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By Joy Crane

The South African forestry sector is in a state of perpetual development and must be responsive to global and local changes in socio-economic and environmental priorities. This requires a science-based understanding of the entire value chain. New precision technologies are helping us to better evaluate forests at macro and micro level, enhance our ability to estimate stand volumes, and measure the properties of individual trees and logs. Increased profitability is also achieved by better understanding the precise interactions of genetic, site and silvicultural management to grow more valuable wood or forests.

The focus in the forestry and transport sections this month is on how science and technology can make the industry efficient and competitive in the international marketplace. The scientists, students, industry representatives and international speakers all contributed to making the Precision Forestry Symposium held at Stellenbosch University a success. We also explore the issue of trapping and shooting baboons. The forestry industry is and has invested hundreds of thousands of rands in researching the activities of baboon troops in and around plantations to identify non-lethal mechanisms of controlling baboon populations. Culling is unfortunately the last resort.

In the sawmilling section, the spotlight is on local manufacturing and the application of science and technology. Sawmill equipment is usually imported, however there is a timeous and strengthening move to embrace local manufacturers of processing machines and waste management and biomass-related equipment. Last year we reported on the purchase of South Africa’s Multisaw Titan sawing machines by a leading worldwide manufacturer and supplier of sawmilling equipment.

We also profile a South African engineering company that for many years has served the sawmilling industry, however few people realise that this is only a sample of what TF Design is capable of. It has successfully applied its expertise in diverse industries such as the military, automotive, medical, bio-engineering research, automation, and fuel cells, to assist sawmillers with their drying, waste and materials handling systems and biomass conversion processes.

Stop Press
Congratulations to Furntech on winning the prestigious International Business Incubation Association (INBIA) Speciality Entrepreneurial Centre of the Year Award and the Dinah Adkins Incubator of the Year Award at the INBIA’s 31st conference held in Seattle, USA. Furntech is our national furniture skills development and small business incubation centre, and competed against 67 countries to bring home the two trophies and USD1000.
The theme of the precision forestry symposium, recently hosted by Stellenbosch University, sets the agenda for the forestry industry in 2017: how to optimise value in the bio-economy from data driven decisions.

This theme covers two concerns facing forestry today: that of developing appropriate, affordable, and accurate technologies to gather scientific data; and how small companies, corporates, academics, and governments can apply these to make decisions on how best to manage their contributions to the bio-economy.

Every four years the event provides a forum for forest scientists and practitioners from around the world to share their research, knowledge, experience, and emerging ideas with the greater forestry community. This year Stellenbosch University’s Department of Forest and Wood Science, the Southern Africa Institute of Forestry (SAIF), Forestry South Africa (FSA) and the International Union of Precision Forestry Symposium highlights data-driven decision-making.

Drones are here to stay: Demonstrating the type of data that drones and LiDar can deliver were, from left: Kelly Gaussen, Franscous Maree, Francois Stroh and drone pilot, Riaan Pheiffer.

Jason Pistorius with the Trimble Justima in its yellow protective case, responds to questions from the precision foresters. Pistorius is from Optron, the company that represents trimble products in South Africa.
Mapping the South

Driven by the need for cost-effective operations the South African forestry industry is recognising that supply chains compete more than companies do with one another and is, for the first time, engaging in inter-company collaboration to identify and analyse its value chains.

Speaking at the 2017 Precision Forestry Symposium, Simon Ackerman of the Institute for Commercial Forestry Research (ICFR) presented the results of the first phase of a mapping exercise by the pulpwood industry of its supply chain.

He said a supply chain contains the full range of activities that are undertaken to convert raw materials into desired final products. The supply chain map can be used as the basis for a framework to map and model other forestry value chains such as construction timber, poles, and furniture grade products.

Ackerman explained that companies that improve the total performance of their supply chain tend to be more successful than those that optimise isolated components.

"Historically, the South African forestry supply chain was divided up into discrete sections, usually nurseries, silviculture, harvesting, transport and processing, with each being managed separately to optimise operational and financial efficiency of a given section," he said.

"However, when viewed from a full supply chain perspective, optimisation within sections often results in loss of efficiency in other sections and possibly even losses in production."

"This recognition prompted the forestry industry to look at the supply chain in a holistic manner, and to develop an understanding of how the optimisation of an operational section, such as the nursery or silviculture, impacts on other sections in the supply chain, and ultimately on the value realised from the full supply chain."

The starting point was to develop an initial map of the eucalypt pulpwood supply chain based on a basic system for plantation forestry production from stock production to mill-gate. This was adapted and built on through engagement with various stakeholders.

The next part of the exercise was to conduct a brown-paper flow analysis to map the supply chain as it currently operates (not as it should operate), to identify challenges and opportunities and to understand the relationships between various sectors and markets. The ICFR staff did the first version and then it was introduced to industry at a workshop.

Benefits to the SA forestry supply chain?

- Informed decisions at planning level => optimal silvicultural regimes => productive low-cost harvesting
- Show potential to increase economic viability of operations
- Overall understanding of influences parts of the value chain on others

Before returning to Stellenbosch, the delegates visited Arderne Gardens in Claremont for a picnic lunch in the most diverse and valuable collection of exotic trees in the country. It includes one of the largest trees in South Africa, the Moreton Bay Fig (or Wedding Tree, as it is commonly called) and the largest Aleppo Pine in the world. These trees, along with four others, were designated Champion Trees in 2008.
African forestry value chain

"To fully capture the information in the forestry supply chain, process owners of the different operational sections (e.g. planning, harvesting, silviculture, nurseries) within each of the major pulp-processing companies were engaged. The draft supply chain map was presented and a consensus component, as well as any links between steps or options, of the supply chain were then discussed and key points captured."

The exercise yielded a conceptual map of the South African forestry supply chain. This included understanding the different parts of and the interaction of these parts on each other. Details of the main criteria, interventions, opportunities and potential for new investigations and research were also discussed and highlighted.

"The results of the workshop show that there are many areas within the eucalypt pulpwood supply chain that could be optimised, some of which would be through a change in management, others require research to determine if they would result in improved efficiency or productivity," explains Ackerman.

The next step will be to identify the variables required, mathematical relationships and potential measures/indicators of various steps and options within the supply chain. This process will highlight the priority of research needs for the supply chain by giving an indication where there is little or no information available.

During the break following Ackerman’s talk, Jaap Steenkamp of the South African Forestry Contractors Association congratulated Ackerman on "the most important presentation" at the event. Steenkamp illustrated his comments by pointing out that it is often said that harvesting spends the money silviculture makes, which underlines the lack of understanding of value chains.

Ackerman said once the various variables are linked together using mathematical relationships in a decision support framework and system, the costs and resultant revenue of various options can be applied to assist companies or individuals to make informed decisions.

Estimating thinning results based on standardised harvester data

Swedish forestry companies are successfully using information collected from their hundreds of harvesters fitted with on-board computers to calculate key stand data after thinning, based entirely on standardised harvesting data.

Johan Moller of the Forestry Research Institute of Sweden (Skogforsk) informed Precision Forestry Symposium delegates about the model that was developed and evaluated for all types of sites in Sweden using more than 10 different thinning harvesters.

The objectives of thinning follow-up on a stand level, said Moller, are to monitor thinning operations, making it possible to update databases to:

- Have accurate forestry planning systems
- Increase thinning quality
- Decrease costs
- Increase total productivity

He explained that it is important to focus further development on giving the logging teams more rapid updates and methods of increasing the quality of the estimations of the remaining stand.

Skogforsk has developed and extensively tested a model for calculating key stand level data, based on harvester data. A demonstration software for use in harvester computers has been developed, giving operators feedback on important thinning quality parameters and data for the remaining stand. A total of 60 different thinning stands from all over Sweden were evaluated.

Moller says that all indications are that the methods for estimating stand variables based on harvester data can be implemented and will result in a precise information under most normal conditions that occur in Swedish thinning stands. "Based on this study it is concluded that the methodology has been sufficiently validated and that the method can thus be widely implemented by Swedish forestry. The future development therefore ought to be focused on implementation of the method and, of course, further fine-tuning," commented Moller.
International and local delegates enjoyed the symposium

Delegates at the 2017 Precision Forestry Symposium held at Stellenbosch University did not let the speakers relax, and questions were asked and issues debated during question time, the field trip and even during breaks.

The delegates took advantage of the good weather and the opportunity to network with a glass of wine and excellent food.
Many people are unaware that forests cover one third of the earth’s land mass – and that some 1.6 billion people, including more than 2 000 indigenous cultures, depend on forests for their livelihood. In addition, global deforestation continues at an alarming rate, and it is estimated that 13 million hectares of forest are destroyed annually. Deforestation accounts for between 12% and 20% of the global greenhouse gas emissions that contribute to climate change.

Also rather astonishingly, forested watersheds and wetlands supply a whopping 75% of the world’s accessible fresh water.

In celebration of the 2017 International Day of Forests on 21 March, a leading producer of outdoor power products for garden, park and forest care, Husqvarna South Africa, invited their dealers and end users to accept the 2017 #treechallenge and join their tree planting drive.

Husqvarna, the world’s first forest and garden group to have its greenhouse gas emission reduction targets approved by the Science Based Targets Initiative, pays homage to this global forest recognition day and is earnest about doing its bit to raise awareness about the importance of all trees and forests, says Jacqui Cochran, marketing manager for Husqvarna South Africa.

As a world leader, the group is committed to playing its part in renewing the earth’s natural resources. In the spirit of this, Husqvarna has challenged its dealers nationwide to plant indigenous species for worthy recipients, i.e. schools, orphanages, old age homes or other deserving charity organisations.

"The annual International Day of Forests celebrates how forests and trees sustain and protect us," says Cochran.

"This year’s theme focuses on how forests are key to the planet's supply of fresh water, which is essential for life."

"We want to see more than 100 trees planted in 2017, with our dealers’ cooperation," says Cochran, adding the old Chinese proverb: "The best time to plant a tree was 20 years ago. The second best time is now."
Bell focuses on whole system forestry mechanisation

Bell Equipment has a strong pedigree in the field of forestry mechanisation, having invested substantially in the research and development of products as well as in relationships with respected partners to bring to market the most comprehensive range of proven mechanised solutions for its customers.

"Uniquely, Bell is a supplier that also has many years of experience in the design and manufacture of forestry equipment; of listening to our customers and proving concepts before we offer them to market," says Bell equipment product marketing manager, Tim Beningfield.

"This means that we are able to deliver both the innovation our customers need and reliable backup support to keep them running.

"Over the years we've tested various concepts. Sometimes our innovations have been a few years ahead of their time, but ultimately this extensive research and development has had a direct bearing on our product offering. We have carefully selected our own and partner products that we are confident will meet customers' needs, be it manual or fully mechanised operations."

Driven by providing lowest cost per tonne solutions, Bell looks at the whole system and not only specific parts, because the company believes this is critical to improving efficiency, operational safety and reducing costs.

Bell Equipment's legacy in forestry started almost 60 years ago when the Bell range of tri-wheelers, rigid haulers and trailers were extended from sugar cane handling to cope with the more demanding forestry environment.

Today the ubiquitous tri-wheeler is the benchmark for loading timber. In spite of this, Bell has spent the last three years refining this machine to meet the health and safety needs of the industry, and will launch a new generation early next year.

Its Series IV generation of rigid haulers was updated last year to include the latest Mercedes-Benz water-cooled engines that deliver key performance and productivity benefits, as a case in point.

Today, based on Bell's mainstream ADT products, the company is able to offer versatile alternatives for transport, including infield self-loading long range forwarders and articulated tractors designed to handle differing haul distances as well as poor underfoot conditions.

The partnership with John Deere Forestry Equipment provides additional substance to the range with purpose-built fully-mechanised systems, which are seen as the global benchmark in terms of safety, productivity, lowest daily operating costs and uptime. This range includes feller bunchers, forwarders, harvesters and skidders.

"We've learnt through our years of experience that machines built for the forest need to be strong and reliable to survive," says Beningfield. "It is much the same as the relationships with our stakeholders; we believe in building strong, reliable relationships with our customers and partners."

With Bell Equipment's in-depth knowledge of the forestry industry, and products well suited to meet customers' requirements, the company is committed to remaining the premium supplier to the timber industry.
Through our carefully selected combination of own and partner products, Bell Equipment provides solutions that meet customers’ needs as they move from manual to fully mechanised operations. Driven by providing lowest cost per tonne solutions, we look at the whole mechanised system and not only specific parts of the system, with a keen view to improve operational safety and productivity.

Bell Equipment - a proudly South African company committed to helping businesses realise Africa’s potential.
The issue of baboons and their activities and impacts on South Africa’s dwindling pine plantation resource is again in the spotlight, and this time it is a national talking point since Carte Blanche aired a programme on the topic on Sunday, 5 March.

In the programme the conservationist group, Baboon Matters, points out a pine forest floor littered with thousands of baboon skeletal remains. Several people were interviewed in the programme including Jenni Trethowan who is the founder of Baboon Matters, the executive director of Forestry SA (FSA), Michael Peter, Mpumalanga government officials, a forestry contractor, tearful conservationists, and Dr John Scotcher, the chairperson of the Baboon Damage Interest Group.

The conservation groups are appealing to the public to support their cause because baboons are part of the natural ecosystem and monoculture crops like pine plantations have invaded and changed their environment. They want a moratorium declared on the culling and insist that forestry companies have not done enough to find alternative non-lethal solutions to the problems caused by baboons. They say that although the baboon killings are legal, they are inhumane and irresponsible.

FSA explains that it should be remembered that the forestry industry is not alone. Baboons cause substantial losses for other agricultural activities including citrus, banana, maize, vegetable, macadamia, avocado, and grape farmers. The industry works with other farming groups, nature conservation agencies, environmental bodies and the scientific community, to ensure that control measures for reducing crop losses from baboons, are scientifically and ethically sound.

Economic losses

Over recent years, the South African forestry industry, particularly in Mpumalanga and the southern Cape, has encountered an alarming increase in damage to commercial timber plantations by baboons. This damage occurs when baboons strip bark off the trees, causing major deterioration in wood quality and the eventual death of the tree. Disturbingly; some plantations have sustained greater losses from baboons than from drought.

The damage has resulted in significant losses for the commercial timber industry owing to:

- The high reject rate of harvested timber by sawmills as a result of damage
- Escalating fuel, harvesting and replanting costs due to volumes of damaged or dead trees left infield

Scientific research

The forestry industry has invested hundreds of thousands of rands in researching the activities of baboon troops in and around plantations to identify non-lethal mechanisms of controlling baboon populations and preventing them from damaging the resource. The forestry value chain is recognised by the government as a key sector for development. However, baboons, pathogens, fire, and climate change are all affecting the future sustainability of the resource.

The Baboon Damage Interest Group (BDIG) operates in Mpumalanga and comprises affected timber growers, provincial nature conservation, the Wildlife and Environment Society of South Africa (Wesa) and the Endangered Wildlife Trust. It is currently extending its membership to other affected stakeholders, like the South African Sub-Tropical Growers Association and the Mpumalanga Department of Agriculture Forestry and Fisheries (Daff).

This forum convenes regularly to find suitable management options and has developed a Baboon Damage Protocol for the management of Chacma baboons causing damage in southern African commercial plantations. The protocol enables affected timber growers to use appropriate control measures.
Culling is a last resort when damage has become unsustainable for business to continue, and when all possible non-lethal alternatives have been tried and failed. FSA and its members are committed to ensuring that control measures are based on sound scientific research, part of which is being undertaken by the Baboon Research Unit at the University of Cape Town. The unit is run by Prof Justin O’Riain, who recently addressed the precision forestry delegates during their field trip to Kirstenbosch Botanical Gardens.

What are the alternatives?

At the start of his presentation O’Riain asked the delegates to think of an answer to the question: Are there alternatives to culling baboons?

He described the various research methodologies and technologies used to track and record baboon behaviour. It was found that in Mpumalanga there are an average of 7.36 baboons per square kilometre, whereas the ideal is two baboons per square kilometre.

“We found that baboons love pine plantations and exotic timber. They don’t like indigenous trees, probably because it is difficult to strip their bark and digest,” he said. A key reason for the proliferation of baboons is the removal of their natural apex predator, leopards.

Preliminary research shows that when more adult males reside in plantations rather than in neighbouring natural habitats, it disrupts social relationships. Stripping bark seems to centre on the behaviour of stressed baboons due to these unnatural population ratios. O’Riain described how the plantations in Tokai in Cape Town were adjacent to many hectares of vineyards. Electric fences prevented access to the grapes, which caused the baboons to become frustrated. They resorted to scratching, scraping and biting the pine trees.

O’Riain detailed the known drivers that change the behaviour and density of baboons and their troops. "There are multiple reasons for the changes and it is impossible to mitigate them," he said. "Plantation forestry is the only form of agriculture that encourages biodiversity. All other forms of agricultural practices eliminate any threat completely. We are the only agro-industry that farms with baboons. We don’t want to eliminate baboons if their numbers and the damage caused are manageable."

He concluded by again asking the delegates if they could think of an alternative to culling baboons. It was unanimously agreed that unless it was possible to reintroduce leopards into the ecosystem, culling as a last resort is inevitable.

York Timbers' baboon management statement

Recently, various groups gained unauthorised access to our land where they disturbed burial sites of damage-causing animals and captured footage with the intention to portray forestry companies in an unfavourable light. The growing baboon population has become a national problem in the agricultural sector and York is as concerned as other stakeholders about this.

York Timbers’ forestry land is privately owned and access to the land is controlled through a permit system. This is necessary to control fire risk, timber theft, theft of fauna and flora, environmental damage to sensitive areas as well as poaching. In addition, the safety of people accessing York’s plantation is of great importance to York since forestry activities entail the moving of heavy machinery and harvesting equipment as well as timber trucks weighing up to 40 tonnes.

This poses a risk of causing harm to people entering our plantations without authorised access. The recent rains of over 200 mm in the Sabie district made travelling on the roads inside the plantations very dangerous. York promotes access and utilisation of our forestry land through various events and recreational activities on an organised and controlled basis.

Finding practical solutions to the growing baboon population and the resultant risk to the agricultural sector is a very high priority to the forestry industry. Forestry companies in Mpumalanga continuously strive for scientific solutions based on ethical grounds to contain and manage this problem.

**Therefore:**
- York fully subscribes to the Forestry South Africa (FSA) protocols and governance in baboon management, and participates in industry and community forums that jointly address this matter with an ethically and scientifically-based approach.
- York, under the umbrella of FSA, is collaborating with stakeholders, through the Baboon Damage Interest Group (BDIG). Research is governed and managed through these forums to constantly improve on baboon management protocols.
Forestry

Research studies have revealed that baboons do not eat bark as it is of minimal nutritional value. The stripping of bark is a behavioural consequence directly related to high population densities. The baboon population densities in the Mpumalanga region range from seven to 10 times greater than the accepted norm of baboon population in their natural habitat. These densities vary between pine plantations (the highest), urban environment and the natural fynbos habitat.

The reason for the explosion of the baboon population numbers is still under investigation. The decline of natural predators with the habitat transformation due to urbanisation, the growth of the mining sector and intensive agricultural activities are all factors impacting animal behaviour.

The density of baboons in various biodiversities have a significant impact on ecological systems and is currently impacting the survival of other endangered species like the African Peregrine, Bateleur and Cape Vulture.

The damage that baboons have caused to trees in the Mpumalanga region is substantial. This causes a huge volume of timber, in both solid wood and fibre processing, to become unusable. The situation is so dire that York submitted a bid under the renewable energy independent power producer procurement programme for a 25 MW biomass electricity plant to better use this huge volume of baboon damaged trees.

Various research institutes such as the Forestry and Agriculture Biotechnology Institute (FABI) of the University of Pretoria, University of Cape Town (UCT) and the Institute of Commercial Forestry Research (ICFR) are engaged to assist the industry in finding alternative solutions. This includes adopting species that will be less prone to damage caused by animals. The industry and FSA fund these initiatives, in conjunction with the Department of Agriculture, Forestry and Fisheries (DAFF).

The practice of allowing various sporting and recreational activities on our land throughout the year also acts as a deterrent for baboon troops.

Along with the rest of the industry, York is keen to find constructive solutions to manage the baboon situation in a balanced and sustainable way.

FSC gave permission for culling

The Forestry Stewardship Council (FSC) is a global organisation dedicated to the promotion of responsible forest management practices.

In January 2011, the FSC reviewed the method of “bait, trap and shoot” used by the forestry industry in Mpumalanga, and found that the practice is not an infraction of any of the FSC Principles and Criteria.

The finding further states that culling:

- Complies fully with legal requirements
- Does not prejudice any listed threatened or protected species
- Does not threaten any species with local extinction
- Does not threaten the viability of existing native ecosystems
- Respects the criteria dealing with pest management

The FSC panel also made certain recommendations, including adopting a more transparent approach to the problem as well as encouraging further research to better understand the bark stripping behaviour.

The livelihood of thousands of people in the pulp, paper and packaging industry, furniture manufacturers, construction industry and sawmills are among those affected by tree mortality.
Tough work? Tougher tools required...

The STIHL FS 460 C-EM K is a professional-grade cleaning saw for cutting and sawing applications. Designed especially for the exacting demands of the forestry industry, the FS 460 C-EM K features the M-Tronic electronic engine management system that automatically alters settings according to altitude, temperature and fuel quality. This innovative system monitors and adjusts the fuel-air mix for optimal performance in all conditions, and recognises a cold/warm start and calculates the precise amount of fuel needed. It also records settings for future use so there’s no need to constantly reset the machine. STIHL ErgoStart ensures easy starting (as there is no choke it is almost impossible to flood this machine), while the 2-MIX engine reduces emissions and is fuel efficient. A large, see-through fuel tank limits the time spent on filling and checking fuel levels. This compact, ergonomic and powerful cleaning saw is the ideal machine for clearing and coppice reduction, even in difficult terrain.

Like any premium item, STIHL products are only available at specialised dealers nationwide. For expert advice and superior after-sales service.

www.stihl.co.za
In 2012, the United Nations General Assembly proclaimed 21 March the International Day of Forests (IDF). The aim is to celebrate and raise awareness of the importance of all types of forests. Countries are encouraged to undertake local, national and international efforts to organise activities involving forests and trees such as tree planting events.

IDF raises awareness on forests and trees, including their role in climate change. This year’s focus was on Forests and Energy. Although a public holiday in South Africa (Human Rights Day), IDF is a global day of observance and not a public holiday.

With this year’s focus on forests and energy it is important to remember that energy from biomass is one of the oldest forms of energy used by man and that wood was the principal source of energy until about the mid-nineteenth century. Fuelwood is still the dominant energy source in developing countries, accounting for most of the wood usage in Africa. While developing countries aspire to move away from often-unsustainable use of fuelwood to “modern” energy sources such as nuclear (even in South Africa!) we also see an increase in biomass usage in developed countries as a climate change mitigation approach – truly a remarkable contrast in thinking!

Despite how people and countries think about biomass usage we should recognise that forests cover about one third of the world’s land mass and that approximately 1.6 billion people, including more than 2 000 indigenous cultures, depend on forests for their daily livelihood (including energy usage). Therefore, forests (whether planted for modern short rotation fuelwood crops or protected examples of ancient natural forests) are vital to the planet for many reasons, including:

- Providing shelter for more than half of the terrestrial species of animals, plants and insects.
- Contributing to the balance of oxygen, carbon dioxide and humidity in the air.
- Protecting watersheds, which supply fresh water to rivers.

However, we cannot take these forests for granted. Deforestation accounts for 12% to 20% of the global greenhouse gas emissions that contribute to global warming. I hope you joined hands with foresters worldwide at #IntForestDay to be part of International Day of Forests 2017.

Every day should be #IntForestDay

Hannel Ham, President of the Southern Africa Institute of Forestry (SAIF)
Agricultural land — and stubble lands in particular — with the disastrous drought and strong winds have played a role in fuelling wildfires in the Overberg region during this fire season.

According to the fire protection officer of the Greater Overberg Fire Protection Association (goFPA), Reinard Geldenhuys, he experienced wildfires covering the same distance in a space of two hours on stubble lands, as he did in two days in fynbos.

Agricultural land is traditionally considered to be low risk in terms of wildfires, with many farmers who own only agricultural land not belonging to any fire protection association.

"From mid-November until the end of March, stubble lands are not as low risk as we used to think," says Geldenhuys.

"We’ve seen some of the worst fires in Caledon and Swellendam this fire season – mostly covering agricultural areas. Not only do we lose infrastructure during fires, we tragically lose lives."

According to Louise Wessels, manager of the goFPA, a legal opinion from Cliffe Dekker Hofmeyr shows that landowners can avoid being exposed to claims of negligence.

"If a fire starts on a landowner’s property – whether it be natural vegetation or agricultural land, non-FPA members can be exposed to the presumption of negligence," says Wessels. "And if non-members try to fight wildfire and the fire spreads, causing damage to infrastructure or even loss of life, these non-members will also be presumed to have been negligent."

Non-FPA members should notify their insurers that they do not belong to an FPA. If they don’t, they could compromise their cover should a claim be made.

"During these times where we’ve faced such intense and uncontrolled wildfires, it’s really important for landowners to belong to any FPA — as stated by the National Veld and Forest Fire Act," concludes Wessels.

**Stubble fuels Cape Overberg wildfires**

If you have a mean machine you want to show off to farmers and foresters, or if you get a thrill from seeing big machinery in action, then the Agriculture and Forestry Expo (AGFO) 2017 is for you. It promises to have a wide variety of sector-specific exhibitors.

Held for the first time last year, Joey Lascelles, Chairperson of the AGFO committee and CEO at United Forest Products, says it was the first of its kind and established itself as the preferred trade platform for the agriculture and forestry sectors.

AGFO 2017 was launched at a well-attended networking event held at the Casterbridge Lifestyle Centre in White River on 2 March.

"AGFO was conceptualised by a group of volunteers to ensure that there’s an efficient and effective trading platform for the agriculture and forestry industries in Mpumalanga. It’s an expo where like-minded people are able to gather, network and do business to ensure the growth of the economy in these sectors."

Besides launching AGFO 2017, which will take place at the Casterbridge Lifestyle Centre from 14 to 16 September, the organisers handed out trophies to the 2016 sponsors and expo stand prize winners.

The sponsors were Valley Macadamias (gold sponsor); Ezigro Seedlings and MTO Forestry (silver sponsors); and United Forest Products, Imvelo Forests and SILVIX Forestry (bronze sponsors).

Exhibitors who received awards were Malelane Garage Equipment, for the best stand in agricultural equipment; Rudamans, for the best stand in forestry equipment; Laeveld Trekkers, for the best stand in industrial equipment; and Enviro Chainsaws Nelspruit, for the ‘Gees’ (team spirit) award.

"Without the support of our sponsors and exhibitors, AGFO 2016 would not have been as successful as it was," says Lascelles.

As part of its corporate social investment initiatives, AGFO presented a R5 000 cheque to Rotary White River. Lascelles also shared with those gathered at the launch that the Honorary Rangers had a free exhibition stand at AGFO 2016, valued at R6 000, and also received R8 500 raised at an expo auction.

**AGFO Expo 2017 launched in style**
Automated measurement of logs on trucks

The volume of wood in log form that arrives at a sawmill represents on average about one third of the delivered cost, and it is therefore key to adopt measurement procedures and technologies that provide better wood volume estimates.

Speaking at the 2017 Precision Forestry Symposium, Dr Mauricio Acuna of the Australian Forest Operations Alliance, University of the Sunshine Coast, in Queensland said poor measurements have an impact on the income obtained by haulage contractors and forest companies, and can negatively affect their contractual business relationship.

The goal was to investigate an automated and cost-effective way to accurately estimate the value to be derived from the green wood on the trucks.

Acuna explained that although laser scanning has become a mature and more affordable technology in the forestry domain, it remains expensive to adopt and implement in some real-life operations. In the study, multi-view photogrammetry and commercial 3D image processing software were tested as an innovative and alternative method for automated volumetric measurement of truckloads.

This, a preliminary study, also investigated the accuracy in truck volume calculations that can be obtained with photogrammetric methods and 3D reconstruction software in comparison to manual methods, and proposed guidelines for the implementation of the technology in real-life operations.

The study used 10 truckloads which, when manually measured using Huber, came to 1230 m³ solid volume. The digital images were collected with a drone (DJI Phantom 4) from different angles and heights (10 to 15 metres above the trucks) to cover the whole load of pulp logs carried on semi-trailer trucks. The drone has an in-built GPS system, so all the photos were geotagged with their corresponding latitude, longitude, and altitude information.

Multi-view 3D reconstruction is a technology that uses complex algorithms from computer vision to create 3D models of the truck from overlapping 2D images obtained from a digital camera. It is an inexpensive, effective, flexible, and user-friendly photogrammetric technique for obtaining high-resolution datasets of complex topographies at different scales.

The results from the preliminary study of 10 truckloads of pulp logs indicate that there is indeed potential for the use of multi-view photogrammetry and commercial 3D image reconstruction software to determine the frame volume of truckloads. Acuna concluded: “Our preliminary tests show promising results for the future implementation of this approach in real-life operations, and more tests will be conducted to validate our approach.”
Dr Bo Dahlin of the University of Helsinki, Finland, presented a paper on the efficiency of high capacity trucks (HCT) at the 2017 Precision Forestry Symposium. The study investigated productivity, fuel consumption and emissions for HCT trucks.

He explained that traditionally timber logistics involves long haul from the felling site to the log yard, or as in the case of South Africa, the logs are short hauled from the felling site to a landing site where a second truck takes it all the way to the log yard. In the HCT world smaller units carry the logs to a central terminal from where HCT units transport them to the sawmills. This central terminal is equipped with a range of technologies to ensure that both loading and unloading operations work efficiently.

Finland has one of the highest allowed gross vehicle weights (GVW) globally, with a maximum of 76 tonnes on public roads. The Finnish Transport Safety Agency gave permission for three different HCT units to exceed the general limitations (in GVW and length) for some designated routes between 2014 and 2016. The study took place in two different areas, one in the north of Finland and one in the south. The conditions of the areas are quite different, as the northern area reaches above the Arctic Circle, while the other is as far south you can get in the east of Finland.

Data was collected with the HCT’s on-board data loggers and was retrieved using the manufacturers’ software during the period March 2014 to September 2016. The number of trips for each truck is shown in Table 1.
Table 1: Number of observed trips for each studied vehicle

The average speed and distances driven for the three trucks are presented in Table 2. It is not possible to calculate the proportion of empty driving directly from the figures. HCT B, for example, seldom drove empty.

<table>
<thead>
<tr>
<th>Truck</th>
<th>Number of trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCT A</td>
<td>448</td>
</tr>
<tr>
<td>HCT B</td>
<td>309</td>
</tr>
<tr>
<td>HCT C</td>
<td>317</td>
</tr>
</tbody>
</table>

Table 2: Average speed and driving distances for the three trucks

For all trucks the fuel consumption was about 60% higher when driving loaded compared to empty driving (Fig. 1). The consumption also showed some seasonal variation.

<table>
<thead>
<tr>
<th>Truck</th>
<th>Average speed km/h</th>
<th>Average km per trip</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Loaded</td>
<td>Empty</td>
</tr>
<tr>
<td>HCT A</td>
<td>73</td>
<td>78</td>
</tr>
<tr>
<td>HCT B</td>
<td>53</td>
<td>58</td>
</tr>
<tr>
<td>HCT C</td>
<td>71</td>
<td>71</td>
</tr>
</tbody>
</table>

Fig 1: Fuel consumption for HCT A:
(a) Loaded (solid line) and empty (dotted line) per 100 km
(b) Fuel consumption in litres per tonne and kilometre.

The emissions of carbon dioxide showed a big difference between HCT B and the two others (B). “This is not so much related to a more environmental friendly engine as to the amount of empty driving. While HCT trucks A and C had around 50% of empty driving, HCT B had less than 10%.

Dahlin said that in Finland an ongoing project is investigating the effects of HCT and road wear and it has been demonstrated that increased payload of trucks reduces the emission of carbon. The environmental impact is lower than for regular trucks as the fuel consumption per tonne kilometre is significantly lower.

“Of course, the road network including the bridges must be able to cope with the extra weight. However, the axle weight of the HCT units are the same or even less than that of regular trucks. There are studies showing no or very small differences in traffic safety compared to regular trucks.”

One of the most significant factors of fuel efficiency was found to be the driver. The difference in fuel consumption per truck was 16% for empty driving and 18% for loaded between the best and worst driver. “One may assume that modern trucks with automatic gearboxes would be less prone to the driver’s influence, but this study shows otherwise. Education of drivers on how to drive efficiently should be considered to further increase fuel efficiency,” advises Dahlin.
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Gugulethu Fuels expands its oil and fuel supply services in KZN

Gugulethu Fuels, from its base in Vryheid, KZN, is primed to expand its supply of petrochemical products and solutions to the forestry, transport and sawmilling industries in the province.

Elvis Zulu, the marketing manager of Gugulethu Fuels, says their competitive advantage lies in the ability to be relied upon to deliver small or large volumes to clients. The company supplies 50 parts per million of sulphur (ppm) diesel and 500 ppm diesel, petrol, paraffin, gas and lubricants. “Many clients prefer to have a tank at their site and we keep these tanks full. Another advantage of doing business with us is the fact that we offer 30-day payment terms to our clients. We do this because we know the difficult times they are going through and try to help all our clients,” explains Zulu.

Gugulethu Fuels has secured the support of a major petrochemicals producer and is presently supplying its range of products. Zulu says they are negotiating with other petrochemical companies to import, sell and supply wholesale petroleum products and expand their client service.

“We intend to use our business knowledge and relationship-building experience to establish ourselves as the leading petrochemical supplier, locally and in our neighbouring countries.”

The company is the brainchild of Philemon Shabalala, the managing director of Gugulethu. Shabalala’s vision of establishing a black-owned petrochemical company became reality when he launched Gugulethu Fuels five years ago. “Since I can remember I always dreamed about having my own truck stop and service station, even though I had to leave school early to find work to support my family,” says Shabalala.

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U D Trucks Southern Africa was recently awarded the International Sales Award as the brand’s largest overseas market in 2016.

"This award is a true testament to the calibre of staff and dealers we have in the region, and it will certainly drive us to perform even better this year," says Gert Swanepoel, managing director of UD Trucks Southern Africa.

"Our dealers are true ambassadors of the brand and are on the forefront of our interactions with our customers. We are very honoured to receive this award on behalf of all our staff and dealers."

The UD Trucks Southern Africa management team is one of the most experienced and knowledgeable in the industry and the company currently has an extensive network of 47 dealers across the region, who are able to support customers with all their transport requirements—from sales to service and parts.

"We have great expectations for the future of the brand within the region and are confident that we will continue to be successful as we have been over the last five decades," says Swanepoel.

"Through continuous training, skills development and the implementation of world-class quality standards, we are able to provide customers with a dependable service wherever they operate their fleets within the region."
Southern African Hyster dealer, Barloworld Handling, has started trading as BHBW (Pty) Ltd following approval by the competition authorities of the joint venture partnership between Barloworld Limited and German trading group BayWa AG. The joint venture came into effect on 1 March.

Late last year, Barloworld and BayWa announced that they had signed an agreement to establish a joint venture to further their materials handling and agriculture operations in southern Africa. Barloworld South Africa and BayWa each have a 50% stake in BHBW, which will build on Barloworld’s handling and agriculture businesses in southern Africa.

“Barloworld Handling has been the exclusive southern African distributor of Hyster lift trucks and warehousing equipment since 1929, and has over the decades established itself as a leading supplier of materials handling equipment and solutions to the local market,” says Godfried Heydenrych, Barloworld Handling chief executive, who continues as chief executive of the new joint venture.

“In cooperation with BayWa and our principal Hyster-Yale Company, we look forward to continue expanding these solutions and our footprint.”

The company’s Hyster line-up, which ranges from warehousing equipment to reach stackers lifting up to 52 tonnes, was recently expanded to include the long-awaited “back to basics” Hyster XT series of counterbalance lift trucks, while the UTILEV range of utility lift trucks for low-hour applications has also found great favour in the local market.

“As BHBW we will continue our focus to provide solutions tailored to southern African conditions, and to our customers’ widely differing operational and cost-of-operation requirements,” says Heydenrych. “From an operational point of view, it will be a seamless transition with no impact on our customers in terms of service delivery.”

The joint venture partnership has the approval of Hyster and UTILEV principal, Hyster-Yale Company.

The Barloworld Handling management team has remained in place, as have staff and the existing countrywide branch infrastructure. BHBW continues to operate from Barloworld’s premises in Boksburg, Gauteng.

On the agriculture side, the new company will continue the distribution of AGCO brands Massey Ferguson and Challenger, and introduce new solutions around agricultural mechanisation, digital farming and agronomy, also drawing on BayWa’s expertise as one of the leading agricultural traders worldwide and the world’s largest distributor of AGCO products.
Vermeer Corporation has redesigned the HG6000 horizontal grinder to meet wood-waste processors’ needs for productivity and government emission regulations.

The HG6000 is powered by a Cat C18 Tier 3 engine producing 630 horsepower (470 kW).

A dual-screen system allows screens to be mixed and matched to attain the desired end product. The screens are reversible and interchangeable.

Customers also have the ability to adjust the screen support, allowing the screen to be moved closer or farther away from hammer tips.

Vermeer eliminated the transition area between the anvil and screen, increasing the screen area by 20%.

The Series II duplex drum hammer mill consists of 10 hammers and 20 cutter blocks with a 92.5 cm cutter tip diameter and 157.5 cm cutting width.

A box beam-style anvil uses a wedge system to maximise retention while providing good resistance to bending.

All hardware used to secure the anvil is located on the outside of the machine, away from the wear path of material.

Vermeer has increased the thickness of the mill box sidewalls in front of the mill, and made it easier for the plates between the end of the mill and sidewall to be replaced. Optional abrasion-resistant wear plates are available.

The Vermeer-exclusive SmartGrind system stops and reverses material from feeding into the hammer mill when the engine rpm drops below a preset droop speed. The feature reduces wear to vital engine and machine components. The feed table and feed roller pull material into the grinding chamber, or reverse material away from the chamber when prompted.

The operator can reverse the feed roller independently of the feed table to reposition irregular material.

Feed roller hydraulic down pressure can be applied using the remote control unit. Down pressure aids in feeding difficult material sizes and shapes.

A single-piece 48-inch (121.9 cm) wide belly and discharge conveyor belt eliminates the transition point from belly to load-out, helping to reduce the occurrence of plugging or bridging in some conditions.

Vermeer also enhanced the overlap of the infeed and discharge conveyors to reduce spillage on the ground.

The thrown object deflector (TOD) is designed to reduce both the quantity and distance of thrown material. The TOD can be temporarily raised to reduce interference when loading over-length or bulky material if required.

Improved site manoeuvrability and a smaller turning radius were achieved by moving the fifth wheel pin under the 20-foot (6.1 m) long infeed.

A multifunction, wireless remote allows the operator to control most operating functions from as far away as 300 feet (91.4 m). This feature enhances jobsite productivity by allowing the operator to control machine functions from the loader vehicle while performing other functions.

An optional air compressor is available to speed up end-of-the-day cleaning of the machine.
The objective of the workshop was to give sawmilling stakeholders an opportunity to develop a plan of action that will contribute to the continued development of the forestry sector value chain.

"The department is working with the industry to develop a comprehensive wood processing strategy and various other initiatives that will assist in the recapitalisation of ageing machinery, and improve productivity in the sector," explained dti forestry-based industries director, Tafadzwa Nyanzunda.

"The dwindling forestry resources, particularly that of pine for structural and furniture use, are a major challenge that needs to be dealt with by both government and the private sector," says Southey. "The forestry sector as a whole needs to make better use of the current resources and look beyond the borders of South Africa to turn the forestry sector around for the better."

The forestry and forest products sector has been identified by government as one with high growth potential that offers opportunities for the participation of black economic empowerment companies and economic development of the poor, and rural areas of the country.

Security of supply of raw material, lack of investment in critical infrastructure, and new product and market development are critical challenges. This situation is exacerbated by declining competitiveness which includes inadequate access to funding and markets, a shortage of the skills required to move the sector forward, lack of research and development in the furniture and wood processing industries, and poor enforcement of regulatory instruments.

Nyanzunda explained that a forestry sector beneficiation framework is being developed by a working group made up of officials from the:

- Department of Trade and Industry (dti)
- Department of Agriculture, Forestry and Fisheries (DAFF)
- Department of Science and Technology (DST)
- Department of Small Business Development (DSBD)
- Department of Public Enterprises (DPE)
- Development finance institutions
- Council for Scientific and Industrial Research (CSIR)
- Academic institutions
- Representatives of the forestry-based industries, including Sawmilling SA and Forestry SA.

"The forestry sector as a whole needs to make better use of the current resources and look beyond the borders of South Africa to turn the forestry sector around for the better."

The framework provides an international, regional and local overview of the state of the forest sector and its main industries. There are cross cutting challenges that affect the entire forestry value chain, and standard approaches to solving these issues are discussed. These include funding and access to markets, how to ensure a sustainable source of raw materials, the branding of wood as a green and sustainable product, and productivity improving processes. The drive for zero waste and energy efficiency is providing a platform for the introduction and acceptance of transformative technologies. These include biofuels, biochemicals and biopolymers (bioplastics), new product and market development through promotion of wood culture.

Technology, innovation and skills development are the only way in which to reduce costs and provide continuous product improvements within an industry and this will only succeed with public and private partnerships to improve access to industrial funding, increase recovery efficiencies, recapitalise ailing industries, skills development, and exports.

South Africa needs to urgently respond to the resource shortages within the sawmilling industry to unlock the benefits of job creation and growth, Sawmilling SA’s executive director, Roy Southey, told delegates at a Department of Trade and Industry (dti) hosted sawmilling industry workshop.

Short supply of wood impacts sawmilling industry
New Bruks chipper improves waste handling systems

A & J Scott, a leading independent UK sawmill, is reaping the benefits of its recent investment in a new Bruks chipper and improved waste handling systems.

The company undertook a major upgrade of its main volume production sawmill, Mill 7, last year, and the new year has seen the first full week’s production setting an all-time record output from Mill 7. With rising productivity and a new shift pattern in Mill 9, A & J Scot is aiming to increase its overall output for the year by over 15%, building on its success achieved through high standards of quality and service.

Robert Scott, managing director, said, “This latest investment will increase our output of high quality fencing products to complement the increased range of railway sleepers and landscaping timbers we are producing. It’s a great feeling to start the new year by bringing the upgraded production facilities online, and we are looking forward to another strong year ahead.”

The sawmill supplies sawn softwood timber for a wide variety of uses, principally in the outdoor and garden products, fencing, landscaping, DIY and pallet and packaging sectors. It is also one of the UK’s leading hardwood round timber merchants, providing hardwood logs of all species and qualities to customers of varying sizes.

Established in 1960 and still operating from the original site in Northumberland, the company now employs over 100 people. With family ownership and a strong team of long-term employees, Scott says the company’s vast knowledge of timber and experienced skills base provides top quality products supported by unrivalled standards of service.

"Continuing investment in state-of-the-art production facilities supports our ability to produce large volumes of consistently high quality products, serving an increasingly diverse customer base," says Scott.

Bruks is a leading international provider of complete solutions for wood-processing, bulk materials handling and bioenergy. The Nukor Group is the southern African supplier of Bruks products.
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Kallfass, the international specialist in sawmill sorting, cutting, stacking, planing and gluing systems, has commissioned several projects in South Africa, with two large projects located in George at MTO’s sawmill.

In January 2015, MTO commissioned Kallfass to make the existing dry mill more efficient and safer by upgrading its materials handling and sorting systems. The systems were specified and designed according to the highest European safety standards.

Kallfass, in collaboration with the engineering teams from MTO Solutions and Operations, developed plans to smoothly integrate the new equipment and the existing systems without adversely affecting production.

Kallfass supplied the conveyors, measuring devices, and new electrical control system for the second-hand tray sorting plant MTO had purchased in the USA. The sawmill’s service engineers repaired and overhauled the used system parts and, thanks to excellent teamwork, the tray sorting plant and automatic stacking system were in operation within a few weeks.

Kallfass and MTO only had the short Christmas holidays to dismantle and replace the existing cross cutting system, and relocate the new conveyors. They successfully completed the project in time for the reopening of the mill in January 2016.

The new trimming deck, with a capacity of up to 50 boards per minute, was installed parallel to the green chain. Boards are fed into the trimming deck where the sides of the boards are removed before moving to the third saw where a maximum of 300 mm is trimmed off to ensure each board is the specified length. If the
boards are too short they are moved automatically to the finger jointing line.

Before the boards reach the Kalfass multilevel sorting plant, they are visually graded and then sorted out on 10 decks, as well as a manual stacking station. Only the large tilt stacking system of the old dry mill was used.

A computer system monitors the filling levels of the decks and reports when there is enough material for a package. The operator then selects this deck and uses an auto stacking machine to stack the boards. The finished packages are transported to the packing station where they are packed, compressed with a hydraulic press and strapped with plastic tape.

The second phase of the mill upgrade started early in 2016 when Kallfass delivered a mechanisation system for the planing machine. This system was installed together with an existing finger jointing system in a new building.

With the new system, the graded boards are planed on four sides at a maximum feed rate of 60 to 80 m/min, and then ripped into higher value structural products.
MTO George sawmill upgrades dry mill systems

Kalifass designed a materials handling system that connects the finger jointing system to the planer so that the jointed components can reach the planer line directly by means of roller and chain conveyors.

After the planer the boards are bundled into mini packages by one of the three strapping machines. These machines operate at an output of up to nine batches per minute. After bundling, the work pieces move through a Kalifass multicross-cutting saw which cuts the parts with millimetre precision. Downstream of the automatic stacking machine, the packages are pressed, strapped and wrapped and transported to the warehouse.

MTO and Kalifass ensured that the design of the handling systems are robust enough to accommodate a faster planing machine in the future to increase the sawmill’s throughput.
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Bradly Banks of C-Saw says that he and his father, Brian, are continuing to follow their philosophy of producing heavy-duty, no-frills bandsaws. “We have received several enquiries from large and small sawmills for a machine that can process pulp logs. “The over-supply of small logs due to the shorter rotations implemented by the pine and eucalyptus growers is making it challenging for sawmills to get the recovery they need with their existing equipment,” explains Bradly.

“We introduced a small-log processing line in response to this demand, and market reaction to the news that C-Saw is back in production has been phenomenal. “Our small log processing line offers unprecedented flexibility and configuration possibilities to meet the needs of our clients,” says Bradly. “Years ago, when the market decided to go the multi-rip route we opted to stay with our basic design because we strongly believed that the narrow band saw was still the better route to follow. This has been a winner for us and we would like our customers to know that nothing has changed.”

C-Saw still produces their iconic single-head and multiple-head re-saws with newer manufacturing methods and techniques. “Recently achieved an astounding 0,1mm accuracy on radiata pine in collaboration with the client at an installation in George in the Western Cape,” reports Bradly.

C-Saw successfully sold machines into markets in the UK, Ireland, Romania, and the Czech Republic. Bradly explains that the underlying business structure was unfortunately not sufficient to support such a wide geographic footprint and, in 2003, he decided to consolidate and relook at how to build the brand. He and his father decided that there needed to be a stronger emphasis on their manufacturing capacity to meet future export demands.

“We kept abreast with the log supply situation at home and identified an opportunity when it became clear that there is an over-supply of pulp logs,” explains Bradly. They decided to re-launch the saw to meet the requests from C-Saw’s local customers because its form is as important as its function. “Although there is a large international market for South African designed and manufactured equipment, the volumes of orders and short lead times require huge capital investments,” comments Bradly. “Unfortunately, the major banks in South Africa are inept or just unwilling to listen when it comes to assisting small businesses with confirmed international orders.”

Bradly went on to say local banks lack understanding of the international sawmilling market and do not have the flexibility to deal with the challenges faced by small enterprises on the global stage. “Much lip-service is made of the need to drive value-added manufactured goods but little comes in the way of support or incentivised programmes.”

Market research and an uncanny ability to produce solid and sought after machines prompted Brian and Bradly to look at “butt-end size” versus diameter of the pulp logs. Brian is putting his decades of engineering experience to use and C-Saw will soon launch its high-speed small log chipper-canter line. The company is already receiving orders for the equipment.
Evowood's Estcourt mill remains closed

Despite the disruption at its mill, Evowood's head office, regional branches, and distribution centres remain fully operational, and contingency plans are in place to minimise the impact of the protracted strike action.

Hardboard manufacturer, Evowood (formerly Masonite), has unfortunately had to dismiss 434 workers at its Estcourt mill in the wake of protracted illegal strike action. The Evowood mill is one of only 25 large hardboard manufacturing operations and is amongst the top three in the southern hemisphere. It is also South Africa's only hardboard production facility.

The production stoppage is costing the company more than R2 million per day and the accrued costs may prove a major setback in the implementation of a wide-ranging business turnaround strategy aimed at returning the company to profitability.

The Masonite mill was on the brink of closure in December 2015 when a black empowerment consortium comprising Black Bird Capital and Jacobs Capital bought it. The shareholders, who brought the company out of business rescue and took control in August 2016, conducted an extensive due diligence investigation to put in place a comprehensive business plan that would not only turn around the business but also create a sustainable long term future for it.

This strategic plan entails upgrading the equipment, rebranding the company as Evowood and controlling spiralling costs at the mill.

"Our turnaround plan included injecting capital into the business in the short term and a long-term capital investment programme to enable the company to reach its full potential through improving processes, products and service. However, we always recognised that no plan would be viable if all stakeholders did not come to the table to help us to rebuild the company," explains Nkosinathi Nhlangulela, a director of majority shareholder, Black Bird Capital.

Because the overall cost structure of the mill was not aligned with the long-term viability of the business, cutting costs, and improving efficiencies, formed a key part of the turnaround plan for the business.

After a lengthy negotiation process, the workforce signed a formal agreement on 29 November 2016. This stipulated a reduction of 12 % of the basic salary of every employee to be implemented from 1 February 2017.

The formal agreement, signed by all stakeholders, ensured that there would be no retrenchments at the mill. It was concluded to ensure that the shareholders could save all 733 jobs at the company. It also provided for a minimum 7% wage increase as per the existing bargaining council agreement. This increase would have been implemented from 1 July 2017.

Given the entire workforce's commitment to turning around Evowood, Black Bird Capital and Jacobs Capital invested over R50 million in rebranding the business and upgrading the plant at the mill during December. However, a faction within the workforce reneged on this agreement, leading to the illegal strike.

With costs building up and jeopardising the viability of this rescue plan, the company's shareholders are now investigating longer term options which could include scaling down production at the Estcourt operation and insourcing some materials to ensure consistency of supply.

Nhlangulela says the shareholders understand and are concerned that the loss of an operation such as this would be a serious blow to government's endeavours to boost economic development through the beneficiation of raw materials and the promotion of manufacturing and reindustrialisation.

"We are not taking any decisions lightly as we are aware of the potential negative impact on the local economy. We remain committed to building sustainable businesses and to economic growth in KwaZulu-Natal. Because of this, we are open to continued communication with key stakeholders who can work with us to develop a viable plan," comments Nhlangulela.

Wessel Jacobs, the chief executive of Jacobs Capital, says the shareholders are weighing up their options to ensure that the customers' supplies are maintained in the short term and to find long-term alternatives.

"Our business is to grow 'built to last' companies. We invested extensively in this business in December in good faith and have put in place significant operational resources and employed outside consultants to ensure the best outcome for Evowood," he explains.

Confirming that; without the support of labour, it is impossible to take the process forward, Jacobs says the shareholders remain committed to resolving the impasse.
Nestro filter technology and surface will be live in Homag City

Nestro is celebrating its 40th anniversary in style at Ligna 2017, and is looking forward to demonstrating its base area of 192 m² in hall 15/G69. Like previous Ligna exhibitions, the company is once again providing Homag City area.

Founded in 1977, Nestro Lufttechnik GmbH is a market leader in the fields of dust, chip, and spraying mist extraction in the wood industry. It offers self-contained technology system solutions with the added benefits of energy efficiency, noise reduction and comprehensive consulting services. About 180 employees develop and produce the equipment at production sites in Germany, Poland and Hungary.

Clients confirm that they experience considerable energy savings because the system uses highly efficient fans, frequency converters for fan control, high efficiency motors and recirculating air instead of exhaust air systems. The system also uses the return air for heating or air conditioning.

Noise emissions are drastically reduced through optimum product and system design and various insulation measures.

The following products will be on show:

**NE 200 deduster**
The NE 200 will extract dust and chips live from a panel-sizing saw. All Nestro dedusters work in what is known as "clean gas" operation where the fan comes after the filter. This provides the highest energy efficiencies and guarantees absolute dust tightness.

The clean gas technology also reduces the risk of sparks since metal particles cannot get to the fan impeller. It operates with a maximum sound pressure level of 72 dB(A) and the residual dust content in the air discharged into the exhibition hall will be less than 0.1 mg/m³.

**NE 350 deduster**
The top of the range NE 350 deduster has an operating volume flow of 9 500 m³/h; it has a nominal volume flow of 6 927 m³/h with corresponding negative pressure of 2 750 Pascal. This makes it perfect for extraction of CNC machines with high-speed processing, or the high air volume required to run standard woodworking machines simultaneously.

The BG-certified deduster can be installed adjacent to the machines and can also be used for filtering related materials such as plastic, leather, paper or other types of industrial dust.

**Intermediate filter 9/4-30 with use of return air**
The Nestro intermediate filter 9/4-30 with a construction height of more than 8 m will be set up outside the western façade of hall 15.

It will provide extraction for additional Homag processing machines through the second duct. This filter demonstrates the modular design with individual add-on elements. The
Nestro filter technology and surface engineering solutions will be live in Homag City.

Nestro is celebrating its 40th anniversary in style at Ligna 2017, and is looking forward to demonstrating its products at its double-storey exhibition stand with a base area of 192 m² in hall 15/G69. Like previous Ligna exhibitions, the company is once again providing dust extraction for all the processing machines in the Homag City area.

**Sawmilling**

The 9/4-30 design on show will have a filter area of 77 m² in each element. Three fans will generate a flow rate of up to 45 000 m³/h. The filter is appealing to look at thanks to its smooth surface caused by consistent inside bending. Return air is discharged back into the exhibition hall, reducing the load on the air conditioning system and effectively improving the air quality (residual dust content < 0.1 mg/m³).

**NZL 4 chipper**

Nestro shredders quietly convert disposal costs into energy gains. The offset arrangement of the turning plates ensures low energy consumption, while the low speed of the NZL 4 chipper guarantees quiet operation. Wearing parts are designed to be robust with a long lifespan, and large viewing windows allow visitors to clearly observe the chipping process.

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**BÖHLER UDDEHOLM**  
Highly developed nickel strip
Paintline system for spraying mist

There are three modular Paintline systems with flow rates between 7,500 and 24,500 m³/h. The medium performance spray mist extractor will be at the show. As solvents and paints drop due to their greater density, the paint particles are suctioned up in a continuous, low-draught air flow near the floor and then bound in the filter mats. This results in a consistently high quality paint finish. Nestro custom-designs each system based on the requirements of the customer and the space available.

NST 95 grinding bench

The new NST 95 grinding bench with an air volume of 9,500 m³/h is the big brother of the successful NST 75, and removes dust from a 5,400 x 3,100 mm work surface with a separation rate of up to 95%. Trade fair visitors will see how grinding dust is effectively bound in the easy to clean filter elements by means of a low-turbulence directed airflow. Recirculating air reduces energy costs and ensures minimal dust in the workplace.

NAST 24 grinding table

The Nestro NAST 24 grinding table with a 2,000 x 1,000 mm work surface closes the gap between the two established sizes, 16 mm and 28 mm. It was added to the standard range in response to numerous customer requests. Hydraulic table height adjustment, a pneumatic component clamping fixture and a high-pressure extraction port for manual machine extraction and cleaning are standard accessories.
Tieto Forest Hub: a new cloud platform for wood and fibre supply

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inland’s Tieto is introducing a new Forest Hub ecosystem platform that helps wood supply business partners share operational data regarding wood logistics and mill reception processes.

According to a report in Industry Intelligence Services Alert, the platform seeks to improve daily operational planning and follow-up, management of inventories, and information quality, while decreasing the amount of manual work required and reducing errors.

The system is based on business information exchange (BIX), which is a cloud service for business to business integration. Tieto BIX currently covers 1,500 direct customers, 26 sales partners, and exchanges close to 500 million transactions annually.

By using this large scale service as its core, Tieto Forest Hub can provide cost efficient and reliable services that meet critical business continuity requirements.

Tieto Forest Hub is open to everyone in the industry, including bio-energy producers. Two major forest products companies, Metsä Group and UPM, are implementing the Forest Hub this year and they believe it will radically improve their forest industry logistics data transfer capabilities by connecting different wood supply partners into a modern ecosystem. It will improve communications and operations.

“We are excited to help our customers to boost their business efficiency and provide an environment for new growth opportunities. Tieto Forest Hub offers service packages for small entrepreneurs to large international companies.

We believe it will grow into an ecosystem platform on which future solutions and applications are developed and applied in wood and fibre sourcing,” says Jaakko Kuusisaari, director, wood and fibre, Tieto.
Proudly South African solutions by TF Design

Stellenbosch’s picturesque Devon Valley is the headquarters of an innovative team of South African mechanical and electrical engineers who have quietly built an international reputation in a diverse range of industries based on their knowledge of heat transfer and thermodynamics.

The group’s name, Thermodynamics Fluids and Designs, may not be as well-known in the timber industry as its acronym, TFD. The TFD Group describes itself as a single point supplier of mechanical and electrical engineering solutions. This includes researching, designing, prototyping, building, installing and project managing high-tech customised solutions for the South African sawmilling and other industries.

Koot Kotze and Sarel Venter established the company in 1993. Today there are two components to the business, TFD Engineering that operates from the 800 square metres site in Devon Valley, and TFD Manufacturing, which occupies 2 200 square metres of factory space in Somerset West. The group employs about 150 people with more or less the following composition:

- 45 mechanical and electrical engineers
- 25 artisans and mechanical workers
- 20 electricians and electrical workers
- 20 students in practical training programmes (mechanical and electrical)
- 10 administrative personnel
- 30 general workers

There is a tangible feeling of respectful camaraderie when visiting TFD Engineering. The four hands-on company directors, Chris Conradie, Dana Swanepoel, Gideon Venter and Koot Kotze, emphasise team work and joint responsibility. This highlights the horizontal structure of the organisation where there are no titles and very little time is spent in formal, round the table meetings.

For the past 24 years TFD has found that its reputation for meeting and proudly exceeding its clients’ expectations keeps growing. The directors say: “We are a unique group of people and are full of energy, young new ideas and are known for our positive attitude. Our record of accomplishment proves that we have the knowledge and practical experience to always design and deliver the most effective solution for our clients.”

Over the years TFD has applied its innovative design thinking philosophy to complete a diverse range of products in the timber industry, including:

- 120 timber drying rooms
- Close to 150 drying rooms running on TFD control systems
- More than 20 biomass fired steam boiler systems
- More than 40 log scanning systems (intake volume measurement)
- The first new steam turbine in the South African timber industry in 25 years at MTO Forestry, George Sawmill.

The steam distribution system in a sawmill is very important to ensure reliable high quality drying. TFD has used their extensive knowledge of thermodynamics, heat transfer and flow dynamics to design, manufacture, deliver and commission steam distribution systems in various factories.
In the non-timber industries projects include:

- Specialised heat exchangers for the automotive and other industries
- Biosafety laboratories and clean rooms for various clients
- Specialised explosives dryers and loaders for local and international customers
- Self-contained and mobile military command centres
- Self-contained and mobile medical operating theatres and consulting rooms
- Factory automation and machine building for the general industry
- Development and research work for the hydrogen economy. This includes fuel cell assembly machines, metal hydride hydrogen compressors, and specialised hydrogen pressure vessels

"Our typical projects usually involve designing and building custom designed equipment for our clients. We complete the entire process from the initial concept to design, actual prototyping instead of only producing a rendered image, and implementation of design, manufacturing and finally, on-site installation, commissioning, and operator training.

"Where we cannot manufacture equipment ourselves, we source reliable equipment from recognised local or international suppliers and integrate it as part of the solution. The PLC-based control systems we provide are developed and provided 'in-house', giving you the assurance of seamless integration. "As a single point supplier, there are no hidden costs and we take responsibility for the complete solution, leaving our clients free to focus on their business."

Visitors to the factory can see the latest projects the team is working on because they assemble and thoroughly test all projects before they are delivered to clients. This means troubleshooting has been done and the solution is complete.

The directors report that the last three to four years have seen a change in the mix of projects executed by TFD. The company is attracting higher value projects and this they say is due to trust. "Over the years, we have established a trust relationship with our clients. They trust our expertise and are confident in our abilities to deliver innovative designs that meet and exceed their quality and specification standards."

A key contribution to this expertise is a direct result of the company’s relationship with the University of Stellenbosch and the Cape Peninsula University of Technology (CPUT). Every year 20 students are selected from the universities to serve a sought-after year-long internship with TFD.

"We encourage tech-savvy young people to use their inherent creativity while they learn on the job, and this allows us to tap into transformative ways of thinking," the directors explain.

"We are confident that our commitment to working with our clients to develop innovative South African solutions for uniquely South African problems will contribute to their growth and ultimately their sustainability."
Streamlining the complex residential roof

Every so often, a complex residential roof, of average scale and with relatively small truss spans, arrives for design and estimation at a timber roof truss fabricator. While it may not necessarily be of grand scale, even relatively small yet complex projects can cause frustrations to all along the supply chain – with mounting time and cost implications.

Stan de Jager, Institute for Timber Construction South Africa (ITC-SA) Category A Roof Inspector, weighs in on installation difficulties with complex residential roofs by drawing lessons from a completed roofing project in Kensington, Johannesburg, in which he was involved.

De Jager explains that the roof structure of this new residence, with a roof area of a little over 300 m², was designed to carry concrete roof tiles and was, at first, nothing out of the ordinary.

"That is until the walls that were designed and built just slightly (less than 5 degrees) out of square, with the roof specified to be square, were taken into account," says de Jager. "In addition, the building had a cranked section at 40 degrees that further complicated the design and measuring of the site.

"This resulted in a roof design with over 100 different truss labels – enough to scare some of the most competent of roof installers."

Multiple origins of the problem
A prominent finding of the study revealed that the eventual installation difficulties experienced on site were not ascribed to a single source. De Jager expounds: "In my experience, these issues often arise from a combination of factors, starting with uninformed clients and inexperienced or easily-conceding architects.

"Add to this designers working under pressure and installers lacking in effective communication, and it becomes clear how the installation on site can spiral out of control."

"In these situations, installers can be easily overwhelmed by the sheer complexity of the design and even experienced installers can start making novice mistakes. At this point, planning and good communication are abandoned, a ‘make-do’ approach is adopted, and any disconnect between designer, installer and inspector further exacerbates the problem," says de Jager, adding, "Insufficient or incomplete details given to the roof designer by the architect can also lead to assumptions being made about the roof design, which can later develop into disputes once the trusses have been fabricated.

"Another factor contributing to these installation difficulties could be the lack of special installation
IS YOUR ROOF LEGALLY COMPLIANT?

Unless a roof is constructed in accordance with the ‘deemed-to-satisfy’ rules of the National Building Regulations, a rationally designed roof by an engineer is needed for a roof to be legally compliant. The design will be considered a rational design and by law (NBR Regulation A19), it must be signed off by the registered professional engineer who is responsible for the design and who was duly appointed by the owner.

For more information about acquiring an A10 certificate for your roof or to find an ITC-SA accredited Inspector member near you, visit www.itc-sa.org.

BUILD WITH THE BEST. BUILD WITH AN ITC-SA ACCREDITED MEMBER.

ITC-SA CERTIFICATIONS

CREATING AND MAINTAINING THE HIGHEST STANDARDS IN THE ENGINEERED TIMBER CONSTRUCTION INDUSTRY IN SOUTH AFRICA
Difficulties that can arise on site

The misapplication of the universal nailing details as specified by the various systems for roof truss manufacturing in southern Africa is a common error that occurs on site. "Nailing details are often applied incorrectly at the perpendicular connections of jack trusses to girders at open hips or 90-degree infill hips," remarks de Jager.

Inadequate or incorrect nailing of truss hangers, bracing, truss and batten connections is another common error. De Jager notes: "Because of the overwhelming complexity, confusion of bracing items, cleats, hanger and other details can occur, with many being switched around and some even being left out completely. In the same way, several of the small trusses can be neglected, because the main trusses are repeatedly repositioned in an attempt to 'make the roof fit'. These are then left out of the structure, causing some unstructured open spaces in the roof, which then leaves the adjacent trusses to carry an additional load that they were not designed to bear."

Another major issue that can arise is the on-site modification and cutting of trusses by installers without the prior consent and instruction detail from the designers.

"Not only does this compromise the integrity of the roof structure, it is also not necessary in most cases. The trusses might merely need to be positioned correctly," says de Jager. "Finally, many support blocks on internal walls that were meant to temporarily aid in the positioning can be forgotten and left in place. If this is not picked up by an inspector prior to roof loading, severe bending moments around these points can be created, for which the trusses were not designed, and they can fail at these or other points."

While the above list is extensive, it only highlights the most prominent errors that presented themselves in this project.

Impacting effects and results

"Sometimes, installers will start loading the roof tiles before the structure has been inspected, which can have damaging results. In complex roofs where bracing and metal work can easily be installed in the wrong positions or neglected, long compression truss members can buckle and tension members can pull out of nail plates," comments de Jager.

Fortunately, in the case of this project, the installation problems were on a new residence and de Jager was called out to inspect the structure timeously. That said, when taking the cost of capital at interest and other consequential costs into account, it is clear that all delays caused by installation difficulties can be detrimental to the scope of the project.

The solution

Ideally, clients, architects and roof designers should all meet during the planning stage of the project for discussion on any complex and out-of-the-ordinary roofs necessitated by walls that are not perpendicular and the like. However, this is not always possible and quite often the walls have already been started by the time the truss manufacturer receives the drawings to estimate for the roof.

"When a collaborative approach is not possible from the start of the project, it can be of great benefit to all parties to get a competent roof inspector involved from the start of the roof installation," advises de Jager. "Depending on the complexity and scale of the project, the roof inspector would visit the site at least daily to ensure that mistakes are not compounded and that the communication between installer and designer is clear.

"The inspector or engineer responsible for signing off the roof should also be able to observe and request any required special details in a timely manner. These simple steps can greatly reduce the time spent on site and ensure an accurate and efficient installation process," he concludes.
LCP Roofing, leaders in roof truss technology, are renowned for their precision work, attention to detail and commitment to delivering world-class workmanship. Between a humble section of timber and an elegantly finished timber roof truss is a manufacturing process that has been fine-tuned and perfected over years.

From estimation and design to fabrication and quality control, LCP Roofing’s manufacturing process is one that is constantly improved upon and that looks to the future. William Long, LCP Roofing Designer, weighs in.

**Estimation and design**

After first contact with the client regarding the project, architectural drawings or designs including dimensions are requested by LCP Roofing from the client. “The designs and estimations done at LCP Roofing are solely based on the information supplied to us, which helps us to supply the client with an accurate and competitive quotation,” says Long.

“That said, when it comes to manufacturing the roof, the dimensions are based on measurements that are taken on site, so as to ensure that possible errors that are made during the construction phase can be avoided.

“In addition, it is imperative that the client makes mention upfront of crucial information, such as loads being imposed on the roof structure, solar panels, air conditioning units, HVAC ducting, geyser and the like. Failing to take this into account could have disastrous consequences,” he adds.

As a leader in its field, LCP Roofing prides itself in staying abreast of the latest design and estimation software. The company makes daily use of three software programs, namely RoofCon, TrussCon and QuoteCon, designed and programmed by a conglomeration of structural engineers and industry professionals.

The software is supplied by International Truss Systems, full system supplier to the prefabricated timber truss sector and an Illinois Tool Works (ITW)-owned company.

“RoofCon is used to create the basic design of each individual roof, excluding the design of the timber trusses, whereafter this basic design is imported into the second program, TrussCon, which is used to design each individual truss,” explains Long.

“This software also applies various loads to, and forces through, all members to test for any possible weakness. The design results then also assist in determining which timber sizes and timber grades are to be used.

“Once the designs have been optimised, the job file is exported to our third program, QuoteCon, which drafts all quotations and delivery notes,” he adds.

**Manufacturing**

Once the quotation has been accepted,
manufacturing commences. Manufacturing of timber trusses consists of two main processes: cutting and assembly.

**Materials**
In the event that the roof is of a regular design with ceilings, timber from LCP Roofing’s stockpile is utilised and the manufacturing of the timber trusses is scheduled accordingly.

Manufacturing a special roof, however, requires special material, which could include laminated timber, specialised decorative plates and any number of additional accessories. All timber used by LCP Roofing is sourced from highly reputable timber mills, that ensure that their supply is strictly from sustainable resources.

**Cutting**
"By using TrussCon, we are now able to create a cutting bill for the saw operators in the factory. This cutting bill not only includes all required information on a printed copy, but also the digital Computer Numerically Controlled (CNC) cutting file for the autonomous SPIDA saws," says Long, adding, "This has ensured that production capability has increased and quality control can be maintained."

Accurate CNC measuring and cutting means that the timber in a roof truss exceeds the minimum requirements with regards to dimensional accuracy, while the computerised SPIDA saw automates angle and length setups. The job is simply downloaded via LAN or USB to the source computer and the angles and lengths are set to the precise measurements.

**Assembly**
The traditional method of truss fabrication in South Africa, by which more than 90% of plants operate, is by use of a framing table either on the floor, or elevated for easier working, with nail plates placed and hammered by hand.

Trusses are then flipped over and the operation is repeated. In a third operation, trusses are fed through a special finishing roller, which exerts up to 30 tons of force to fully embed the nail plates. This is a time-consuming operation and triple handling alongside inconsistent quality can offer up its problems.

In a bid to eliminate these manufacturing challenges, and after much research and two visits to suppliers in the United Kingdom, LCP Roofing purchased and imported a Hydraulic Birch Press which arrived and was installed in October 2011.

In order to increase production and capacity, a second press was purchased and installed in February 2013.

"Using the printed copy of the cutting bill, the trusses are assembled with the correct timber sizes and grades as well as the correct nail plates. A ‘truss ticket’ is created, which gets stapled onto all the main trusses," notes Long, who continues, "Not only does this ticket indicate truss numbers, it also indicates the design loads, approximate spacings, job numbers and all pertinent company information for future reference."
PROMOTING TREATED TIMBER AND THE USE OF TREATED TIMBER PRODUCTS PRODUCED BY SAWPA MEMBERS

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H6 – High Hazard: Prolonged immersion in sea water

FOR MORE INFORMATION ON ANY ASPECT RELATED TO TREATED TIMBER PRODUCTS AND THE CORRECT USE OF TREATED TIMBER, OR WHERE TO CONTACT SAWPA MEMBERS, PLEASE CONTACT:

Tel: 011 974 1081
sawpa@global.co.za
www.sawpa.co.za
Quality control

LCP Roofing as a South African Technical Auditing Service (SATAS) Quality certified fabricator, is permitted to apply the mark to its product and is ISO 9001 accredited.

All timber roof truss fabricators in South Africa should subscribe to and utilise the same quality controls, but in the absence of regular audits, both internal and external, a number of South African fabricators consistently ignore these controls, which are put into place to protect the consumer.

Of the 200+ timber roof truss fabricators in South Africa, only a handful have voluntarily registered with SATAS and operate under the South Africa National Standards (SANS) 1900 scheme (Quality Mark), and are subjected to regular SATAS or SABS inspections. Fewer than 100 of these fabricators are registered with the Institute for Timber Construction South Africa (ITC-SA).

"With a combined 32 years’ experience in design and manufacture, our estimators and designers are in constant search of more innovative, cost-effective methods of timber roof truss design," comments Long, concluding, "This, coupled with management’s extensive experience in the fields of residential and commercial construction, means that LCP Roofing is best positioned to offer both the trade and consumer expert, custom advice in roof design."
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No glue line, no problem

The thinner the glue line, the better. In fact, the complete elimination of a visible glue line has been the holy grail for the furniture industry for years now, and there have been a number of approaches toward achieving this elusive goal over the years, with varying degrees of success – or failure.

However, the fact is that classic hotmelts are based on ethylene vinyl acetate (EVA), polyolefin (APAO), or polyamide (PA) for edge banding panel materials, and not one of them has been quite up to the task of eliminating those pesky glue lines that have the furniture manufacturers ever since the first edging was glued onto a piece of board.

While, during the edgebanding process (when done properly), it might have appeared that the glue line had been completely closed, it did not take too long for environmental factors such as dust, heat, moisture, exposure to household cleaners and the like, to cause the exposure of the glue line, even causing small joint openings, which would surely grow over time and continued exposure to the day to day environment, much to the chagrin of the industry.

The fact is that with the classic hotmelt materials, it is basically a given that over time and exposure to normal environmental conditions, the glue line will appear and become more and more pronounced, no matter how hard one tries to avoid it, especially when lighter adhesives and panel materials were used in the production of the board. Some modern adhesives from the above mentioned categories are formulated specifically to avoid glue lines, and to some extent do, but only when processed under ideal conditions.

There are, of course, the rather more expensive laser bonding technologies available that go some way toward the dream of an invisible glue line, but not quite. While the laser technologies melt another pre-applied and colour matched plastic layer directly to the bond, and while there is no question that the glue line is more securely closed and hidden than with classic bonding methods, the use of thermoplastics (EVA Hotmelts) means that there will always be the ‘rubber effect’, which is still not quite what the industry wanted, even if it was significantly less pronounced than was the case with classic bonding methods.

So much for thermoplastics

So, is that elusive invisible glue line just a dream? Definitely not. The invisible glue line has been around for a long time.
Where, you ask? How? Well, the answer is of course, by using polyurethane (PUR), instead of the more traditional EVA hotmelts.

Reactive PUR Hotmelt KLEIBERT 707.9 is the standard when it comes to achieving a truly invisible glue line, that staunchly withstands even the worst environmental conditions that you can throw at it. It has been used for years and is trusted worldwide in workshops as well as by industrial users as the ultimate solution for those pesky glue lines and near perfect bonding quality.

Producers in this market segment have marketed their product at a premium and considers the invisible glue line as a true mark of quality. The so-called ‘rubber effect’ is a complete non-issue with KLEIBERIT 707.9 as it is a reactive hotmelt which develops an extremely hard glue line.

When correctly processed, it is also extremely water resistant because it develops a chemical bond with the panel. The level of adhesion is so extreme that in most cases, the edging material wears out long before the KLEIBERIT PUR Hotmelts, which maintains a strong, invisible bond.

"The complete elimination of a visible glue line has been the holy grail for the furniture industry for years now."
The time for pre-fabricated wooden buildings is now

The seventh Wood Conference took place in Cape Town on 28 February, drawing nearly 600 professionals to this high-class event to discuss this year’s theme – ‘Wood as a sustainable, multifunctional material’.

The Wood Conference was held at the Cape Town International Conference Centre (CTICC) with 564 delegates, ranging from students to architects to international suppliers. The conference, which offered delegates Continuous Professional Development (CPD) points, was organised by HWZ International.

“We have come a long way since we started the Wood Conference seven years ago,” said Roger Kuratle, head of corporate development of the Kuratle Group during his official opening address. He renewed his organisation’s commitment to South Africa and its goal to support the local industry to grow and improve the wood-building sector. “We are here to stay for the long term,” said Kuratle.

Bernadette Hunkeler Brown, consulate general of Switzerland, delivered the welcome address. She shared various examples of how wood has been used throughout the ages, highlighting remarkable historical structures.

“In today’s world, it is ever more important (and quite possible) to come up with new applications through innovative technology,” said Brown. “The boundaries of what is possible using wood are being pushed by those in the industry.”

Andre Eksteen

Andre Eksteen, of Earth World Architects, discussed the role of the architect in the rapidly evolving technological landscape. He said timber is a driver for innovation and democratic industrialisation. Eksteen demonstrated how creativity and sustainable materials can merge to become incredible timber structures. He quoted Einstein’s proverb:

“We cannot solve our problems with the same thinking we used to create them,” and said there is a need for connecting people, architects, and suppliers. He suggested that perhaps intellectual property (IP) should be shared free of charge as this is a way in which...
Woodworking

architecture can take its place in our complex socio-political and technological landscape.

Eksteen said "plywood is the magic material" and is an important contributor to the move to pre-fabrication of homes and assembly on site. He commented that we are moving closer to online ordering of buildings.

The Bloch

Johannes Hedinger, founder of Com&Com in Switzerland, took to the stage to explain the significance of "the Bloch – a Swiss tree in Africa," and why it is travelling the world. Hedinger showed pictures of the Bloch's adventures and explained the laborious task of getting it to South Africa.

Despite numerous setbacks, the Bloch finally arrived in Cape Town just in time for the Wood Conference and was on display across from the conference venue.

Richard Stretton

Architect Richard Stretton illustrated his talk with a range of interesting projects designed and built from local and imported wood. His topic was 'Timber – the democratic building material', and he explained how timber is:

- an accessible building material
- easily scalable and can make anything from a toothpick to a skyscraper
- a curse to burn and a blessing to build with
- the greenest building material possible and the only route to true carbon neutrality
- a driver of our economic freedom

Stretton believes there is a lot more South Africans should be doing with timber, especially in the affordable housing sector. "We are way behind in timber construction but we do have the advantage of being able to learn from the rest of the world. It would be easy to start," he said. "Timber is the future of architecture in South Africa."

Certification and testing

Abe Stears of the South African Technical Auditing Service (SATAS), an accreditation authority currently holding certification for 75% of the locally manufactured structural timber, spoke on 'The importance of certification of imported timber'. He described the difference between certification and accreditation.

"Manufacturers are ultimately responsible for the quality of their products and must also take responsibility to make use of the services of a certification body and test facility," Stears explained. He also touched on the importance of imports and a comparison between South African structural timber grades and European ones.

Treatment

Bruce Breedt, executive director of the South African Wood Preservers Association (SAWPA), addressed delegates on 'The importance of treatment of local and imported timber'. He looked particularly at timber preservation and the difference between locally grown and imported structural timbers. After touching on the species differentiation and characteristic differences specific to treatment, he also looked at current regulatory and compliance requirements in South Africa.
Busting timber myths

Ben Paine of Log Homes considered why timber isn’t more popular locally in his talk ‘Misconception on timber housing in South Africa’. He tackled the main misconceptions currently in the market around building with timber, busting the myths with examples and facts/reason. From timber being a perceived fire risk to people thinking it’s poorly insulated and an inferior building method, he explained why building with timber is actually a great choice.

A major area that is currently being addressed is the insurance of timber frame buildings. "Santam loads the premiums on timber frame houses, while other companies do not."*

Pre-manufacturing

Pietro Russo, local architect, looked at ‘The art of pre-manufacturing the future’, tackling the topic of modular housing and pre-fabricated timber structures. "In recent years, the pre-fabrication of homes off-site has become one of the most promising developments," said Russo. "All over the world, developers have begun to adopt this process with the goal of revolutionising housing."

From simple trailers and cottages, prefab homes are now taking the designer route and are fast becoming known as ‘the next big thing’. He ran through some interesting projects, showing just what is possible with modular flat pack housing, and highlighting the advantages of going this route.

Student timber structures

After lunch, Barry Muller, wood technology lecturer of Nelson Mandela Metropolitan University (NMMU)’s George campus, shared some projects designed by his students. His talk centred around his experience of training students to use wood in timber structures. He explained how some of them designed their first structures using basic Excel!

His presentation discussed the importance of training students, the future decision makers, in the correct use of timber in structures. His course is very practical and hands on and the students have built some interesting projects over the years.

Largest wooden statue of a skier

Jiri Osilizlo, CEO of Novatop, shared his experience of working with the Kuratle Group to put together the 62” tall wooden installation of a skier at the World Championships on Alpine skiing in St Moritz.

This incredible structure relied on the latest technology to design, cut, and transport the various pieces of the sculpture which had to be put together in record time for the event. Osilizlo, with the help of Roger Kuratle, showed some pictures of the various stages of the project to highlight just what an incredible feat this was!

Hout Bay House update

Next up was Eliska Oberhofnerova of the Czech University of Life Sciences Prague’s Faculty of Forestry and Wood Sciences. Her topic ‘Surface degradation of wood exposed to external conditions in South Africa’ looked at the Hout Bay House research project to see how the material has fared after exposure to the elements.

She explored the building materials and methods used in this project and the implications of this on the weathering of the structure over a nine-month period. With the use of graphs and charts, she explained the results that compared the treated samples with the untreated ones. "The treated samples showed significantly more stable results than the untreated ones after nine months of weathering, as expected," she concluded.

Prefab and innovation

The last speaker of the day was Prof Heinrich Köster, board member of the Wood Construction Forum in Germany. His topic was ‘Prefabrication of wooden buildings: innovation in the areas of production and logistics’. He looked at the benefits that can be derived from wood construction, and considered more technical details on how to start with pre-fabrication and what technology is available.

"Pre-fabrication is the only way to increase the productivity in the construction of wooden buildings," he said. "Pre-fabrication has higher requirements in terms of planning and order preparation, but the benefits a company can gain from this method is worth it."
A Swiss tree, the Bloch, is travelling through South Africa

The Bloch – a Swiss tree in Africa," arrived in time for the Wood Conference in Cape Town. It had already journeyed through Bern, Basel, Berlin, Karlsruhe, Zurich, Shanghai, Taipei, Singapore, North Dakota, Minnesota, Cincinnati and New York and after its trip through South Africa will be on its way to Palestine, Israel, Columbia, Medellin, Australia and the Antarctic before returning to Switzerland in 2020.

Johannes Hedinger and Marcus Gossalt, of Com&Com launched the trans-disciplinary project that combines contemporary art with traditional popular culture. The Bloch aims to foster dialogue between people, sharing traditions, customs and stories for different cultures.

A ‘bloch’ is the lowest, branch-less piece of a large tree trunk. According to Swiss Appenzell custom the stump of the last spruce felled in winter is drawn back and forth between the two villages, Urnäsch and Herisau, by 20 men. At the end of this day-long procession, the Bloch is then auctioned off to the highest bidder in Urnäsch square. As a rule, someone from the region will acquire the Bloch and use it to produce a special piece of furniture or tiles and shingles. In 2011, Swiss art duo Com&Com was one of the first non-local companies to purchase a bloch tree trunk at a historic peak price of CHF3 000.

Since then, Bloch has been on its journey travelling around the world, making at least one stop on every continent. Its trip to South Africa marked its arrival in Africa, its fourth continent. Despite numerous setbacks, the Bloch finally arrived in Cape Town just in time for the Wood Conference and was on display across from the conference venue at the Westin hotel where local artists were engraving their mark into the trunk.
Optimal automation at Totally Board

Automation has become a buzzword across most sectors, especially when it comes to stock management, production handling and warehousing.

Between the massive potential savings in salaries, greatly decreased risk, and hugely increased handling capacity that these systems bring into play, it is not unheard of for an automated stock handling system to show a return on investment very early on.

In the case of the Biesse Winstore Automated Magazine, distributed locally by woodworking machine giant, Austro, increased production line capacity of up to 25%, an up to 35% reduction in product delivery time, a 10% saving on raw materials compared to conventional production handling methods, combined with an up to 30% labour reduction and significant waste reduction, can result in a return on your investment within as little as a year.

Austro recently installed the Biesse Winstore Automated Magazine at Midrand-based Totally Board. The company has been in existence since 2001 and has branches in the Cape, Olifantsfontein (Midrand), Centurion, Silverton, Middelburg and Nelspruit.

The Olifantsfontein branch is the first to have taken the leap and it will be interesting to see when the others will follow suit.

According to Totally Board owner, JP Joubert, he can already see significant improvements in terms of effectiveness, making their everyday work so much easier.

"For me, a large part of having this system installed, is peace of mind," says Joubert. "I do not have to worry about getting an order wrong, or stock getting damaged, since the Winstore takes care of all of it. It eliminates nearly all issues in terms of human error.

"All we need to ensure is that everything is captured correctly to begin with and the Winstore takes care of the rest."

According to Joubert it is much too early for him to weigh in on what the Winstore is saving him in terms
Biesse introduced high-tech solutions that can meet the technical requirements of contract manufacturers, thus considerably reducing costs and cycle times. Winstore is an automated storing facility for the optimised management of panels for large contract manufacturers, which guarantees production with reduced times and costs. Winstore can be integrated into nesting and sizing cells with a significant increase in productivity.

- Winstore stacks panels of different sizes and materials, including mixed ones, with no need for operator intervention. The reorganisation of the panel magazine and stacking can be carried out automatically, and out of working hours.
- 35% reduction of product delivery time compared to conventional solutions.
- Magazine mapping is fully optimised thanks to the panel automatic handling managed by the system supervision software. The panel scissor pick-up mechanism enables installation in low-height areas, as well as supporting high system performance and guaranteeing optimal panel stability.
- The rotating panel pick-up system and squaring laser photocells optimise the magazine internal area enabling the perfect alignment of the stack as well as correcting manual loading errors.
- Greater efficiency of floor and storage space due to the management of multi-sized and multi-coloured stacks.
- Waste reduction.
of labour. He also points out that this was not the reason he purchased the system.

"For me it is more about the peace of mind that everything is running smoothly. I think the system will really prove its worth in the longer term, as we continue to grow. Higher capacity, increased efficiency, smaller risk, and the elimination of human error will definitely show results in terms of growth.

"Another big factor is the fact that this system will greatly reduce the cost of growth. I don't see it in terms of saving me money on labour costs now. I look at it in terms of saving me in the long term. How many fewer staff will I have to take on as the company grows?"

According to Joubert, the installation is still under way, with phase one installed and running. The complete system is expected to be up and running by the end of April.

More about Biesse Winstore

- The Biesse Winstore Automated Magazine is ideal for the optimised management of panels for large contract manufacturers. The system can be integrated into nesting and sizing cells, and guarantees production with reduced times and costs.
- Winstore stacks panels of different sizes and materials, including mixed ones, with no need for operator intervention. The reorganisation of the panel magazine and stacking can be carried out automatically, and out of working hours.
- Magazine mapping is fully optimised thanks to automatic handling managed by the system supervision software. The panel scissor pick-up mechanism enables installation in low-height areas, as well as supporting high system performance and guaranteeing optimal panel stability.
- The rotating panel pick-up system and squaring laser photocells optimise the magazine internal area enabling the perfect alignment of the stack as well as correcting manual loading errors.
- Can handle up to 400 panels per seven hour shift.
- Greater efficiency of floor and storage space due to the management of multi-sized and multi-coloured stacks.
THE EXHILARATING SENSE OF SOMETHING NEW

Inspired by international trends, our latest Formica LifeSeal Worktop colours also boast our new square edge with a tight radius, for that crisp, sleek look.

Designed to endure most of life’s little knocks.
In the short space of four weeks the installation of a Biesse River G CNC machine at Totally Board in Cape Town enabled the business to expand its product ranges.

Warren Zevenster, manager of Totally Board in Cape Town, says: “I could not believe the reaction from our clients when they heard about the CNC machine and came to inspect it for themselves.”

The decision to place an order with Austro Cape to replace an old machine with the Biesse Rover G was largely based on the versatility and ease of use of the new CNC machine. It has a gantry mechanism that provides high productivity for processing large boards. The working table allows it to perform a range of operations including boring, milling and cutting.

“I fell in love with the machine when Francois Els of Austro Cape showed it to me. I knew it was exactly what our business needs. We can now offer a complete precision cutting, rebating, edging and machining service to complement our board supply business,” explains Zevenster.

Cape Town’s Totally Board has a quick turnover of raw materials due to its reputation of delivering quality products on time. The fully stocked storeroom is kept neat and tidy, and so is the factory and its well-maintained machines. The company provides employment for 15 people and the Biesse’s operator, Simon Morwatshehla, has worked for the company for 14 years. “I never knew machines could do so much. I enjoy working with the Biesse Rover and look forward to learning more,” says Morwatshehla.
The drive for improved productivity is key for woodworking companies in the Western Cape, and the owners of many of these businesses depend on Austro to assist them to keep up to date with the latest relevant technologies that can improve their competitiveness.

"Year on year we have experienced phenomenal growth since we took the decision to open a branch in the Western Cape in 1997, and I believe we are now the dominant player in this market," says Gary Miles, director of Austro Cape.

"Ten years ago, South African manufacturers lagged behind the rest of the world when it came to investing in equipment like CNC machines," explains Miles. "This is definitely no longer the case, and the same hi-tech Biesse machines that are operating in Cape Town are in use in the rest of the world."

Miles says the main difference between local factories and those in Europe is the reluctance to adopt automated materials handling systems. But, he says, this is changing and he and his staff are working with several clients who realise this is the only way to expand their markets.

Miles moved from Johannesburg 20 years ago to open the branch in Gordon’s Bay. The positive reaction to the arrival of Austro in the Cape, and the growing demand for its saw sharpening and technical services, prompted the branch to relocate to 4 Shiraz Street in Saxenburg Park, Blackheath in 2011.

The spacious facility in Blackheath has ample room for Austro to provide the top-quality service its customers expect. This includes live demonstrations of machines, the comprehensively equipped saw doctoring and machine servicing centre, and storage space for tooling, spare parts, edge banding, adhesives and power tools for the furniture and wood products industries.

The Austro Cape Team is excited about the future and believes the market for both, high production machines and smaller, traditional machines is unlimited. "We would like to say thank you to our customers for their trust in us and our products and services. We are looking forward to the next 20 years," says Miles.
Malaysian Timber Council turns 25 and heads for gold

The CEO of the MTC, Dr Abdul Rahim, says the council is proud of its accomplishments and has overcome steep hurdles, including the anti-tropical timber campaigns in Europe in the early 1990s.

"In 2016, potential sales from business matching missions organised by the MTC was R46.60 million, compared to our target of R37-million. Also, potential sales achieved by our industry participants in MTC Malaysian Pavilions at international fairs hit R260.62 million, exceeding our set target of R257 million," he says.

MTC launched the celebrations by introducing its 25th anniversary-themed logo and the tagline: “Engage, Connect, Grow”.

Rahim says the MTC thanks its stakeholders including the Ministry of Plantation Industries and Commodities (MPIC), industry partners and employees. "The success of the council is driven by the leadership, aspirations and commitment of these parties."

The MPIC tasks the council to promote Malaysian timber and timber products to overseas markets, a role it takes very seriously. To this end, it is opening a new regional office in Bangalore, India to address the growing demand for Malaysian timber products in that country and region. This will be its fourth regional office after London, Dubai and Guangzhou.

"As the nation’s marketing arm for Malaysian timber products, we are constantly looking for new markets, and India's purchasing power is on the rise. Ranked as one of the top three most attractive investment destinations in the world, India is also one of the fastest growing economies on the globe," says Rahim.

"India is an important market for Malaysia as it is the third largest trading partner after Japan and the USA. In 2015, the value of major timber and timber products exported to India was R5.4 billion, an increase of 6.4% compared with 2014. Known initially as a tough market to penetrate because of its high import duties, the Free Trade Agreement has made it more competitive for Malaysian products to enter the Indian market. The expanding Indian middle class is presenting new opportunities for Malaysian product manufacturers including furniture exporters," explains Rahim.

Market research groups under MTC’s Market Advisory committee (MAC) have been formed to seek out business opportunities. "Through the MAC, we have
For the past 25 years, the Malaysian Timber Council has provided stewardship to the Malaysian timber industry. The Council will continue to facilitate the development of the industry, in particular the export of valued-added timber products including furniture to global markets.

To learn more about Malaysian timbers and timber products, and the Council’s 2017 events and programmes, please visit www.mtc.com.my
introduced market research groups called the Task Force on India and Task Force on Meranti, based on the inputs that we have from our industry partners,” says Rahim.

There is much work ahead for the council to meet the ministry’s target of R152 billion in export receipts by the year 2020. Already identified are 40 key industry-related activities for 2017 including organising five MTC Malaysian timber pavilions and three Malaysian furniture pavilions, participation in 20 international exhibitions, six business matching missions, two technology acquisition missions and four resource and business missions.

The Malaysian timber pavilions will be at DelhiWood (India), AIA Expo (USA), TurkeyBuild (Turkey), Sylvawood (China) and PHILCONSTRUCT (Philippines), while the Malaysian furniture pavilions will be at the Malaysian International Furniture Fair and Export Furniture Exhibition (both in Malaysia) and Furniture China.

Of the 20 international exhibitions where MTC will be setting up promotional booths, three will be in Malaysia, one in the USA, three in the Middle East, five in Europe, two in India, four in China and one in Japan. Besides which, MTC will also be organising joint missions with the Malaysia External Trade Development Corporation to the UAE, Doha, Qatar, Kazakhstan and the UK.

At home, MTC will roll out more investor-ready business plans designed to attract more investments for Malaysian timber manufacturers.

“Our mechanisation and automation study, promotions on the use of glulam and the raw material augmentation programme are some of the projects that are expected to benefit our small and medium-sized entrepreneurs.”

Although the automation programme, which changes factory operations from a labour, to a capital-intensive one, is deemed expensive, Rahim says it provides for lean management and is cost-effective in the long term.

“The use of engineered timbers is the way forward as we reduce our dependency on solid hardwoods. I believe more experimentation and research will result in Malaysia utilising products such as cross laminated timber (CLT) and glulam in a more practical and affordable setting,” comments Rahim.

He adds that investing in engineered timber products and the innovations that come with them will not put Malaysian timber manufacturers out to pasture, though it may seem like a pricey venture at this point.

The MTC’s philosophy is to be agile and bold to enable local manufacturers to overcome the crunch of a slow economy.

The council’s foresight stretches as far as the 2022 World Cup in Qatar, where there will be a demand for timber for the construction of the stadium and other projects.

“Malaysian timber manufacturers are held in high regard overseas because they offer premium products and deliver promptly. Our timbers are also certified which makes it easier to export as we have been practicing sustainable forest management for over a century,” he explains.

Rahim, who took office as MTC’s seventh CEO in November 2015, is confident that the council will grow from strength to strength as it has good business policies in place.

“We will continue to grow in our role as the nation’s marketing arm. We are willing to change and evolve by focusing on the factors that help keep our industry partners, and employees stay with us for the long haul.”
Interprint’s new showroom, situated conveniently in Pretoria sees the company making inroads into Africa from Europe, showcasing the latest in international trends and designs, offering an educational and inspiring experience for designers, woodworkers, buyers, and manufacturers.
The American Hardwood Export Council (Ahec) is bringing three hardwood projects to Cologne: the unique Workshop of Dreams from Spain, The Smile, which is the most ambitious CLT structure ever made; and Ahec’s interactive map of the US hardwood forest distribution, growth and removal data.

The Workshop of Dreams was originally created for the Hay Festival in Segovia, and brings together four of Spain’s innovative architects and designers in an exciting collaboration that celebrates creativity and craftsmanship in wood. The resulting unique mix of objects: a set of café tables, an ergonomic lounge chair, an extraordinary kitchen cart and an unusual design concept for a portable cabin, demonstrate the vast capability and beauty of some of the lesser known American hardwoods such as American tulipwood, cherry, red oak, alder and gum.

On a full cradle-to-grave basis, the carbon footprint of all the products from The Workshop of Dreams is more than carbon neutral.

The biogenic carbon locked into the wood during growth exceeds all the emissions required to extract, process and deliver the timber to the factory in Madrid where they were manufactured.
Woodworking

The Ahec space will also feature a scale model of ‘The Smile’, the timber pavilion Ahec created in collaboration with Alison Brooks Architects and engineers Arup for the 2016 London Design Festival. This project featured the largest ever panels of cross laminated timber (CLT) to be made, showcasing the structural and spatial potential of cross laminated hardwood and, more specifically, tulipwood CLT.

This project is vital in demonstrating how hardwoods can play a greater role in the construction industry and make the built environment more sustainable.

Ahec will also present a new, interactive online tool that shows forest distribution, growth and removal of American hardwood species across the US. This new technology visually presents accurate highly detailed information in the sustainability of American hardwoods.

A team of Ahec staff and consultants will be on hand to discuss the organisation’s activities and answer questions on a wide range of current issues relevant to U.S. hardwoods: including EUTR compliance, LCA research, potential for thermally modified hardwood, structural applications and the launch of the interactive map tool.

Visit the AHEC exhibition stand at Interzum, 16 to 19 May, located at H-029.
Zero-joint, zero glue-line and jointless edging have long been buzzwords in the wood working industry, and with an evergrowing demand for these technologies, it is clear that office furniture and kitchen manufacturers are prepared to invest in quality.

Seal Cool Industries (SCI), and German partners MKT, in addition to the existing Alpha Tape ABS range launched last year, have recently released their latest product, Alpha-Tape Zero ™ PP edgebanding, on the South African market.

As one of the leaders in edging globally, MKT is one of the very few manufacturers who produce co-extruded edging that truly achieves the long-sought goal of an invisible glue line between the edging and panel.

MKT’s Alpha-Tape Zero PP edging is a glueless, seamless solution that functions on all current zero joint technologies including Hot-Air, Laser and Near-Infra-Red (NIR).

New technologies like Hot-Air (often referred to as Air-Force) and NIR have made this advancement in quality more accessible to manufacturers in South Africa.

"These technologies were made with a co-extruded edging in mind, whereby you basically melt the edging into the board," says Eladio Gaspar, National Sales Manager at SCI Woodworking, adding how that, coupled with a quality colour and grain ‘match’, is how you best achieve a seamless join.

Alpha-Tape Zero is an innovative edging produced by MKT, which is based on the environmentally harmless Alpha-Tape PP edging and features a special, hard, co-extruded, polymer functional layer, which makes primer and adhesives in the production process redundant.

Unlike other technologies that feature an adhesive (EVA or PUR) functional layer, ZERO features a polymer-based functional layer which is perfectly matched to the decorative layer and board, creating an invisible, homogenous and seamless transition on all technologies. When processing the ZERO PP edging, the functional layer is activated using any of the available technologies and then flows into the substrate (chipboard, MDF, honeycomb boards). This hardens to form a permanent bond before the edgebander finishes the processing.

The fully welded corner edge cannot be penetrated by moisture or dirt. The result is stronger and longer-lasting edges that offer anti-bacterial benefits that make it a great solution for kitchens, restaurants, health-care and similar public uses.

By extruding the two layers (functional and decorative) simultaneously in the calandering (broad sheet) method, an impregnable bond between the two materials is created, guaranteeing a constantly equal layer thickness and cross section of the two layers - even at the edge rim.

This is not the case with so called ‘post coated’ alternatives, which is edging that has the functional layer added to it after production, as this leads to inherent weaknesses in the edging. These weaknesses can range from having a limited number of standard base colour tones available for the functional, or bottom layer, or the jointing of the two layers not being seamless, causing an ingress of dirt between the two material ‘joints’.

Both of these weaknesses can lead to a so-called ‘Picture Frame’ effect where the edging can cause an unsightly frame around the board. A similar effect happens with adhesive-based solutions; where if the joint is repeatedly rubbed it can leave a permanent frame effect.

These alternatives may also have an inherent weak point on corners where joints are not fully fused, whereby the ALPHA-TAPE ZERO PP fully bonds to itself. This not only enhances the aesthetics, but increases both the moisture and heat resistance of the panel.

Beyond the significant increases in the quality and aesthetics of the finished product, the processing of this edging also offers several advantages in that it eliminates several steps in the manufacturing process, such as adhesive colour matching, processing setup and other cleaning and maintenance requirements, such as all the hassles and costs associated with maintaining your gluepot. Coupled with MKT’s expertise in colour, grain
ALPHA-TAPE ZERO PP EDGING

One edging for all zero-joint technologies.
HOT AIR - NIR (Near Infrared Radiation) - LASER


MKT PREMIUM EDGEBAND
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pattern and texture matching, this technology really begins to merit the title of being truly jointless or seamless.

The level of consistency achieved within tight tolerances means that whether using an ultra-high gloss, super matt, or uniquely textured MKT edging, the perfect result can be achieved consistently.

Another issue for manufacturers globally is the growing demand for green technologies and products that ensures the lowest possible environmental impact. While there has been much debate in the industry regarding the differences between edging materials, there is no doubt that PP (polypropylene) is the greenest edging polymer available, being easily recyclable, low in density (hence reducing freight costs) and it even consumes less energy during production.

"With the right match, ZERO edging makes the edged board look like a solid piece, and the longevity of the product easily meets the high quality demands placed on manufacturers, including the demand for greener technologies and products," says Gaspar.

Alpha-Tape Zero™ PP edgeband is available through SCI, that offer flexible solutions based on individual clients requirements. Besides the various visual options offered, the ZERO PP edging is available in widths of 12 mm to jumbo rolls of 405 mm, and in thicknesses from 0,5 mm to 3,2 mm, including the functional layer and lacquered or unlacquered.

"With the scope of products in the MKT range, we can meet specific customer requirements. Whether it is a higher level of UV stability, increased material flexibility, specialised textures, and many more," says Gaspar.

"The ability to have the exact same design, whether it’s a woodgrain or a colour, in both the ZERO PP and standard primed ALPHA-TAPE edging, offers additional support to those investing in this new equipment.

"This way the manufacturer doesn’t need to make a clean switch to a new technology, but can use matching edging on existing hotmelt edgebanders."

The SCI team is confident that Alpha-Tape Zero™ PP edgeband is the edging of choice when it comes to ‘zero joint processing methods’ in South Africa, not only because of its inherent characteristics, but also due to the impeccable matching ability of the MKT team.

As an addition to their range of ALPHA-TAPE ABS edging stock, matched to local décors, their product offering has steadily increased over the last three years.

The combination of SCI’s technical knowledge, capacity and capabilities, their strong partnership with MKT, and their shared passion for progression, make them a valuable partner to the industry.

"With each month, SCI is growing within this market sector, and more customers coming to trust us, not only as a supplier of quality components, but of quality solutions as well," concludes Gaspar.
Any tradesman will tell you that choosing the right tool for the application is pivotal. But sometimes, choosing the right tool is not as clear-cut a matter as one would like it to be, as Walter Booyens found out in 2012 when appointed to produce sound panels for the new engineering auditoriums of the Tshwane University of Technology (TUT).

“I could not find a local tooling representative with practical woodworking experience to offer the solution to complete my project in an efficient manner,” says Booyens. “My 14 years of production, and seven years of tooling, machine, and adhesive experience did help me significantly, but I still needed advice.”

The job consisted of machining 64 000 holes in 250 m² of 18 mm SA pine shutter ply.

The 361 holes (39 mm) per panel took on average of 11 minutes with a rather good CNC centre, provided the cutter did not get blunt, break, or wear, and the panel did not decide to relocate.

According to Booyens, time was of the essence as this accounted to 2 478 hours (almost three months, if working 24 hours per day), to produce only the face of the sound boards, including handling, but the lead time was only six to eight weeks. Thus only 1 344 hours for the complete project were allowed.

There were options of course, but which was the optimal solution? “PC Diamond, tungsten carbide spiral cutters, or low cost HSS milling cutters?”

“Is it chip breakers; are the cutting angles correct? Feed speed vs depth of cut and rotation speed is the most asked question for CNC routers,” says Booyens. Dust extraction is another vital addition to tool life.

The material, being shutter ply, was mainly produced for the building industry. Skins (also known as veneers) of around 1,2 to 1,6 mm, were laminated with Urea Formaldehyde adhesive, which is stable, cheap, rock hard, sets in around 60 to 80 seconds at 120°, and the best part, ‘gap filling’, but surely not tool friendly.

Today we have MDF, chip board, coated and uncoated, and various high gloss options as our challenge, not to mention other products that could change their behaviour before you finished reading this article.
Solid woods are discovered with inconstant grain patterns, chip board contains adhesives and waxes, MDF could be made of pine or eucalyptus—with varying density differences. All these materials have one thing in common. They need a saw blade or cutter to process.

"Choosing the right tool will reduce waste, labour, and production cost, and constantly having to replace equipment," says Booyens.

Furniture Installation Technologies the perfect partner (FIT)

FIT has a well-established national footprint, supplying hardware and tooling solutions. With nine branches throughout the country, their competent sales staff can easily reach nearly every corner of southern Africa with little delay.

For this reason we joined ideas and opened FIT Technical. A one-stop shop for your production and service needs.

Frequent training enables the sales staff to now also advise you on a suitable saw blade for your cutting needs, not to mention the other tools that FIT have on offer.

Freud: your productive partner

Freud is a world-leading manufacturer of circular saw blades, cutter heads, drilling, routing, CNC tools and carbide for industrial users.

Freud was established in 1962 in the furniture manufacturing area of north-eastern Italy, a strategic location that has always ensured a proximity to end-users, enabling Freud to test new product developments in real-life applications and to work directly with manufactures on cutting-edge solutions.

Freud’s headquarters is today one of the most modern product development research centres for cutting tools in Europe. Since 2009, Freud has been part of the Bosch group, leveraging the extensive global network of the market leader for accessories.

The company is known for several innovations like Silver ICE—a coating for industrial saw blades that provides superior protection against friction and corrosion, enabling a longer tool lifetime.

For the highest resistance to heat and wear, Freud engineered Perma-SHIELD, the industry-first choice coating that acts as a complete thermal insulation.

As a cutting-edge solution for the window tooling industry, Freud invented the ISOprofil system, a technology which automatically recovers the tool’s cutting diameter after each re-sharpening.

Today, the ISOprofil technology also includes High Speed ISOprofil, the ideal system for high rotation speed and extreme feed rates.

As a true partner for the cutting industry, Freud invests in new technologies to develop the best performing solutions for each application.

The latest LSBX carbide saw blades, for example, achieve the best results in panel sizing applications, thanks to an improved manufacturing process, which increases the durability per re-sharpening cycle.

For aluminium cutting, Freud designed a new generation of carbide saw blade, the LU5F, that outperforms competitors’ products with an up to three times longer lifetime.

Furthermore, Freud anti-vibration slots, laser cut with Freud innovative technology, improve balancing and deliver supreme cut precision. The anti-vibration slots are available with thermoplastic polyurethane fillings that considerably reduce vibration and minimise noise.

Freud’s greatest advantage is a unique 100% in-house production of Micro Grain Carbide, used for the cutting edge of the cutter heads, saw blades, and router bits.

Freud strives to guarantee outstanding products and continuous innovation.
Cabinet has approved the ninth annual iteration of the Industrial Policy Action Plan (IPAP) 2017/18 to 2019/20. The plan addresses the key challenges of economic and industrial growth, race-based poverty, inequality and unemployment.

In a statement, Cabinet highlighted that the IPAP is a key component of President Jacob Zuma’s Nine Point Plan and is aligned to the policy perspective of radical economic transformation.

The IPAP, which is a product of the Economic Cluster of government, is reported to have scored significant successes in several areas including saving many firms and jobs, and supporting sectors which are indispensable to South Africa’s prospects for longer term industrialisation. Drivers of IPAP 2017-2020 include a redoubled commitment to radical economic transformation and ongoing efforts to secure shared and inclusive growth.

Other drivers include the rapid acceleration of the Black Industrialist Programme, and a much stronger and ongoing focus on labour intensity across the value chains that link the primary sectors of the economy to the manufacturing and services sectors. This is in addition to a stepped-up export effort.

Trade and Industry Minister, Rob Davies, says it is a continuous action plan that is meant to reindustrialise the South African economy and bring about structural change in the economy.

The Department of Trade and Industry (dti) has set aside R15 billion for projected investments across all incentives, and the entire budget for the new financial year is to be spent on efforts to industrialise the country and broaden the manufacturing sector, as reflected in its performance targets.

And in another development, the dti director-general, Lionel October, told the Portfolio Committee on Trade and Industry that the department’s budget would also support businesses that have a globally competitive niche on the continent. “Government manufacturing incentives, localisation and designation continue to strengthen the economy despite negative global and domestic trading conditions.”
Precise and clean routing with the OF 1400 Festool router and their mobile dust extractors

Routing produces both coarse shavings and extremely fine dust, especially when routing chipboard or MDF panels.

"Without dust extraction, this not only makes the workstation dirty but also endangers the users’ health, as the fine particles can penetrate deep into the lungs. This is rectified by purchasing the right combination of router and mobile dust extractor," says Andreas Buck, Product Manager for Mobile Dust Extractors at Festool.

"Effective dust extraction is indispensable when sanding and when routing wood. Not just for a cleaner workstation but also from a health and safety stance," explains Buck.

"For the interior finishing of roof trusses, chipboard and MDF panels are often milled using cut-out templates for roofs, windows and doors. This releases extremely fine wood particles. Without effective extraction measures in place, these wood dust particles not only persistently make the workstation dirty, but they can also penetrate deep into the lungs. This dust also reduces the service life of the power tool."

The Festool OF 1400 router and the CTM 36 mobile dust extractor (or CTM 46 with a larger capacity) make the ideal combination for precise and clean routing work, especially that creates class M wood dust. The chip deflector, which is included in the scope of delivery, is a perfect addition for dust-free work, particularly for edge trimming.

Power and comfort when routing with the Festool OF 1400 router is extremely versatile as its power reserves make it ideal for routing all wood materials. It therefore represents the perfect mix of handling and power, whether freehand, rail-guided, with parallel side fence, or on the ball bearing.

Precision is ensured by the simple routing depth setting, which is precise down to 1/10 of a millimetre and by the guide columns, which are clamped on both sides.

Thanks to the rocker and ratchet principle, which allows you to either tighten or release the router bit without having to turn the open-ended spanner, Festool routers can be changed particularly quickly and conveniently. Also, the quick-acting brake guarantees your safety when working with this tool, while the MMC electronics with adjustable, constant speed and temperature monitoring, mean that you can work with a variety of different materials.

The OF 1400 is the perfect all-rounder router with its 70 mm sanding stroke. It is also extremely flexible for all types of templates, such as the MFS routing templates and the APS 900 worktop templates, extension profiles and copying rings.

The fact that the copying rings can be installed without being centred and without the need for tools is unique and particularly practical.

Routing with the correct dust extraction

Wood dust belongs to dust class M Tools that belong to different dust classes differ in terms of the technology that they use as well as in terms of their filtration rate.

Tools in dust class M must alert the user when the suction power is no longer sufficient, ie when the air speed in the hose falls below 20 m/s, by emitting a noise. The technology that makes this possible comprises special electronic components, sensors, and software. Buck generally recommends working with mobile dust extractors for dust class M when routing.

Technical data

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power consumption</td>
<td>1400 W</td>
</tr>
<tr>
<td>Idle engine speed</td>
<td>10,000 to 22,500 rpm</td>
</tr>
<tr>
<td>Collet diameter</td>
<td>6 to 12.7 mm</td>
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<tr>
<td>Routing stroke</td>
<td>70 mm</td>
</tr>
<tr>
<td>Routing depth fine adjustment range</td>
<td>8 mm/63 mm</td>
</tr>
<tr>
<td>Dust extractor connection diameter</td>
<td>27 mm/36 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>4.5 kg</td>
</tr>
</tbody>
</table>
Economic production of furniture components requires know-how and machines that are made to meet the demands of the job.

It is precisely this feature of their machines that KOCH intends to showcase at the upcoming Ligna 2017 show, to be held at Hanover in Germany from 22 to 26 May.

KOCH offers a range of different machines that are developed specifically to suit the customer’s demands.

The SPRINT range of machines is offered in three different equipment versions. While the first two versions are designed as pure drilling and dowel insertion machines, the third line can be equipped individually. In addition to drilling units with a variable number of individually controlled spindles, sawing, routing and fitting insertion units are possible.

The machines can also be equipped with a swivelling device (0° and 45°) for the drilling and dowel insertion unit. The length of the stock support tables can be individually adjusted to the needs of the customer. The machines are available with stock support table lengths of 700 to 1 300 / 1 800 to 2 500 and 3 000 mm.

All KOCH machines are made to the highest specifications and are easy to use and quick to set up. They can be used in any workshop, however, they are ideal for just-in-time (JIT) manufacturing processes.

Another machine that will be exhibited at Ligna is a drilling machine for the processing of all six sides of a workpiece. The machine is particularly of interest to manufacturers of drawers, frame components, profiled rails or furniture components.

The workpieces are separated in a hopper feed and then led to the working stations. There, the workpieces are clamped into position, fed into the machine, drilled and after exiting, are fed back into the machine via the return feed conveyor for final drilling (for single operator operations), or the outfeed moves the components to the next step.

The machine is equipped for horizontal drilling into workpiece ends (both sides) and into the workpiece’s edges, as well as for vertical surface drillings from above and below. Thus, drilling operations from six sides are possible.

For optimal workpiece alignment and processing, the machine is equipped with a freely movable workpiece centre support with stop and back stop, as well as a parallel guided clamping bridge, which ensures that the workpieces are clamped and held in the correct processing position.

Like all KOCH machines, this drilling machine is also characterised by quality and accuracy at the highest level. Due to the modular design it can be individually equipped with drilling units and a sawing unit.
KLEIBERIT Adhesives –
Solutions for woodworking and furniture production worldwide.

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Phone JHB: 010 500 9165
Email: sales.safica@kleiberit.com

www.kleiberit.com
IMA at Ligna 2017

MA Klessmann GmbH and Schelling Anlagenbau GmbH will launch their new corporate name IMA Schelling Group (ISG) at Ligna 2017, to be held in Hanover, Germany from 22 to 26 May.

ISG will be sharing a 3 608 square metres stand with Priess+Horstmann and will welcome visitors to the IMA Network.

Batch-size-1 production using a fully automated and integrated production line will be the predominant theme on show at this year’s fair.

ISG will show a processing plant conceived for a customer from the office furniture industry, which for the first time will use an IMA plant control system. That means IMA will once again present itself as a machine and plant manufacturer for complete solutions from one source.

These solutions cover all manufacturing steps from panel cutting through edge banding to final assembly and include, besides the machine and plant control, the required robotics.

In addition to being a provider of fully automated solutions, ISG also provides comprehensive service and machine solutions at beginner level.

New solutions for panel cutting

A new flexible panel cutting cell for custom production of furniture will be one of the exhibition highlights. It will, for the first time, combine the panel cutting technologies from IMA and Schelling into a high-volume line with flexible cutting possibilities and panel optimisation.

The Robotics portfolio

A second focus of the trade show will be on robotics. In this field, IMA is increasingly concentrating on flexible 6-axis robots which are programmed depending on the individual application.

This rapidly expanding portfolio of robotics will have a dedicated section where visitors will be able to see the robots in action.

Plant control systems from IMA

IMA has developed its own platform for plant control in order to be able, as a provider of solutions, to respond even more flexibly to customer demands by increasingly modularising conventional production concepts.

This new IMA plant control system creates a uniform higher-level operating concept on all implemented machines. It has already been applied in practice in several plants and will be presented for the first time at Ligna 2017.

Other exhibition topics

IMA will present its beginner level machines at Ligna 2017, including the Novimat Contour with IMALUX, the direct laser system, featuring a feedback return conveyor for truly seamless edge banding in small industrial shops. The new features of the high-volume IMAGIC FLEX drilling machine will also be presented. Last but not least, IMA Service will be represented with its own booth at the Ligna fair.

The IMA Schelling Group will be out in full force at Hall 12, stands A50 to E50.

Mirka at Ligna 2017

Mirka, a world leader in abrasives technology and innovation, is gearing up to showcase their extensive range of products at Ligna 2017, to be held at Hanover, Germany, from 22 to 26 May.

Mirka, represented in South Africa by Bulldog Abrasives, while displaying and demonstrating their established range of products for the wood sector, including the 1230 range of dust extractors, will focus extensively on their new DEOS range of direct electric orbital sanders with a 3,0 mm orbit, and Abranet Ace HD net abrasives.

With ceramic grains for heavy duty sanding you will never need another sander.

The DEOS is available in two two models, the Mirka DEOS 353 (81x133 mm), and the Mirka DEOS 383 (70x198 mm). Just like the Mirka DEROS range, these machines are light, ergonomic, and very efficient.

The advantages of the brushless motor and the 3,0 mm orbit become immediately clear when you use the machine.

The Abranet Ace HD range of net abrasives, which are available in grits ranging from P40 to P80, are great for all wood materials, and especially for hard woods; fast cutting, long lasting, and naturally, dust free.
No dust, no fuss!
Mirka ROS Sanders

MIRKA® ROS 650DB (Dust Bag) is a Pneumatic Random Orbital with a 5,0 orbit. This sander is equipped with a dustbag, so there is no need for a central vacuum system, only compressed air needed for dust-free sanding. This machine is developed for general sanding purposes on all kinds of surfaces.

MIRKA® ROS 650CV (Central Vacuum) is a Pneumatic Random Orbital with a 5,0 orbit. When connecting the sander to a dust extraction system you are able to sand dust-free. This machine is developed for general sanding purposes on all kinds of surfaces.

Bulldog Abrasives Southern Africa (Pty) Ltd
Joshua Doore Building
4 Andrews Street South
Wynberg, Johannesburg
Telephone: +27 (0) 11 786-5991
Email: info@bulldogabrasives.co.za
sales@bulldogabrasives.co.za
www.mirka.com
FP&M SETA MANDATORY AND DISCRETIONARY GRANT FUNDING WINDOWS FOR 2017/18

SUBMISSION DEADLINE: 30 APRIL 2017

The FP&M SETA mandatory and discretionary grant funding windows for 2017/18 are currently open and stakeholders in the fibre processing and manufacturing sector are invited to submit their applications by midnight on Saturday, 30 April 2016.

The mandatory grant application must include a Workplace Skills Plan for the period April 2017 – March 2018 and an Annual Training Report for the period April 2017 – March 2018.

Discretionary grant applications can be submitted in two categories:

- Fixed grants for learning programmes (including learnerships, apprenticeships, internships, adult education and training, skills programmes and bursaries)
- Special projects addressing sector skills development priorities, rural development, RPL, TVET/University partnerships (WIL placements), new venture creation, HIV/Aids awareness, and career or vocational guidance or skills development projects aimed at designated groups (women, youth, people living with disabilities)

Eligible organisations must submit their mandatory and/or discretionary grant applications online via the FP&M SETA Indicium System which can be accessed via our website (www.fpmseta.org.za).

For assistance with your Mandatory Grant or Discretionary Grant applications, kindly contact your nearest regional office:

<table>
<thead>
<tr>
<th>Region</th>
<th>Mandatory Grant</th>
<th>Discretionary Grant</th>
</tr>
</thead>
</table>
| Gauteng, Mpumalanga, Limpopo and North West | Pearl Ngiba  
Tel: 011 403 1700  
PearlN@fpmseta.org.za | William Malema  
Tel: 011 403 1700  
WilliamM@fpmseta.org.za |
| Kwazulu-Natal, Eastern Cape and Free State | Helvy Mnisi  
Tel: 031 702 4482  
HelvyM@fpmseta.org.za | Lungile Shabangu  
Tel: 031 702 4482  
LungileS@fpmseta.org.za |
| Western Cape and Northern Cape     | Gloria Nqinambi  
Tel: 021 462 0057  
GloriaN@fpmseta.org.za | Leigh Hayes  
Tel: 021 462 0057  
LeighH@fpmseta.org.za |

Gauteng - Tel: 011 403 1700  | KwaZulu-Natal - Tel: 031 702 4488  | Western Cape - Tel: 021 462 0057

www.fpmseta.org.za
SUBMISSION DEADLINE: 30 APRIL 2017

REGISTRATION OF NEW SKILLS DEVELOPMENT FACILITATORS (SDF) TO CAPTURE MANDATORY GRANT APPLICATIONS

A. To register, access the system via the stakeholder login on www.fpmseta.org.za and select "SDF Registration (WSP/ATRT)".

B. Complete the "Applicant Details" Page and save your information.

C. Then proceed to the "Organisation Details" page. Then follow steps i - vi.

D. Existing SDFs must access the Skills Planning Module using their current credentials (username and password).

E. Once logged in, select your role e.g. primary SDF to proceed to the SDF dashboard.

F. Check your personal details — if all correct, proceed to the "Organisation Details" tab. Then follow steps i - vi.

G. You will be informed via e-mail once your application has been approved and access has been granted to capture your mandatory grant application.

For more information on registering, contact your nearest regional office for assistance:
Gauteng - Tel: 011 403 1700 | KwaZulu-Natal - Tel: 031 702 4488 | Western Cape - Tel: 021 462 0057

STEPS I - VI

i. Select the organisation that you want to link to your profile using the "Search" function and entering your Reference Number.

ii. If your organisation is not listed on the FPM SETA database, contact your nearest regional office for assistance.

iii. Select the 2016/17 year from the drop down.


v. Your status will now be indicated as "Pending".

vi. If you are acting on behalf of more than one organisation, repeat the actions for all organisations.

REGISTRATION OF NEW STAKEHOLDERS TO CAPTURE DISCRETIONARY GRANT APPLICATIONS

A. To register, access the system via the stakeholder login on www.fpmseta.org.za and select "Stakeholder Registration (Discretionary Grant)".

B. Complete the "Applicant Details" Page and save your information.

C. Then proceed to the "Organisation Details" page. Then follow steps i - vi.

D. Existing Stakeholders must access the Discretionary Grant Module using their current credentials (username and password).

E. Once logged in, select your role to proceed to the Stakeholder dashboard.

F. Check your personal details — if all correct, proceed to the "Organisation Details" tab. Then follow steps i - vi.

G. You will be informed via e-mail once your application has been approved and access has been granted to capture your discretionary grant application.
# QUALITY WOOD WORKING MACHINERY FOR SALE

IMPORTED FROM GERMANY

**Paul Board Edger**

<table>
<thead>
<tr>
<th>Technical Specifications</th>
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<tr>
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**Gross Briquette Press**

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<td>Agitator Motor:</td>
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<td>Screw Spindle Motor:</td>
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<td>Hydraulic Oil:</td>
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**Weima Shredder WL 4**

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<td>Rotor Knives:</td>
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**Haas Drum Chipper**

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<td>Feed roller 2</td>
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**Möhringer Log Carriage**

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**Auxiliary Carriage**

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<tr>
<td>Height:</td>
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</tbody>
</table>

**Complete Hardwood Mill for Sale**

Fully operational hardwood mill for sale in Plettenberg Bay, owner retiring due to ill health.

This mill has been one of the foremost suppliers of fully processed Eucalyptus and Blackwood timber to the local and export markets. The mill may be purchased as a going concern or may be sold in individual items of plant.

**The plant and equipment consists of the following:**

- Complete harvesting unit consisting of an Agrico skidder, 220 Bell, Bell trailer and a Mercedez crane truck.
- Complete wet mill plant consisting of horizontal & vertical breakdown saws, re-saw, multi-rips, 3 LT40 Wood-mizers and a 225 Bell Logger.
- Complete dry mill equipment consisting of Weinig Moulder, 4 sided Planers, Double end Tenor, heavy duty cross cut and 2 x 3 ton Forklifts
- Equipment for two hardwood drying kilns also available.

**Viewing by appointment with the owner.**

Contact Sharlene at 083 254 3003 or email at Sharlene01@mweb.co.za

---

**All machine prices are upon request**

Delivery ex stock, subject to prior sale

For more information please visit our showroom in Plett at Bitou Business Park or website www.wis.za.com or via e-mail, wis@iafrica.com

Tel: 044 533 3651 or Fax: 086 600 3724
2017 EVENTS

WOODWORKING

27 – 30 April in Cape Town
Decorex Cape Town
Cape Town International Convention Centre (CTICC)

9-12 May in Johannesburg
Machinetools Africa 2017
Expo Centre Nasrec
Machine Tools Africa, launched in association with the Machine Tools Merchants’ Association of South Africa (MTMA), is the biggest trade exhibition of its kind in Africa showcasing cutting edge developments across the machine tool and related industries. Machine tools will not only be displayed but demonstrated.

16 – 19 May in Cologne, Germany
Interzum 2017
Koelnmesse exhibition centre (see story in this issue)

22 – 26 May in Hannover, Germany
Ligna 2017
Deutsche Messe exhibition centre (see story in this issue)

9 – 13 August in Johannesburg
100% Design South Africa
Hall 1, Gallagher Convention Centre
100% Design South Africa is the largest curated exhibition platform for sourcing high-end contemporary design in Africa.

9 – 13 August in Johannesburg
Decorex Johannesburg
Gallagher Convention Centre

4 – 5 May in London
4th Annual Forest Investment Conference
Park Plaza Hotel, London
Get a European perspective on global timberland investments at the 4th Annual Forest Investment Conference.

After three years in New York City, this event is moving to London - a move reflecting the globalization of timberland investing. Attracted to this financial hub city, already confirmed delegates include companies managing more than $1.5-trillion in assets.

This year’s speaker line-up includes some key European professionals from large investment companies, pension funds, and more.
Contact: information@risi.com for more information

FORESTRY

19 – 21 April at Cedara, KZN
Focus on forestry
Theme: Harvesting, silviculture and fire management systems in a restructured forest industry. This event covers the full value chain of practical forest management - forest engineering, silviculture and fire protection.

15 – 17 May in Pretoria
The 28th Annual TPCP Symposium:
Keeping trees healthy
This is the annual meeting of the Tree Protection Cooperative Programme (TPCP) and the DST/NRF Centre of Excellence in Tree Health Biotechnology (CTHB), and is one of the most important relating to forest tree health in South Africa.

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Ligna 2017
Deutsche Messe exhibition centre (see story in this issue)

7 – 10 June in the forests of Jönköping, Sweden
Elmia Wood
Elmia Wood is the world’s leading trade fair for the forestry industry. The fair is completely built in the forest and you can see and test forest machines and tools in their natural environment. It is held every four years and provides an excellent opportunity to get an overview of the market and see new trends.

18 – 20 July in Pietermaritzburg
7th Forest Science Symposium
Co-hosted by ICFR, IUFRO, DAFF, FABI, NMMU and SUN
This event will showcase the depth and breadth of forestry research across southern Africa, and aims to provide a unique opportunity for the southern African forest research community to interact with international partners and share knowledge around the work being carried out across the region.

28 August – 1 September in Pretoria
Short course:
An introduction to modern tree breeding

16 – 19 April 2018: Rotorua, New Zealand
6th International Forest Engineering Conference
Theme: “Quenching our thirst for new knowledge”
THE LARGEST STOCK OF WOODWORK MACHINERY IN SOUTHERN AFRICA. MASSIVE SELECTION OF NEW AND PRE-OWNED IN ALL THE BEST BRANDS.

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