

Municipal Reference Model – Status Update
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Original MRM Logo

The roots of the Municipal Reference Model (MRM) started to germinate in 1989. In those early days, municipalities were struggling with the implementation of Geographic Information Systems (GIS) and strongly desired a common understanding of how to integrate spatial and tabular data, and how to build common data structures to enable sharing of data among and between government organizations.

In the period 1990-1991, two municipal associations – the Municipal Information Systems Association (MISA), and the Tri-Committee on the Utilization of Computers in Public Works (Tri-Committee), initiated a fund raising campaign. Thirty-six (36) Ontario municipalities and two Ontario Provincial Ministries contributed a combined total of \$300,000 to undertake two projects. One project focused on the public works and engineering data needs and was original termed the Engineering Database Model. This initiative went on to become the Municipal Infrastructure Data Standard (MIDS). The second project was termed the Generic Municipal Data Model. Chartwell Inc. was selected to develop this model but quickly convinced the associations to add a new dimension to the data view by producing a generic functional model. From this effort, the Municipal Reference Model was born.

Between 1992 and 1993, Chartwell developed the original model with the assistance of six (6) municipalities. The model consisted of two key components – a functional model based on the programs and services offered by municipalities, and a data model. Arising from this effort emerged the “red book” outlining the model framework and providing samples. In addition to the “red book”, Chartwell circulated a copy of the MRM software, Version 1.0 – a compendium of the Model elements.

In 1995, Chartwell worked with the two associations to ensure the “models” would be brought to life through continued support by Chartwell to enhance the models, and to work with municipalities to apply the models. The Joint Venture was born where both MISA and the Tri-Committee would oversee the intellectual property of the MRM and guide Chartwell in its future development of the MRM.

Over the period 1995-1999, Chartwell tested these models by carrying out several foundation projects across Canada. As part of these projects, Chartwell expanded the original sponsorship by seeking out “MRM subscribers” who would purchase the MRM and continue to support it through annual subscription fees. Based on the Joint Venture partnership, Chartwell developed Version 2.0 in 1996 and distributed another software solution to the “membership”.

In 1997, Chartwell developed the third version of the models, now termed the Management Reference Model for Government Services™ (MRM™/GS) and introduced the version to an ever-expanding audience of interested municipalities.

In recent years, Chartwell has continued to apply the MRM™/GS concepts on a number of projects (see next section). However, even more important was the introduction of the concepts of Programs and Services to the Province of Ontario, and more recently to the Government of Canada. In Ontario, the MRM™/GS has since been termed the Public Services Reference Model (PSRM), while in the federal government the MRM™/GS has become known as the Governments of Canada Strategic Reference Model (GSRM). The success of the MRM™/GS has only been limited by a municipality’s capacity for innovation! Such a bold statement could not have been made in the early years of seeing subscribers and supporters apply the MRM methodologies and approaches.

*New MRM™/GS
Logo*

***Accomplishments
of MRM™/GS
Subscribers and
Supporters***



Figure 1 - City of Guelph's "Wallpaper"

Accomplishments Continued!

However, as more and more municipalities took up the challenge, Chartwell began to witness innovative applications that exceeded our wildest dreams. Some of these stories are outlined below.

1996 – City of Guelph – Business Technology Plan – a strategic plan that was developed from a business model based on programs and services. Arising from this engagement was the introduction of the “wallpaper” (see Figure 1) that illustrated the activities offered by a municipality and arranged by the programs and services. This “wallpaper” is still used today to provide a perspective of the breadth and diversity of municipal business.

1997 – Regional Municipality of Halifax – Establishing Service Level Standards – a project aimed at examining the services of four municipalities that were amalgamated in 1996 to level the service levels offered by different organizations.

1997-1998 – City of Winnipeg – Focus on Winnipeg’s Services – an initiative originally fostered by the City Auditor to ensure that the City’s services provided “value for money”. Winnipeg continues to use the results of this initiative as the foundation for Winnipeg’s New Deal – perhaps one of the most progressive initiatives in Canadian cities today.

1998 – City of Fredericton – Organizational Structuring – an initiative focused on coming up with a new organizational design for the City based on its program and service offerings. Fredericton has since taken the results of the MRM in its search for continuous improvement to new levels of success and can now claim to be ISO9000 certified.

1998 – City of Dayton – Service Delivery Alternatives - Faced with the impending loss of approximately \$20 Million in revenue, the City looked to Chartwell and the MRM to provide an alternative approach to unilateral departmental budget cuts.

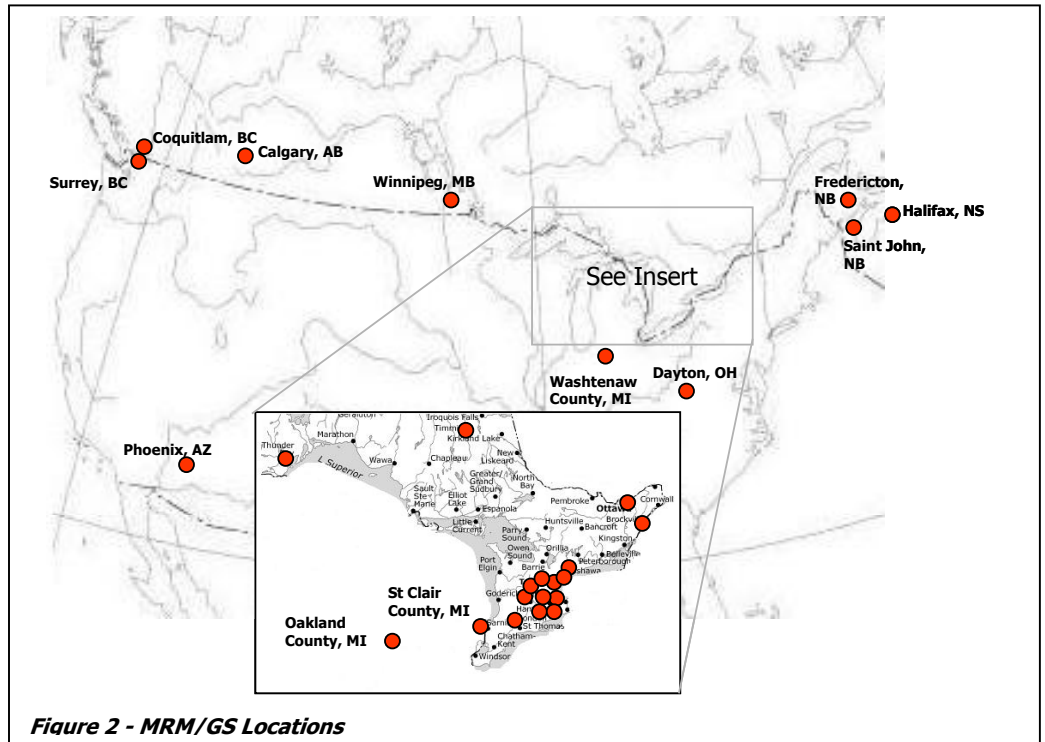
2000 – Municipal CAO Benchmarking Initiative - Chartwell was retained by a cooperative of 14 Ontario Municipal CAO’s to establish meaningful performance measures and identify best practices for internal support services. Up until this point the Chief Administrative Officers had been successful in profiling a subset of public services but were challenged in coming up with the fully-loaded costs of any service without the costs associated with indirect services.

2000-2001 – City of Kalamazoo – Mapping, Profiling and Reconciling City Services – a project aimed at developing a Program/Service Based Budget and to begin to grapple with the challenge of changing service levels to meet reduced funding and budget cuts.

Accomplishments Continued!

2001 – City of Saint John – Corporate Services Department Service Profiling - In their efforts to achieve National Quality Institute (NQI) certification. Within a span of three months, the Corporate Services Department was provided with a comprehensive inventory of their programs and services, along with the business processes and associated activities.

The number of stories that begin with the MRM™/GS continues to grow. Across Canada, the MRM™/GS has been applied from coast-to-coast, from Halifax to Coquitlam. The MRM™/GS has also been applied in Phoenix, in Shanghai, China and recently in Poland on an institutional strengthening initiative. Regardless of its origin, the MRM™/GS does apply to local government whether we are talking about small Townships such as Centre Wellington (Elora/Fergus) with a population of 25,000 people, or to large urban areas such as the City of Shanghai with a population of 21 million.



***MRM sets the stage
for Provincial and
Federal Models –
by Skip Lumley,
Chief
Methodologist,
Chartwell***

The GSRM (Government of Canada Strategic Reference Model) is a powerful transformation management tool designed expressly for the public sector. It can benefit Canadians by helping to improve the operation and integration of government programs and related public and private services within and across jurisdictional levels.

The GSRM is the end product of ten years of continuous development and innovation, and contains contributions from many local governments (in the Municipal Reference Model or MRM), provincial ministries (in the Public Services Reference Model or PSRM) and the federal government (the GSRM). The GSRM encompasses the concepts of the earlier models, and is the most current and mature implementation in terms of methods and applications.

A reference model for any enterprise is an authoritative body of knowledge about its structure and operation, expressed in a formal or consistent way. It is used as such to help people understand their role in the enterprise, the implications of change, and how to contribute to its overall goals. It is used as an analytic tool to create alignment between policies, strategies, organization, processes and systems. It is used as a system of record by project governance bodies to ensure that alignment is maintained during transformation.

The MRM was created to become a standard for developing local government reference models. It formalized many basic concepts such as target groups, programs and outcomes, services and outputs, and relationships between services and business processes. It contained a conventional Information Model, but departed from the typical Business Model of functions and processes found in private sector enterprises. The reasons for this departure arise from fundamental differences between not-for-profit and for-profit enterprises. A library of thousands of instances of local government service was developed, so municipalities could create their own reference model quickly and inexpensively. Analyzing this library, 55 types of services (called 'archetypes') were identified, along with patterns of business processes for each type. A municipality with a population of 100,000 would typically have between 150 and 250 services in their reference model, classified according to type

The PSRM aligned the MRM with the Zachman Framework for Enterprise Architecture. It formalized additional important concepts such as needs vs. requirements, and the distinction between services to the public and services to providers. It introduced several general models recommended for that framework such as the Logistics Model and the Events and Cycles Model. It also introduced several models specific to the public sector: the Program Service Alignment Model (PSAM), the Service Integration and Accountability Model (SIAM) and the Performance Model.

The GSRM added further refinements and additional models. For example, the original 55 types of service were normalized to 19 first-level service types and more than 100 second-level variations. Each service type was described with a standard pattern of business processes and performance measures. Important new models included: Target Group Hierarchy; Needs Hierarchy; Communities Model; Program Logic Model; Target Group State Transition Model; Service Bundles Model. The most significant addition was the Top Model, a simple and easily-applied framework that can be used by any public service agency to describe its entire operation in a common language that can be understood accurately by any other agency.

*"Return of the
Municipal Reference
Model" by Roy
Wiseman, CIO,
Region of Peel*

As someone who was involved in the Municipal Reference Model from its MISA/Tri-Committee Joint Venture beginnings almost fifteen years ago, it is perhaps a bit late to admit some initial skepticism about the model's utility for information systems.

At times, the MRM seemed to assume that IT organizations were starting with a blank piece of paper and could either build their own applications to fit the model or demand that vendors build or modify their systems to conform to it.

The reality, of course, is that most of our systems are already in place and that when it is time to invest in a new or replacement application, we will look first at what is commercially available, choosing to develop from scratch, only when there is no acceptable commercial product. When evaluating commercial software, it is unlikely that either IT staff or our clients are going to allow compliance with some esoteric data model to outweigh the benefits of a well established product that meets the business requirements.

But with the passing of years, the MRM has popped up in surprising places and has been (or could have been) put to uses far different from those originally envisaged. Let me provide four examples:

1. The Region of Peel has undertaken an Electronic Information Management (EIM) strategy, which has a core purpose of providing corporate access to all forms of electronic information – from data in databases to electronic documents or images. If we are going to store each document only once for access by all appropriate users, the organization of this potentially massive data store becomes all important. When we are creating a filing system for our own use or for use by a limited number of people, we can organize it pretty much how we want. But a corporate-wide filing system in which everyone knows where documents should be filed and how to find them once they are filed requires much more thought. Organizing such a system around existing departmental structures would mean rearranging the system every time responsibilities move from one unit to another. (Many of us have faced these same issues regarding the organization of information in our corporate Intranet or Internet sites.) Not surprisingly, the recommended approach was to organize files by program and service – which leads to the need for an agreed list of municipal programs and services – which takes us to (you guessed it) the MRM.
2. Peel is also participating in the Ontario Municipal CAO's Benchmarking Initiative (OMBI). OMBI's purpose is "to identify and develop appropriate service performance measures, capture performance data, and analyze and benchmark results, in order to identify best practices of service efficiency and quality in Ontario municipalities". The provincially mandated Ontario Municipal Performance Management Program (MPMP), is also interested in documenting and comparing municipal cost and performance information for a range of municipal services. Both OMBI and MPMP had to start out by developing a representative list of municipal programs and then drilling down into specific services and activities for which service measures can be defined and compared. OMBI terminology, definitions and lists of services can be clearly traced back to the MRM as at least a strong influence.

3. In today's web world, we have all been exposed to the idea that our citizens and clients don't think of their governments in organizational terms. They don't decide one day that they would like to call the Region of Peel. Rather, they have a service need and some idea (correctly or otherwise) that this may be a service that the Region provides. Frequently, they need not a single service but a bundle of services, perhaps relating to a life event (such as loss of a job, birth of a child). Such events may require services from multiple levels of government. This phenomenon is giving rise to initiatives such as the Seniors Portal, in which service from all levels of government (and even from non-government sources) are grouped together in one place. (Can the Children's Portal or the Jobs Portal be far behind?) If one wanted a catalogue of services provided by all levels of government for such a subject-specific portal, where would one go? This seems like a job for the Public Service Reference Model, an expanded version of the MRM to include services from the provincial and federal levels.
4. Despite my reservations about data architecture, we have at Peel been discussing the need to identify a single master source for each distinct set of information, so that it can be maintained in one place by the identified responsible area. For instance, HRMS should be the master repository for most, if not all, information about employees. We understand that some information about employees will be required in other systems (e.g. so that work orders can be assigned, employee time can be captured). However, these other applications should either access the needed employee data directly from HRMS or, when required, we should extract the needed information from the master source to reformat it as required for purchased applications. Storing redundant data is to be avoided but probably inevitable. But this doesn't mean that we have to maintain it in two places, through two separate processes, with the duplication of effort and inconsistent data that inevitably results. If we are going to address this issue, we need to understand and map our data – sort of like data architecture – sort of like the MRM.

In summary, today's technology trends are conspiring to make the MRM even more relevant than it might have been in the early 1990's. If we are going to organize and share information throughout the organization – and between organizations – then we need a common organizing framework. If we are going to benchmark our services, we need a common understanding of what those services are – and the appropriate performance measures for each. If we are going to provide a single point of entry for services provided by multiple organizations, we need a taxonomy of those services.

For all of these reasons, information architecture is coming back in fashion. It may be time to take another look at the MRM to see what role it can play in this new world.

**Summary of
Achievements –
Observations by
Alan Mitchell**

Reflecting back on the history of the MRM, I can't help but think about the original reason for developing the MRM – to overcome a GIS dilemma posed by the need to integrate spatial and tabular data. How far have we come? Let me give you a thumbnail review of where the MRM™/GS has assisted municipalities in ways never envisaged.

Perhaps one of the more popular reasons for using the MRM™/GS has been to develop **Information Technology Strategic Plans** (ITSP's). Guelph, Brantford, Centre Wellington, Oakville, and Whitby have started with a really solid foundation by developing business models based on the programs and services offered by the municipality. From those business models they developed application portfolios, databases and technology components to cover all functional requirements. Some of these municipalities have made tremendous inroads, such as the City of Guelph who developed their ITSP in 1996.

The second most popular reason for choosing the MRM™/GS has been to develop **Software Requirement Specifications** for particularly challenging solutions that may span several departments. Peel Region, Phoenix, Guelph, Shanghai and Oakland County, to name a few, started with the program / service models to tackle the requirement specifications, and then drilled down deeper into processes, activities and tasks. The resulting solutions are more robust, and clearly cater to the needs of their customers or clients.

Performance Management is clearly an important reason for introducing the MRM™/GS. Winnipeg, Fredericton, Saint John, Ontario Municipal CAO's, St. Clair County, and a growing number of other municipalities find the MRM™/GS as the best way of stitching together the mosaic that links service efficiency and effectiveness outputs with program outcomes to achieve greater accountability to the public.

Service Based Budgeting is growing in popularity. Coquitlam started the exercise; Guelph, St. Clair County, Winnipeg and Kalamazoo continue to work on this most challenging goal.

Fredericton chose to use the MRM™/GS to assist in a critical **Organizational Restructuring** effort. Over a span of three months Fredericton was able to evolve a municipal organization from a group of inward-focused departments to an outward-focused, customer-oriented, quality service delivery organization. In a similar fashion, Winnipeg also used the MRM™/GS to facilitate a reorganization.

One of the most curious aspects of the MRM™/GS is how seldom it has been used to assist in the implementation of e-Government solutions. One would think that the "service delivery" components of the MRM™/GS would naturally lend itself to a more proven, more robust customer centric solution ... time will tell!

Where to now?

Several thoughts on future directions of the MRM™/GS are being tossed around. Your views on these directions would be greatly appreciated. Here are some ideas:

Firstly, the growing interest in inter-jurisdictional cooperation among and between different levels of government suggests a growing role for the MRM™/GS in bridging the divide. Evidence of the applicability of such a model in setting standards that all levels of government can subscribe to have already been proven with the Federal Treasury Board's Business Transformation Enablement Program (BTEP) and Government of Canada Strategic Reference Model (GSRM).

Secondly, the MRM™/GS or some such variation might well prove to be the basis on which Canadian governments can begin to store performance indicators and "best practice" models. Everyone seems to talk about performance management, but where does one go to find comparable indicators and/or best practices, and will there be a standard manner in which these indicators and/or best practices can be retrieved, assimilated and modified for use in one's own organization.

Thirdly, the MRM™/GS might be expanded to embrace other forms of government or quasi-government organizations, such as School Boards, Universities and Colleges, Conservation Authorities, etc.

You may have your own thoughts on the next version of the MRM™/GS. If so, please take a moment and jot down your thoughts and send them along to:

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