Governance Models for Successful Asset Management Development and Sustenance

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INTRODUCTION

Asset Management (AM) has become a must have practice in many organizations and implementation range from informal to very comprehensive programs focusing on strategies, tactical and operational elements. Businesses on a daily basis try to juggle the Level of Service (LOS) or Level of Production, Cost of Service (COS) or Production, and Risk (See Figure I). Asset owners, that are successful at implementing AM programs and realize the anticipated return on the investment realise that success requires a focus on Strategy, People, Processes, and Data & Technology. Design and implementation of an effective AM governance model to guide AM development and sustain the new culture in the organization is usually a key activity for AM programs. This paper provides guidance to asset owners who are embarking on an AM program, are in the process of implementing one or have completed implementation and are keen to sustain the gains and continuously improve.

FIGURE 1 ORGANISATIONAL DESIGN

KEYWORDS

Strategy, People, Processes, Data, Technology, Governance, Communities of Practice

ORGANISATION DESIGN AND GOVERNANCE MODELS

The structural configuration of an organizational design (Figure 2) is the way work is divided and how it achieves coordination among its various work activities around the assets lifecycles. An organizational design structure resolves the two basic tasks of getting work done by:

1. Dividing up the work in the organization into logical units (this enables performance management), and
2. Ensuring the work gets done by providing the coordination and control of work.

FIGURE 2 - ORGANISATIONAL DESIGN
Understanding the assets and the work needed around the lifecycle (plan, design, create, operate, maintain rehabilitate/replace and dispose) of these assets to create a service is fundamental to the organizational design process. Organization design is the series of management decisions needed to achieve the organization's vision and mission that gets translated into the strategies and tactics in the strategic plan. The most successful and effective AM governance models in place at utilities, municipalities and some private sector companies share many of the same organizational design principles, these include:

1. Reflect the strategic vision, mission and values of the organization as well as the vision for AM strategy implementation
2. Reallocation and balance human resources and workload across positions within existing and vacant positions and provide for appropriate critical functions
3. Acknowledge and leverage the existing skill and expertise areas of management and staff; acknowledge the strengths of management and staff involved and identify and create opportunities for further enhancing skills (gap and skills analysis – development and succession planning).
4. Reflect the organization's current Human Resources policies and practices
5. Adhere to Collective Agreements.
6. Decisions will consider the best interests of the organization, customer and staff
7. Roles, responsibilities, communication links and decision making rights will be clearly defined.
8. The structure will support the integration of AM across the organization and the necessary interdepartmental relationships
9. Enable the organization to attract and retain the right people/skills.
10. Provide for performance measurement of AM program delivery.
11. The structure will be flexible to support and adapt to future AM needs

The ISO Asset Management Standard (ISO 55000, 55001 & 55002) also provides guidance on Asset Management governance as shown in Table 1 below:

**TABLE 1 ISO AM GOVERNANCE REQUIREMENTS**

<table>
<thead>
<tr>
<th>ISO Clause</th>
<th>AM System Element</th>
<th>Documents</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Organizational Context</td>
<td>Organizational Plans and Objectives</td>
<td>Ensure clear understanding of the organizational objectives and mission for stakeholders</td>
</tr>
<tr>
<td>ISO Clause</td>
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<tr>
<td></td>
<td></td>
<td>Contain existing strategic plans that relate to the assets (e.g. service goals, sustainability)</td>
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</table>
| 5          | Governance and Leadership | Asset Management Policy | Articulates senior management commitment to asset management and continual improvement  
Provides "top down" direction regarding expectations and mandatory requirements for asset management and defines the key principles that underpin asset management in the municipality |
|            | Asset Management Strategy | | Defines what the organization intends to achieve from asset management activities and by when  
Identifies and prioritizes key initiatives that support delivery of the asset management policy  
High-level overview of resources, time scales for implementation |
| 6          | Planning and Decision-Making | Master Plans | Provide approach to managing the assets over the short, medium, and long term  
Outline long-term plans for the assets including service expectations, timelines and funding, and resource requirements |
|            | Asset Management Plans | | |
|            | Maintenance Strategies | | |
| 8          | Operation (Service Delivery) | Performance and Condition Reports | There are resource implications with this clause that need to be considered in an Asset Management Governance Model |
| 9          | Performance and Condition Evaluations | Stakeholder Engagement | There are resource implications with this clause that need to be considered in an Asset Management Governance Model |
| 10         | Continuous Improvement | | There are resource implications with this clause that need to be considered in an Asset Management Governance Model |
| 7          | Resources and Support | | There are resource implications with this clause that need to be considered in an Asset Management Governance Model |

**AM GOVERNANCE MODELS**

Based on the above principles, guidelines and regulatory requirements (Ontario Regulation 588/17), four potential models are possible:

1. Model 1 - Departmental AM Steering Team (Facilitation and Advisory), Centralized AM Office and Formal Decentralization Departmental Delivery
2. Model 2 - Departmental AM Steering Team (Senior Level Cross-Departmental Group) and Informal Decentralized Departmental Delivery
3. Model 3 - Centralized (Departmental AM Office) and Informal Decentralized Departmental Delivery
4. Model 4 - Departmental AM Steering Team, AM Delivery through Task Teams

Table 2 below provides guidance on the advantages and disadvantages of each of these:

### TABLE 2 – ADVANTAGES and DISADVANTAGES FOR THE 4 GOVERNANCE MODELS

<table>
<thead>
<tr>
<th>Model</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 2 - Departmental AM Steering Team (Senior Level Cross-Departmental Group) and Informal Decentralized Departmental Delivery</td>
<td>All Departments are involved in Asset Management strategic &amp; tactical decision making. Departments control what is implemented and the level of support they require. No new hires. Overall it does not involve a significant change program.</td>
<td>Lengthy implementation. Lack of consistency. Lack of accountability and authority. Difficulty reaching consensus on key decisions. Staff may be overloaded. Concerns for long term viability of Asset Management Steering Team. Will take longer to show benefits of Asset Management Implementation. Work flow and information sharing silos that currently exist are unlikely to change.</td>
</tr>
<tr>
<td>Model 3 - Centralized (Departmental AM Office) and Informal Decentralized</td>
<td>Accountability for Asset Management is a core function. Consistency and tight control over all aspects of Asset Management.</td>
<td>Departments could fear that the Asset Management Office will take over their operations. Asset Management Office could</td>
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### Model 1:

**Departmental Delivery**

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<tr>
<td></td>
<td>Departments are involved in both Asset Management strategic and tactical decision making. Departments have a forum for discussing implementation and support needs for Asset Management and in this way have some control on what is implemented and the level of support received. No new hires required.</td>
<td>Lengthy implementation. Lack of consistency. Lack of accountability and authority. Meetings can be adhoc and attendance can be seen as optional. Staff may be overloaded. Competing objectives duplication of frameworks and the development of standalone solutions.</td>
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Model 4 - Departmental AM Steering Team, AM Delivery through Task Teams

Model 1 has been found to be the most suitable and has been widely adopted in public and private industry.

**AM COMMUNITIES OF PRACTICE**

Coordination and collaboration across life cycle is also required for effective AM Governance. Figure 3 below shows the typical focus areas and the four necessary communities of practices, centers of excellence or AM networks. These are discussed in Table 3 below:

**FIGURE 3 DESIRED COORDINATION AROUND THE ASSET LIFECYCLE and NETWORKS**

**TABLE 3 – COMMUNITIES OF PRACTICE OR AM NETWORKS**

<table>
<thead>
<tr>
<th>Network</th>
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</thead>
<tbody>
<tr>
<td>Asset Management Strategy and Planning Network</td>
<td>Provide a forum for AM practitioners to standardize and establish consistency in AM practices and concepts related AM strategy, capital planning, budgeting and integrated project coordination across asset classes</td>
</tr>
<tr>
<td>Asset Management Tactical and Operational (Productivity)</td>
<td>Provide a forum for AM practitioners to standardize and establish consistency in O&amp;M practices and concepts related to</td>
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</table>
Network

- maintenance/work order management, reliability and continuous improvement across asset classes

Program and Project Delivery Management Network

- Provide a forum for project managers to standardize and establish consistency in project delivery across asset classes
- Provide a forum for working with other project management groups to ensure integrated capital project delivery

Performance and Knowledge Management Network

- Provide a forum for AM practitioners to standardize and establish consistency in Asset Performance Management and Knowledge Management across asset classes

**BENEFITS OF EFFECTIVE AM GOVERNANCE**

An appropriately resourced Asset Management Office reporting at the right level to have proper influence can focus on Capability development: creating the necessary strategies and frameworks at the corporate level, and providing guidance and support to their colleagues in the various departments. Similarly, dedicated Asset Management staff in the various departments can take ownership for Asset Management execution and sustenance of best practices at the departmental level. Networks and communities of practice can encourage coordination around the asset life cycle, collaboration, knowledge sharing and continuous improvement. The end result and benefit to an organisation is that there will be transparency and accountability at all levels of the organization ensuring that:

1. Right activities (project management/delivery operations, maintenance etc.);
2. at the right time;
3. for the right reason; and
4. for the right cost.

In addition, there will be compliance with applicable standards (e.g. ISO 55000) and regulations (e.g. Ontario Regulation 588/17). Senior managers and political decision makers would then have the confidence that they are operating a lean organization and have quantified and understand the risks to the business and the optimal cost of asset ownership to meet set service levels.

**CASE STUDIES**

As part of their AM Program development, implementation and sustenance a number of organisations have successfully implemented AM Governance Models. Most have adopted Model 1 but some have found unique ways to manage the potential disadvantages and have adopted some of the other models. These various case studies will be discussed in the presentation.

**CONCLUSION**

Asset management programs have the potential to cause significant disruption in the organization as new strategies, practices, technologies and role/responsibilities are introduced. Managing these changes with the current organization designs have been found to be the least optimal solution. Many organizations have reviewed their organization designs in line with the concepts, principles and guidelines discussed above. They have then gone on to successfully implement appropriate AM Governance models that complements the existing structures and relationships to support AM development. The end result is the achievement of desired AM program benefits, integration of the new ways or working into the work culture and setting the stage for continuous improvement. Effective, communication, stakeholder management and change leaderships are key elements for a successful AM Governance program.

**REFERENCES**