POOLING FOR INNOVATION

Councils and governments can find local suppliers that provide world class solutions for the essential job of creating safe and hygienic conditions at aquatic leisure centres and other water infrastructure in their own back yard. **Paul Hemsley** reports.

When it comes to community assets that underpin health, leisure, sport and entertainment, there's no looking past Australia's love of public pools.

In a land where summer temperatures can soar into the forties, access to a clean, cool and well maintained body of water can be the difference between a town or suburb being a pleasant place to live and enjoy that attracts visitors or one best avoided.

Culturally, Australians revel in the water. Even though beaches remain a national icon, it's backyard and public pools that actually provide the defining immersive experience when it comes to the everyday lifestyle of the millions in the majority.

Public pools have long provided a very tangible social value in the same way that parks and playgrounds create somewhere for young and old to enjoy.

They have deep significance for communities not only because they create a venue for people to exercise and play, but also fulfil the role of delivering swimming lessons that save lives and embed an active lifestyle in the national culture.

But the value and meaning of pools extends beyond the magical blue allure that draws swimmers to local aquatic centres – the health of public pools often reflects the social and economic health of a community and its local government area.

Yet behind the facilities that many communities take for granted, every day pool managers pour an abundance of work into cleaning and maintaining these enclosed areas of public delight to get the recipe right.

As public pools generally fall under the supervision of local governments, it's the ongoing job of council managers to create a safe swimming environment, a responsibility more complex than many appreciate that expands beyond the fence enclosures that are now legally required across the country.

One of the biggest tasks in pool maintenance is the constant cleaning and filtration of large volumes of water that must cater for a constant stream of swimmers that normally enter that body of water in a day.

An essential measure is the control and eradication of bacteria that can otherwise use water as breeding ground – as commonly experienced in natural water bodies like rivers and lakes.

If you put the "ick" factor to one side, the simple fact is that in pools a lot of unwanted microorganisms are likely to originate from the bodies of the very human beings that need to be kept safe.

And unlike the sea, man-made pools don't have the benefit of natural self-cleansing mechanisms like the salty water of the ocean.

To combat this problem, man-made measures have to be applied to make pools equally clean as the sea.

While some private pool owners might seek to replicate salt water conditions in their own domestic oasis, it's a much bigger ask for public facilities.

The more popular choice for local government managers and most residential pool owners is the use of a chemical agent that's been the go-to disinfectant for the public waters for decades: chlorine.

Historically, chlorine has been an effective tool to keep pools in a sanitary condition – and public pool managers have successfully employed its usage as part of their maintenance programs.

But like any chemical that can kill living microscopic organisms, it's not always friendly to the frailties of human flesh – particularly the skin, hair, nose and most painfully, the eyes.

POOLING LOCAL RESOURCES

Despite chlorine's proven results at getting the job done, its occasional irritating effects on the human body can be enough to put some people off swimming in a public pool altogether. For elderly people with more delicate skin, an alternative to chlorine or its reduction in water can make a huge difference in being able to access restorative hydrotherapy.

The demand for alternatives is now such that several councils across Australia have been hard at work identifying innovative ways to make public pools more attractive to those with an aversion to chlorine.

One key development is the far more effective management of water filtration,

Australian Innovative Systems director Elena Gosse.

a complex process that normally requires specialist expertise from external providers.

Fortunately for councils across Australia, there are now world class local providers based in Australia just as willing to help clean up their own backyard as they are to successfully sell the technology overseas.

One thriving company that has been providing ground breaking knowledge and expertise is Queensland-based Australian Innovative Systems (AIS), an Australian-owned organisation that provides design, production and supply of water hygiene technologies.

The firm's products include specialist technology for almost any water disinfection application through electrolysis – the decomposition of water into oxygen and hydrogen gas from an electric current being passed through the water.

Local governments that have harnessed its technologies include Brisbane City Council, Moreton Regional Council, Maranoa Regional Council, Mitchell Shire Council, Coffs Harbour Council, Nambucca Shire Council and Rockhampton Regional Council.

Most of these councils have used the services of AIS to implement measures to protect humans and habitats against waterborne pathogens and the transmission of infectious disease in their local aquatic centres.

The application of filtration technology extends well beyond pools: AIS' director Elena Gosse argues the technology can be put to work in a broad range of uses for government projects at the federal, state and local level.

Australians might love their pools, but the fact remains that many communities have long struggled with just getting a sufficient supply of water for more basic needs.

In terms of key applications, Ms Gosse nominates the treatment of waste water or sewage; recycled water; irrigation; treatment of industrial waste; drinking water for remote communities; agriculture and aquaculture.

She says AIS technologies can be retrofitted or custom fitted to most water facilities and infrastructure.

However it's not deficient infrastructure that is posing the big challenge to AIS expanding. Ms Gosse notes that the biggest obstacle AIS faces is "deficiencies in thinking" when looking at innovation in water technology.

A core argument that Ms Gosse puts forward is that if governments want to get the best out of their service delivery in water management, they need to support locally-based companies who provide the best products and services.

"It is about getting all levels of government to embrace and support Australian owned and manufactured technology and think 'differently' about water disinfection solutions," Ms Gosse says.

She argues that many "progressive" councils and a number of universities already have AIS water disinfection systems operating in their aquatic centres or swimming pools, but there's a remainder still holding on to legacy methods.

"Others are still treating water the 'old way' (ie: super-dosing with dangerous levels of chlorine and compromising people's health with chloramines and chlorine storage and handling)," Ms Gosse says.

She says AIS's innovative, cost effective technology reduces the dependence on chlorine delivery and storage and focuses on product efficiency and environmental preservation along with various other benefits.

According to Ms Gosse, AIS's technology "essentially negates" many of the challenges associated with managing water facilities because of its compact systems and a range of other solutions for water disinfection.

Historically, these challenges have been the inherent workplace health and safety risks associated with the "old way" of disinfecting water including the delivery, storage and handling of chlorine, as well as issues with large storage areas and high levels of maintenance.

Ms Gosse says AIS "takes all that away".

FOSTERING LOCAL LIQUIDITY

At a time when Australia has suffered major shocks to its manufacturing sector, especially in the automotive sector, the importance of diversifying manufacturing across different industrial sectors has never been greater.

Increasingly, governments are now being urged to better support local manufacturers and suppliers which can develop innovative technologies that not only help governments deliver better services more cost effectively, but provide a much needed boost to the domestic economy.

As part of her call for Australian governments to source solutions from local suppliers, Ms Gosse maintains that there are bigger benefits than just patriotism at stake. She argues the fact that because AIS is Australian owned and operated, a "big plus" for government is that the company can very easily respond to questions or maintenance needs if required.

While AIS does not tender directly for projects, Ms Gosse still stresses that "more needs to be done" by government to actively support Australian-manufactured technology as part of the procurement processes to make the most of what local industry can deliver in terms of jobs and export potential.

"We feel that all levels of government should include more emphasis on incorporating Australian owned and manufactured technology into projects and to be proactive and look at what's working in other facilities throughout Australia and even overseas," Ms Gosse says

Two of these overseas projects have taken place in Bali and the United Arab Emirates.

"Water engineers and construction companies working on government projects need to look in their own backyard and at projects and case studies that are already using our technology and then specify it as part of a job or tender," Ms Gosse says.

"We should be working together to find the best solutions for water disinfection – not just doing things the 'same way it's always been done' - that makes no sense at all."

As AIS employs over 200 people and exports products to over 50 countries, doing business with government is significant so that the company can continue employing technicians and skilled workers many in-depth fields.

These include micro-electronics, chemistry, power systems, electrical and mechanical engineering, water system design, assembly, metalworking and plumbing.

This means that government customers balance getting the best value and buying locally because of the long term economic benefits of the products such as lower operational costs, increased efficiencies and reduced occupational health and safety risks.

All in all, it's a solution that could go a long way both in terms of bettering local communities and selling Australia's smarts to a world where access to clean water will increasingly command a healthy premium. GN

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Lessons On The Record

[By PAUL HEMSLEY with JULIAN BAJKOWSKI]

The National Archives of Australia (NAA) has substantially ramped up its efforts to become an educator for the public sector after the agency launched a new course to school government information managers on how to better deal with the new challenges being generated by the rapidly changing world of digital information management.

In a training course that the official record keeper has masterfully given the acronym of 'DIGITAL', the new curriculum and materials will focus on information managers' key role as decision makers who "must influence agencies and improve their ability to manage digital information".

Prime Minister Bob Hawke with British actor Paul Eddington of Yes Minister, 1986. Source NAA.

According to Archives the 'DIGITAL' program stands for the seven keys to effective digital management including "Direction and policy, Information for business needs, Governance and risk, Implementation, Tools and systems, Accountability and Leadership".

The new course is designed as a short, sharp and very practical lesson in how to get things right in the digital age as the business of government and the information it generates and provides moves from paper to pixels.

One of the biggest challenges is ensuring that there are sufficient and robust processes to both identify and capture information as it is generated in a digital format so that the nation's rich history can be accessed and researched by generations to come.

That means ensuring that everything from seemingly innocuous official emails and public web content to secret intelligence dossiers and Cabinet deliberations are retained in a consistent format – with proper provenance – so they can survive the test of time.

As such, the new one-day course is part of a wider move by the Archives to create "intensive, practical training" on digital information management through the Digital Transition Policy which requires government agencies to move from a paper-based office to fully digital information management for "efficiency purposes."

According to the Archives, the implantation of the new policy has "resulted in a great deal of cultural change within agencies and new recognition of the value of government information as an important business asset".

The Archives director-general David Fricker says that all agencies now need to recognise that skilled information managers are vital if they are to meet government expectations for increased efficiency, accountability, digital transition and digital continuity.

"It's now widely understood that managing digital information more effectively will ultimately improve business outcomes. As an international leader in this field, we recognise that it is our responsibility to help agencies enhance the skills of these key professionals," Mr Fricker says.

There is clearly a strong appetite for the new skills. Courses that Archives ran in March, April and May in Canberra this year booked out quickly and extra monthly DIGITAL courses have now been scheduled throughout 2014 to help meet the popular demand within federal agencies and organisations outside the Commonwealth government. GN

GALLIPOLI CENTENARY HIGHLIGHTS VALUE OF RECORDS

As preparations for centennial Anzac Day commemorations in 2015 quickly start to ramp-up, the National Archives of Australia (NAA) says it is "pulling out all stops to help descendants of Gallipoli veterans claim their rightful place at Anzac Cove" for defining national event.

Although millions of Australians will undoubtedly turn to screens big and small to watch the event live, the natural limits of space at the forthcoming has necessitated the Department of Veterans Affairs to hold a ballot for places that requires direct descendants of those who served to provide documentary evidence of their connection.

It's a big ask in a tight timeframe for all concerned and subsequently Archives has said is now providing access to World War I service records that are held in its collection.

"While 376,000 World War I records were digitised in 2007, the records of servicemen and women who also served in World War II were not digitised at the time," the NAA noted in an official statement.

"To ensure descendants of those Anzacs do not miss out, staff at the National Archives are making a special effort to help them identify the correct record and to digitise it for them within the required timeframe," the NAA said.

It added that anyone seeking World War I service records can find them through the National Archives' website. naa.gov.au.

However there is a very human element to the way Archives is harnessing new technology in its pursuit of not only preserving history but making it easily available. Those with an interest in the making scanned paper records into rich, searchable data will now be able to help transcribe scans under the initiative known as Hive.

The Hive project means that means that members of the public can now literally contribute to history as well as calling upon it.

The National Archives will also launch a new website Discovering Anzacs to coincide with Anzac Day this year, with a preview available at discoveringanzacs.naa.gov.au