South Africa's biggest timber conference turns 15

Over 1000 professionals, academics, business owners, investors, sawmillers and students interested in using timber in the built environment joined the Kuratle family to celebrate the 15th annual Wood Conference in Cape Town in February.

The apt theme of this year's conference was *Celebrating 15 years of timber, innovation and expertise connecting South Africa and the world.*

The first Wood Conference was founded and hosted by the Swiss entrepreneur and philanthropist, George Kuratle, in 2011. Although only one hundred people attended, he and his organising team persevered, and each year the numbers grew.

Over time, the Wood Conference has established a reputation as the leading platform for hearing the latest developments in timber construction, knowledge sharing, and relationship-building. When George retired, he handed over the CEO role at the Kuratle Group to his son, Roger.

Roger has continued the tradition of hosting the event, working closely with the local organiser, Zaida Davids, to invite international and local speakers from leading architecture, timber engineering, manufacturing, and digital services companies to share their knowledge and experience with like-minded South Africans.

Hannu Garny, a close friend of the Kuratle family, was the master of ceremonies for the 15th time and ensured that the speakers and audience tore themselves away from the delicious refreshments to stay on schedule.

In a moving speech, Roger welcomed everyone to the 15th Wood Conference. "The conference represents our commitment to innovation and open dialogue across borders, focusing on modern and sustainable timber construction. It has developed into an internationally recognised platform for knowledge exchange and collaboration".

After the Consul General of Switzerland, Andreas Rufer, officially opened the conference, the Deputy Mayor of Cape Town, Councillor Eddie Andrews, took the floor.

SHIFTING PERCEPTIONS

A rousing speaker, Deputy Mayor Andrews, said the Wood Conference is helping to shift public perceptions of timber. "Why is timber seen as an alternative building material?" he asked. "If timber works, why isn't it specified? Is it because of regulation

Deputy Mayor of Cape Town - Eddie Andrews


Reinhard Kropf - Helen & Hard, Norway.


Jurg Frefel - Stoecklin Logistics, Switzerland.

lag, risk perception, procurement systems, insurance and skills gaps, supply-chain constraints, or institutional inertia?"

He thinks the fault lies with the government. "Government's role is about creating conditions that enable innovation, modernise regulatory frameworks, and align planning, infrastructure, and procurement. Public land and buildings must be used strategically".

He proudly highlighted the Green Point Dome, commissioned by the City, as an example of placemaking. The dome is constructed of engineered timber, including curved laminated solid-wood beams and curved timber and plywood panels.

"It shows how public-sector leadership, private-sector knowledge and expertise, and innovative material choices, combined with thoughtful design, can deliver infrastructure that is relevant, efficient, resilient, and environmentally responsive", he said.

He said timber at the city scale is needed for it to be seen as a solution for social and affordable housing, schools, libraries and clinics, community facilities, transit-oriented development, and urban regeneration precincts. "Scale, speed, cost and quality are non-negotiable".

Andrews' final remarks were, "Sustainability is not only environmental, but it is also socio-economic. No single actor can solve the socio-economic challenges cities face. It requires shared courage, and platforms like the Wood Conference to help shift perspectives".


Jamie Smiley of XLam SA and George Kuratle.

MORE FROM LESS

Reinhard Kropf, an architect and founder of Helen and Hard in Norway, was the first speaker. He suggested ways to *Extract More Value with Fewer Resources*.

Resource efficiency is strongly shaping the evolution of timber construction. Reflecting on their first cross-laminated timber (CLT) project in 2005, he said the process of manufacturing fully finished solid panels for walls and floors was wasteful and consumed too much material.

They learned and innovated with subsequent projects to reduce spans, minimise panel thickness, and optimise CLT. In some cases, solid walls were replaced with skeleton construction, hollow box elements, and prefabricated insulated timber-frame systems.

Reinhard said there is growing awareness that although wood is a renewable natural material, it must not be taken for granted. Digital tools, innovative engineering, and prefabrication are helping architects, engineers and manufacturers reduce their material use without compromising architectural and environmental value.

Additional ways of extracting more value from fewer resources are to:

- Design timber structures and connections for easy disassembly and re-use.
- Re-purpose structures and materials instead of demolishing them. Use timber for extensions and additions.

Gunnar Aanesland - Aanesland Treindustri, Norway.

Maretha Perold - Wolf & Wolf Architects, South Africa.

Richard Stretton - Koop Designs, South Africa.

- Integrate hybrid concrete-timber systems that reduce timber and concrete use.

GAME-CHANGING

Jürg Frefel, CEO of Stoecklin Logistics Group in Switzerland, spoke about *How Timber Construction Meets Technology*. He recounted their scepticism when the topic of adding timber to the group's largely steel-based solutions was broached.

"However, we found that timber and technology can be perfectly combined in fully automated intralogistics solutions", he said.

For Stoecklin Logistics and its customers, including retailers, libraries, and international brands like Lego and Sonepar, it is a "game-changer", particularly for those concerned about ecological and economic value, ESG regulation, and financing. In addition, Jürg said, international supply chains can be optimised and proactively address US tariffs of up to 50% on steel and aluminium.

HEMP MATERIALS

The audience was fascinated by Maretha Perold's presentation. Maretha is a Senior Project Architect at Wolf & Wolf Architects in Cape Town. Addressing the topic of *Timber, hemp and the future of sustainable cities*, her presentation explored how integrating glulam, CLT panels and hemp represents a historical transition to biobased construction in South Africa.

Maretha focused on the company's activities in Harrington Street in Cape Town. She describes 84 Harrington Street as "the turning point for South African construction."

The 12-storey repurposed building houses 50 apartments. It has a concrete frame infilled with hempcrete, "marking a global first: the world's tallest building constructed using hemp-based building materials".

She explained that hempcrete is a carbon-negative material that actively sequesters carbon dioxide (CO_2) from the atmosphere, with approximately 108kg of CO_2 stored as biomass per cubic metre over the building's lifespan.

Maretha also spoke about the neighbouring building, 82 Harrington Street. It is now an Excelsior hotel. Wolf and Wolf added three storeys to the existing building. The structure, formed from locally sourced and manufactured prefabricated glulam and CLT mass-timber, was also infilled with hempcrete.

She said the lightweight timber truss, walls and floors system allows for swift, clean construction, with elements lifted into position by a crane. The mass timber enhances acoustic and thermal performance and lowers embodied carbon.

Maretha appealed to the City of Cape Town and other local authorities to implement incentives and policy changes to support developers in "going green". She urged public and private developers to "stop building monuments to the past and grow the future".

VIKINGS TO ROBOTS

Gunnar Aanesland, the owner of Aenesland Treindustri & Sørlaminering in Norway, spoke about the design and manufacturing processes behind highly complex timber structures. The intriguing title of his talk was *"From Vikings to Robots: from the skills of handicraft to digital technology."*

He explained that craft-based construction principles, from traditional and even historical shipbuilding artisans, must inform modern digital timber architecture.

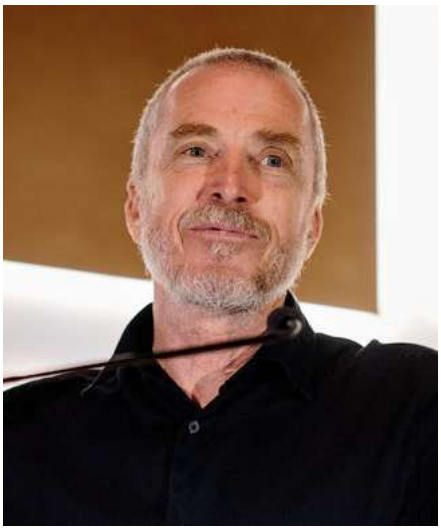
Like all the speakers, he emphasised the importance of continuous collaboration between the professional team and manufacturers so that the design intent, structural logic, and fabrication regulations evolve together. In this way, he said, "innovation is grounded in practical feasibility and architectural vision".

IRM INCUBATION HUBS

Richard Stretton of Koop Designs has strong social and environmental values that feed into his furniture and architectural design. Indigenous knowledge, materials, and craft influence his work.

Richard discussed his contribution to the national IRM (Installation, Repair and Maintenance) Hub initiatives that support local micro, small and medium-sized enterprises through youth-focused, sustainable economic empowerment programmes.

Jari Jonowski - Timbatec, Switzerland.



Sean Mahoney - StudioMAS, South Africa.

Simon Topliss - WAM Studio, Australia.

Richard designed the hubs as prefabricated mass timber structures to serve as "a teaching tool," so that they could be assembled on site by local people. The buildings are water- and energy-efficient, and the services are exposed, making the building a living example of what is being taught.

The hubs are built on the premises of and managed by vocational colleges in some of South Africa's townships. Each hub includes workshops equipped with manufacturing machines and tools, including laser and CNC machines for production, computer and software access, meeting rooms, workshops and shared central areas.

TIMBER FIRST, THEN THE CONCRETE CORE

From fundamentals to future: The vision and innovation of timber construction was the title of Jari Jonowski's talk. He is a Structural Timber Engineer at the Swiss company Timbatec.

There was an audible groan of agreement in the audience when he described the difficulties encountered in aligning precisely engineered prefabricated timber members with concrete structures. "It is a worldwide trend that concrete is less accurate than timber, and the alignment work prolongs projects", he said.

Timbatec considered the problem and decided to turn the process on its head.

Instead of pouring the concrete for stair and lift cores early on, they decided to build the prefabricated timber structure first. This approach "leverages the millimetre precision of timber prefabrication. It also reduces the number of connectors, steel elements and volumes of concrete while simplifying interfaces and shortening construction time".

Jari explained how the company employs 19th-century Vierendeel girders in some buildings. Traditionally used in long-span bridge designs, Vierendeel girders or trusses have no diagonal members, allowing large spans without support beams. The upper and lower chords are made of spruce glulam, while the vertical filler elements are made of spruce CLT. The latter acts as shear plates that transfer the horizontal force between the chords.

Professionals attending the conference could achieve a CPD point.

ORANJEZICHT CITY FARM MARKET

Sean Mahoney, Director and Architect at StudioMas, South Africa, discussed the design aspects of the new Oranjezicht City Farm Market in Granger Bay in Cape Town's V&A Waterfront. He said the "horrible" part of the project was its location atop an underground parking garage.

Mass timber was chosen for its lightweight and prefabrication. The materials included 185m^3 of laminated SA pine, 50m^3 of solid SA pine, 12,400 screws, and 5,530 bolts.

"I wanted the CLT and glulam structural frame to recall the large volumes and pitched roofs of the historic maritime buildings in the area, reimagined in sustainable wood and translucent roofing", he explained.

"It needed to be a temporary yet robust design that would encourage organic growth and showcase the

Richard Ferguson – FSC, South Africa.


Martin Povala – A2 Timber, Czech Republic.


Fabian Scheurer – Design to Production.

authenticity, culture, flavours, and creativity of the community of traders. The authenticity must be felt and easy to change. It is fragmented in form yet connected to the V&A Waterfront".

SELL SOLUTIONS, NOT TIMBER

Simon Topliss, Principal at Warren & Mahoney (WAM) Studio in Australia, describe a different approach to marketing mass timber in his talk, *Blueprint for change: Unlocking mass timber for clients and communities*.

Housing developers in Australia, like those in southern Africa, are "cost-pressured, risk-averse and stuck in concrete thinking", Simon pointed out. "Suppliers are entrenched, clients are cautious, and procurement systems punish unfamiliar approaches. These constraints highlight why now is the time to unlock mass timber at scale".

How did WAM move mass timber, termed "an appalling idea" by a quantity surveyor, to three successful projects progressing to tender? They have convinced Flinders University student accommodation (250 beds), Newcastle University student accommodation (450 beds) and Model Build-to-Rent (155 apartments) to use timber.

The answer, he said, is not to sell the idea of timber. Rather, focus on identifying the questions the developers and specifiers are going to ask and prepare the answers. "Simplify the process and reduce their uncertainty. Projects don't fail because of design, they fail because of risk", he advised.

Two SA companies are part of the Kuratle Group; Universal Plywood and XLam.

The ProNature team and their stand are always a striking presence at conferences.

Hannes Tahtinen- Sweco, Finland.

Sebastian Bildau - Atelier Bildau, Germany.

Erik Soderlund of ITC-SA and Chris and Allan du Toit of TPS.

The University of Pretoria's Schalk Grobbelaar, Marcus van der Hoven and Johann van der Merwe with their graduate Owen de Lange and his employer, Leon Ras of Dockter + Ras in Cape Town.

Developers, architects, and engineers understand concrete and labour costs, the time and number of people required for on-site construction, and the mud and waste that accumulates.

"Address the risks, technical challenges, and environmental concerns first. I have collaborated with universities on timber projects valued at over AUD125 million, and the reason we were successful is that it always comes back to one answer: the client's desire to demonstrate carbon leadership", he said.

"The blueprint for change is to ensure that the timber case is backed by evidence and confidence at the highest decision-making level. Pre-empt questions about rapid prototyping, digital fabrication, meeting building and fire standards, and prefabrication".

Explain the implications of shifting construction from messy building sites into factories, he urged. Construction becomes about assembling parts and panels. It makes a circular economy and Passive House principles achievable by reducing the building's operational carbon footprint.

CZECH REPUBLIC PAVILION

Martin Povala, Executive Director at A2 Timber from the Czech Republic, described how they designed and built the award-winning and visually striking Czech Republic Pavilion for World Expo 2025 in Osaka, Japan. When it was completed, the circular timber-and-glazed structure was one of the tallest timber buildings in Japan.

Martin mentioned that the circular floor plan was divided into 36 equal sections using rational geometry and Stora Enso's Sylva mass timber kits of parts throughout the building. Due to the geographical location and weather conditions, including tornadoes and earthquakes, the engineering calculations had to ensure that the materials met local regulations.

The design was optimised for the simplest possible on-site assembly and dismantling after the event. The timber components were sourced in the Czech Republic and transported to Japan in 50 shipping containers.

"The project was a dialogue between cultures, engineering philosophies and contrasting building codes. We learned to operate in an environment where tradition meets cutting-edge technology".

FREEFORM TIMBER

Fabian Scheurer, Managing Partner at Design-to-Production (D2P), Switzerland, discussed *Freeform Timber 2010 – 2025*. He describes freeform projects as the "low-hanging fruit for digitalisation in the construction industry" because of the relationship between digital design and CNC-controlled fabrication.

The company specialises in parametric planning. It creates detailed 3D models, 3D construction documentation, and processes data required for fabrication by different tradespeople.

He explained the geometry, parametric modelling and fabrication data produced for the Wisdome project in Stockholm. The dome is covered by a timber grid-shell spanning 24x47m and assembled with 2,655 pre-cut laminated veneer lumber (LVL) bent on site.

The roof of the Centre Pompidou Metz was designed by the Japanese architect Shigeru Ban to resemble an 8,000-square-metre traditional Chinese hat. The timber beams measure 14 x 44cm in cross-section, and D2P assisted in creating a reference geometry for the roof and provided the construction firm with the CAD tools to CNC process 18,000 linear metres of material into 1,800 double-curvature laminated timber segments.

DIGITALISATION

The Technology Manager at Sweco in Finland, Hannes Tahtinen, presented on *Structural solutions: Versatile implementation methods in timber construction*.

Hannes used Finnish examples to illustrate how digitalisation is transforming design and manufacturing. Technologies like building information modelling (BIM) and digital twins support the innovative use of timber. By ensuring precision in design and fabrication, waste is reduced, and construction becomes more efficient.

Universal Plywood has rebranded itself.

Special attention is paid to climate adaptation, emissions reduction, circular material flows, and energy-efficient systems. In housing and urban development, sustainability and digitalisation go hand in hand, with new technologies analysing, simulating, and shaping the best solutions.

INSIST ON CERTIFIED TIMBER

Timber's carbon advantage only matters if the forests behind it are sustainably managed. That was the central message from Richard Ferguson of the Forest Stewardship Council, South Africa. The title of his talk was *Beyond Carbon: Where wood comes from and why sustainability matters*.

David Marks of MEWA.

Brad Anderson of Universal Plywood.

The 15th conference, like those that have gone before is a convivial space for learning and networking.

Good food and conversations at lunch time.

Compared with conventional structural materials, timber can significantly reduce embodied carbon: typically, 30–60% lower than concrete and 40–50% lower than steel, depending on the system used. Wood also stores biogenic carbon absorbed during tree growth for the lifetime of a building, while timber structures are often lighter and quicker to construct.

But Richard argued that these advantages are only the starting point. The critical question for architects is not simply whether to use timber, but "where did the timber come from?"

While wood is a renewable material, it is only truly sustainable when sourced from responsibly managed forests. He urged architects to ask questions about the Chain of Custody of timber products. It is the system that tracks wood from its point of origin as a seedling in the forest, through sawmilling, manufacturing and distribution.

"Sourcing is a design decision. Specifying certified timber is not idealism but risk and liability management in an era of increasing ESG scrutiny and green procurement requirements".

Richard said opting for voluntary FSC Project Certification informs stakeholders that forest-based materials in a building have been responsibly sourced. It helps projects meet procurement policies and contributes to sustainability rating systems such as BREEAM and LEED.

TALL WOODEN BUILDINGS

Sebastian Bildau of Atelier Bildau in Germany is an Urban Designer and Tall Timber Specialist. Sebastian had the unenviable task of being the last speaker of the day; his down-to-earth presentation proved entertaining and kept everyone awake. The title of his speech was *Tall wooden buildings for urban redevelopment*.

In Europe and Canada, modern cities are progressing towards greater sustainability by adopting timber and other renewable materials, such as bamboo, as their main building resources. Cities resemble "forests", he explained, because buildings serve as trees and enhance the resilience and diversity of urban ecosystems.

When designing mass timber structures, the interplay between the overall concept, or "the big picture," as he calls it, and fine detailing takes centre stage. The structure itself becomes an ornament, fulfilling aesthetic and load-bearing roles.

The entire process, from design and detail through to fabrication, transport, and (dis-)assembly must be integrated. Hybrid structural systems enable an optimal balance between material use, cost, and ecological responsibility.

Sebastian believes that, as far as possible, buildings should be built to last. They can be repurposed through adaptive reuse with renewable materials rather than disassembly.

He presented a hypothetical example of innovation and adaptive reuse of the Cresta Hotel in Cape Town. The design uses mass timber elements to add 7,000m^2 of additional hotel rooms and 1,500m^2 of additional amenity space. The most remarkable and visible aspect of the proposal is to extend the building vertically with four new mass timber floors, including a rooftop pool and sun deck supported by timber "super" or "mega" trusses.

AFTER PARTY

In conclusion, Roger and Hannu thanked the organisers, CTICC, speakers, and audience. They extended an invitation to everyone for the after-party celebrating the 15th anniversary. Tongue in cheek, Hannu playfully reminded the conference goers not to forget their coveted large bars of Lindt chocolate.