

concept

GOVERNANCE OF MAJOR INVESTMENT PROJECTS
CONCEPT SYMPOSIUM 2008

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Governance of Projects: The Portfolio Perspective

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Outline

- ◆ Norway and Quebec
- ◆ Quebec infrastructure
- ◆ Why portfolio management now?
- ◆ 2 examples among partners in the Chair
 - TransÉnergie
 - STM
- ◆ Commonalities and Lessons learned

Norway and Quebec

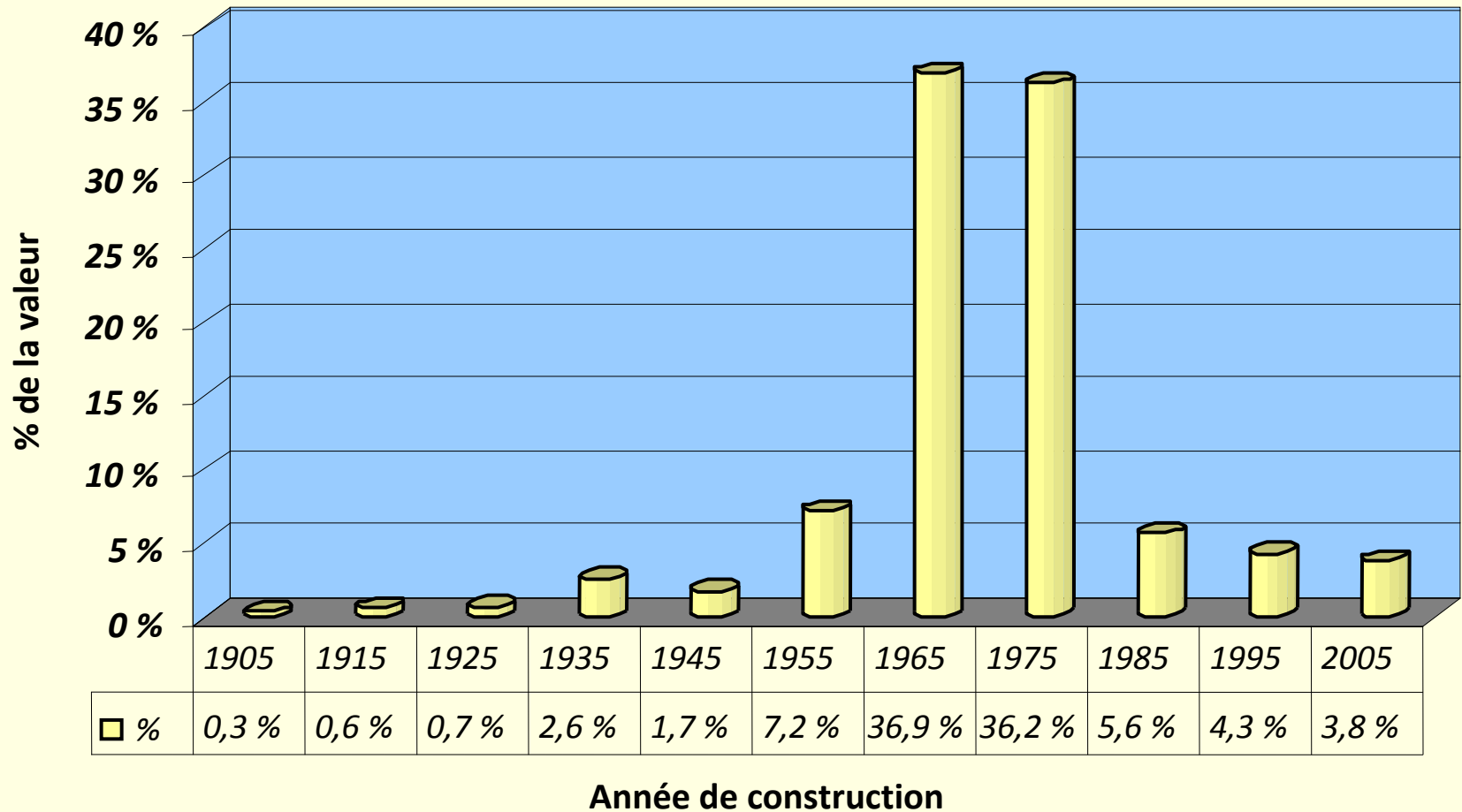
Norway

- Parliamentary democracy
- Unitary state
- 4.8 million
- 385,000 km²
- Oil

Quebec

- Parliamentary democracy
- Province with jurisdiction on transportation, health, education, natural resources
- ...
- 7.7 million
- 1,365,000 km²
- Debt

Aging Infrastructure: Example of transportation infrastructure



First 5-year plan

- ◆ Quebec plan for infrastructure
- ◆ 30 billion \$ over 5 years

Why portfolio management now?

- ◆ Large number of projects to:
 - Align with strategy and prioritize
 - Monitor and control
 - Create synergies
- ◆ Needs outstrip resources
- ◆ New fashionable topic

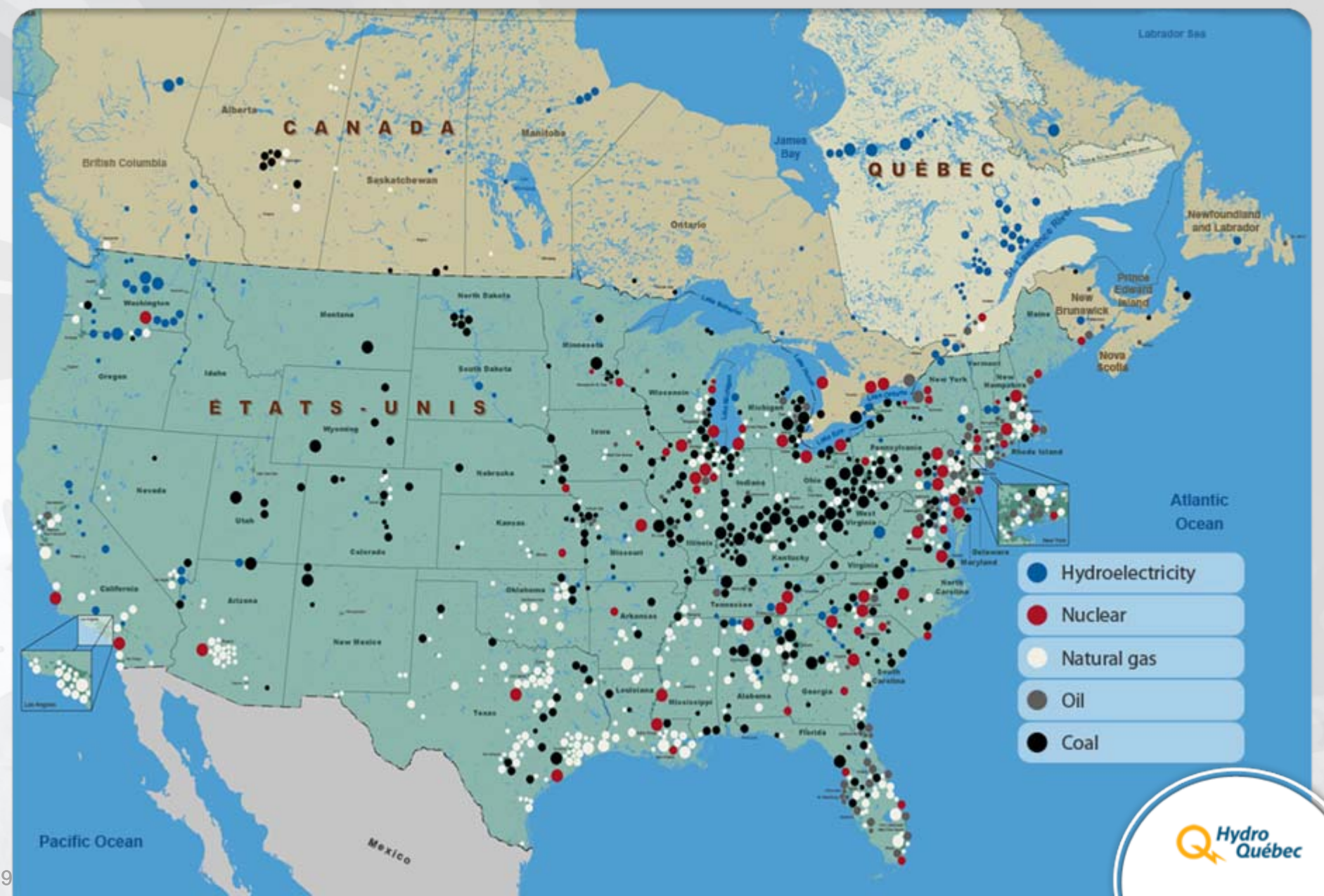


An Overview of Hydro-Québec

September 2008



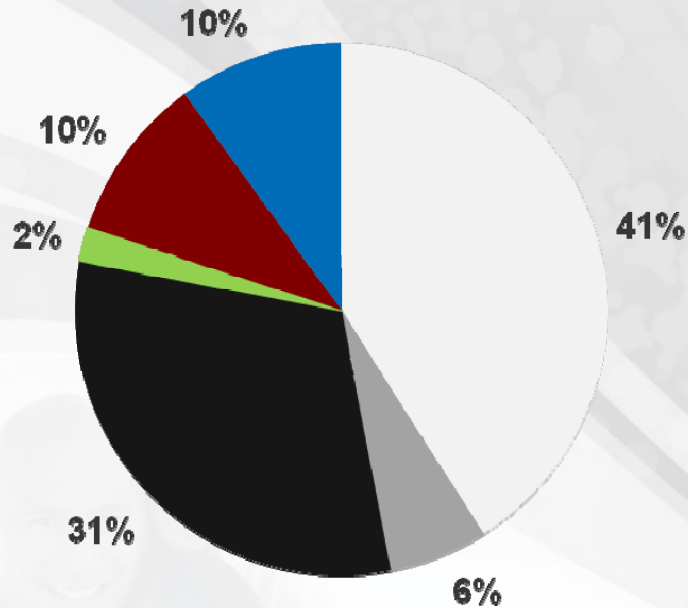
Electricity Supply Options in Québec & the Rest of North America



Comparison of Energy Options in North America (2005)

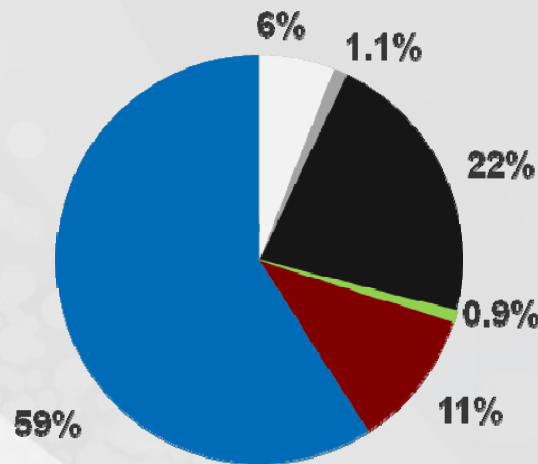
UNITED STATES

Installed capacity
1,067,000 MW



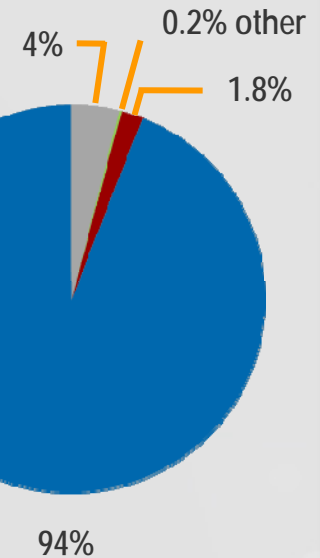
CANADA

121,000 MW



QUÉBEC

38,000 MW



Natural gas
 Oil
 Coal
 Other
 Nuclear
 Hydroelectricity

Source Energy Information Administration 2007 (Name Plate Capacity)

Natural Resources Canada

Natural Resources Canada

Electricity generation

4,055 TWh

597 TWh

182 TWh

Source Energy Information Administration 2007 (Name Plate Capacity)

National Energy Board

National Energy Board

Corporate Structure



23,000 employees

 **Hydro Québec**
Production



 **Hydro Québec**
TransÉnergie



 **Hydro Québec**
Distribution



 **Hydro Québec**
Équipement



Hydro Québec -TransÉnergie



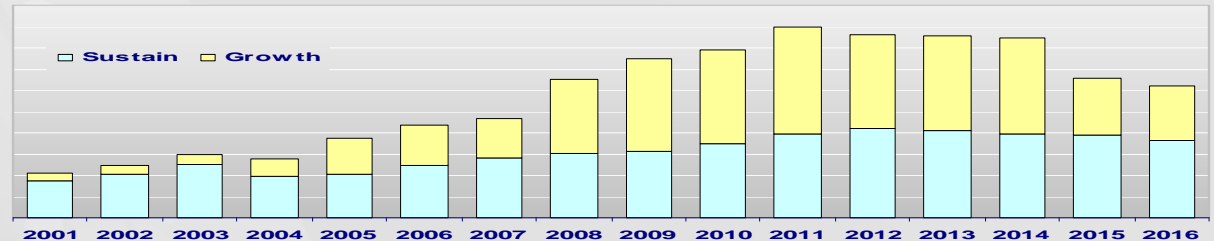
- Revenue \$2.8 billion
- Net income \$396 million
- Property, plant and equipment \$15.2 billion
- Annual investment (2008) \$1 billion
- 33,000 km of power transmission lines
 - Largest transmission system in North America
- 509 substations
- 15 interconnections with neighbouring markets

TransÉnergie – Investments 2009–2013



- Ensure a high level and quality of power transmission service
 - Meet the growth in local load (+ 2,300 MW)
 - Integrate nearly 4,000 MW onto the transmission grid from new generation sources
 - Ensure the quality and reliable integration of more than 3,500 MW of new wind power
 - Ensure the long-term operability of facilities
- Increase access to outside markets

Investments needs – A driver for change



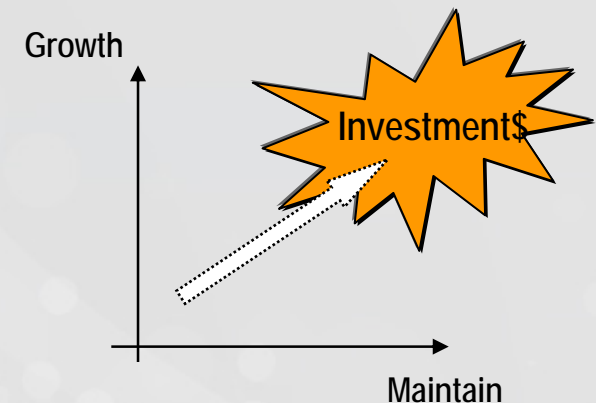
- Aging infrastructure & demand driving investments ↑

- Average equipment life : 25 – 30 years
- Strong utilization rates +80%
- Non linear unit costs

- Equipment world wide demand driving price ↑

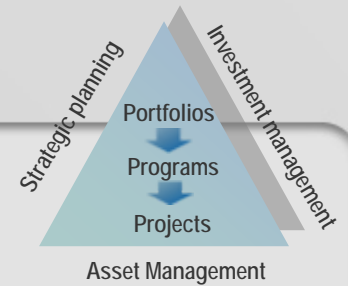
- High churn driving skill & knowledge ↓

- Delivery capability



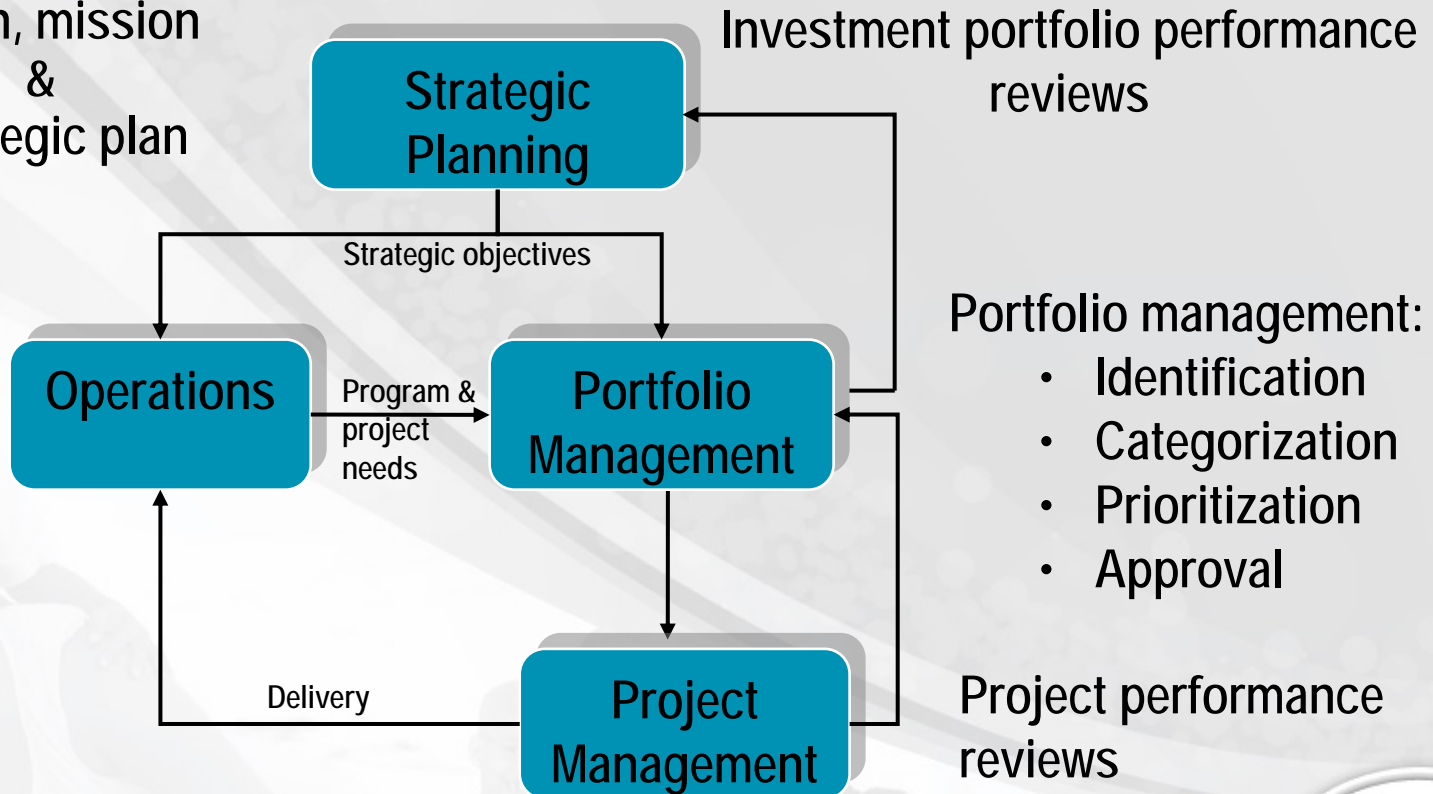
*From project to project investment decision
to strategic portfolio management*

Integrated business solution



... Business solution will integrate these dimensions

Vision, mission
&
strategic plan



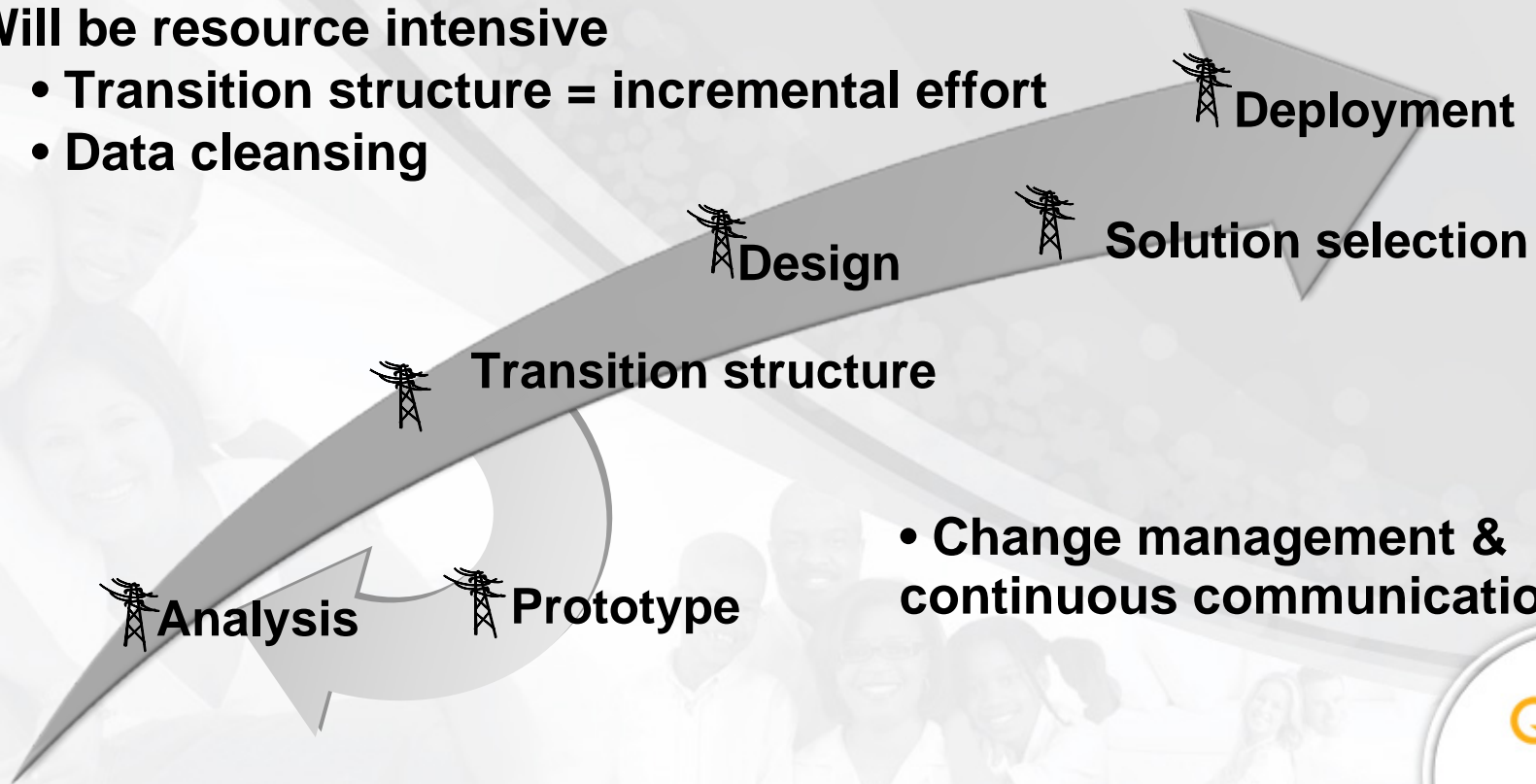
Portfolio management:

- Identification
- Categorization
- Prioritization
- Approval

Towards an EPPM integrated solution

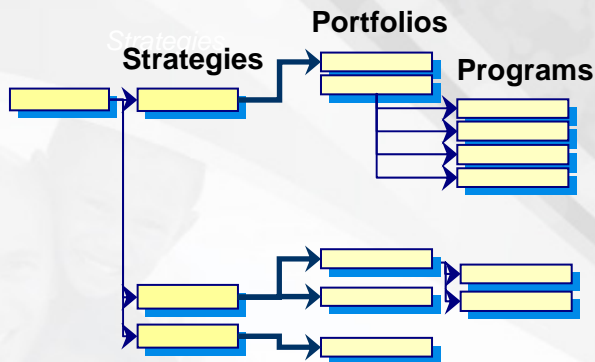
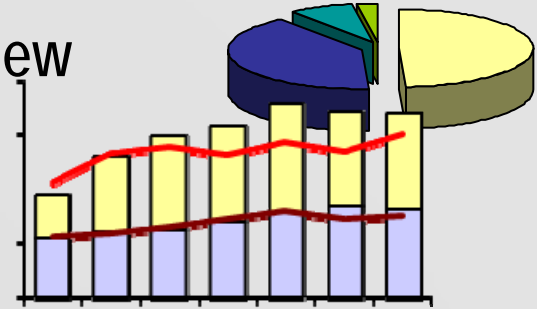
Enterprise Portfolio Project Management

- **Start with the end in mind**
 - **Clear vision statement**
 - **Executive leadership & demonstrated support**
- **Early wins**
 - **Step by step approach, fixing issues while demonstrating value to the organization**
- **Will be resource intensive**
 - **Transition structure = incremental effort**
 - **Data cleansing**



Analysis approach

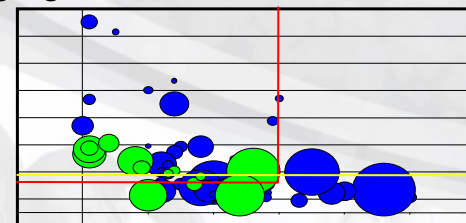
- Strategic & financial plans detailed review
 - Investment trends
 - Business goals & issues
 - Strategic & tactical goals



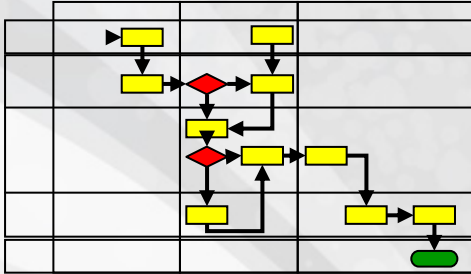
- Portfolio creation aligned w/ strategic plan
 - Appoint Portfolio Managers
 - Clarify accountabilities
 - Monthly executive reviews

- Create a prioritization model

Strategic goals

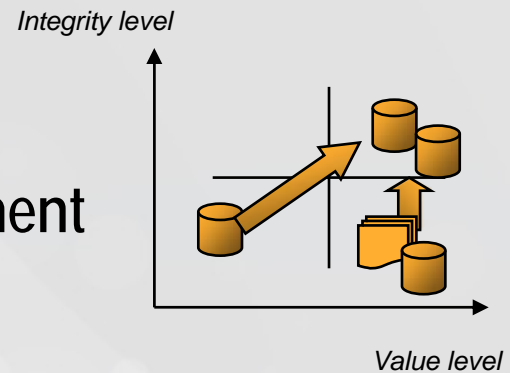


Analysis approach



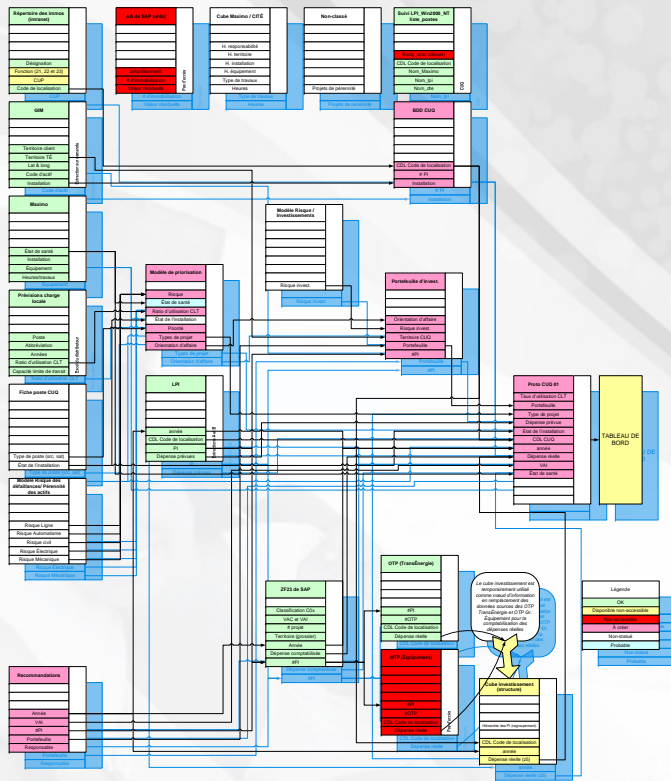
- Business process review & design
 - Governance & accountabilities

- Information model analysis
 - Integrity & value level assessment



Financial model
=
Business model

Information model challenge



- Diagnostic
- Define the information model required to support the business needs
- Deploy by phase to create immediate benefits and commitment to the vision



The Implementation of Project Portfolio Management at the Société de transport de Montréal

The STM in brief...

- 365 millions trips a year
- 7 500 employees
- Assets valued at 10 billions \$
 - 1 600 buses
 - 93 minibuses adapted for the handicapped
 - 759 subway trains
 - 8 transport centres
 - 68 subway stations
 - 71 km. of subway

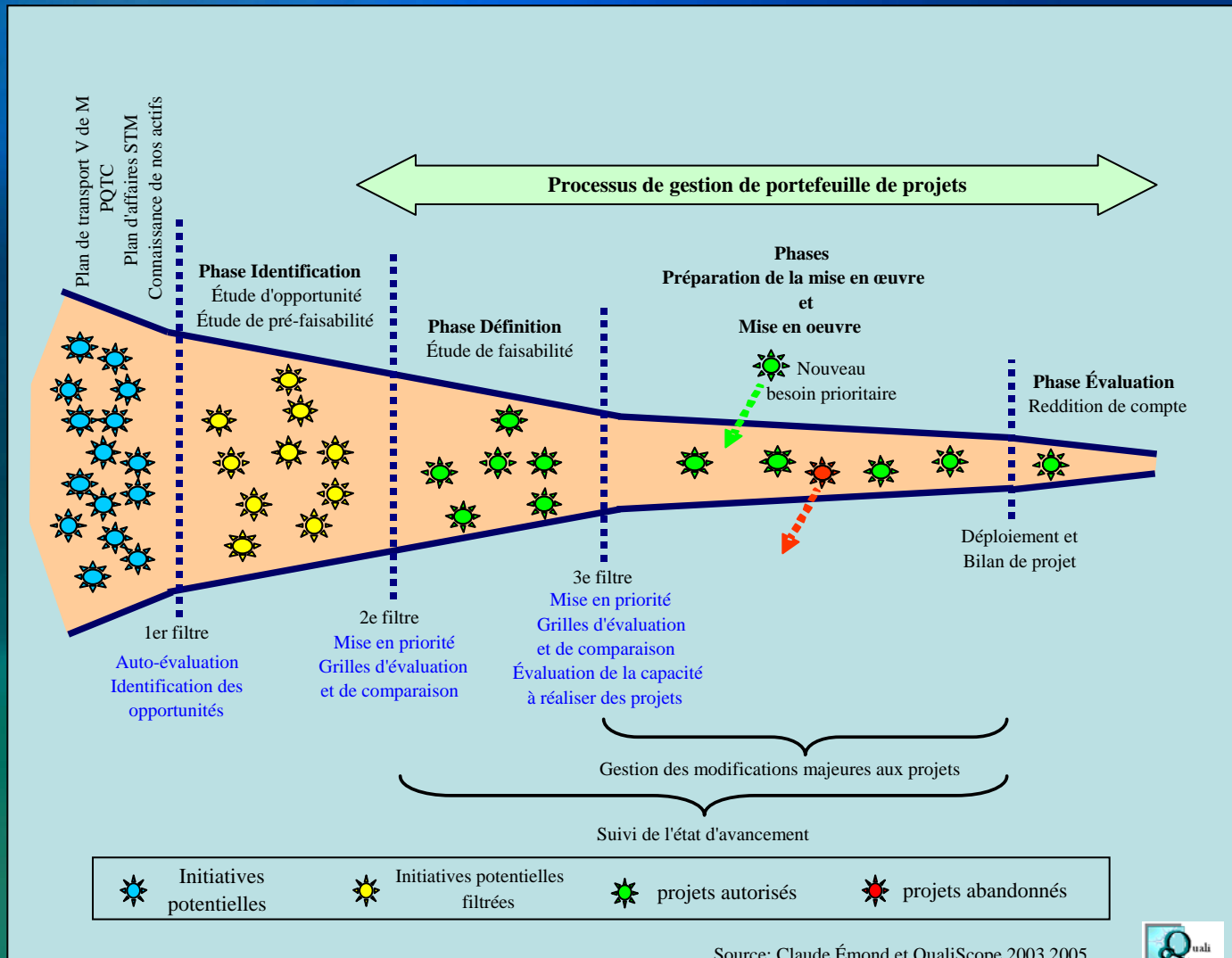
Projects at the STM

- 100 active projects for a value of 2.5 billions \$
- Potential for 6 billions \$ over the next 10 years
- 85 % renewing assets
- Opportunistic strategy when renewing assets:
 - Improve customer service
 - Improve efficiency
 - Integrate sustainable development

Project Portfolio Management at the STM – First implementation

- April 2005 -
 - Operational improvement exercise identified projects as disrupting operations
 - Creation of an Executive Director of Portfolio Management
- 2005 et 2006 – Implementation of a project portfolio process for « strategic » projects:
 - Phase-gate process for each projet
 - Formal evaluation criteria
 - Project Prioritization Committee
 - Recommendation and approval processes

Stage-gate and prioritization processes



Source: Claude Émond et QualiScope 2003,2005



Lessons learned for the first implementation

- Seized the opportunity to implement project portfolio management
- Project portfolio management must be positioned strategically within the organisation
- Only “strategic” projects included in portfolio
- Difficulty to align projects with strategy (no priority associated with asset renewal)
- Difficulty to compare very different projects

Audit of the project portfolio management process

- Fall 2006 – Recommendations
 - Clarify strategic objectives in measurable terms
 - Place the portfolio management process within annual budgeting cycle
 - Modify the identification process to allow:
 - Identification of major categories of potential projects
 - Eventually, manage large groups of projects as programmes or portfolios
 - Establish a process to align with capability to deliver projects and to use project deliverables

Improving the implementation

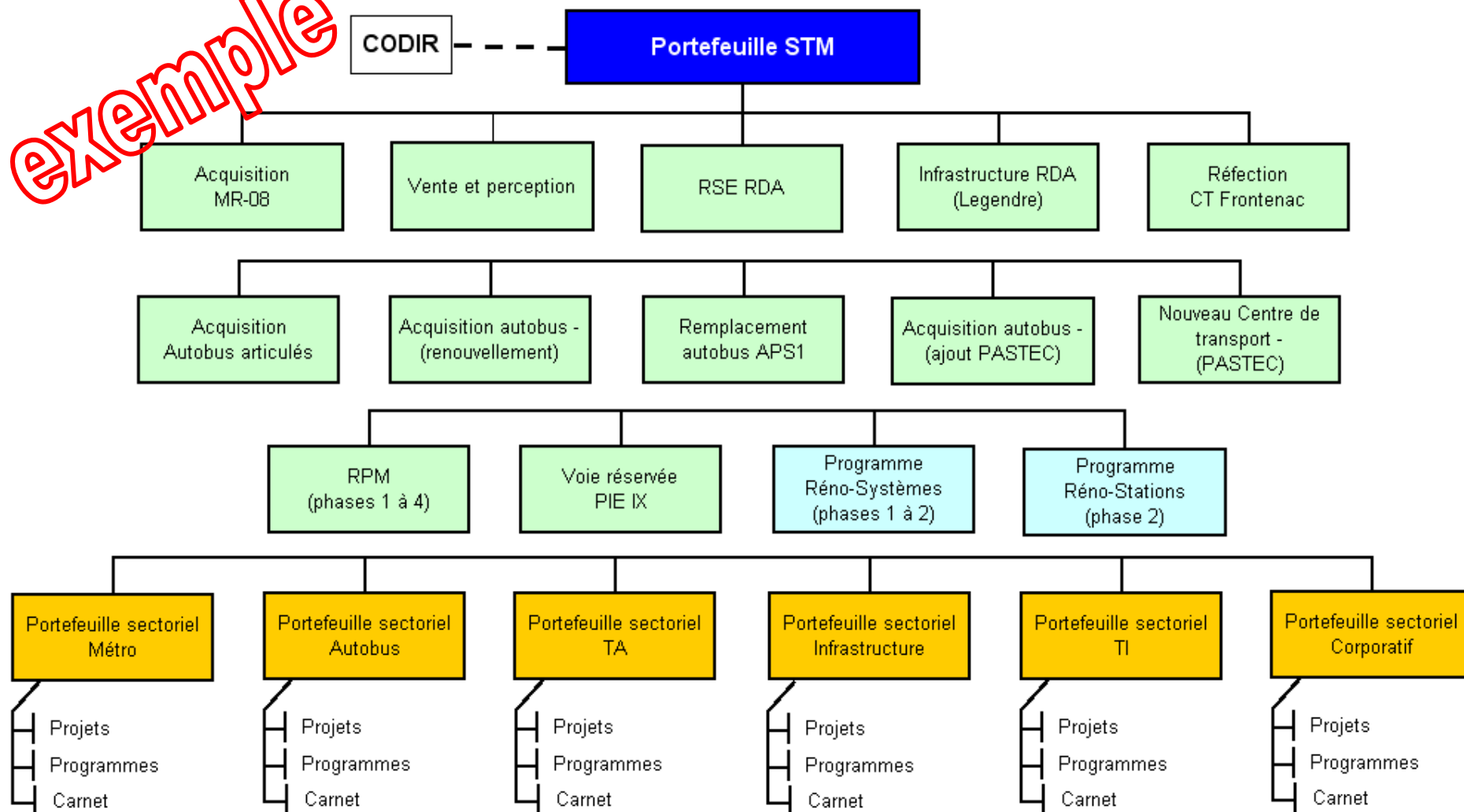
- 2007-2008
 - Asset renewal added to strategic plan
 - A multidisciplinary team to:
 - Structure the management breakdown of projects
 - Identify initiatives to include in portfolio
 - Establish criteria for evaluation and selection for:
 - Contribution to strategic objectives
 - Complexity
 - Establishing levels for recommendation and authorization

Management breakdown structure of projects

- Portfolio in 2 levels
 - Level 1: STM portfolio
 - Level 2: sectorial portfolios
- Each level has a body for recommendation and a body for authorization

Management breakdown structure of projects

exemple



Future steps

- Establish a process to align with capability to deliver projects and to use project deliverables
- Establish scorecards / indicators for project portfolio management performance

Commonalities

- **The same target :**
"Do the right projects"
- **Large infrastructure investments**
 - STM - \$6B / 10 years with 85% asset renewal of \$10B asset base
 - HQTÉ - \$10B / 10 years with 45% asset renewal of \$15B asset base
- **A prioritization matrix**
 - STM (Strategic contribution & delivery complexity matrix)
 - HQTÉ (Strategic contribution & business risk matrix)

Lessons Learned

- ◆ Something new for most organisations
- ◆ A long process of organisational change over several years (often iterative)
- ◆ Top level support and involvement
- ◆ A clear and relevant strategic plan
 - Easier if already in place
 - Deficiencies will be revealed by efforts to align portfolio with strategy
- ◆ Portfolio and programme managers
 - New roles with accountability

Lessons Learned (con't)

- Reduce the number of items in highest level portfolio
 - Creation of sub-portfolios and / or programmes
 - Manageability
 - Comparability (apples to apples)
- Big information system issues:
 - Clarify information needs
 - Information from legacy systems
 - Standardized project data

Conclusion

- Not all capital spending is in one-offs
- Need to manage large numbers of projects
- Ability to create strategic benefits from non-strategic projects
 - Alignment of smaller scale projects and maintenance / replacement projects



Discussion