



Grate Insights

Issue 1, 2023

Brought to you by Stormtech

Grate Insights – Welcome



Hello and welcome to Grate Insights 2022.

As we reach the end of another year, we're looking back (as is customary), and safe to say it's been another tough one for a lot of businesses in the construction industry.

We feel lucky that we have been mostly insulated from that external volatility, and we've taken that as an opportunity to keep our heads down and work even harder on building the next phase of Stormtech. We've had significant advances across both our product range and our operations. We've continued to implement initiatives that will benefit the future of our business, and the future of the planet. And we've maintained the high standards of quality our customers have come to expect from us.

On the product front, we've innovated upon the linear drainage grates we're known for and released the Wave Grate. Designed and manufactured in Australia with Australian sourced and processed aluminium, the Wave Grate delivers high-flow

water removal while cleverly concealing drainage channels for a perfect integration. Another of our innovative products, the shower screen support, is a unique design that allows surface water to drain from both sides of the shower screen for perfect drainage. The shower screen support is growing in popularity due to its unique functionality and ability to solve a simple, yet common problem.

Our moves to localise our supply chain continue to pay dividends. For many years now we've railed against the widely held notion that offshore manufacturing is cheaper, and therefore better for business. For us, it's always been about ensuring quality, guaranteeing sustainable sourcing, and having greater control over our logistics - and as the rest of the world continues to grapple with the ongoing supply chain effects of the pandemic, I'm happy to report we're in great shape to continue getting our products to customers on time.

Those of you who are familiar with Stormtech know that sustainability is an inextricable part of our business. It permeates

everything we do, and we're always innovating to find new ways to reduce our environmental impact while still delivering quality products. To that end we've continued to certify our products to the highest global and local standards, and are continuing to test and apply new technological innovations to our manufacturing process that will increase efficiency across the range.

Thanks again for your ongoing support, it means the world to us. As always, we'll keep you posted with the latest updates as they come through - but for now, here's a digest on some of the interesting projects, people, and organisations we've been privileged to work with this year.

Enjoy the read!

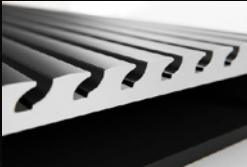
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**ARCHITECTURAL
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At last, regional architecture takes centre stage

Following the devastation of bushfires, floods, and the pandemic, in 2021, a group of like-minded regional architects banded together to form a new, member-driven organisation with a focus on bringing about positive change in Australia's regional areas. Thus, the Regional Architecture Association (RAA) was born; a network of regional practitioners supporting one another to collectively strengthen the practice of architecture, advocate for a better built environment and connect members to communities, industry and decision makers.

"The RAA connects practitioners with each other," says Sarah Aldridge, RAA Committee Secretary. "But it's also important that we connect not just within our own profession, but further than that, into communities. And also upwards - we adopt an advocacy role, by identifying issues that will be pertinent to regional practice and then advocating on behalf of regional practitioners to decision makers."

The organisation aims to be open and responsive to members' needs - and as a not-for-profit member organisation, is very much set up to do that. "We were keen to make a membership model that was really inclusive," says Sarah. "Which is why we're the Regional Architecture Association, not the Regional Architects Association - because we feel, as just mentioned, that architecture needs to reach beyond its own profession. And so whilst we advocate for regional practice, we work very much in collaboration with others."

Originally set-up in NSW, today RAA has members in Queensland, Victoria, South Australia and Tasmania, demonstrating the relevance of the work the association does - and highlighting the allure of its purpose-driven agenda.

The Association addresses significant issues affecting regional areas, and has a clear mandate to do so. "We took a while at the beginning to make sure that we agreed our policies and core

values and incorporated them into our website, through our mission statement, for example," says Sarah. "It's very important to us that the people who join as members understand what we're trying to do. And we found that's been really successful because the people who have joined share those values and understand what we're trying to do with the organisation. So it's meant that there's been a good momentum right from the beginning."

The RAA engages its membership and wider community through events which regularly attract between 50 and 90 people - despite the Association's total membership only numbering 100 - a fact that Sarah says indicates the organisation's appeal spreads far beyond its immediate reach. In addition to in-person events, the RAA runs frequent online events as a means of combatting the prohibitive distances its members would otherwise have to navigate. This serves to overcome one of their members' most pressing issues: lack of connection to other industry people and businesses.



But the Association deals with far more than that.

"This is why it's so important for us to be agile as an organisation," says Sarah.

"There will be times where we'll hear a few people saying, 'Oh, we're really struggling with cost control at the moment, because the costs in the construction industry have gone mad,' or, 'we're really struggling with regional recruitment,' or whatever the issue is. And we're then able to respond quickly and pull together a session that assists them."

The RAA was founded with a small number of 'Founding Technical Members' - industry partners who jumped on board early on because they saw the value of the RAA, and held a shared belief in the importance of its mission. "Those founding members have helped us in many ways. They've provided finance, but they've also provided that genuine support to us right from the very beginning. And they're not just random suppliers. They're people and businesses

who we have good relationships with, that we felt really did align with RAA's core values, and who really understood what we were trying to do."

One of these founding members was leading drainage designer and manufacturer, Stormtech. Headquartered in NSW's Shoalhaven region, a couple of hours south of Sydney, Stormtech's ethos of quality, sustainability, and locality, is very much in line with the collaborative values that the RAA is founded on.

"Stormtech has long demonstrated their commitment to regional Australian manufacturing," says Sarah. "So, again, that's very much in line with what we're trying to do, which is to demonstrate viability and value in the regional economy, and also the benefits that it has, especially during times of global crisis. So we felt that there was a natural synergy between what we were trying to do, and what Stormtech were already doing."

Sarah adds that Stormtech's origin story also resonated with RAA's mission and core values. "It's a family-run business that saw a need in the market and worked with the architectural profession to create a product to meet that need - that is very much in line with the qualities of agility and the collaboration that our organisation was founded on."

Driven by these inclusive, dynamic and synergistic values, the RAA's upward trajectory continues, with some exciting plans in store for the next phase of its development. "We've been going for around 18 months, so I think the next year for us is a year of consolidation," says Sarah. "So consolidating events and activities, but also looking at our strategic direction and assessing where we can focus our energies around advocacy. We've got the support from the profession, but also our industry suppliers as well, so it feels like we're in a really strong position, and we're all pretty excited about what's coming next."

Case study – The Echo Beach House: Reverberating the ease of coastal living

Perched behind the expansive dunes of Casuarina Beach, NSW, the sleek geometry of the Echo Beach House volumes sprawls across the narrow, corner site, epitomising the ease of coastal living.

Drenched in sun and enveloped in the sea spray from the adjacent beachfront, this 1950s-inspired residence is attuned to the owners' affinity for surf culture and entertaining – aspects of their life Scott Carpenter of Create Architecture had an intimate understanding of. "We had known the owners of the Echo Beach House for over 15 years before we designed the house," says the Director of the studio behind the project. "We travelled together and got to know them very well, which made the brief development process easy."

With the longer side of the site facing the North and the shorter one positioned towards the West, the architect decided to define two different points of entry into the house. "We organised the planning so that the family would enter from the West side," Scott explains. "That's where they would park the car, offload their surfboards or bikes and walk through the laundry into the kitchen, and then into the household." In contrast to the everyday practicality of the Western entry, the more formal Northern side welcomes guests with a gated entry sequence resembling a tropical resort setting. "Stepping over rectangular slabs emerging out of a pond, the guests come through this concealed yet public pathway across the water," Scott adds.

This progression offers a subtle

glimpse into the indoor-outdoor lifestyle the Echo Beach House embraces so intentionally. With the teenage daughters' wing tucked away on the first floor, and only the primary bedroom on the lower level, the home's sizable living space stretches across the ground floor, seamlessly connecting to the lush outdoors. "A set of glass doors separates the inside from the outside. However, when these are peeled away, and hidden out of sight on either end of the living space, there is an uninterrupted flow between both sections," Scott explains.

Stortmech's threshold drain was instrumental to bringing this relaxed coastal haven to life. "The product allowed us to achieve that flush transition from the inside out," Scott points out. "Without that Stormtech drain, we just couldn't have achieved it.



You'd have between 50 and 70 mil steps which would destroy the ability to make that area feel like one cohesive space. So the drain was critical."

Providing a gentle visual transition between the timber floors of the indoor space and the dark grey tiles of the outdoor area, the sleek lines of Stormtech's signature product gently mark the parameters of the two sections while enhancing the flow of the space.

This open progression between the indoor and outdoor living spaces forms an integral part of the response to the site. "The home is right on the beach, and each room is oriented towards the North," Scott explains. "It's very easy to open up the doors and windows on the North and the South, and get that beautiful

northeaster blowing through the house on both levels. Then the pool is in the courtyard on the northern side, so, once again, the breeze comes across the pool, cools the air and then passes straight through the open-plan ground floor space."

This connection to the home's geographical location is also reflected in the minimal yet layered palette. "The main structure of the house is concrete," Scott says, referring to the sleek, white-rendered lines that define the silhouette of the dwelling. "Then we've used stone and wood to give it a homely feel, and bring those beautiful textures and warm colours in."

Scott explains that while these textures add depth, the planning is defined by the simplicity of lines. This refined, sleek design

language is carried throughout all interiors, including bathrooms. Here, Stormtech drains were also instrumental in creating a sense of uninterrupted seamlessness. "In the bathrooms, we have these beautiful large format tiles. We really didn't want to cut them, so we used the strip drains in the showers so we could preserve those seamless lines," Scott explains. "And where we couldn't use these lovely large strip drains, we used the smaller tile insert drains. I don't think there is one drain in this house that isn't Stormtech."

A result of an intimate understanding of the owners' lifestyle and the home's local context, the Echo Beach House embraces the organic appeal of its seaside locale in a considered and unpretentious manner emblematic of coastal ease.



Livable Housing Provisions & Level Threshold Compliance

The Impact of the National Construction Code 2022 on Drainage Design and Specification

Drainage maintains a straightforward but crucial function: making sure water can be removed from the property effectively, safely, and efficiently. This is not only important in bathrooms to avoid pooling water and unsafe conditions, but also in the transition between indoor and outdoor spaces. An effective drainage system prevents water ingress by draining it away, all the while ensuring a level transition between the two spaces.

The National Construction Code (NCC) 2022 edition has new provisions that will make new Australian homes more suitable for people with mobility issues. New livable housing design requirements are included in the updated Code, changing the way we design homes to make

them easier to use and more adaptable to the changing needs of occupants.

Based on the Livable Housing Design Guidelines (silver level), first published by Livable Housing Australia, these new requirements represent a significant improvement in the housing options available to older Australians and those with physical disabilities. In practice, this entails eliminating steps whenever possible, creating more room in the bathroom, enlarging doorways, and making provisions for future modifications like the installation of grab rails.

The priority for designers and specifiers is understanding the 'nuts and bolts' of these changes and how they will impact the design of different parts of new

home builds, including the types of drainage systems that can be specified to ensure compliance.

Download this whitepaper for a detailed overview of Livable Housing Provisions & Level Threshold Compliance

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Stormtech Architect Profile: Scott Carpenter, Director of Create Architecture

Marking three decades since Scott Carpenter opened his first practice, the architect shares insights on designing for local climates and explains why our regions deserve strong architectural identities.

Your career in the architecture and design industry started in 1992, when you set up an architectural drafting practice. What got you into the industry in the first place?

My father owned a design and construction company in Central West New South Wales in the 70s and 80s. And so I was watching him draw up these terrific homes already as a six-year old, and spending school holidays on building sites later on, as a teenager. Although, I think it quickly became obvious that I was much better with a pen than a hammer, so architecture seemed to be a natural path.

And even though I missed out on getting into architecture by six marks the first time, I completed drafting at TAFE which

boosted my technical skills and construction knowledge, and put me in good stead for when I went back to university to learn the more creative side of architecture.

In 2003 you established Scott Carpenter Architect and started specialising in residential design appropriate to the unique South East Queensland and Northern New South Wales climate. Has the role of environmental considerations in your practice evolved since?

The basic passive design principles have not changed, and I believe it always begins with understanding your specific environment. When designing for the South East Queensland and Northern New South Wales climates, you start by orienting as many rooms as you can towards the North. Then, you make sure that the windows are shaded in the summer, but allow the sun to penetrate the interiors in winter. At the same time, you respect and manage the early morning sun, as well as the late afternoon western sun. You provide the right

thermal mass and insulation – and learn where the cooling breezes and harsh winds come from, so you can manage them to create good cross-ventilation.

Over the years, there have been many environmentally sustainable products and systems that you have had to stay on top of, but I still believe that those passive design principles are as relevant as ever.

In 2018 Scott Carpenter Architect became Create Architecture. How did that come about – and what is the focus on the practice today?

I changed the name of the practice because I had some terrific staff who I wanted to bring on as partners and associates, and it was paramount that our whole team had a sense of ownership, rather than build equity in my own name.

In terms of our focus, for quite a while now, we've been very successful around Northern New South Wales and Southern Queensland, building an in-depth



understanding of the subtropical climate, and designing beach homes and coastal properties for this environment. We have also completed quite a few projects in the hinterland, which is an area many people from this part of the East Coast have been moving to recently.

But what's really exciting is that we're looking at moving into the alpine region of New South Wales – Jindabyne. The NSW Government has identified this area as a Special Activation Precinct set to become a year-round destination.

Having now completed a couple of residential projects and designed a few homes for friends and family there, for me this is really exhilarating because I am once again learning about a new region. Being able to understand the climate and the people who live there before designing is crucial to create homes that have a strong regional identity. I've seen it work exceptionally well around Queenstown, in New Zealand, and I think Jindabyne can go down the

same route, if done properly.

You are an advocate of the concept of regional identity. You are also a founding member of the Regional Architecture Association (RAA). It's a network of regional practitioners that focuses on positive change in the regions – “the most important area of future urban growth in Australia.” Can you tell us more about it?

We believe that change should occur in a way that truly celebrates the uniqueness of each place, and caters for the diversity of community life – and architects are valuable resources that help that process. And so, as an organisation, we encourage and support regional practitioners to strengthen the practice of architecture, and drive a better understanding of its value and benefits for those local communities.

RAA is a not for profit and was originally established by nine passionate architects. Today, it has 12 members on the Founding

Committee, with a range of wonderful Founding Technical Members, such as Stormtech.

And when did you first come across Stormtech's offering?

It was 2003. I was just establishing Scott Carpenter Architect, and Stormtech was becoming one of the key players in the industry.

I first discovered linear drains, which quickly became one of our practice's design staples. Bigger tiles were becoming popular, and clients didn't want step downs in the showers, so we started specifying linear drains almost throughout all of our projects. Then I came across the threshold drains, which were a true game changer because they allowed us to create a flush floor from inside right through to the external terrace area. And that's a design methodology we use in over 90% of the homes we design.

We have specified Stormtech ever since. Once we're onto a good thing, and it's tried and tested, we stick with it.

The wave of change:

Stormtech's new aluminium grate moves the goal post for modern drainage

Stormtech, a renowned Australian drainage solutions designer and manufacturer, has been redefining the architectural potential of drains with every product launch since the company's inception in 1989. From the invention of the signature linear drain to the industry-altering threshold system, this family-run business has been paving the way for modern drainage. Now, Stormtech's very first aluminium drain – aptly named Wave Grate after its unique design – brings the same cutting-edge quality to the architecture and design industry.

Embodying over 30 years of Stormtech's innovative efforts, the highly-anticipated Wave Grate has been designed and engineered in Australia to fuse affordability with outstanding performance, setting new precedence for both residential and commercial bathroom applications. "What we've learnt over the last three decades is that the design needs to be as simple as possible, yet provide multiple benefits to different stakeholders," explains

Stormtech Managing Director, Troy Creighton.

The ingenious product is an apt reflection of this outlook. Made entirely with locally sourced Australian aluminium, guided by fundamentals of sustainable production and anchored by the principles of Design Thinking, the new drainage solutions ticks all the boxes.

"It is designed and manufactured in Australia for Australians and will give excellent performance suited to our harsh environment," Troy says and adds that everything about the Wave Grate is aimed at making life easier. "It is comfortable to walk on and because the top rails have a shallow radius, and debris in the channel is concealed, it's also more aesthetically pleasing. At the same time, it maintains high flow rates, is resistant to corrosion and provides a safe wet area finish as it 'grabs' water using surface tension and reduces standing water on the grate."

Understandably, this pioneering system has been in the making for decades. The first challenge Stormtech had to overcome was the limitations of aluminium, which – although an excellent material all around – isn't deemed suitable for sanitary drainage when used in contact with cement and concrete. "As the Wave Grate will be used in a wet environment, this is a critical factor to overcome and ensure the product is fit for purpose," Troy points out. "We've overcome this by using either our existing uPVC channel, or our stainless channel, coupled with insulators, both of which protect the aluminium perfectly."

To ensure Wave Grate meets the high-quality expectations of all Stormtech products, an insulator has been invented to separate the aluminium grate and the stainless-steel channel, and eliminate the potential for corrosion. "Half measure is not in our DNA," Troy says proudly.

That sentiment is precisely why the launch of Wave Grate



took years to finalise – while Stormtech’s stainless-steel grate designs are known all around the world, Troy was keen to ensure that all legal and technical design matters were solved first. “That enabled us to apply for the assurance of WaterMark Certification, and we could finally make the product to the highest standard,” he enthuses. Certified under WaterMark WMTS:-040:2021, the grate is designed not only to comply with the Plumbing Code of Australia but also to exceed Australian Building Standards for quality and safety – the elements of building and construction industry Troy feels particularly strongly about.

But that wasn’t the only aspect of product development and manufacturing that took a considerable amount of time. Because a grate like this has never been made before, Troy and his team found themselves in a pretty unique situation. “We had to custom-build machinery that would be

capable of producing the new grate on a large scale, here, in Australia,” he explains. With Stormtech’s commitment to local manufacturing, it was paramount to invent and engineer a solution that would enable the company to manufacture the new product using only Australian materials, and adhering to the highest sustainability standards.

The result of this considerate, committed and meticulous process is a trailblazing drainage system that punctuates Stormtech’s innovative design language, and expands the design potential of the modern bathroom. “We wanted to ensure that the grate wouldn’t be see-through, and that it would maintain the signature linear rail achieved with wedge wire. The venturi and aperture are angled sideways to prevent a direct view from above the grate to beneath, and the top surface of each of the ‘rails’ is slightly radiused. This gives a ‘soft’ feel on bare feet,” Troy describes the simple and sophisticated, yet easy to clean design.

The product is available in modular kits, made-to-length, and fixed length units in both uPVC and stainless-steel channels, and comes in a silver, gold brass or satin black finish. “The option to anodise the grate allows greater flexibility in colour matching designs,” Troy adds. “Plus, all our colours are sourced from sustainable suppliers who have robust expertise in their fields. That means the anodising is continuously tested in a wide range of applications and environments, and is designed to be durable and fade-resistant.”

While this exclusive and highly original product does pack a punch, it doesn’t come with an exorbitant price tag – Wave Grate is the much-anticipated alternative for architects, designers and specifiers who are after a high-end product at a mid-range price that is Australian through and through.

stormtech.com.au

Simplify bathroom drainage with Stormtech's latest innovation

From the inventors of the revolutionary linear drainage system, Stormtech, comes a new invention that is set to change bathroom design all over again. The culmination of Stormtech's wealth of industry experience and after extensive collaboration with designers, builders, tilers, regulators and waterproofing consultants, the 120SCS Shower Screen Support drain represents the latest innovation in bathroom drainage.

With the National Construction Code 2022 incorporating the new Liveable Housing Provisions for the first time, the need for drainage solutions that make bathrooms accessible and easier to use is greater than ever. Under

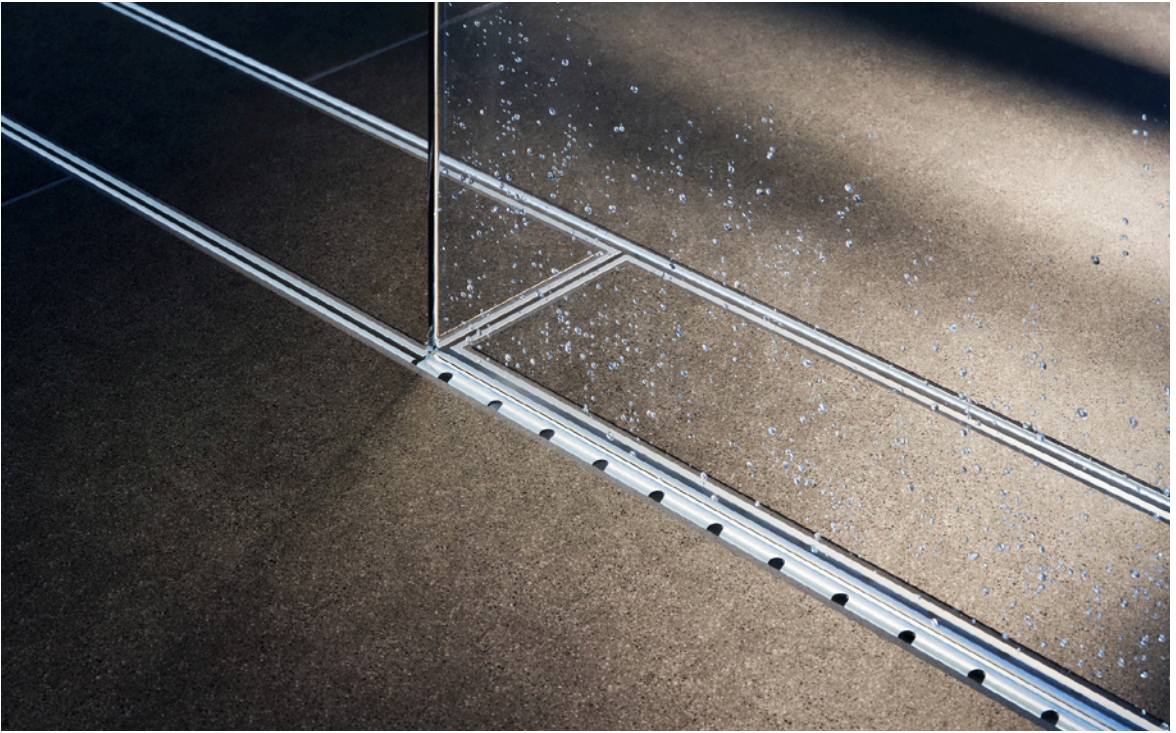
the updated Code, new dwellings will be required to have at least one accessible shower.

Stormtech's 120SCS Shower Screen Support drain will help you meet this new requirement while at the same time drastically simplifying bathroom design and installation. This all-new product, which includes a Shower Screen Support Channel for any Stormtech grating style, is a versatile linear drainage system that provides dual function as a drain for both sides of the shower screen, and a support for the shower screen itself.

Made from 316 Stainless Steel, the 120SCS is designed for flexibility, and ease of installation.

Wall-to-wall installation allows a simple dual fall across the bathroom. As a result, a single floor waste can drain the entire bathroom, meaning designers are no longer required to detail the intricate geometries in which the bathroom floor will fall to a traditional centred floor waste. Additionally, as the simple dual fall sheds water more effectively, they are free to use larger format tiles to create the impression of space in smaller bathrooms.

With Stormtech's groundbreaking 120SCS design, builders and tilers do not need to have complex falls or undertake intricate tile cutting as is required for most dual drain (shower and main bathroom) layouts. There is



less tile wastage from having to re-cut tiles and breakage, plus a faster and simpler tiling process. Waterproofing is even easier too as the waterproofed substrate falls towards the location below where the Shower Screen Support Channel drain will be, and less water will find its way through grout joints due to effective watershedding.

Importantly, simple dual falls are helpful for people with access and mobility issues because the shower entrance is open. More specifically, when a shower chair or stool is used, the single plane of fall in the shower area ensures that the chair or stool will not rock. These factors enhance bathroom accessibility

and accommodate the NDIS and Liveable Housing Provisions for future adaptive use.

Furthermore, as the drain is away from the entry door to the bathroom, any water thrown towards the door will run back to the drain. This reduces the risk of amenity loss if a water heater within the bathroom were to fail as the water spilled would drain normally instead of flooding the bathroom and then into other areas of the building.

Over recent years, Stormtech has improved the design of this solution, and, with bleeding-edge equipment and technology, the company has been able to leverage its unique capabilities to

reduce the cost of manufacture and lead times significantly – a benefit they can pass on to their customers.

Available in all Stormtech designer grates and finishes, the 120SCS Shower Screen Support drain exceeds all Australian Standards, is WaterMark certified and is exclusive to Stormtech.

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