



THE FUTURE OF SWIMMING POOLS –

Engaging Design, Community,
and Sustainability



Why this Partnership?

Public swimming pools are among Australia's most valuable community assets — delivering essential life skills, health benefits, social connection, and cultural inclusion. Yet without a reimaged approach to planning, design, financing, and delivery, many communities risk losing access to safe and equitable aquatic environments.

This partnership has been formed to drive a sector-wide shift — moving beyond traditional, capital-heavy builds and toward innovative, scalable, modular, and community-led solutions.

The program brings together public policy, expert design, cost modelling, and community consultation to shape future-ready concepts that balance:

- Safety and life-saving outcomes
- Financial efficiency and operational sustainability
- Environmental performance and climate resilience
- Universal access and inclusion
- Cultural relevance, community identity, and place-making



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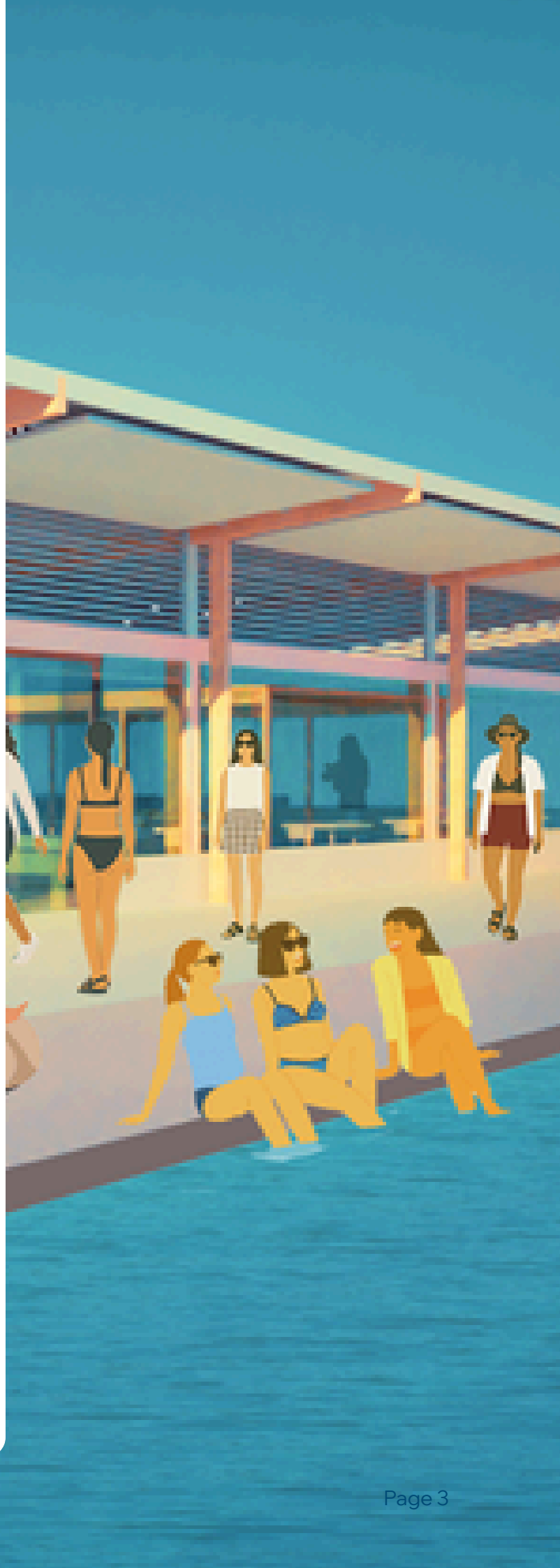
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Introduction

Royal Life Saving NSW is proud to partner with Cox Architects and WaterCo to deliver **The Future of Swimming Pools – Engaging Design, Community, and Sustainability**, an ambitious national initiative to reimagine the next generation of aquatic and leisure facilities. This partnership brings together Royal Life Saving’s deep sector knowledge, community networks, and drowning-prevention leadership with Cox Architects’ internationally recognised expertise in public, community, and aquatic precinct design.

Together, we are responding to one of Australia’s most pressing public infrastructure and wellbeing challenges: ensuring every community — metropolitan, suburban, regional, and remote — has safe, affordable, resilient, and equitable access to aquatic environments. With nearly 40% of Australia’s 1,200 public pools approaching end-of-life by 2030, and local governments under increasing financial and environmental pressure, a new model for aquatic infrastructure is urgently required.

We are challenging conventional assumptions.

We are questioning old models, old timelines, and old cost structures.

We are imagining a future where aquatic facilities are delivered faster, smarter, and more affordably than ever before — without sacrificing quality, safety, or community value.

This is not merely an collation of concepts. It is a call to rethink how Australia builds aquatic facilities.

It is an invitation to innovators, decision-makers, funders, planners, and community leaders to shape the next chapter of our public water story.

The future of Australia’s pools will not be found in “either-or” thinking.

It will be built through flexible, modular, scalable solutions that match community need with smart design and sustainable delivery.

This exhibition will challenge all involved. And in that challenge lies our opportunity — to build a legacy that serves every community, from the aspiring Olympian to the child taking their first breath and first kick in the water.



SECTION 1

A PROPOSED FUTURE





A Shared Vision for the Future

Aquatic facilities are not just places to swim — they are community anchors, public health assets, social equalisers, climate-resilient refuges, and gateways to lifelong safety and wellbeing. This initiative seeks to secure the future of aquatic participation in Australia by delivering:

 **New Thinking**

 **New Pathways**

 **New Models**

 **New Solutions**

...all grounded in a shared commitment to safer people, stronger communities, and sustainable aquatic futures.

Desired Solution

This initiative will produce a suite of adaptable design models — from low-cost learn-to-swim pools for small and remote communities, to multi-use suburban hubs, to world-class metropolitan aquatic precincts. These models will prioritise:

Design innovation

- Modular, scalable facilities adaptable to different community sizes and budgets
- Contemporary design that enhances user experience and accessibility

Policy & Investment Pathway

- Future-focused design guidance for councils and government
- Evidence-based models that support funding decisions and long-term infrastructure planning
- A catalyst for a nation-wide conversation about aquatic infrastructure investment

Community-Centric Function

- Facilities designed for learning, recreation, health, rehabilitation, and social connection
- Cultural inclusion, universal access, safe spaces, and community identity at their core

Operational Sustainability

- Energy-efficient systems, water management, and climate-resilient construction
- Sustainable materials and lower lifecycle cost models



The Journey Ahead

This initiative marks the beginning of a transformative journey. The next phase will focus on structuring engagement, turning inspiration into action, and building the coalition of partners required to deliver lasting community impact.

This staged strategy will ensure that the ideas showcased become the foundation for real, funded, and shared solutions for Australia's aquatic future.

OUTCOME

A shared model for aquatic infrastructure that is:

- Scalable
- Sustainable
- Inclusive
- Community-centred
- Financially responsible
- Endorsed and supported by all levels of government

**Inspired Together.
Designed Together.
Delivered Together.**

01

Mobilise Momentum

Convert Inspiration into Participation

02

Establish the Future of Pools Advisory Group

Build a Leadership Coalition

03

Engagement & Evidence Program

Define designs, priorities and investment models with the sector

04

Co-Design & Demonstration Framework

Move from concepts to real-world pathways

05

Endorsement & Investment Framework

Secure commitment and unlock scale

06

Implementation & Continuous Improvement

Support delivery and scale adoption nationally



Practical Solutions

Engaging Design, Community, and Sustainability

1 Maximising Roof-top Solar

The use of extensive photovoltaics or solar hot water will significantly offset the operational cost of keeping pool temperatures comfortable throughout the year.

3 Simplified Site Preparation

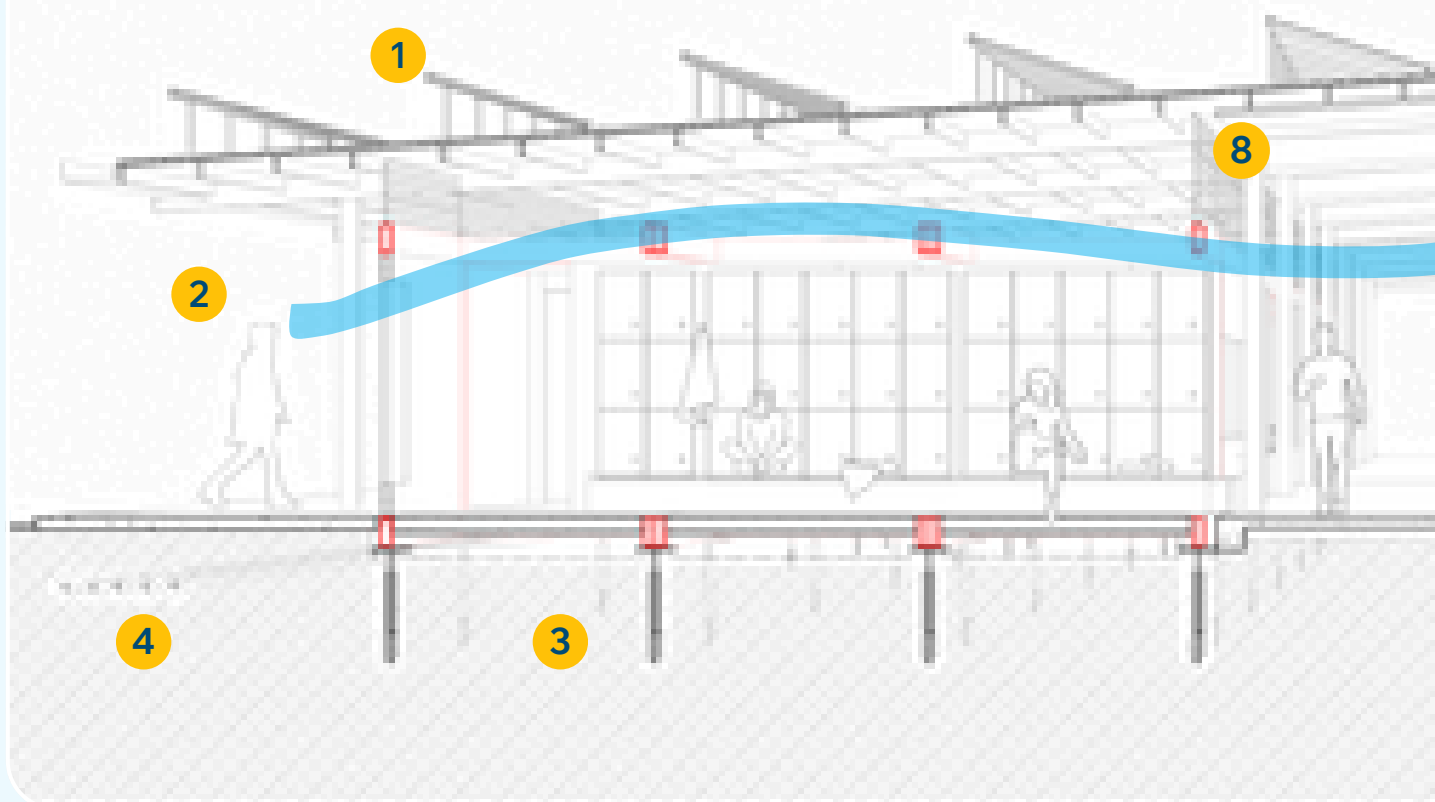
Modular and prefabricated buildings have identical structural requirements at every deployment, allowing for the design of optimised footing systems to suit local site conditions and minimise costs.

2 Natural Ventilation for Great Indoor Air Quality

Supplying fresh air to change rooms, staff and community spaces ensures a pleasant, healthy environment and ensures the longevity of built facilities.

4 Efficient Heating Technologies

Ground source heat pumps can dramatically reduce the power required to keep pools adequately heated, and provide excellent return on investment if site conditions are assessed early in a project.



5 Modular Pool Wall Structure

Prefabricated structural panels provide a highly durable pool that is quick and easy to install on site. To be utilised for both new and re-living applications, the same kit of parts will apply to varying pool widths and lengths.

6 The Right Pool for Every Community

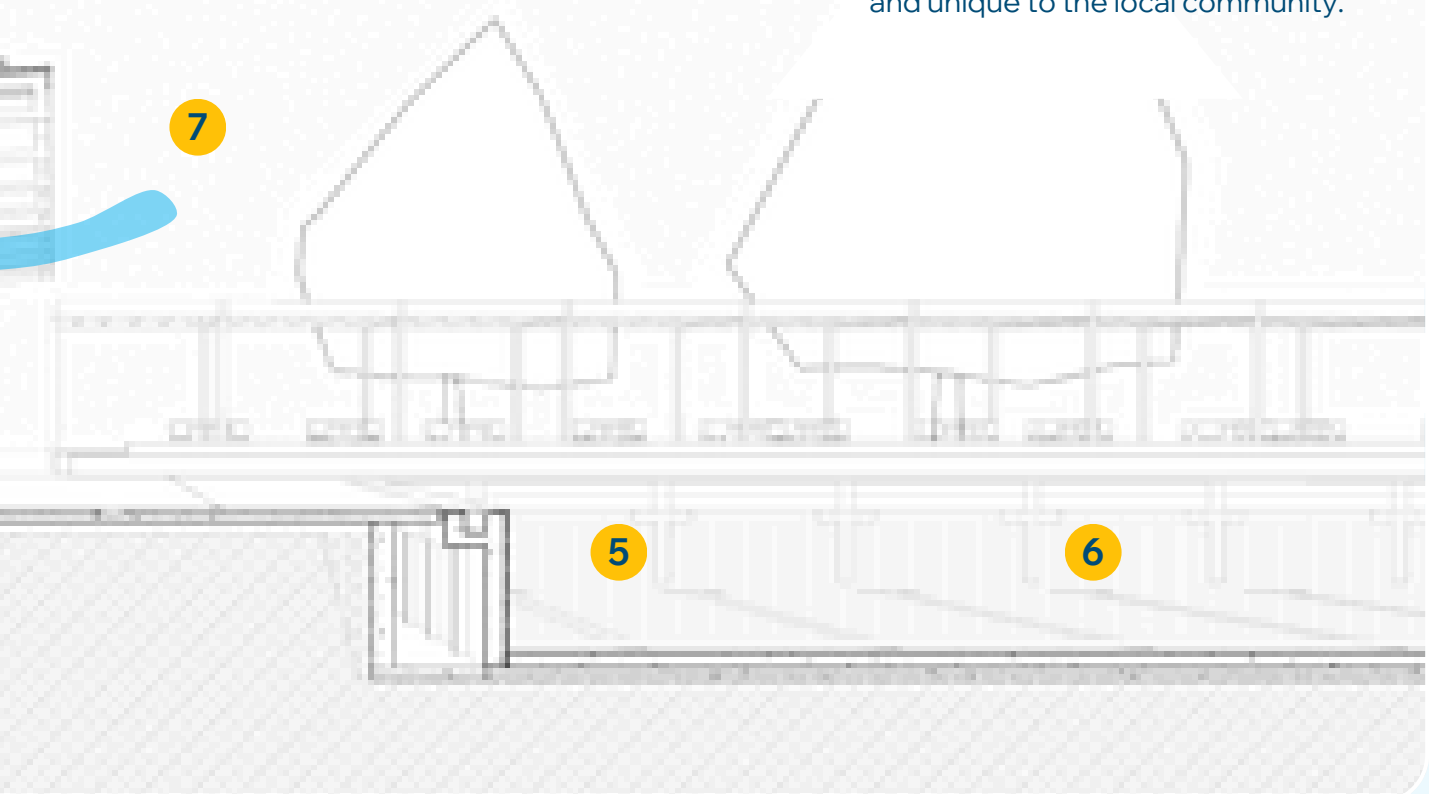
A modular approach to the pool and surrounding infrastructure allows for a best fit approach to sizing facilities for different communities, without sacrificing the prefabrication economy of scale.

7 Building Orientation for NSW

The pool and built elements will be set out on each site to maximise community enjoyment. Buildings should not obscure morning sun, maximise heat gain to the water itself and shade users from the hot afternoon sun in the warmest months.

8 Community and Regional Identity

The modular system does not preclude delight and variation. Choices of cladding materials and colour, and the shaping of roof canopies allows for each facility to take on an identity that is identifiable and unique to the local community.





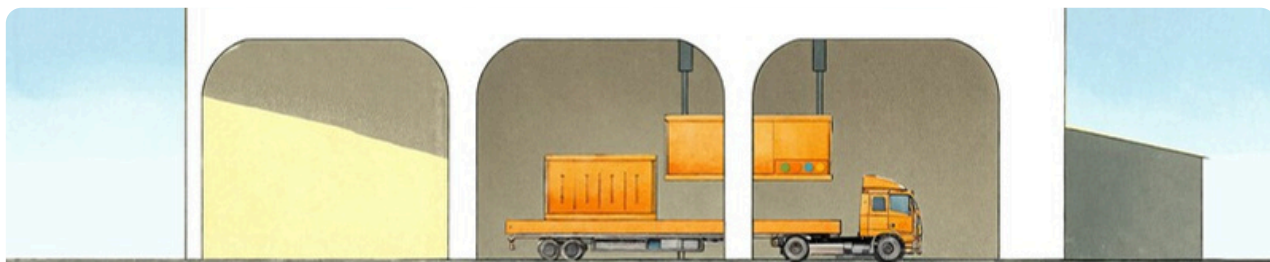
Modular Buildings

Design Quality, Construction Efficiency

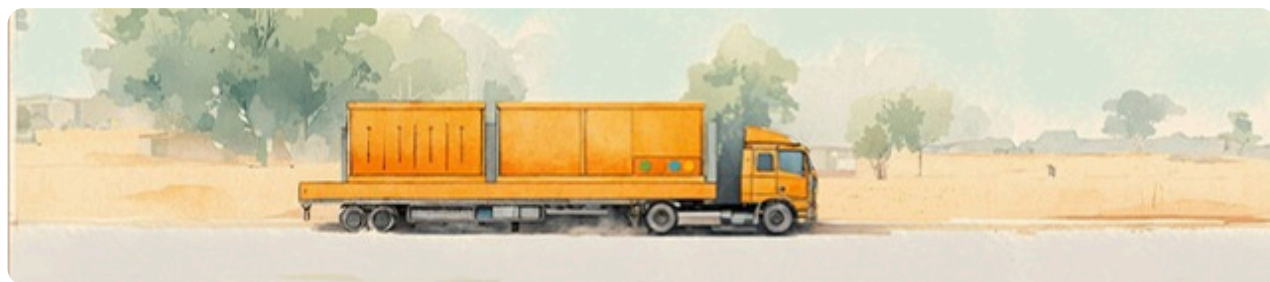
Modular design and construction will be employed across two main areas — the pool itself and the buildings that provide support to users and staff.

A modular approach to the pool itself allows for a tested, precisely manufactured system to be quickly rolled out to any NSW site, whether they are new facilities or existing pools requiring replacement. This provides for long-term durability, economies of scale and compressed construction timelines, helping to get more people swimming, sooner.

Modular systems for supporting buildings such as change rooms, cafes and administration, will be highly designed and optimised for longevity, construction efficiency and a high quality user experience. The combination of modular design and prefabrication allows for the easy scaling of a system to suit different community sizes while retaining excellent long term resilience and speed during the construction process.



Prefabricate



Transport



Install



Modular Water Treatment

Design Quality, Construction Efficiency

Containerised Pre-Plumbed Water Plant

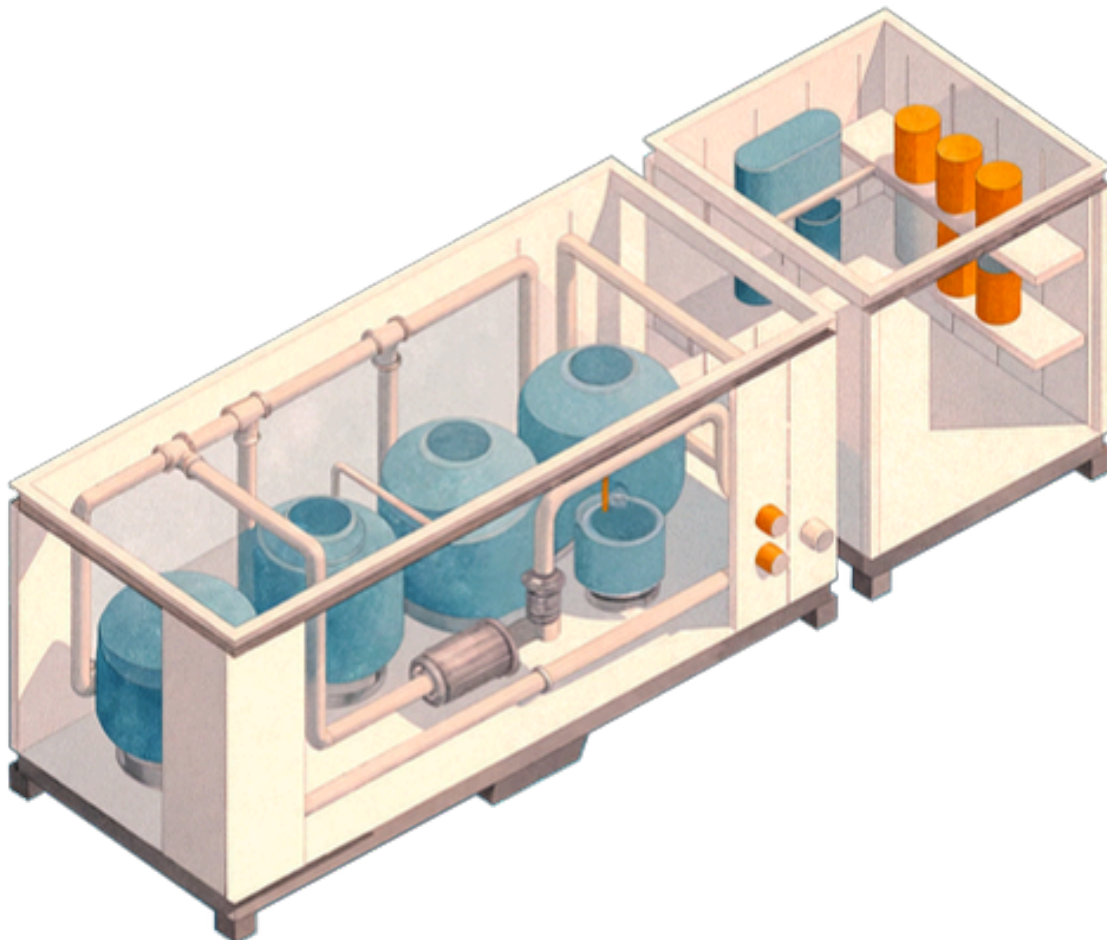
Modular water treatment plant is an established ecosystem, providing scalable solutions with cost and reliability benefits. Specialist plumbing and system assembly are undertaken off-site by experts.

Modern Disinfection

Consideration for the safety of pool users, infrastructure and the environment is driving continual improvement in chemistry and water treatment regimes, allowing for the delivery of better, healthier aquatic environments.

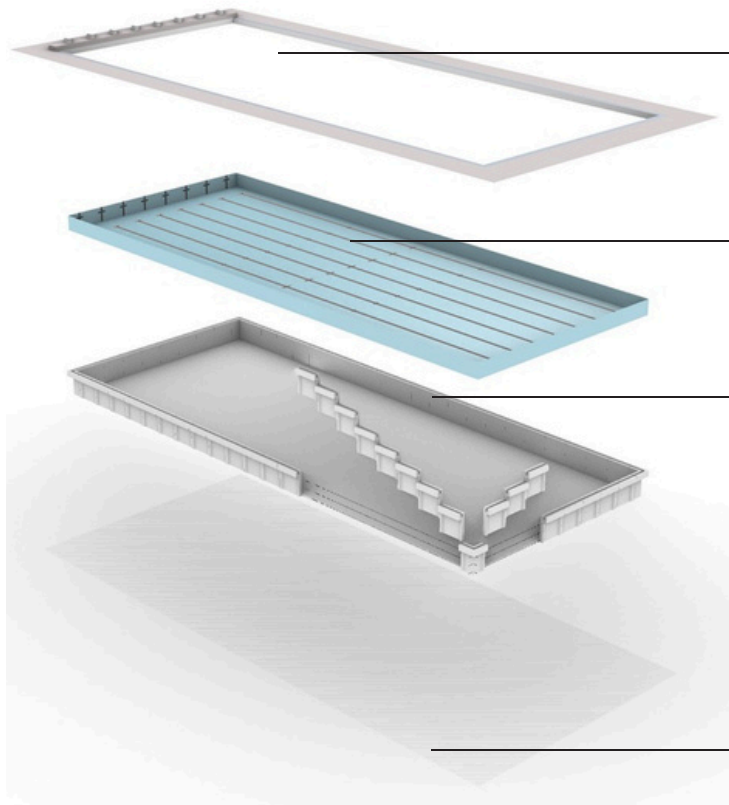
Automation and Monitoring of Treatment

Central monitoring across multiple pool assets facilitates automation in the treatment process and encourages pre-emptive maintenance by system experts - reducing down-time and local operational costs.





Modular Pool Construction



Pool Deck

A paved or tiled pool deck is an important part of the pool experience and can be tailored to suit the site and type of pool.

Waterproof Lining

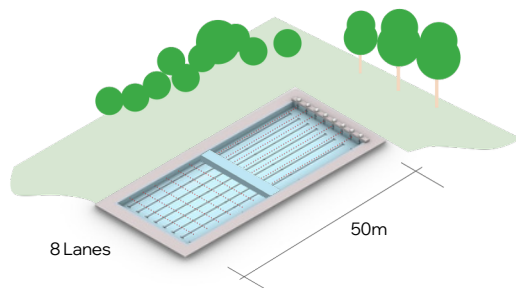
A robust membrane is applied to the whole pool and seam sealed for water-tightness. Finishes are applied for aesthetic appeal and wear-resistance.

Pool Wall Kit of Parts

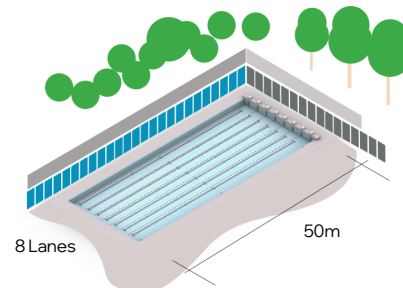
Pool walls formed from a series of prefabricated elements capable of forming various pool sizes and depths. Compressible seals and tension cables bind the panels together for a durable enclosure.

Pool Base

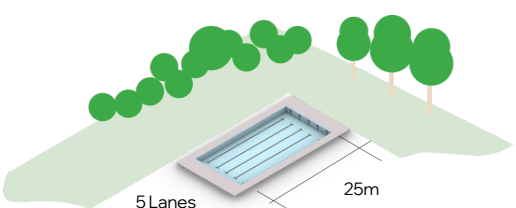
Pool base and foundations suitable to the ground conditions of a given site.



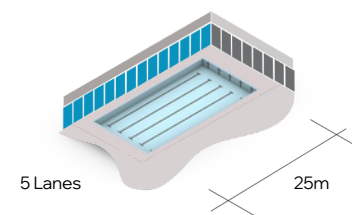
50m Outdoor Pool



50m Indoor Pool



25m Outdoor Pool



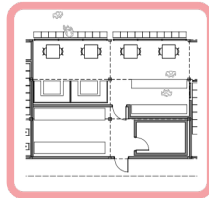
25m Indoor Pool



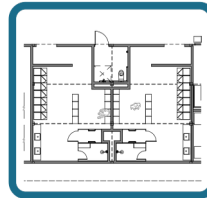
Modular Facilities Buildings



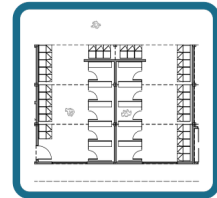
Administration Assembly



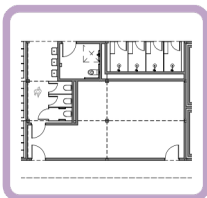
Administration Assembly



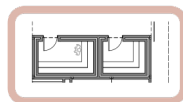
Gendered Change Assembly



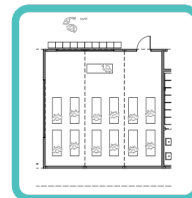
All Gender Assembly



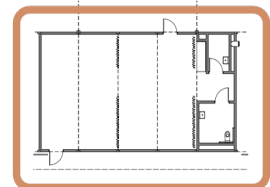
Shower and Toilet Assembly



Sauna and Steam Assembly



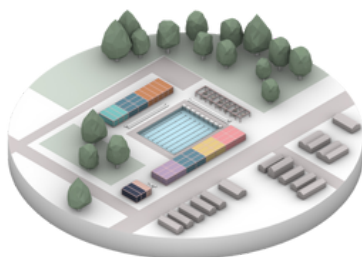
Fitness Studio Assembly



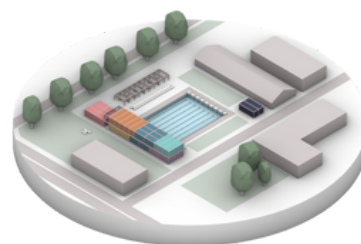
Community Hall Assembly

The above matrix of assemblies provides an example of a prefabricated and modular system for providing high quality pool amenities. Each assembly above is made up of a number of repeating modules. These can be joined together to make smaller or larger assemblies, as required by a particular site or community. For example, a larger change room can easily be produced by joining more or fewer modules together to create the assembly.

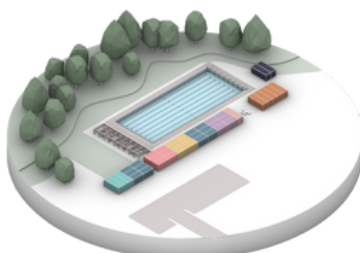
An example of how these assemblies might be arranged on a variety of sites, and for different scales of facility, is shown below.



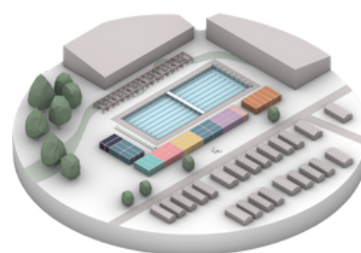
25m Pool — Single-storey amenities



25m Pool — Two-storey amenities



50m Pool — Linear amenities



25m Pool — Wrap-around amenities



SECTION 2

POLICY ALIGNMENT





Section 2 - Policy Alignment

The Future of Swimming Pools and the NSW Performance Wellbeing Alignment Framework

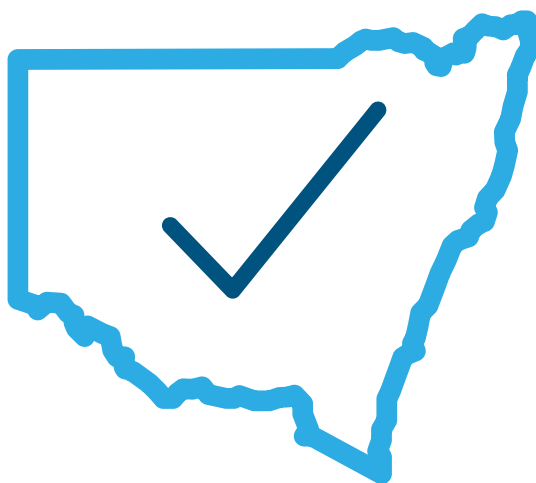
The Future of Swimming Pools initiative delivers a state-shaping opportunity to modernise aquatic infrastructure, strengthen public amenity, and maximise the social, health, environmental, and economic value that aquatic facilities bring to NSW communities.

This innovative design and policy program aligns directly with NSW wellbeing outcomes, demonstrating that modern aquatic facilities are essential community infrastructure—supporting active living, resilience, social cohesion, and equitable access.

Strategic Outcome

This project will enable NSW to lead Australia in future-proofing aquatic assets, delivering:

- Modern, sustainable aquatic design models
- Equitable access to safe swimming facilities
- Strengthened regional recreation and tourism
- Stronger community cohesion and inclusion
- Lower life-cycle costs and capital efficiency
- Health & wellbeing benefits across generations.





1. Healthy

Active lifestyles, physical and mental wellbeing

Wellbeing Drivers

- Safe aquatic access builds lifelong active habits, confidence & healthy behaviours
- Aquatic spaces support exercise across all life stages and abilities
- Water environments support mental health, rehabilitation & inclusive activity.

Key Project Contributions

- Development of scalable facilities that support teaching, fitness, rehabilitation and recreational swimming
- Low-cost regional pool modules providing affordable community access
- Design principles that prioritise universal access and inclusive environments

Evidence & Indicators

- Aquatic industry contributes \$2.5B in annual health benefits (PwC)
- Over 333M pool visits per year nationally—demonstrating high demand
- Pools support both physical health and mental wellbeing outcomes.

Wellbeing Alignment

NSW Indicator	Project Contribution
Active lifestyles	More communities can access affordable, purpose-designed aquatic facilities
Participation in recreation	Modular design ensures swimming access in regional & urban areas
Health equity	Design ensures lifelong access across age, disability & fitness levels



2. Secure

Resilient communities & safe public environments

Wellbeing Drivers

- Aquatic facilities are supervised, safer environments than natural waterways
- Community-based aquatic access reduces risk of harm and drowning
- Climate-resilient and future-proofed facilities support emergency planning & heat preparedness

Key Project Contributions

- Climate-resilient infrastructure (water reuse, solar, stormwater capture)
- Reinforcing supervised public aquatic environments to reduce risk-taking at unsafe locations
- Design methods to withstand extreme weather, heatwaves and rainfall events

Evidence & Indicators

- 40% of public pools in Australia due for replacement by 2030
- Closures would cost \$910M annually in health, safety and social costs
- Safe spaces reduce reliance on lakes, rivers and beaches—highest drowning risk sites

Wellbeing Alignment

NSW Indicator	Project Contribution
Disaster resilience	Climate-adapted aquatic facilities support heat & flood resilience
Community safety	Prevents displacement to unpatrolled waterways
Public risk reduction	Designed for safe, controlled water environments



3. Community

Diverse, engaged, cohesive communities

Wellbeing Drivers

- Pools are community hubs that foster belonging, inclusion & connection
- Facilities support CALD, Indigenous, youth, seniors & disability participation
- Inclusive aquatic architecture encourages civic pride and local identity

Key Project Contributions

- Culturally sensitive design & programming environments
- Social infrastructure supporting community events and youth programs
- Engagement model with councils, local communities, land managers and industry

Evidence & Indicators

- 28% of drowning victims overseas-born—facilities improve safe participation
- Pools deliver \$3.8B in annual social benefits (PwC)
- Local governments own 64% of aquatic assets—key community infrastructure

Wellbeing Alignment

NSW Indicator	Project Contribution
Social cohesion	Pools foster community gathering & cross-cultural inclusion
Participation	Low-cost modular pools ensure broad access
Community infrastructure	Keeps pools open in communities with ageing infrastructure



4. Connected

Equity in access, infrastructure, services & technology

Wellbeing Drivers

- Equal access to aquatic learning and recreation across NSW
- Cost-effective models support councils facing financial constraints
- Facilities act as essential social and recreational service centres

Key Project Contributions

- Modular, scalable designs that match community size & funding capacity
- Integration of digital education and learning platforms
- Exhibition and sector engagement guiding policy & infrastructure planning

Evidence & Indicators

- 500+ pools nationally require replacement by 2030
- Pool replacement costs range from \$10M+ per site
- Councils unable to meet costs risk community infrastructure loss

Wellbeing Alignment

NSW Indicator	Project Contribution
Access to services	Modern pools in regional & urban locations
Infrastructure affordability	Scalable designs reduce capital pressure & delivery time
Digital connection	Digital education integrated in future aquatic models



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