While the concept of asset management may be nothing new to infrastructure owners, operators and investors, the past decade has seen a significant evolution in the way that asset management planning is conducted and encouraged. Our experience suggests that the key to successful and sustainable asset management lies in the ability of organizations to bring a more holistic approach to their infrastructure planning and decision-making process. Yet many are finding that to be easier said than done.

These are not easy times for the world’s infrastructure owners and operators. Facing pressure from aging assets, increased performance expectations, changing regulatory requirements and a growing skills gap, today’s infrastructure participants – public and private – are under mounting pressure to create more value from less resources. As we noted in our recent 10 Emerging Trends for Infrastructure in 2015 report, the need for improved asset management has jumped up the agenda. In some markets, the discourse has been led by regulatory pressure, largely focused on public accounting and risk reduction, and targeted towards those sectors deemed most critical. UK asset managers have been subject to regulated requirements in the water, power and rail sectors for years. In the US, the Moving Ahead for Progress in the 21st Century (MAP-21) Act passed in 2012, has mandated performance based asset management in the transportation sector. And in Canada, the federal Building Canada initiative is helping to promote and support asset management strengthening at the municipal level.

The recent introduction of the ISO 5500x Standards for Asset Management (a topic discussed by my colleagues in more detail in a previous Foresight article) has moved the discussion forward by outlining the components of a robust strategy and guiding the definition of an integrated and effective asset management system. These standards have already been adopted in many markets and are forming a global foundation for the practice in the future.

**Taking a more strategic view**

What is particularly interesting about all of these initiatives is not just that they are making the issue a priority. It’s also that they are evolving the concept as a whole. Indeed, whereas in the past, the function was largely focused on the physical asset – extending the life-cycle, improving efficiency, and enhancing performance, for example – recent initiatives have shifted attention to focus more on the asset’s role and its ability to meet the organization’s broader business needs.

This is a welcome development. Our experience suggests that the most successful asset management programs start not with the asset itself, but rather with defining service goals and outcomes, and finding an effective balance between costs and risks in sustainably meeting these requirements. So rather than asking how they can extend the lifespan and output of their assets, owners and operators should instead be focused on understanding what they want to deliver to consumers and stakeholders, and how infrastructure assets can help support them in meeting those goals. Only by defining this infrastructure ‘value chain’ at the start do questions about ‘which assets’ and ‘at what level of service’ start to become meaningful – and discussions about trade-offs and sustainability become possible.
This approach provides a range of benefits for those seeking to develop truly effective and sustainable programs. For instance, a more strategic approach to asset management can help ensure that investment decisions can be linked back to business goals and objectives, and trade-offs can be evaluated and assessed.

It can improve overall transparency by introducing rigor around how needs and priorities are set and communicated. And it can provide a platform for making long-term investment decisions within a constantly changing environment.

<table>
<thead>
<tr>
<th>Business goals and objectives</th>
<th>Desired levels of service</th>
<th>State of infrastructure</th>
<th>Asset management strategy</th>
<th>Financial strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Why are we here?</td>
<td>• What services do we need to support these goals?</td>
<td>• How does our infrastructure support service delivery?</td>
<td>• What do we need to do to achieve this?</td>
<td>• What will this cost us and how will we pay for it?</td>
</tr>
<tr>
<td>• What is our vision and what do we want to achieve?</td>
<td>• At what level do we need to provide them?</td>
<td>• Where are the gaps and opportunities?</td>
<td>• What capital and operating investments are needed?</td>
<td>• What trade-offs are needed to make this sustainable?</td>
</tr>
</tbody>
</table>

Getting there

While an increasing number of asset owners and operators are now starting to recognize the need for a broader approach to asset management, many are struggling to make the transformation. Our experience suggests that there are five key areas that must be addressed for asset management to succeed.

1. **Education:** Achieving the full benefits of a new approach requires the involvement of a broad set of stakeholders, particularly if it is to become fully integrated as a core business function. Stakeholder education will involve ‘building the case’ for improved asset management planning; it is important that the benefits (and costs) to the organization – and to the public as a whole – are well communicated and understood.

   Implementation of a comprehensive asset management planning process will improve the consistency, transparency and defensibility of operations by allowing the organization to demonstrate that:

   1. Service is being delivered in an efficient and effective manner.
   2. Assets are being managed in a responsible manner.
   3. Due regard is being given to sustainability, affordability and future needs.
   4. Funding requirements are realistic and justified.
   5. Regulatory, growth and other objectives will be accommodated without compromising the current asset base.

2. **Drivers:** In most cases, broad industry-level change is best catalyzed and sustained through clear regulation or incentives. To date, however, most regulation and government incentive programs have tended to focus on process, data and reporting, rather than encouraging the broader, more strategic alignment of infrastructure outcomes with societal needs and objectives.

3. **Models:** As the industry continues to move towards improving asset management planning, it is important that we learn from the accomplishments and shortcomings of past programs and initiatives. Organizations should strive to incorporate ‘leading practices’ from a number of jurisdictions into their own asset management programs. Our experience suggests that looking at tools and practices from a fresh perspective can lead to innovation and new and better ways to meet current and future requirements.

4. **Perspective:** All too often, asset management is approached from a purely technical perspective; assets are viewed as pieces of concrete or steel, rather than tools for delivering service. To be effective, the function must rise above the technical and operational level, focusing on return-on-investment in meeting service outcomes. Setting these goals and objectives, and the policy and strategy for meeting them, is ultimately a board and executive-level responsibility.

5. **Change:** People react to change differently based on their position in the change continuum. Concerns and issues must be effectively understood and managed in order to mitigate risk and achieve the required results and, ultimately, program sustainability. A tailored, well developed change management plan, prepared by an experienced change professional, will play a key role in this process and should not be overlooked.

Towards a better approach

Effective asset management planning can identify and guide the actions needed to achieve and support sustainable service delivery within the infrastructure sector. But more must be done to elevate the function above siloed financial, technical, and operational activities.

Yet while more attention to stakeholder education, change management and procedural support is clearly needed in order to achieve these higher-order transformative outcomes, we believe that the trend towards integrated, more holistic asset management is here to stay.