RGS Consulting International Inc.

An Enterprise Architecture for BC Transit

A First Step Towards a Unified Transit Reference Architecture

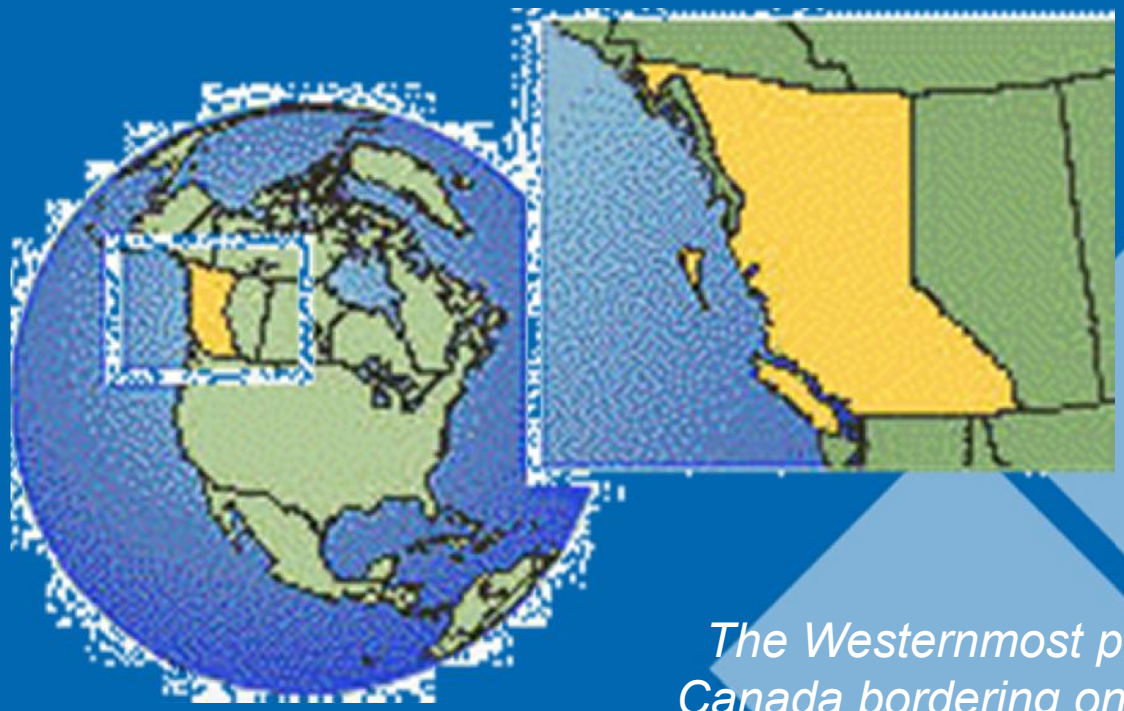
Presented by:
Robert G. Shirra, FCMC
RGS Consulting International Inc.

Our Mandate

- In response to a new strategic vision for BC Transit:
  - develop a clear understanding of corporate and regional stakeholders' needs and expectations
  - define an enterprise architecture that will enable BC Transit to re-tool for the future
  - Assist in implementation of resulting governance structures, business processes, systems and technologies

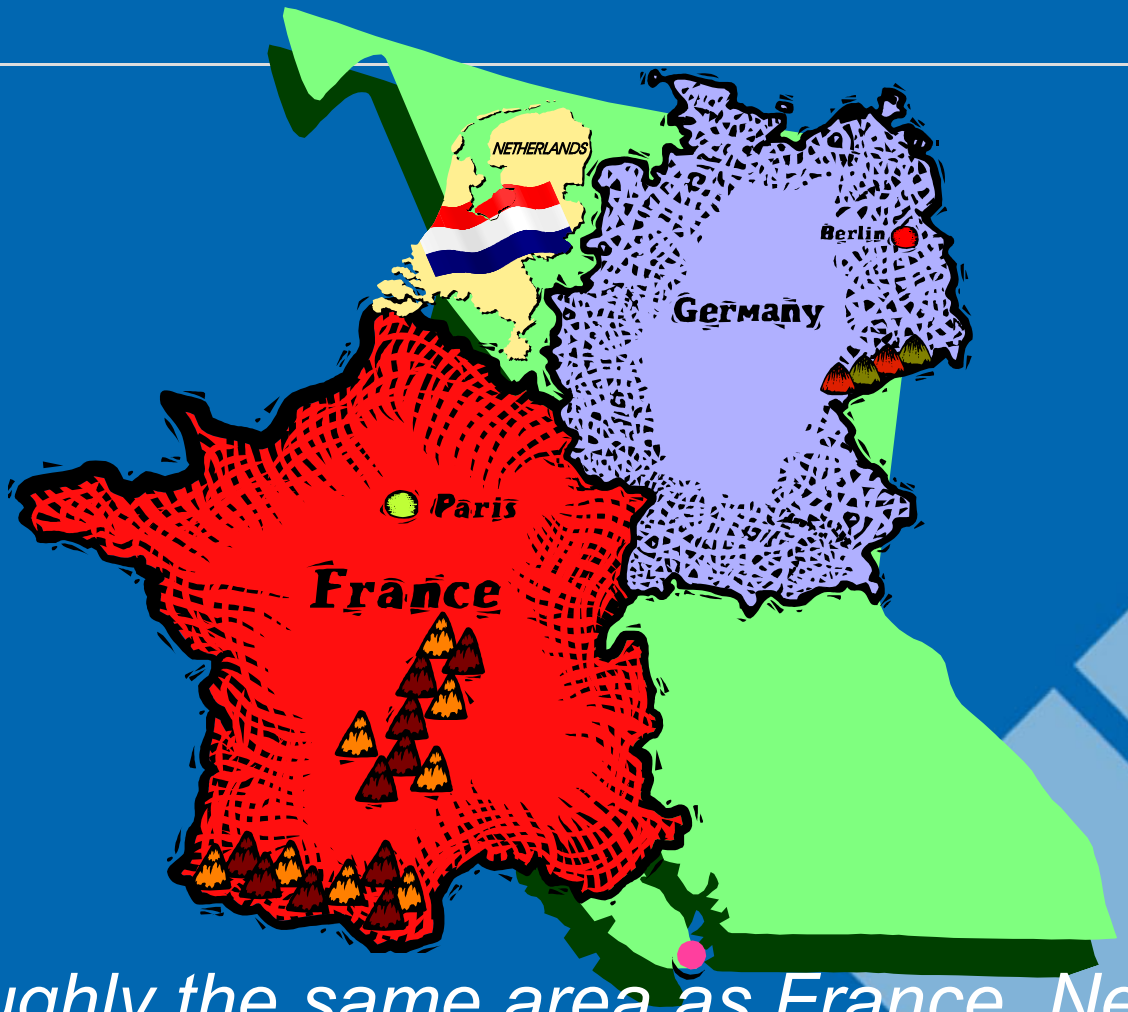
About BC Transit

- So where is British Columbia?



The Westernmost province of Canada bordering on the Pacific Rim and the USA

Geography of British Columbia



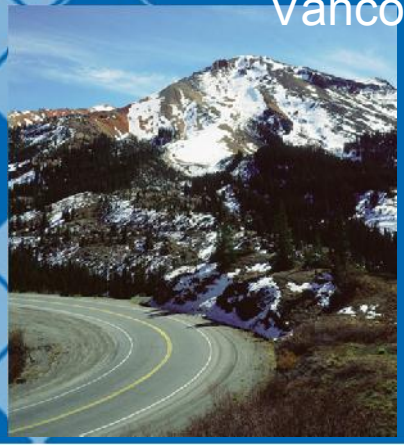
Roughly the same area as France, Netherlands and Germany combined !

Geography of British Columbia

Larger than the total area of Washington, Oregon and California combined !

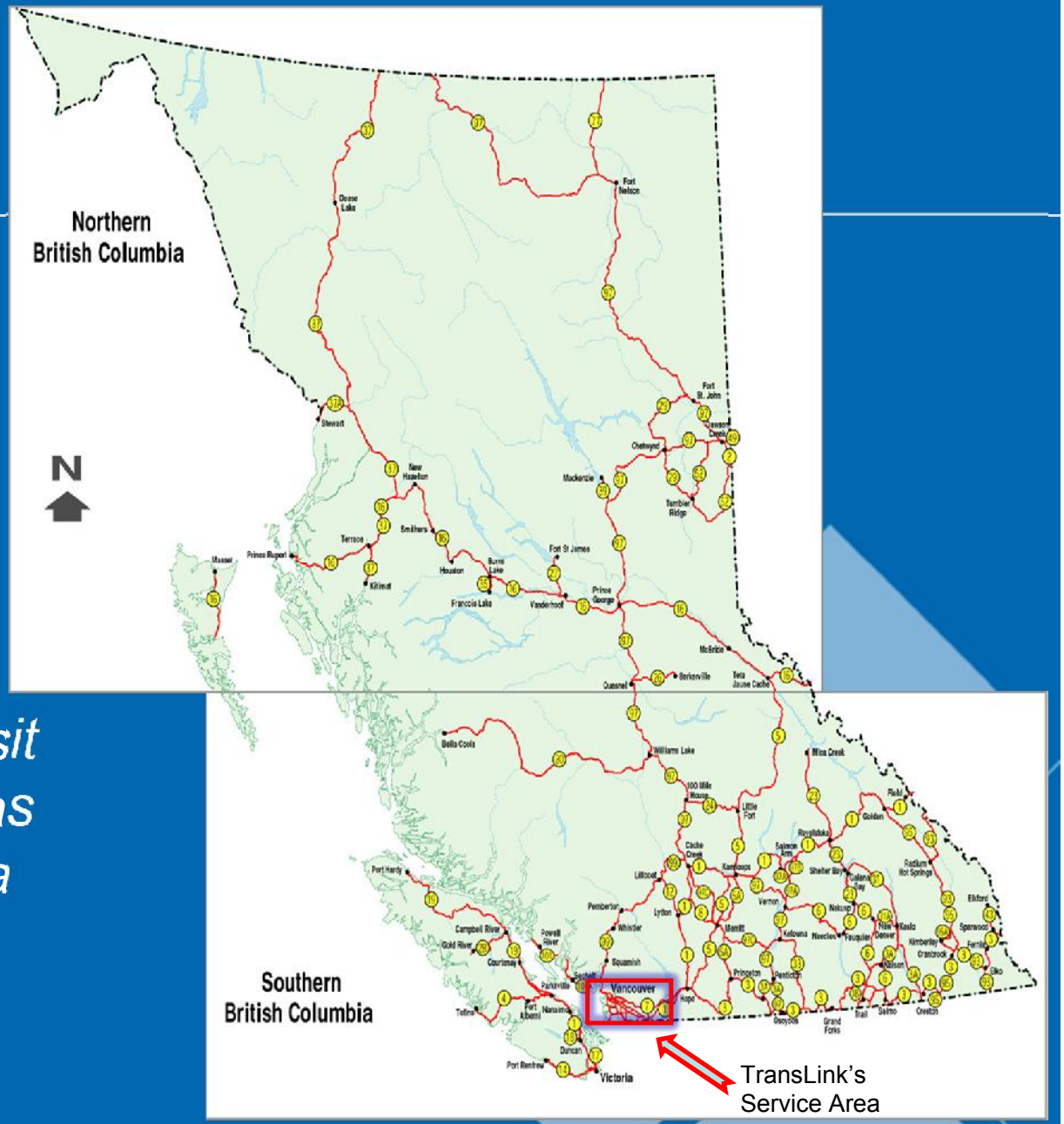
Geography of British Columbia

- British Columbia is Canada's third largest province, after Quebec and Ontario . It covers about 9.5 per cent of Canada's surface area.
- A series of southeast-northwest running mountain ranges, from the Rockies in the east to the Coast Mountain and Vancouver Island ranges in the west, serrate the landscape into a series of peaks, plateaus and valleys.
- British Columbia's rugged coastline stretches for 25,725 kilometres (15,985 miles), including deep, mountainous fjords and about 6,000 islands, most of which are uninhabited.
- Most of BC's population of over four million people (4,530,960 in 2010) clusters in the province's southwest corner, in and around the cities of Vancouver and Victoria.



Our Client

BC Transit has responsibility to deliver public transit services in all areas of British Columbia except the Metro Vancouver area.

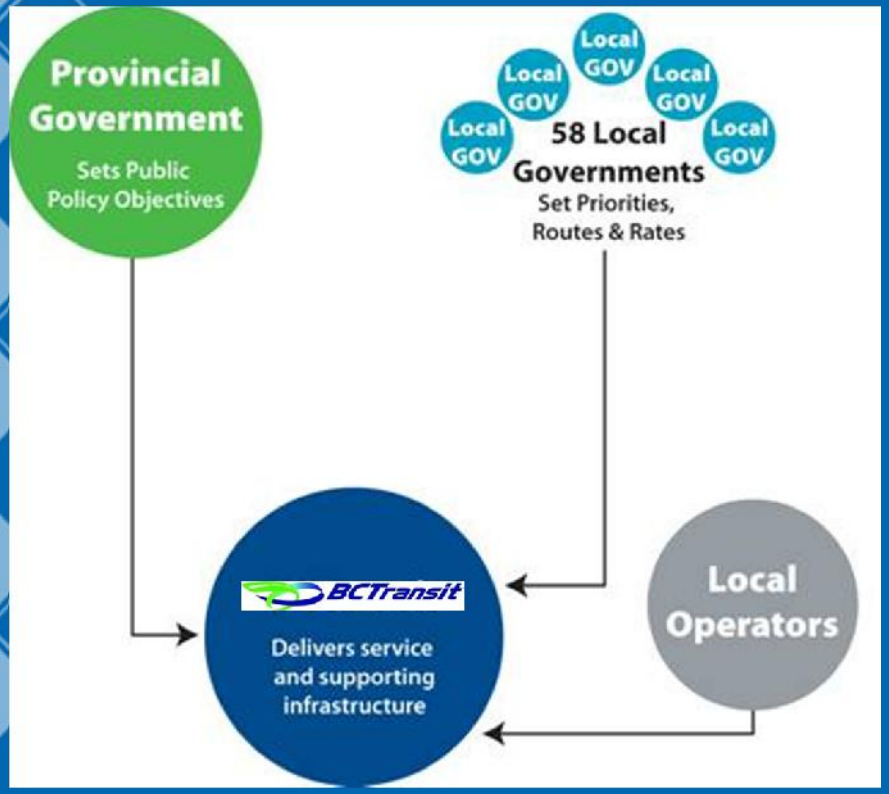


Our Client

Scope of BC Transit's 2011/12 program as of Feb-2011:

- 58 local government partners
  - » Cities, towns, villages
  - » Regional Districts
- Contracts with 18 private management companies, 5 public operating organizations and 15 non-profit agencies
- Carries over 50 million passengers annually !
- Oversees 81 transit systems – conventional, custom and paratransit

BC Transit Operating Model



Provincial Government

- Sets Public Policy Objectives

Local Governments

- Plan communities, establish local transit priorities and routes
- Set fares
- Provide local tax subsidy

BC Transit

- Turns municipal priorities into transit operating and capital plans
- Works with Province to access funding
- Establishes operating contracts and manages transit operations
- Manages capital program

Enterprise Investment Initiative Project Vision

- The EII project is about delivering greater value to customers, building ridership and strengthening the local transit systems.
- The EII project will generate value through a methodical and collaborative approach involving BC Transit and its local government and operating partners.
- Through a series of workshops and analyses, BC Transit and its partners are:
  - identifying the customer and stakeholder needs and expectations that drive value,
  - clarifying the flow of information, products and services needed to support value delivery,
  - pinpointing any gaps in being able to deliver value today, and
  - identifying the investments needed to close these gaps and deliver greater value in the future.

. . . achieved through a proven Enterprise Architecture Planning approach

A Blended Methodology

Best of Proven Methodologies

- TOGAF (Open Group Architecture Framework)
- Canadian Governments Reference Model (CGRM)
- Process Renewal Group's BPM Methodology

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Focus on Key Results

- Outcomes-based Orientation
- Strong Process Architecture Component
- Business Case-driven Results

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Emerging/Proven Reference Architectures

- TRB-TEAP (Transit EA & Planning Framework)
- European Bus System of the Future (EBSF) *
- ITS Architecture for Canada *

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Content Influences from other Jurisdictions

- WMATA Enterprise Architecture
- others as available

* Lower level technical architectures that will be aligned when Application and Technology layers are developed

A Simple Approach

Who ?

- Who are the beneficiaries of BC Transit's enterprise effort
- Who has a stake in the success of this enterprise?

Why ?

- Why is BC Transit in business?
  - Identify stakeholder expectations for value, and respond to their needs and priorities
  - Inform business innovation and shape service delivery

What ?

- What kind of organization it needs to become?
- What relationships and roles need be adopted to achieve shared objectives?

How ?

- How the enterprise will enable desired outcomes through processes and the exchange of products, services and information?

Where ?

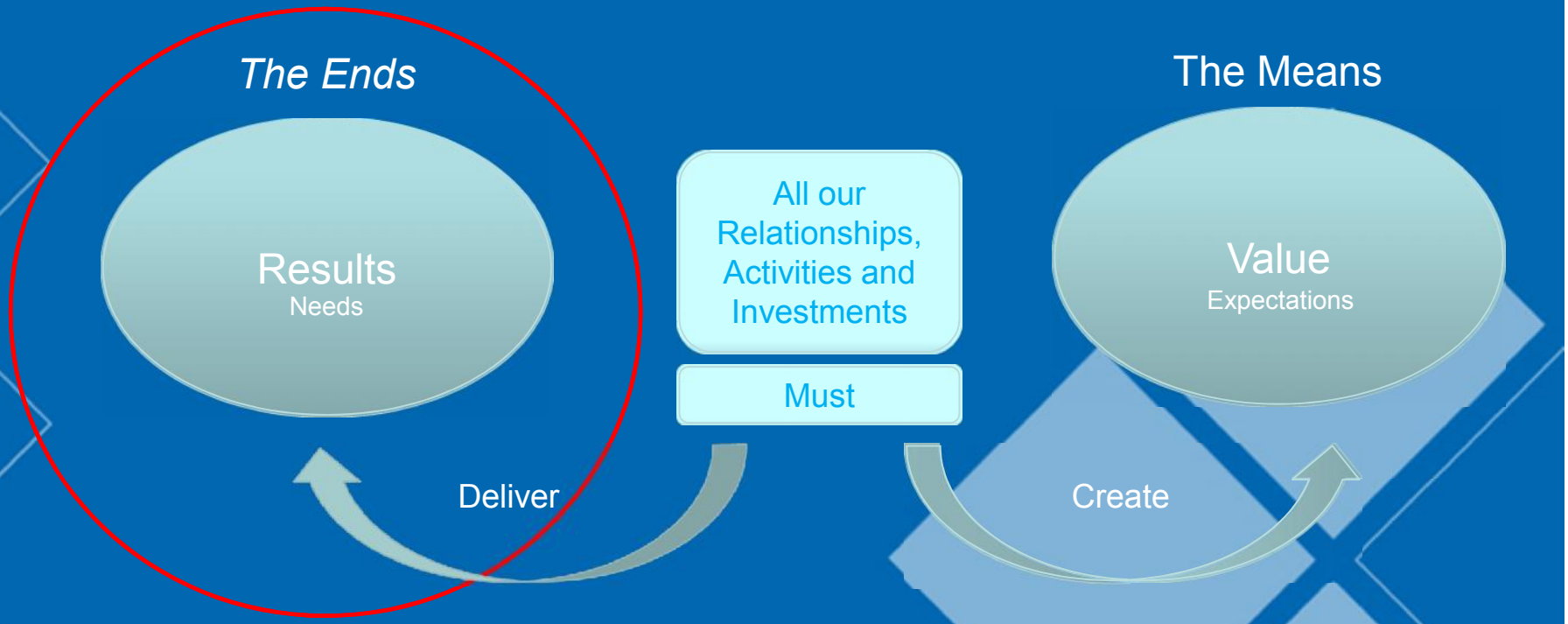
- Within which geographic, virtual and/or physical settings must it deliver products, services and information to achieve expected value and anticipated results?

When ?

- When will exchanges of products, services and information trigger a requirement for a business process or a service event, and within what hours of the day-and-week the enterprise needs to operate to be considered operationally excellent?

Outcomes-based Focus

Beginning With The End in Mind



. . . begin with the definition of strategic outcomes that are results-based

Stakeholder Expectations

- Customers demand:
  - Higher-quality service
  - Safer transit
  - More timely and accurate information
- The Province expects:
  - Increased ridership
  - Reduced GHG emissions
  - Support in shaping a sustainable future
- Local Funding Partners require:
  - Tight cost control
  - Predictable budgeting
  - Support for shaping sustainable land use.

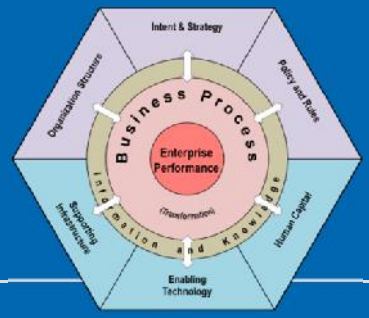
. . . BC Transit is facing increasing demand for modern information and communication technologies

Biggest Challenge

Stakeholder Expectations

Financial Sustainability

EA Activities to Date



Used the Burlton Hexagon© to determine ideal processes and define ideal business requirements in the lead-up to Pain-Gain.

Corporate & Provincial Strategies

ICT Strategy (2010)

ICT Governance

Business & Risk Analysis

Business Strategy

Stakeholder Engagement

Pain-Gain Analysis

Process Alignment

Conceptual Architectures & Initiatives Portfolio

ITS & Enterprise Web Studies

ITS & Smart Bus Architectures

Logical Architecture

Org function

Process flow

Policy

Data

Messg

Apps

Operational Architecture

Workflow

Business Rules

Networks

Hardware

Software

Resources

Business Cases

Conceptual Designs

Solution Architectures

Preliminary Designs

Detailed Designs

Program/Project Implementations

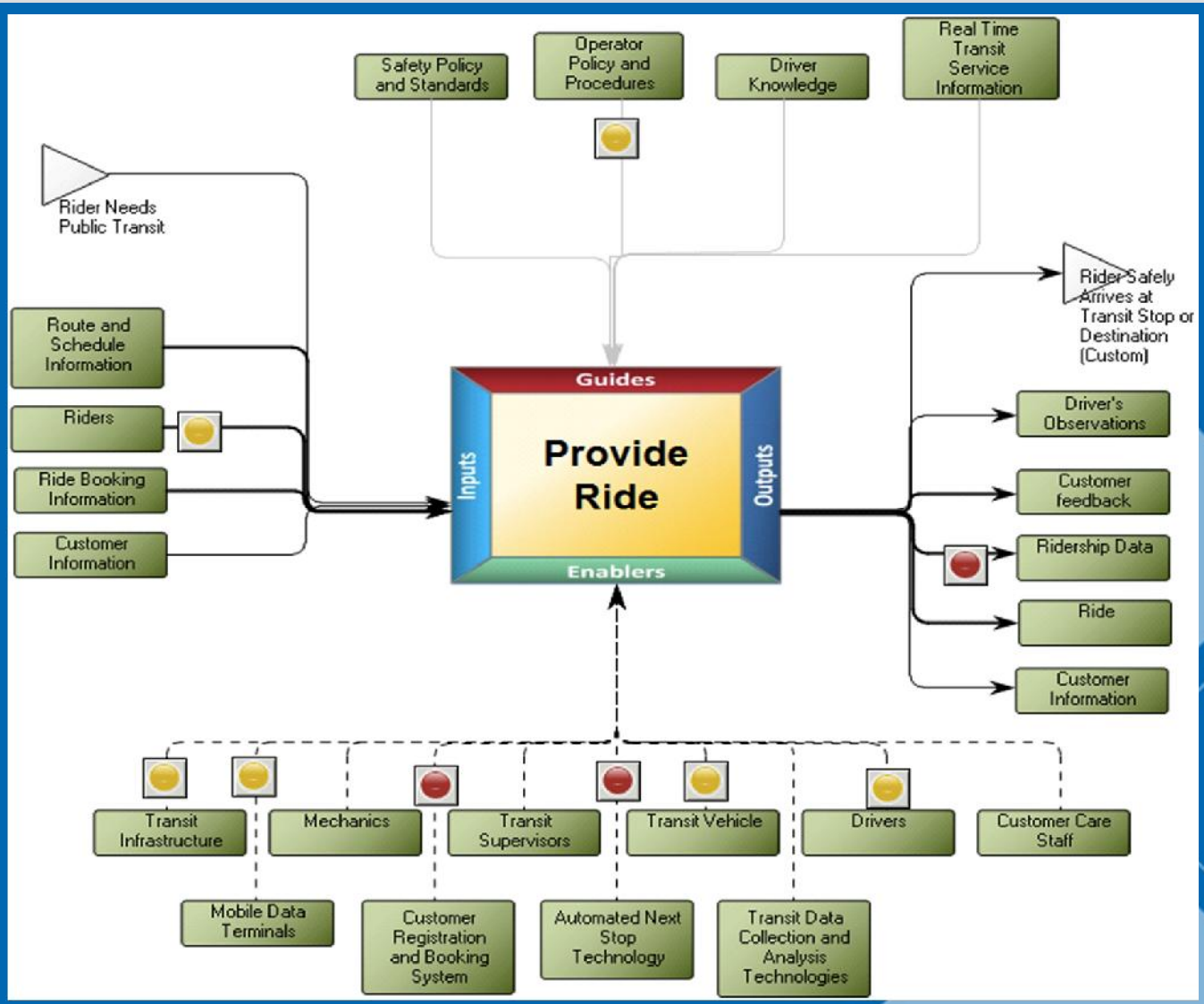
Focus on “Ideal State” Processes

Deliverables to Date:

- Stakeholder Classification
- Stakeholder Product, Service and Information Exchanges
- Stakeholder Needs and Expectations
- Asset List
- Results-Based Strategic Outcomes
- Stakeholder Relationship Lifecycles
- Asset Lifecycles
- Ideal Processes Identified
- Business Capabilities for Ideal Processes
- Direct Outcome Statements
- Ideal Processes Interactions
- Process Performance Gap Assessment
- Process Pain / Gain Criteria

Provide Ride – Process Scope Diagram

IGOE



New Capabilities from their Enterprise Architecture

- BC Transit has already gained a much better understanding of :
  - their many stakeholders' needs & expectations
  - where their business processes and resource capabilities need to change to meet provincial and corporate goals
  - how best to govern and manage their IT/ITS investments
  - the range of initiatives needed to be undertaken to meet their Enterprise Vision

A Movement Afoot

- Public transit agencies in North America have expressed dissatisfaction with the current suite of proprietary information systems. The notion of an 'Open Source' suite of public transit applications is gaining momentum.
- Significant opportunity to break the stranglehold that proprietary systems vendors currently have on the transit systems marketplace.

. . . to be successful the Transit industry needs to adopt a standardized Enterprise Reference Model !

Leading Towards a Reference Architecture

- Would this BC Transit process have been easier if a Transit Reference Enterprise Architecture had existed?
  - YES! –because of the benefits that Roger Burlton espoused
  - Would have made the entire process quicker, simpler and less costly!
- We encourage APTA, CUTA and UITP to seriously consider the industry-wide benefits of developing a ***Uniform Transit Reference Architecture***.

Thank You

For more information, contact:

– Robert G Shirra, FCMC
President, RGS Consulting International Inc.

E-Mail: rob.shirra@rgs-consult.com
Web: www.rgs-consult.com

RGS Consulting
International Inc.