MUNICIPAL INFRASTRUCTURE:

Good Practices in the Design, Funding and Management

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DESIGN, FUNDING AND MANAGEMENT

- In order to minimise the impact on society in the case of severe disturbances affecting municipal infrastructure systems it is essential that these systems are resilient to failures, i.e. that they are able continue operations or quickly recover a stable state after a major mishap.
- Numerous opportunities for taking measures to increase resilience of infrastructures exist already in the **design, funding and management phases** of these infrastructure systems.
- Good practices exist throughout Canada and the world in designing, funding and managing this municipal infrastructure

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DESIGN, FUNDING AND MANAGEMENT

- Municipal infrastructure includes:
  - buildings,
  - structures,
  - facilities,
  - equipment,
  - rolling stock,
  - furnishings, and
  - development and purchase of land,
- As well as the associated items to bring the foregoing into operation, and major rehabilitation work.

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- Canadian municipalities are not recognized in the constitution;
- They are creatures of the provinces and fall under their jurisdiction
- Despite this institutional fragility, municipalities offer essential services to the population, including:
  - fire protection,
  - recreational activities,
  - drinking water,
  - collection and treatment of wastewater, and
  - public transportation
- They also enjoy great fiscal autonomy.

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- Infrastructure expenditures differ from operating expenditures in three important ways:
  - **First**, the financing of major infrastructure projects is lumpy in nature; that is, large expenditures in one year generally preclude similar expenditures in subsequent years.
  - **Second**, benefits from large infrastructure projects often extend over many years.
  - **Third**, infrastructure is often funded from special assessments, development charges, reserves, borrowing, grants, and own source revenues, while operating expenditures are funded only from grants and own-source revenues.

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- In Canada, the three main sources of municipal revenue:
  - Property tax (53%)
  - User fees (22%) and
  - Provincial transfers (17%).
- Most transfers are conditional (specific purpose) transfers from provincial governments.
- The largest conditional transfers are for transportation, water and sewage treatment and social services, particularly Ontario where funding for social services has been downloaded to municipalities

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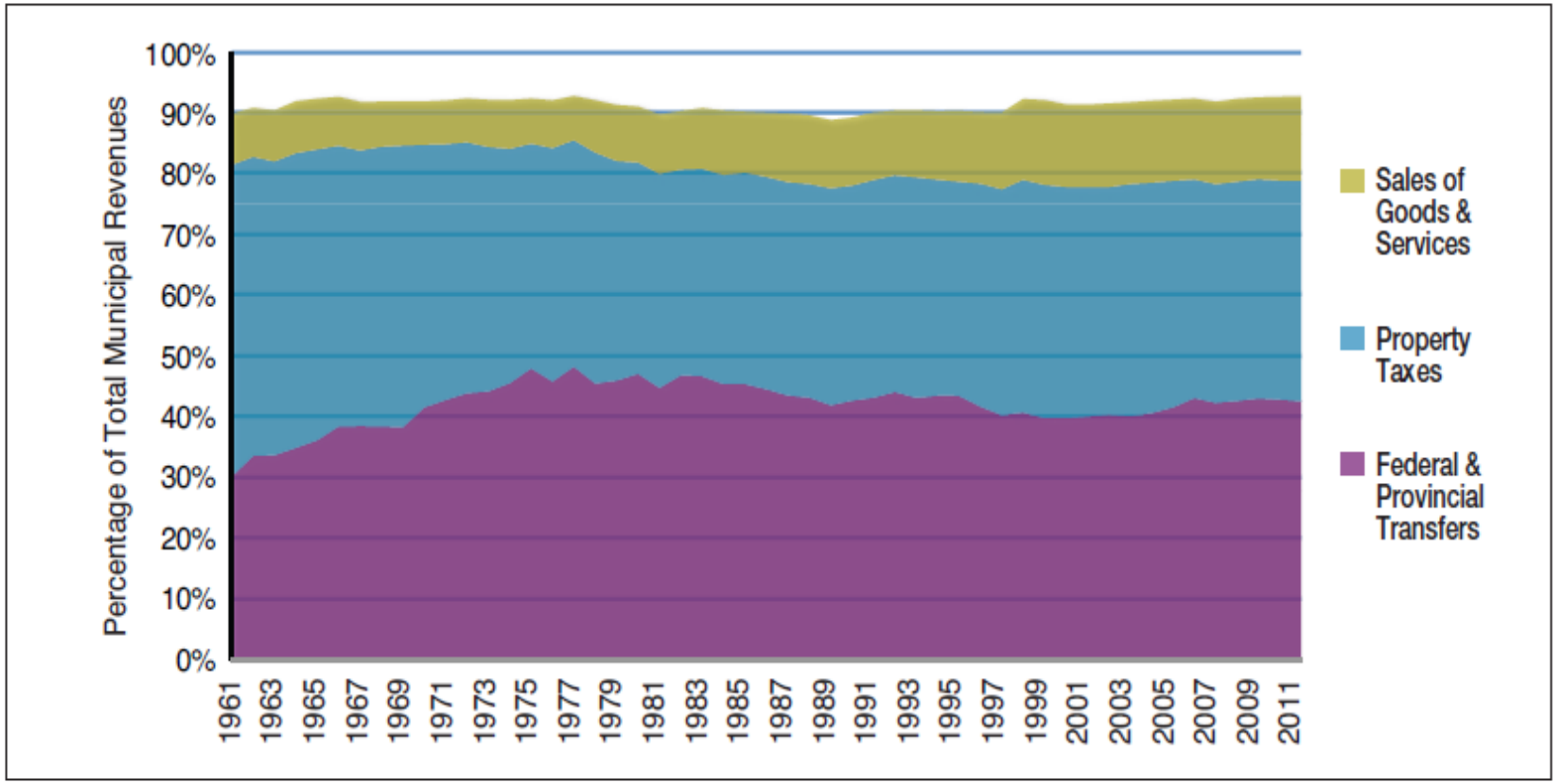
FIGURE 7: COMPOSITION OF MUNICIPAL REVENUE (CANADIAN AVERAGE)



Cansim table 380-0035 – Income and expenditure sub-sector accounts, local governments

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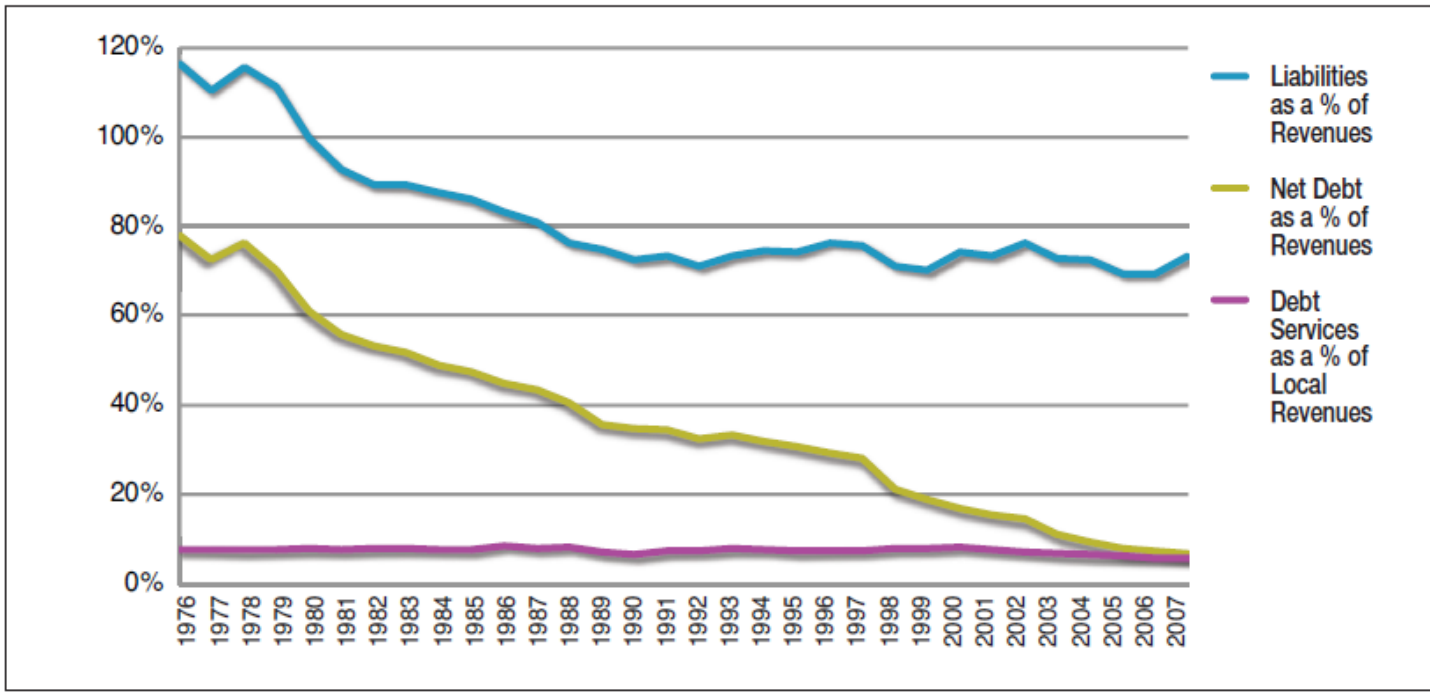
Figure 9: Net and Gross Debt as a Percentage of Local Government Revenue (Canadian Average)



Source: Cansim table 380-0035 – Income and expenditure sub-sector accounts, local governmen
Cansim table 385-0014 – Balance sheet of local governmen

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- The key issues in infrastructure finance are simple to state:

1. How can municipal governments **choose the appropriate infrastructure project**, including coordination across government boundaries?
2. **How can they finance it**?
3. How can an **overall federal/provincial/municipal structure** be created in which incentives:
   - to get the means of financing
   - to maintain the infrastructure,
   - and to use the infrastructure efficiently and equitably

   are not unduly distorted?

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- Shared-cost grants
- Increased dependence on user fees
- Benefits-based model – those who benefit from local infrastructure and services should pay for it
- Reconsideration of uniform fees – some neighbourhoods more costly to service than others
- Access to new financing instruments
- Greater use of public private partnerships
- Multi-year capital budgets
- Need for more reliable data
- Developing data on administrative capacities of local governments
- Incorporating recent approaches to valuing risky investments Incorporating institutional factors
- Recognizing the role of non-for-profit organizations in service delivery

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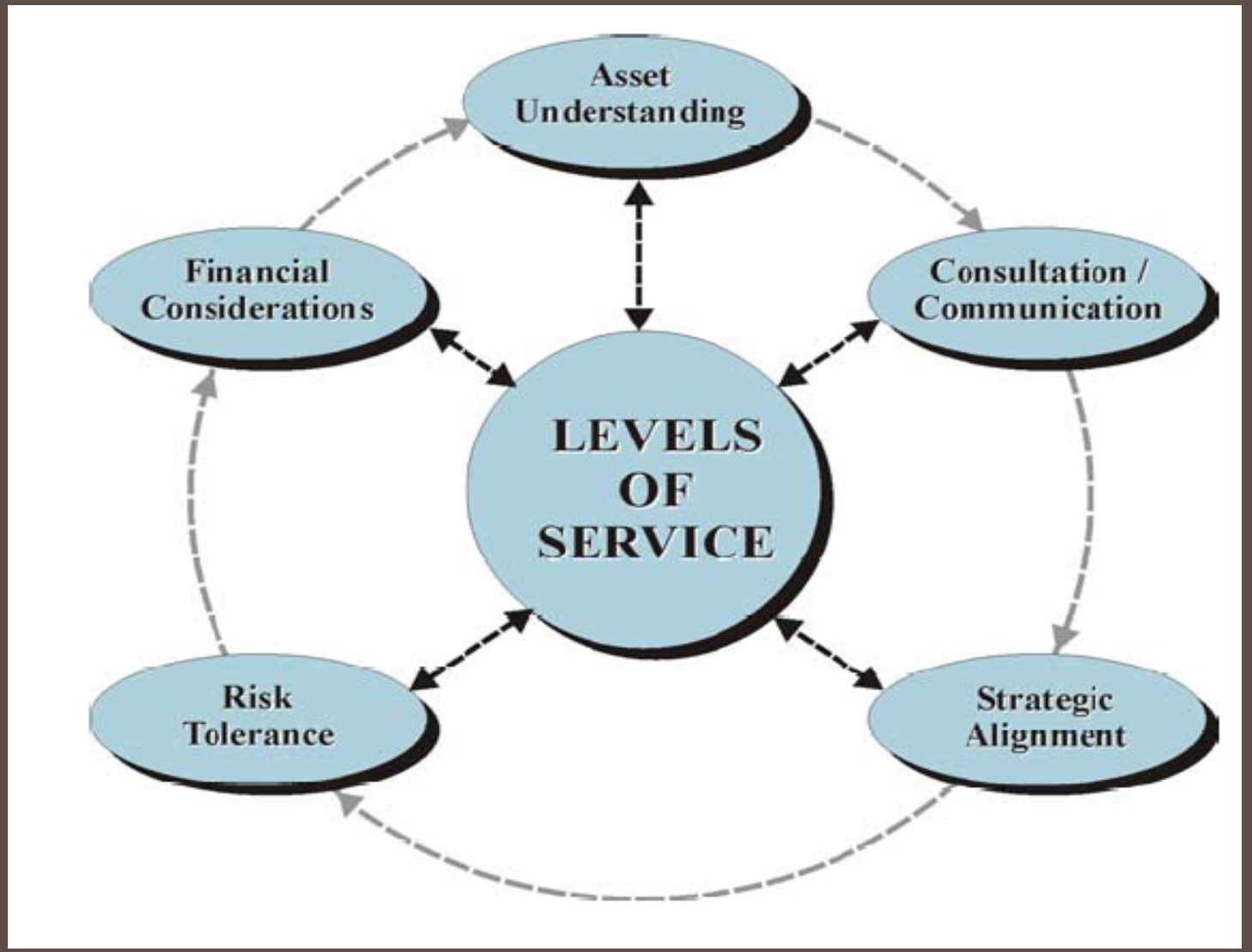

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DESIGN

- Strategic Planning
- Information Management
- Building Public Support and Acceptance
- Exploring new and innovative methods for continuous improvement
- Prioritization models
  - Weighing and ranking systems
  - Linking capital with operations and maintenance budgets in planning
  - Business case approach

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- Asset management provides :
  - transparent,
  - rational, and
  - accountable cost-effective management of municipal infrastructure systems.
- It provides best value for money, saving unnecessary cost.
- In this capacity, asset management could be viewed as a value management program for municipalities at both the strategic and tactical levels.

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- Several researchers have described the processes needed to implement municipal infrastructure management programs.
- Lemer (1998) described these processes as being comprised of two main sets of issues:
- First set of issues:
  - **asset identification,**
  - **appraisal, and**
  - **valuation**
- Second set of issues:
  - **asset deployment,**
  - **utilization,**
  - **exchange, and**
  - **reinvestment.**

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- Vanier (2001) identified six main areas of infrastructure asset management that were referred to as the "six whats?."
- These areas included:
  - **asset identification,**
  - **valuation,**
  - **maintenance backlog,**
  - **condition,**
  - **remaining service life,** and
  - **maintenance prioritization**.

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- The asset management strategy is the set of planned actions that will enable the assets to provide the **desired levels of service in a sustainable way, while managing risk, at the lowest lifecycle cost**
- An asset management strategy can address:
  - Non-infrastructure solutions (i.e. demand management)
  - Maintenance activities
  - Renewal/rehabilitation activities
  - Replacement activities
  - Disposal activities
  - Expansion activities
  - Procurement methods
- Also address risks associated with the strategy (i.e. ways the plan could fail to generate the expected service levels) and any actions that will be taken in response

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- **An asset management plan is a strategic document**
- **Enhancing the asset management planning process needs**
  - Direction and support from Council
  - Public engagement
  - External Support and Collaboration
  - An Open and Ongoing Process
  - Evolves Over Time
  - Some direction for staff to develop guidelines and practices

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- **Consultation/communication can occur in an informal manner**, particularly for the smaller municipalities
  - In the larger municipalities, the use of focus groups, citizen open houses, and surveys is more likely to be the norm
- There needs to be a **clear understanding of the municipalities' goals/strategic alignment** and the municipality's mission objectives
- **Financial considerations are paramount** in the decision-making process on municipal infrastructure
- The local municipality should **establish an intergovernmental agreement to regulate development**

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- Municipalities should design a **regional growth management partnership model**

  Intergovernmental agreements, consent resolutions, and strategic partnership agreements are key instruments
- concept of strongly **differentiating maintenance and repair from capital renewal**
- **A complete inventory of all infrastructure facilities with a detailed condition assessment of each facility will enable the development of optional repair and rehabilitation strategies with the limited budgets currently available**

Thank you for the opportunity to speak….

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