



YOUR LOCAL ASSET MANAGEMENT COMMUNITY OF PRACTICE IN BC.

Enhancing BC communities through leadership in asset management.

TWENTY SIXTH EDITION – SUMMER 2019

OUR INFRASTRUCTURE STORY AS CIVIC EDUCATION

*Diane Kalen-Sukra, MA, CMC
Speaker, advisor and author*



The Mission

Whenever we are asked to consider the appropriate or best way to communicate with Council on matters of the public interest, such as our collective challenges with municipal infrastructure, I consider the public messages that will be most helpful and

instructive for our ‘unelected community representatives’ in our local democracies – the citizens.

There are two reasons for this. **The first** is that even in this media and information age, official City Hall professional communications should never be perceived as a substitute for local leadership. Elected representatives, our politicians, have a responsibility to not just determine and govern in the public interest, but to also communicate to citizens, in many cases face-to-face, the reasoning behind their decisions.

The role of staff and consultants, then, is to help distill sometimes complex topics (like asset management) and concerns to elected bodies in a way that can be easily relayed to the public.

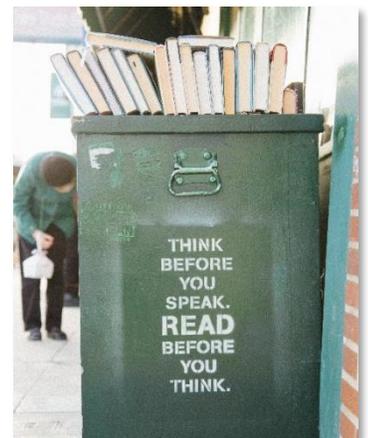
The second is that the enormous challenges that our local governments are facing – from infrastructure to climate

change to social well-being – have been made chronically more difficult to address due to a lack of civic education in fostering informed, active and engaged citizens, which are required for a democracy to function effectively. A global report released this year rated Canada’s democracy at a B-, below most Western European nations and just ahead the United States, primarily due to poor levels of civic engagement.

In this case, the proper stewardship of community assets – whether they be capital, natural, or human – is our overall mission. Why? Because community assets make the provision of civic services possible. And, sustainable service delivery, which requires asset management, provides for the long-term economic, environmental and social wellbeing of people and communities.

The problem

Fixing systemic and big problems, such as those related to infrastructure, require us to understand the political climate and culture that led us to govern ourselves in a way that threatens the long-term sustainability of local governments and communities.



A 2019 BBC report titled *The Perils of Short-Termism: Civilization’s Greatest Threat*, describes our cultural “inability to look beyond the latest news cycle” as “one of the most dangerous traits in our generation.” The report describes this short-termism as manifesting itself in

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politics by defining the dominant decision-making time frame as 'the term in office'.

Given the fact that our infrastructure challenges (whether we call it the infrastructure gap, the infrastructure deficit, deferred maintenance or unfunded infrastructure liability), are all products of this **short-termism**, the first order of communication is to explain to Council and the public that the chickens have come home to roost on this way of thinking, governing and operating. No more 'white elephant' or 'vanity' projects, no more single-issue leaders, no more vending machine democracy.

And, even if we wish to ignore it or find ourselves in political cultures that through complacency, ignorance or arrogance are able to further 'buy time' or 'kick the can further down the line', the reality is that legislative requirements and accounting standards are changing.

Gone are the days when we could budget for existing or new infrastructure without considering the life cycle costs – namely operation, maintenance, renewal, disposal and replacement costs. Given the fact that the average cost of new infrastructure is only 20% of the total life cycle costs, it is incredibly reckless and burdensome to future generations to budget or make any decision without such accounting.

At the back of our minds, we all know that there is a price to pay for deferring maintenance. If this is not obvious to Council or members of the public when first outlined, there is often no one better than a representative of civic works to provide an on-the-ground, lived out experience, of what the consequences are of insufficiently funding infrastructure maintenance over time.

If that is not enough, we can always point to Italy's numerous catastrophic and deadly bridge and overpass collapses in the past decade, which came after maintenance budgets were slashed by as much as two thirds as the country reeled from the effects of the US subprime mortgage crisis. This is also a good time to remember we are not immune to future global economic crises. Asset management is about ensuring we can weather future storms – economic or environmental.

While there are variations between municipalities, the reality is that according to the most recent Canadian Infrastructure Report card, all classes of infrastructure will further deteriorate – including water, sewer, roads, bridges, recreation facilities – at the current rates of investment.

We should also be sensitive to the fact that the average citizen has been enormously short-changed by this short-termism in which we have all wittingly or unwittingly participated in. There is no question that the family and household unit is already economically and socially strained in a way it hasn't been for decades.

Yet, at this very time, to ensure our municipalities are set on a sustainable track, we are going to be asking citizens to support and participate in difficult decision-making processes – such as decisions to reduce, consolidate or eliminate services or raise taxes, sometimes significantly.

On the bright side, this is also an opportunity to communicate better, live wiser, champion long-term stewardship, do things more effectively, be clearer about our priorities, ramp up collective innovation and problem solving as well as engage citizens in a way they have never been asked to engage before.

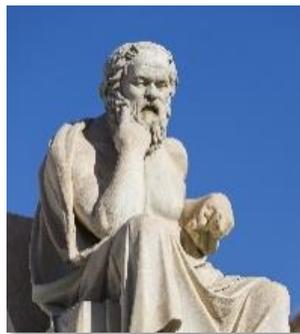
The solution

All of this requires civic education. Why? Because we live in a democracy.

When Hitler and Stalin forced historically astounding mass infrastructure renewal and expansion to support rapid industrialization, they did it as all totalitarian states operate – through mortal fear and manipulation.

We have the benefit and privilege of living in a democratic nation with democratic local governments. Our municipalities are governed, in times of ease and times of trial, with the consent of the people for the people.

This comes with the responsibility to ensure the public has an honest assessment and understanding of the challenges we face and a meaningful part in moving forward and thriving together towards our sustainable future.



Over 2500 years ago, Socrates warned that without this understanding, citizens in a democracy will choose the candy shop owner who 'offers them sweets' over the medical doctor who may prescribe 'bitter syrups', perform painful but necessary

procedures, and advance practices such as exercising and eating healthy that promote good health. Some truths are clearly eternal ...

Given the nature of our mission, as described at the beginning of this article, the role of asset management champions and practitioners is critical in the revival of this necessary civic education. This is not a duty AM BC takes lightly - I mean who else would commission a clarifying discussion on the infrastructure gap, infrastructure deficit and deferred maintenance? Who else would march so diligently for so many years on this mission?

There is no question that consistency in the use of terminology, training and ways in which we assess the journey, as well as our progress, would have most meaning and impact if terms and measures we use are universally applied and understood. Consistency is also important when making the case for funding from higher orders of government.

My contribution is to frame this discussion, define its role in civic education and take this opportunity to celebrate the progress already made in advancing asset

management in the public sphere. While asset management or sustainable service delivery are not yet household terms, the number of politicians who during the last municipal election had AM as part of their political platforms has increased dramatically.

We should be encouraged that the new president of the Federation of Canadian Municipalities, Councillor Bill Karsten of the Halifax Regional Municipality describes himself as "especially passionate about developing a sound asset management program to ensure infrastructure is left in excellent condition for the next generation."

Perhaps we are finally heeding the wisdom of this ancient Greek proverb: Society grows great when old men plant trees whose shade they know they shall never sit in. Today, we include women and yes, the youth who through their mass climate action strikes have demonstrated they know they are the ones who will inherit the earth.

Diane Kalen-Sukra, MA, CMC is a speaker, advisor, and author of Save Your City: How Toxic Culture Kills Community & What To Do About It (www.SaveYourCity.ca). She is a national 'civic academy' columnist with Municipal World. As a former CAO, Diane led her municipality to winning the coveted FCM Sustainable Communities Award for Asset Management.

Join Diane on social media @DianeKalenSukra.

A Case Study: Start where you're at for Natural Asset Management

Gracelyn Shannon, AM Coordinator, Town of Gibsons

Most asset management practitioners and municipal staff view natural asset management as an extra project to add to our already too long to-do list. But it doesn't have to be that difficult.

Small steps taken over time, as part of a pre-existing asset management program, can make a big difference.



Natural assets are the parts of nature that perform civic functions – the stream or pond that is part of our drainage and flood mitigation system, or the aquifer that is our water supply. Sustainable service delivery relies on

municipality's infrastructure systems as a whole, and therefore relies on the natural assets within that system. That's why it's so important to acknowledge natural assets for their infrastructure service value; it allows us to recognize and communicate the risks of insufficient stewardship, improve funding, and move closer to true sustainable service delivery.

At this point, the conversations happening within our industry acknowledge the integral role of natural assets in sustainable service delivery. Even still, there's real apprehension about "taking on" natural asset management as an additional task. That's because natural assets are typically seen as a separate asset class that we need to create a plan for, or that require a complicated valuation, rather than as an integrated component of the systems we already steward.

Today, the Town of Gibsons' formal recognition of our natural assets has enabled us to increase funding to natural asset monitoring and stewardship, while reducing costs for developers by recognizing natural asset solutions to capacity needs. But arriving here wasn't a journey that happened overnight.

For us, the initial steps were just conversations, first between staff and then with Council. Next, the Town added a note to its financial statements which recognized that the Town of Gibsons' Tangible Capital Assets (TCA) report did not include the value of nature, and therefore is a low estimate of the overall true value of the Town. After that, natural assets were strategically brought into documents or processes as they came up, with staff at all levels of the organization, and in whichever way made the most sense in the context of sustainable service delivery.

To model our example, I would encourage asset management practitioners and municipal staff to take a step back and, first, look at the big picture of sustainable service delivery in their own local context, next, recognize the role that natural assets play in that sustainable service delivery, and, finally look at what document update, process change, or software implementation is already underway. Is there an Integrated Stormwater Management Plan update coming? Are you formalizing your routine operations and maintenance? Or looking for a new training opportunity for your operators? There's your natural asset management point of entry.

Natural asset management is not something you have to take on all at once. Make it about sustainable service delivery and start where you are now, one small step at a time.

Creating a new pond in Whitetower Park for storm water management. The equivalent capacity Engineered infrastructure estimated at 4 times more expensive.



For more information on the Municipal Natural Asset Initiative visit mnai.ca. To learn more about how the Town of Gibsons is integrating Natural Assets into their municipal processes visit gibsons.ca/natural-assets or gibsons.ca/asset-management.

A Case Study: Coquitlam's Sustainable Funding Framework Modelling

*Jude Pillainayagam, P.Eng., MBA, MIAM, ISP.,
Asset Management Engineer, City of Coquitlam*

Sustainable service delivery through assets depends on the ability to sustainably fund asset maintenance, rehabilitation and replacement. Thus, sustainable funding becomes critical in asset management, especially for organizations to be considered going concerns, and this would require a systematic approach to modeling long-term funding needs. Organizations budgeting for a short term of one to five years could easily complete the task, partly because they can understand the short term organizational environmental impacts. However, when it comes to sustainable funding, the long-term look is essential. **The long-term look includes a strategic approach to long-term budgeting and its performance measurement.**

In doing so, organizations like municipalities need to scan the environment to understand the long-term dynamics of political, social, environmental, and technological

spheres. Among these, the major determinant is political, as it is generally governed by a short-term mandate.



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On the other hand, most of the municipal utility systems which form nearly three quarters of total asset stocks, last for 80 to 100 years and demand a long-term management strategy. Balancing this dilemma between long- and short-term interests must be handled carefully without compromising the legitimate mandate of the political sphere, and the overall interest of residents: sustainable service delivery.

Interestingly, both the political mandate and service needs originate from the residents.

What helps in resolving this dilemma is the Councils leadership in looking after the long-term interests of their residents, something they do very well when staff provide a credible and convincing long-term plan for their consideration. A well modelled long-term funding approach yields a consistent message over time which is reliable over the long-term and is therefore generally preferred by Councils. A municipality that models its long-term funding commitments will be in a better position to set utility rates both effectively and efficiently, and without high fluctuations in rates or undue rate shocks. This would be well-received by Councils and residents.

One of the major impediments of long-term funding is the different opinions on who should pay for future asset replacements. Some believe that future generations should pay, while others think that the current generation should as we benefit from the contributions of our past generations. Despite this difference in opinion, a combination of all parties contributing may be unavoidable, as funding needs in the future will be massive. With the already existing infrastructure funding gaps solely the future generations catching up may not be sustainable.

To consider various options, we need to know the levels of funding that would be demanded in the long-term future. The City of Coquitlam's Sustainable Funding

Framework helps us understand our future financial commitments so that the staff can make appropriate recommendations and the Council can make informed decisions as to how our services can be rendered sustainably long in to the future without adding a huge and unexpected burden on our tax payers.

The first step in setting up the Sustainable Funding Framework model is deciding on the assumptions. They may be,

1. The time span of a model is 20 years; utilities are analyzed for 40 years because of their longer service lives, otherwise they will distort the real 20-year commitments by back-loading the funding needs in the 20-40 years.
2. Certainty of funding amounts is a consideration. 5-year funding needs are reasonably well understood and driven by Council approved capital budget. 10-year funding needs are fairly certain, in terms of replacement needs. 20-year funding needs are based on fair assumptions. Beyond 20 years, funding needs are expectations based on asset replacement models.
3. Only existing assets are considered. New assets and growth among assets are not considered in the model since most new assets demand considerable investments beyond 20 years.
4. The replacements are considered 'like for like' though in reality they may change but may not make a material difference.
5. The model is built on today's dollars.
6. For utilities it is considered that 15% of the assets will be replaced through development work and 5% may never be replaced in its place due to possible network reconfiguration and new technology solutions.

The way to model the long-term funding need is to model the replacements. The typical Figure 1 below suggests the Annual Average Target Investment (AATI), the funding need computed by averaging the replacement costs of assets, is higher than the existing level of investment, creating a gap.

The needed investment determined from the replacement profile of assets puts onus in modelling the replacement as best as possible. Coquitlam, through its recently developed Asset Replacement Modelling Software (ARMS), is able to model replacements better considering six asset criteria: condition, risk, levels of

service, value for money, operating cost, and internal priorities.

practices increase longevity of assets, unless modelled effectively with complete understanding of the asset investment interventions, projected funding needs may distort the actual need. Therefore, constant review of funding performance is needed to reveal the funding effectiveness. A few asset financial ratios that help review funding performance, are discussed below.

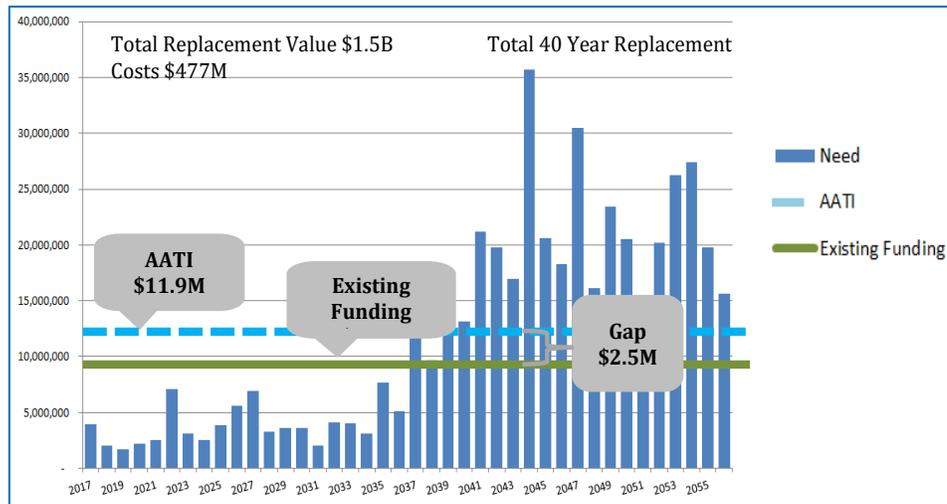


Figure 1: Annual Average Target Investment and Gap

Once clear understanding is formed from the needed target investment, it will be easy to determine the best choice of action from the available options which will highly vary between communities. While communities decide on the best course of action and level of funding, the actual impact of the funding will only be seen when measuring the performance of funding, because the organizational environmental factors are highly complex and may alter the real performance from the projected. In addition, performance review ensures model performance is transparent and, at an overall scale level, the funding is adequate to manage existing assets. Furthermore, it assists to benchmark the level of asset investments, if communities consider it critical.

Figure 2 shows how investments on assets have increased over the years in Coquitlam for utility and general revenue funds.

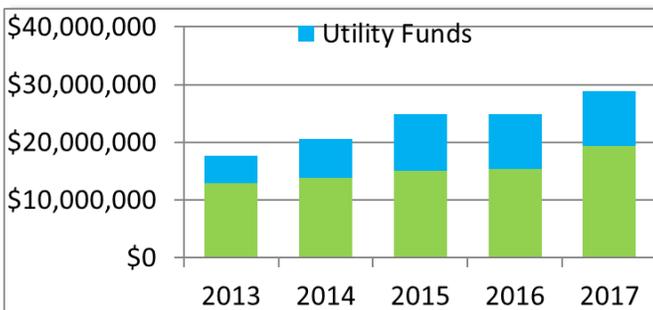


Figure 2: Coquitlam's increasing funding for asset re-investment

An annual average investment of \$29 Million (2017) for an asset base of nearly \$2.5 to \$3 Billion is well balanced. As assets age but effective maintenance and rehabilitation

Asset financial ratios, help assess the investment performance at both the asset level and the organization level. The following are examples of a few ratios.

Affordable Service Index₄₀ (ASI₄₀) =

$$\frac{\text{Annual Average Current Investment (AACI)}}{\text{Annual Average Target Investment (AATI)}}$$

For example, from Figure 1:

$$\begin{aligned} \text{Utilities fund ASI}_{40,U} &= (9.4 \text{ M} / 11.9 \text{ M}) = 0.79 \\ \text{General fund ASI}_{20,G} &= (19.4 \text{ M} / 22.2 \text{ M}) = 0.87 \\ \text{Overall ASI}_{40} &= 0.84 \end{aligned}$$

The above ratio being less than 1 suggests the current investment is less than the needed investment, and thus the service levels may suffer, not necessarily by 16%, unless met by other efficiencies, including innovation, system / process improvements, technology leveraging, procurement efficiencies, etc.

While the above ratio reviews at the overall level the funding adequacy, the one below reviews at a specific asset level. For example, see Table 1 below for a group of water mains of different materials.

Table 1: Asset Group Weighted Life

Pipe (Material)	Pipe Length (m)	Expected Life* (Yrs.)	Average Remaining life* (Yrs.)	Remaining life %	Weighted remaining life total
AC	10,000	55	38	0.69	6,909
CI	30,000	80	48	0.60	18,000
DI	20,000	85	49	0.58	11,529
Total	60,000				36,439

* Condition based

Weighted Average Remaining Life (WARL) =

$$\frac{\text{Weighted remaining life total}}{\text{Total pipe length}}$$

$$\text{WARL} = (36,439 / 60,000) = 0.61$$

Therefore, Asset Consumption Ratio (ACR) = $1 - 0.61 = 0.39$

If the value of:

Asset Employed (AE) =

Net Book Value as of Y/E + Addition for the year – Disposal for the year = (say \$60 Million)

Actual Funding Need (AFN) =

$$\text{AE} \times \text{ACR} = \$60 \text{ M} \times 0.39 = \$23.4 \text{ M}$$

When individual asset category funding needs are determined, with the knowledge of the current investment level, the gap can be determined and aggregated to compute the overall funding gap and used in the review of current funding performance.

Overall Funding Gap =

$$\sum \text{AFN all assets} - \text{Total committed funding}$$

Another useful ratio for the review is the asset utilization is calculated based on financial book numbers,

Asset Utilization Ratio (AUR) =

Accumulated Depreciation

Assets Employed

For example, if:

$$\text{AUR} = (1,350,000,000 / 3,000,000,000) = 0.45$$

ACR and AUR differ as one is based on actual condition and the other is based on an accounting book value. Reconciling the two is only possible if accounting depreciation employs real depreciation curves. Otherwise the Asset valuation gap, as given below, will depict the difference between theoretical depreciation-based asset utilization and actual condition-based utilization.

Asset Valuation Gap (AVG) =

$$\text{Asset Utilization Ratio (AUR)} - \text{Asset Consumption Ratio (ACR)} = 0.45 - 0.39 = +0.06$$

A positive AVR means under valuation of assets in accounting.

A further two overall level ratios will help assess the gap and thus the funding performance, they are:

Funding Target Gap (FTG) =

$$\text{Actual Funding Needed (AFN)} - \text{Average Annual Target Investment (AATI)}$$

Actual Funding Gap (AFG) =

$$\text{Actual Funding Needed (AFN)} - \text{Average Annual Actual Funding (AACI)}$$

Sustainable funding is not only a good fiscal principle but also a needed asset management practice. Performance review of funding – the often-forgotten component – helps

practice meaningful, balanced, and effective funding strategy.

Once objectives, methodology, and assumptions are set, developing the Sustainable Funding Framework model is not a challenging exercise. However, commitment is necessary to update the model periodically. The model is an effective communication tool to keep Council informed.

The Sustainable Funding Framework model is not a set of numbers, but;

- a commitment by Council and staff regarding sustainable service delivery
- backed by policies, processes, and practices
- motivates the organization to follow the promised path in asset management
- a proof of how sustainably our assets could be managed.

A Council and staff armed with an appropriately built Sustainable Funding Framework model will make informed decisions that are effective in-service delivery and efficient in use of financial resources.

FCM Advancing Asset Management Practices in Canada

*Bogdan Makuc, Project Director,
MAMP, FCM Programs*

Over the past few months, the Federation of Canadian Municipalities' Municipal Asset Management Program (MAMP) has experienced some major milestones.

MAMP will receive an additional **\$60 million** investment over the next five years from the Government of Canada, as announced in the Federal Budget 2019. This funding will ensure that MAMP can continue to help local governments to improve their asset management knowledge and practices until **2024**.



In the coming months, FCM will review the MAMP program results and consult with our stakeholders. FCM looks forward to enhancing its existing program funding, training and resources based on the evolving needs of local governments, successes it has achieved and feedback it receives.

MAMP received more good news in May 2019, when the program was awarded the **2019 Tereo Ambassador Award** by the Canadian Network of Asset Managers (CNAM). The award recognizes FCM's commitment to enable the adoption and improvement of asset management practices across Canada. Visit the CNAM website to read the full statement about MAMP and to learn more about other award winners.

Upcoming: FCM will be issuing an RFP to partner organizations to provide local training opportunities. Local government staff and elected officials in BC can learn more about our existing partner organizations and sign up for online asset management training today.

Interested in how start the asset management journey today? Visit FCM's resource library to find tools and guides designed to offer practical asset management advice for communities of all sizes. Sign up for the FCM **Connect e-newsletter** to stay informed about ongoing asset management training, new resources and funding, and the latest program news.

Opportunities to Share Information – AM Communities of Practice

Sharing resources and knowledge is what our Communities of Practice, such as [Asset Management BC](#), is about. **Atlantic Infrastructure Management Network (AIM)** has just published their 3rd edition of the asset management newsletter, with many interesting cases studies and articles. We encourage you to access these at www.aimnetwork.ca/aimnewsletters

AIM and **Asset Management BC** are part of the network of Communities of Practice across Canada serving our communities, local governments and First Nations. Information and resources are shared by regular conference calls, informal information exchange and periodic group meetings. All Communities of Practice can be accessed from the **AM Canada** website (www.assetmanagementcanada.ca) by clicking on your geographic region.

Reflections on Intergenerational Learning, or Not?

*Wally Wells, Asset Management BC
Kim Stephens, Partnership for Water Sustainability
Cory Sivell, YourCity*

CONTEXT: This article elaborates on challenges that the co-authors identified in their previous Op-Ed, published in the September 2017 Newsletter. Thoughts are by the 'old guys', Wally Wells, Asset Management BC and Kim Stephens, Partnership for Water Sustainability, and the 'young guy', Cory Sivell, YourCity.

Asset management for sustainable service delivery and water sustainability, they wrote, are both top priorities for local governments. But the primary challenge is 'integration' and getting every discipline within an organization to recognize the contributions of the others plus get the organization working together on a common path. The major challenge today is communicating and understanding the message. The work environment is changing with time as are the methods of communicating and the form of the messages.

BC is progressing. Yet, persistent challenges for practitioners to adopt, change or evolve standards of practice means there is still a substantive disconnect between UNDERSTANDING (knowing what to do) and IMPLEMENTATION (doing it).

So, if 'asset management for sustainable service delivery' is so simple and logical, why are we not getting it?

Words like 'collaboration' and 'integration' are being tossed around loosely and we all buy into them ... or do we?

Now that British Columbia is in Year 5 of our 'new reality' of a 'climate emergency', collaboration and integration of efforts have never been more fundamental to the long-term wellbeing of British Columbians. Given the urgency to start adapting to a changing climate now, not years from now, intergenerational 'sharing and learning' around a whole-system approach to asset management is a lynchpin for concerted action.

No longer do we have the luxury of time to do nothing. Rather, time is of the essence. Yet turning around the practices that caused the climate emergency is not a sprint. It will take time and sustained commitment by



everyone. Will asset management professionals rise to the occasion so that sustainable service delivery actually leads to integrated solutions? **DO, LEARN, ADAPT AND DO BETTER** – this must be every professional’s mantra. The challenge for successive generations of practitioners is to hand off the baton to the next, without dropping it.

Two very mature, meaning ‘old guys’, got discussing this moment of truth at length. We were fortunate to have a young guy join the conversation with a whole bunch of fresh new ideas and thoughts. Yes, all three of us are engineers but we come from quite different generations. We quickly realized that, while we need to understand the same things, the way we traditionally communicate is quite different. Therefore, the interpretation or understanding of the result can be quite different without really even realizing it.

See us old guys looked for a career, not a job. We tended to stay with the same employer, not move around five or six times during our career. We, us old guys, were not raised with social media and instant communications and ‘tweets’. But our young guy grew up with social media, cell phones, e-mail, instant communications, mobility and a different understanding of both the content and the form of the message, not to say anything of the instantaneous potential for the timing of the message.



Wally Wells

Kim Stephens

Cory Sivell

Recently there was a news item about bad science and what should we really believe. Testing of older, accepted but poorly researched theories has challenged the validity of the science behind theories which are supposed to be absolute. Yet today, we can ‘tweet’ a message in an instant and we all supposed to believe every word. How can we balance instant information with information accuracy, especially if it is action-oriented?

This led us into musing about what it means to be a professional engineer. Historically we have been trained to be applied scientists. This meant that the essence of being a good engineer is whether we have the ability to observe and deduce, and can then apply what we have deduced. This is the foundation for creative thinking and informed problem-solving. This requires that we ask the

‘right questions’ and we solve the ‘right problems’. But these are acquired skills. Today, how does any young professional truly learn his or her trade when so much of daily life revolves around the use of ‘apps’ for instant answers or solutions? And how does he or she know if they have solved the wrong problem or arrived at a wrong answer? We, the old guys, remember the dawn of the computer age. We quickly learned the meaning of GIGO – ‘garbage in, garbage out’ and a ‘mouse’ does not necessarily have four legs and a tail!

The conversation with the young guy took an interesting twist when we old guys recounted what the world was like at the beginning of our careers. We were called junior engineers and we were mentored by senior engineers. In that era, we explained, the accepted wisdom was that it took 5 to 10 years of on-the-ground experience to develop professional judgment and mature into a fully rounded ‘project engineer’. As the young guys, we were the sidekicks. This supporting role gave us ample and varied exposure to real-life situations that allowed us to observe and learn on the job, take on increasing responsibility, and bring forward new ideas. And we had confidence that our mentors would be there to back us up or bail us out, as needed. Organizations invested time and effort in us, the young guys, because we were there for the long-term. The outcome of the process was that we grew as professionals.

After we old guys painted this picture, which is centred on the notion of ‘serving your time’, the reaction of the young guy was immediate. “That is not appealing, it is not exciting,” he stated. Is the nature of your response a reflection of the *instant gratification* ethic that characterizes society today, we queried? Yes, he acknowledges, partly, but also being listened to and appreciated. New ideas and changing times need to be reflected. After all, us ‘old guys’ were not raised with cell phones, instant messaging and ‘fake’ news. All good points!

The conversation continued. The young guy told us that his peer group changes jobs frequently because, he explained, old men are running organizations and their prevailing mentality is old school. Yet, he emphasized, his generation does aspire to a work environment that inspires, enables and stimulates.

What insights does this anecdote provide? What questions does it raise?

- What caused the apparent change in focus from career to job? Have employees responded to a

change in attitude on the part of employers, or was it vice versa?

- If a priority for young professionals is recognition and inclusion, does this indicate either an impatience vis-à-vis long-term and intergenerational learning (mentoring) in the work environment?
- If a prevailing view of the world is based on short-term thinking and a need for instant gratification, then how would it be possible to build long-term trust that is at the heart of true collaboration?
- And in the different view of a long-term commitment to a shared vision, how do we create a work environment that inspires, enables, stimulates and is inclusive?

To provide a starting point for addressing these and other related questions, we can look to and learn from our ancestors. It is all about perspective and time. The grand creations of antiquity were not designed and built with instant gratification, a quarterly report or a 4-year election term in mind. The builders of great cathedrals in medieval times thought in terms of multiple generations carrying out their work, to complete a dream that would not be realised until long after the originator's death. This is known as 'cathedral thinking'. In an Op-Ed published several years ago by the Manchester Guardian newspaper, the late Stephen Hawking observed that;

"a shift in behaviour inspires some ground-breaking new ideas. Termed 'cathedral ideas', these are the modern equivalent of the grand church buildings. These ideas are started by one generation with the hope a future generation will take up these challenges. Cathedral thinking means collaborate, with a shared vision and cooperative endeavour."

The foundation for cathedral thinking is a far-reaching vision, a well-thought out blueprint, and a shared commitment to long-term implementation.

The reality today is a very different work environment than what we 'old guys' grew up in. That leads to a required dialogue of what communicating really means and how the message is received and interpreted by different generations. Maybe, just maybe, we take too much for granted based on what we individually know in trying to communicate asset management. So, if asset management is so simple, why are people not getting it. We need to think very hard about the way we carry the

message with, we would suggest, more thought to the perception of the listener.

We can and must learn from history that is still part of our living memory. Fifty years ago this June, the Cuyahoga River in Cleveland caught fire. This was the spark that galvanized the North American continent to take action to tackle unfettered pollution. The 'decade of the environment' followed. Two months before the river fire, publication of **Design with Nature** by the legendary Ian McHarg revolutionized how designers and planners think about ecology. His legacy matters now more than ever.

On the 50th anniversary of these two defining moments, and in the spirit of intergenerational learning AND ACTION, we close with this quotable quote from a reflective piece written by staff with the Ian McHarg Center at the University of Pennsylvania:

"As much as our work around this anniversary has been about what it means to design with nature now, we've already turned our focus to what it might mean to design with nature next, in the near and distant future," the authors wrote in their concluding remarks.

"This required us to look back, again, at the moment and the movement that gave rise to McHarg—one that was led almost entirely by young activists. And we cannot help but see the parallels between his era and ours, and we cannot help but believe that this rising generation of designers and planners, increasingly and rightfully radicalized, will do what our presiding and retiring generations could not: to design a better, more just, and more sustainable planet."

In 2019, the current climate emergency is the context for a call to action. Asset management for sustainable service delivery is a foundation piece for a more resilient British Columbia. So, what will you the reader do differently after reading and reflecting upon this 'think piece'?

We close with a question to ponder. The core message is that different generations have different perspectives because of the way they grew up which formed beliefs and thinking patterns. This message really brings to light that different audiences will resonate with different messages in different ways. Good messaging is what provides an opportunity to change a perspective which in turn aspires action. So maybe the question is:

Are you considering your different audiences and 'generational ways of thinking in your messaging process and content?' If not, why not?

Recreation Facility Asset Management (RFAM) - Free for Communities in BC?

Dwayne Kalynchuk, Executive Director, Recreational Facilities Association of BC (RFABC)



The Recreation Facilities Association of British Columbia (RFABC) is pleased to announce that it has secured the rights to the RFAM solution.

RFABC joins, The Alberta Association of Recreation Facility Personnel (AARFP) and the Recreation Facility Association of Nova Scotia (RFANS) as licensed provincial partners who have adopted **Recreational Facilities Asset Management software (RFAM)** and are following the Ontario Recreation Facilities Association (ORFA) lead to **provide the solution at no cost as a benefit of membership.**

RFAM facilitates the collection and organization of recreation inventory data for municipalities. A benefit of the RFAM solution is that it strengthens the lines of communication within a recreation department by having one central location where all staff members can update and contribute to the upkeep and maintenance of capital assets.

The inventory module, a free benefit of membership in RFABC, helps staff maintain an up to date roster of various recreation assets including arenas, pools, community centres, parks, trails, playgrounds, etc. This approach is the first step in the development of aggregate data which will assist in establishing a provincial standard.

RFAM includes at no obligation for a monthly fee additional module such as: Inspections, Work orders, Warehouse, Smart4Cast, and Efficiency.

Many municipalities and organizations agree that RFAM is the most effective way to store information for their asset inventory, complete routine inspections and close work orders which results in safer buildings within the community. Individuals involved in parks and recreation agree that RFAM is an enhanced digital solution tailored specifically for the recreation industry in contrast to paper, spreadsheets, or other products.

Dwayne Kalynchuk, RFABC Executive Director says, “We recently came onboard with ORFA and Marmak to make the **Recreation Facility Asset Management software** program available to all of our 700 plus members. Our members now have a tool to assist them in their facility asset management roles. The initial interest in the program has been great and as more of our members become aware of the potential of this product, we anticipate many more facilities and municipalities will be utilizing it. The beauty of the software is that it was developed with input from recreation facility operators who know what their needs are to operate and maintain multiple assets. It is a tool every facility operator needs in their toolbox.”

The simple and easy to use functionality has made RFAM, the software of choice for over 50 municipalities across Canada and we are garnering interested from additional recreation associations, municipalities, consulting companies and private firms.

Asset Management is Effective Strategy to Measure and Manage Nature’s Services

*Roy Brooke, Executive Director
Municipal Natural Assets Initiative (www.mnai.ca)*



Nature delivers core municipal services on the same level as engineered infrastructure assets.

Natural assets can be a key component in asset management, which is the basis for reliable and cost-effective delivery of municipal services to communities. The Municipal Natural Assets Initiative (MNAI) helps governments and communities act on this potential. The initiative has proven its success through many pilot projects. While its research continues to enable more communities to take on natural asset management projects, MNAI is moving toward tailored advisory services.

For many local governments, “asset” refers specifically to engineered infrastructure that provides municipal services such as water filtration and drainage. However, as another spring of devastating floods shows, there are costs and risks to relying on engineered infrastructure alone. New strategies are needed.

Leading local governments have discovered that nature delivers core municipal services on the same level as engineered infrastructure assets. For example, healthy forests and wetlands can manage stormwater and reduce flooding. Natural asset management allows local governments to evaluate and consider them using the same tools as for engineered assets, ensuring long-term health and resilience of these forests and wetlands.

In collaboration with organizations such as Asset Management BC, MNAI supports and guides local governments in identifying, valuing and accounting for natural assets in their financial planning and asset management programs.

The Town of Gibsons, B.C., was a pioneer in natural asset management. It recognized aquifers, streams and forests as infrastructure assets and put them in budgets and management plans alongside standard engineered assets — an approach no other local government had considered. MNAI emerged in 2015 to scale up this approach nationally and has been advancing the methodology, gaining valuable experience ever since.

MNAI’s work shows the following:

- Natural assets can provide the same level of service as engineered infrastructure;
- The value of natural assets increases under scenarios of climate change and intensified development;
- Natural asset solutions can be readily and effectively integrated into asset management;
- Natural assets often have near-zero capital costs, lower operating costs and the ability to appreciate in value over time; and,
- By recognizing natural assets and the services they provide, municipalities can reduce risk.

Community and municipal leaders are implementing MNAI’s projects in British Columbia, Ontario and New Brunswick. Watershed projects are ongoing in several communities, including the K’omoks First Nation in the Comox Valley and in Ontario’s Greenbelt. Other local government projects are under development.

MNAI is expanding the range of tools that it can offer to local governments. These tools will complement Asset Management BC’s upcoming primer for local governments. The primer explains why local governments should consider natural assets, and MNAI’s tools and methods explain how to do the work. Together, these materials will help municipalities capitalize on the real and immediate benefits of managing their natural assets. These and other resources, including a recent paper on funding sources for natural assets, are available on the MNAI website at MNAI.com. Visit the website to sign up for updates and contact MNAI to discuss support for your community’s natural asset management journey.

The 7-Year Review of Planners in Asset Management

*Kim Fowler, RPP, MCIP
Principal, Sustainability Makes Cents Consulting*

In the Fall 2012 issue of the Asset Management BC newsletter, we discussed why planners need asset management, so what’s happened in the past 7 years?

Supposedly, the house is on fire. What?!

Climate change is accelerating at a much faster pace than predicted even 7 years ago. Bigger floods, more frequent windstorms and larger forest fires are really damaging infrastructure at least 3 times more than before. Oh dear!

Planners have developed climate adaptation and mitigation plans, mapped new flooding and sea level rise areas, and incorporated resilience planning into land use plans. Good!

Planners have worked alongside their engineering and finance colleagues to integrate climate change into asset management. The Federation of Canadian Municipalities has a short video on the value of investing in asset management, including climate adaptation and mitigation. Engineers Canada created a protocol to assess the vulnerabilities of infrastructure to extreme weather events and future changes in climate. AM BC developed a framework for sustainable service delivery, nicknamed ‘The Wheel’ after the flow diagram showing how to assess, plan and implement asset management. These actions enable better planning and design of safe and climate-resilient infrastructure. Great!

But it’s not fast enough. Oh drat!

The policies, plans, and regulations must be implemented now to assist communities. That’s a big ask.

Well, we really only have two choices in our communities now, and the status quo isn't one of them. We must become resilient and nimble or reactive and in crisis. Not much choice.

The integration of land use, asset management, and financial planning can really help local governments integrate climate change risk from the operational to strategic levels. And planners need to demand a seat at the asset management table. It's all hands-on deck. Sounds like an action plan.

The "Other Infrastructure Gap"

Wally Wells, Asset Management BC

We promised in the last edition to identify and start a discussion on the other infrastructure gap. The quickest and easiest way to get results and start fixing the problem is **stop cutting the maintenance budget**. We have asked many municipalities and local government a question to public works operations and maintenance staff: 'How much of your time is spent fixing things that are broken or about to break?' The answer was frightening, it was 85 - 95% of their time.

The municipal budgeting process normally produces two budgets, one for normal operations and maintenance and the other for capital projects and expenditures. They are usually presented to Council as one budget for approval. The Province requires local governments to submit a 5-year budget. For many, this is more of a compliance exercise than just 'good business'. The operations budget does not differentiate between operations costs and maintenance costs. Unless a community tracks their maintenance costs outside of the budget and accounting process maintenance costs are not known separate from the O&M total. Many, if not most communities, do not track these costs separately. How do you know when the maintenance costs justify equipment replacement as opposed to continued maintenance if you do not know your maintenance costs?

Have you developed a system that is appropriate for small municipalities? We would like to hear from you if you are willing to share your work. We will follow this up with more information in our fall issue.

Contact Asset Management BC if you have ideas, templates, or advice to share – Executive Director at

info@assetmanagementbc.ca

CNAM Holds Successful Conference in Kelowna

*Joel Shaw, Kelowna,
2019 Conference Chair*



The 13th annual conference was a huge success – again! More than 350 delegates from across the country joined us for four exciting days in beautiful Kelowna, BC. Highlights of the conference and tradeshow this year included the "What's Broken in Asset Management?" panel discussion which started

with some frank discussion and opinions and ended with Christina Benty's sing-along, asset-management version of "Down on the Corner". Delegates also enjoyed inspiring keynote presentations by Chris Morrill, GFOA and Diane Kalen-Sukra, Kalen Consulting. There were more than 80 presentations over the course of the conference which meant there was plenty to choose from. In our post-conference survey, 92% of the delegates rated the conference as met or exceeded expectation and agreed or agreed strongly that CNAM delivers great professional development value for the cost!

Congratulations to all of the well deserving 2019 Tereo Award recipients which included the;

- **Pioneer Award** presented to **Wally Wells** of Asset Management BC;
- **Ambassador Award** presented to the **Federation of Canadian Municipalities (FCM)** for their Municipal Asset Management Program; and
- **Tereo Awards** were also presented to three well deserving municipalities. In First Place was **The City of Selkirk**, in Second Place was **The City of Vaughan** and in Third Place, **The City of Waterloo**.

There are so many great pictures of the people, panels, and prize winners. Check out photos from this year as well as 2017 & 2018 on the CNAM Conference Photo website www.cnam.ca

Next year - St. John's, Newfoundland!

Start planning for 2020 ... because Asset Management Rocks!



Asset Management
**ROCK
SOLID!**

CNAM Conference 2020
St. John's, Newfoundland
May 11-14



With the practice of infrastructure asset management thriving across Canada, we'll be building on the rock-solid footing of our profession at the 14th annual Canadian Network of Asset Managers conference and tradeshow in St. John's, Newfoundland on **May 11-14, 2020**. We invite you to join your friends and colleagues in one of the oldest cities in North America to experience the natural wonders and long history of St. John's – a city where the people are as colourful and quirky as the houses that line the port city streets.

St. John's is also where we will continue our national conversations on best practices to address the financial, environmental, and societal challenges of managing community growth and development while also maintaining and operating existing municipal assets and infrastructure.

With a strong base of practitioners across the country who are literally "rocking it", the annual CNAM conference and tradeshow will continue to explore and celebrate asset management excellence through leading edge professional development, idea sharing, workshops, and many fun networking opportunities with your peers and new players in government, academia and industry.

See you in St. John's !

AM BC to Host their 4th Annual Conference

Conference dates: November 6 & 7, 2019

Conference Location: Radisson Vancouver Airport Hotel

Our 4th annual Asset Management Conference is on the way. Conference planning is well along. Our keynote speakers are selected, the program is almost complete, and you will have several opportunities to participate - not just listen. Socially we again will have our 'networking' reception for your opportunity to meet new people and acquaint with those you know.

The conference theme this year is:

"Innovate, Communicate and Celebrate – A Culture of Continuous Improvement"

Our Keynote speakers are:

Allen Mapstone:

NAMS Canada. Allen is from Australia and for the last several years has spent half his time in Canada.

Allen is a prior municipal engineer and is the Director of Strategic Asset Management for IPWEA and NAMS Canada. Allen is the principal trainer for both the NAMS.PLUS three-day training workshop and the Professional Certificate Asset Management on-line course. He has significant experience in addressing level of service, a concept that sounds so easy. We know it is not. Allen will focus on level of service but also put asset management in the context of its contribution to sustainable service delivery.

Tom Barnes:

Tom is president of the Municipal Insurance Association of BC (MIABC), a partner organization of Asset Management BC. As both service and insurance (liability) involve Risk, there are common goals in achieving sustainable service delivery through the asset management process.

Tom will interpret the MIABC's claims data from the last 10 years. He will explore how this data emphasizes key Asset Management principles and will describe a selection of the MIABC's "war stories" that demonstrate the importance of these principles. Attendees can expect to come away from this session with a practical understanding of the additional reasons that Asset Management is crucial for developing vibrant, healthy communities.

Conference registration is open at www.civicinfo.bc.ca under events.

Hotel reservations can be made now at the Radisson Airport Hotel. Use the code Asset Management BC conference for a special rate of \$169 per night.

**CHECK OUT THE
CONFERENCE EDITION NEWSLETTER AT
www.assetmanagementbc.ca**



Tips and Tactics: Measuring the Performance of Asset Management and Communicating Success

*Bernadette O'Connor AM BC Newsletter Editor,
Principal Consultant, Asset Management, WSP*



It's generally understood that continuous improvement for asset management is important. And some organizations have taken real steps to implement this, while others have just written about it, and still more have good intentions to do something about it.

Heraclitus, a Greek philosopher from Ephesus, who lived around 500 BC is quoted as saying "change is the only constant in life." Today, 2500 years later this is still true.

Good Asset Management is evolutionary, it must adapt to changing circumstances and it should improve with greater knowledge.

Those who leave development or setting up of continuous improvement processes to a later date – perhaps treat it as a 'nice to have add on' – are not understanding the range of benefits that come from tracking progress and reporting successes right from the beginning. The obvious benefit is to know what has and hasn't been done, what money was spent, and whether progress is on track.

Some of the lesser known benefits however include:

- Understanding how much progress has been made from the beginning;
- Maintaining interest and motivation for improvement;
- Appreciating the value (benefit) of what has been done;
- Recognizing when something is not delivering the outcome you wanted or thought it would
- Knowing what to change and what to keep doing;
- Building confidence that the right path is being followed; and
- Securing funding to continue to evolve (adapt and improve) asset management practices.

I am also reminded of Peter Drucker's famous quote "what gets measured, gets managed", a principle very applicable to asset management.

Simple Steps

Now we get to the practical how-to advice. Think about what you are trying to measure and why.



1. Are your **AM objectives** stated in a way that is measurable and timebound? If not, then develop SMART targets for them (specific, measurable, attainable, relevant, and timebound). Simply put, if your goals or objectives are not measurable you cannot reliably report if you have achieved them.
2. Regularly repeat an assessment of **AM maturity or competency** and report progress. Recommend you do this annually in the early phases of your AM journey because it helps to communicate what is still to be done as well as the success achieved in the previous year. The maturity or competency framework you use should be the same each year (or similar) to provide a reliable comparison with results from previous years.
3. When designing measures for **AM data**, consider both completeness and accuracy. A practical way to track accuracy is to add confidence ratings in your dataset for the most important asset data. Typically, such confidence ratings would record for each asset record, how reliable the data is for age, size, and material type. A report on the confidence ratings is a measure of data accuracy and is comparable over time to report progress.
4. Annually review progress on **AM improvement tasks**. Compare results to report on percent complete for scheduled tasks.

The purpose of these four measures is to know if the tasks you have done are generating the outcomes you want. They also **provide the guidance to review, change, and reprioritize the improvement tasks to get the outcomes you want for the least cost, effort, and risk.**

Upcoming Events



Public Works Association of BC

September 15 – 18, 2019
Annual Conference and Trade Show
Penticton Conference Centre
Penticton, BC
www.pwabc.ca

Union of British Columbia Municipalities (UBCM)

September 23 - 27, 2019
Annual Conference and Trade Show
Vancouver Convention Centre
Vancouver, BC
www.ubcm.ca

Infrastructure Asset Management Alberta

October 9, 2019
One day Workshop
Airdrie, AB
www.assetmanagementab.ca

Asset Management BC

November 6 - 7, 2019
Annual Asset Management Conference
Radisson Vancouver Airport Hotel
Vancouver (Richmond), BC
www.assetmanagementbc.ca

BC Water and Waste Association

April 26 – 28, 2020
48th Annual Conference and Trade Show
Penticton Trade & Convention Centre
Penticton, BC
www.bcwwa.org

Canadian Network of Asset Managers

May 11 – 14, 2020
14th Annual Networking Conference and Workshops
ST. John's, NL
www.cnam.ca

Government Finance Officer Association of BC

June 3 - 5, 2020
Annual Conference and Trade Show
Coast Kamloops Hotel and Conference Centre
Kamloops, BC
www.gfoabc.ca

Federation of Canadian Municipalities

June 4 - 7, 2020
Annual Conference and Trade Show
Toronto, ON.
www.fcm.ca

Local Government Management Association

June 9 – 11, 2020
Delta Grand Okanagan Resort and Conference Centre
Kelowna, BC
www.lgma.ca

Federation of Canadian Municipalities

October 20 -22, 2020
Sustainable Communities Conference
St. John's, NL
www.fcm.ca

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