

Services Broker

Lessons Learned

Relationship Management: Cooperation

- Give it high priority from the start
- Craft your governance structure carefully
- Think it through - (How will it work?)
- Don’t fall back into traditional ways
- Be prepared to invest a lot of time in Relationship Management.

Lessons Learned

Procurement

- Write the Request For Proposals (RFP) so it can be evaluated (clear criteria)
- Proper planning for bid evaluation
- Communicate RFP requirements explicitly
- Get clear senior management support and direction
- Use a professional proposal writer

Lessons Learned

Managing Infrastructure & Standardization

- Requirements definition
- Scalability, availability, robustness
- Demand and performance
- Human infrastructure capacity

Privacy: GOL Common Infrastructure

- Secure Channel
  - GTIS* project (within PWGSC**), coordinated by TBS***
  - fundamental component of the electronic platform
  - providing a single electronic window for Canadians and businesses to federal government
  - following the direction of the Strategic Information Management/Information Technology Infrastructure Initiative (SII)
  - provides network connectivity and underlying support services including: access, authentication, authorization, confidentiality, inter-communication, data integrity, non-repudiation and brokering

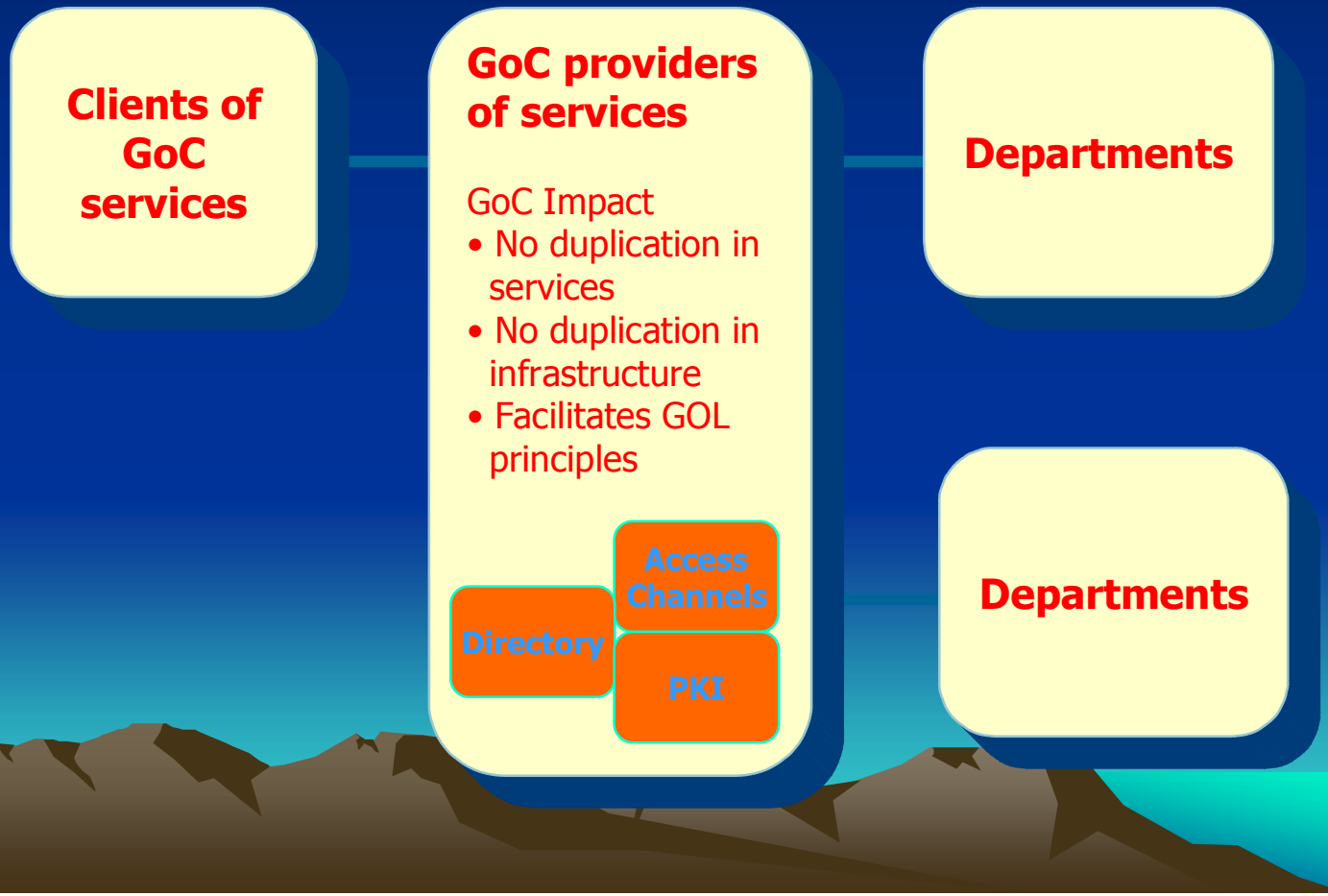
* GTIS-Government Telecommunications & Informatics Services

** PWGSC – Public Works and Government Services Canada

*** TBS – Treasury Board Secretariat

With Secure Channel

Secure Channel would help to realize GOL objectives



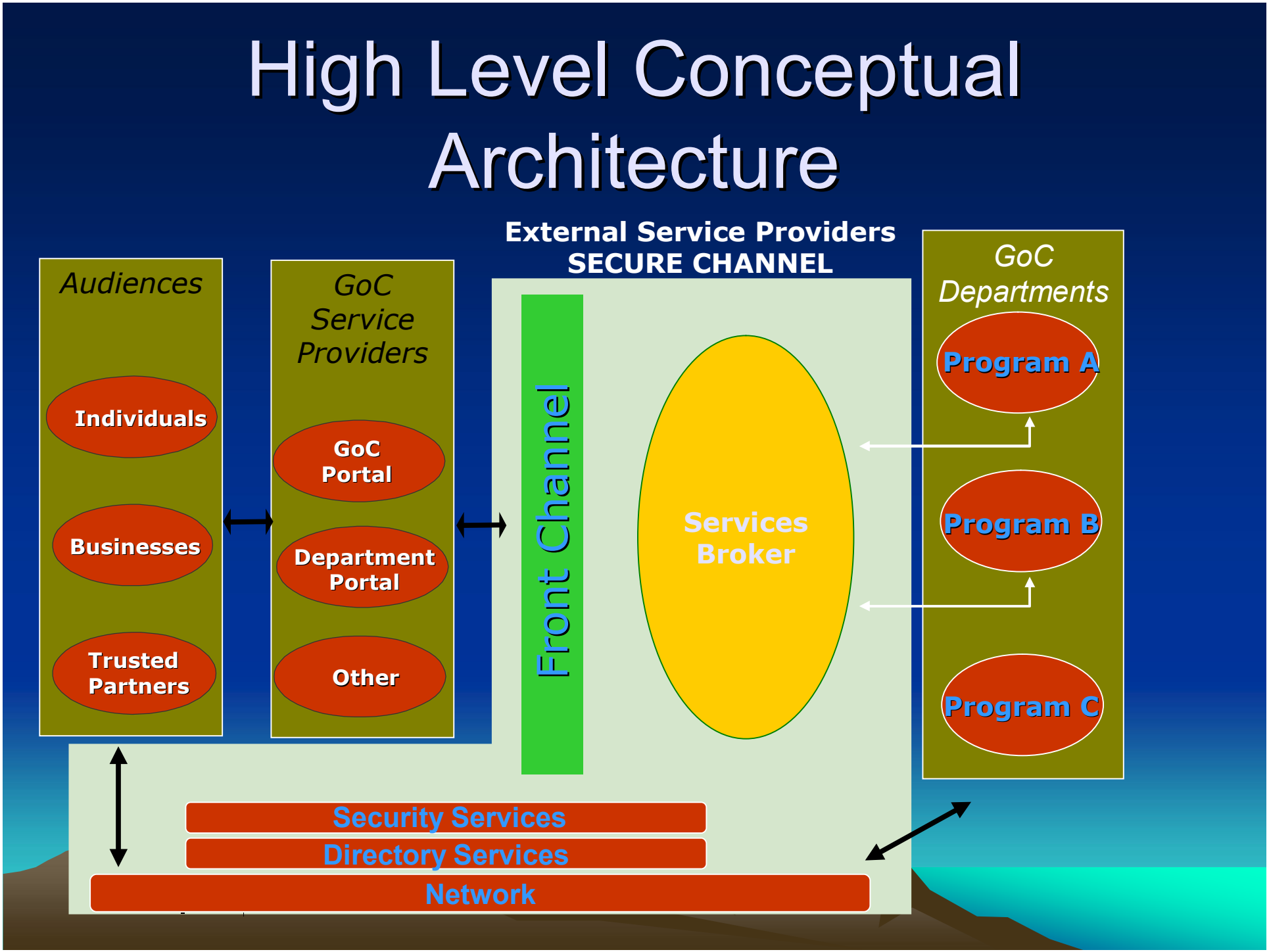
Public Key Infrastructure - The Basics

- A sophisticated security infrastructure comprising a robust combination of policies, procedures and technologies
- Based on the use of ***public key cryptography*** and ***digital certificates***
- Can ensure the privacy and security of electronic transactions essential for e-commerce to take off

PKI Provides

- Authentication
  - to confirm the identity of participants in an electronic transaction
- Data Confidentiality
  - to safeguard the privacy of information
- Data Integrity
  - to ensure that data has not been modified
- Non-repudiation
  - to ensure that transactions cannot credibly be denied and are auditable over time
  - to ensure that data has not been modified and is auditable over time

High Level Conceptual Architecture



E-Clustering is about client-centric service…

New GoC Portal

"No Wrong Door" Approach

Example E-clusters





Employment

Health

Business

Senior Citizens

Aboriginal Peoples

Department Sites

Single window access is the quintessential feature of the citizen-centred approach. It organizes service delivery around the needs of citizens' rather than around the administrative structures of governments (Citizens First, 1998).

GOL Canada Web Site Structure