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The voice of the industry

# trends



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# CONCRETE trends

The voice of the industry

Issue 1 2020

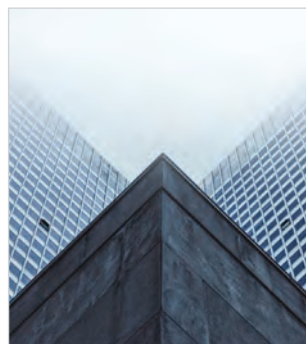


COVER

*JMC leads with new trucks for the construction industry*

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**VICE PRESIDENT:**

Devi Paulsen-Abbott  
e-mail: DeviPaulsen@dmgevents.com

**PUBLISHER:**

Johan van Wyk  
e-mail: JohanVanWyk@dmgevents.com

**EDITOR:**

Nicholas McDiarmid  
e-mail: NicholasMcDiarmid@dmgevents.com  
T: +27 21 700 5579

**ADVERTISING:**

Johan van Wyk  
e-mail: JohanVanWyk@dmgevents.com

Nicholas McDiarmid  
e-mail: NicholasMcDiarmid@dmgevents.com

**DESIGN & LAYOUT:**

Virgil Jacobs +27(0)83 524 5024  
e-mail: rykim@mweb.co.za

**PRINT:**

Shumani Printers, Cape Town

**CONTRIBUTORS:**

Andrew Meyer  
Anthony Kee  
Colorado University Boulder  
Dean Lundall  
Devi Paulsen  
Lyndy van den Berselaar  
Johan van Wyk



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ISSN 1560-2710



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- ▶ **Term:** 72 Months
- ▶ **Interest Rate:** 12%
- ▶ **Residual:** 0%
- ▶ **Total Amount Repayable:** R182 759.04



Changan range carries  
**1 TON**

**CHANGAN SINGLE CAB STD**

## Vigus 5 Starting From Only R5399 P/m

- ▶ **Retail Price:** R317 990
- ▶ **Deposit:** 0%
- ▶ **Term:** 72 Months
- ▶ **Interest Rate:** 12%
- ▶ **Residual:** 30%
- ▶ **Total Amount Repayable:** R484 125



**VIGUS 5**

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- ▶ **Retail Price:** R190 000 – R62 000 Discount
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- Total Amount Repayable: R359 558



### JMC CARRYING LWB STD

# Evolution is good, right?



Nicholas McDiarmid

Sadly Gill Owens has retired from Concrete Trends. Gill's association with *Concrete Trends* goes back longer than most of us can remember, she has been involved in the cement and concrete industry for more than 40 years. Gill also edited *Fulton's Concrete Technology* and *Fundamentals of Concrete* while assisting many a concrete technologist on their way to establishing themselves in the

industry. Gill's drive to make every edition of *Concrete Trends* the best concrete magazine ever will remain a focus point as we move into a new chapter of the magazine.

We welcome, Nicholas McDiarmid as the new editor of *Concrete Trends*. Nic shares our vision and commitment to the industry. Nick made the following comment, "*Concrete Trends* has been the construction industry's publishing partner for over 21 years, and today offers a 3600 communications and branding solution. Our ability to rapidly launch and amplify marketing and branding strategies for our partners, is the result of dedicated service to a meaningful community of influencers and buyers."

Nicholas's vast experience and energy promises another injection that will amplify the voice of the industry. In future all advertising needs can be channeled via Nicholas McDiarmid.

With changes not only at *Concrete Trends*, but in the world, this edition sets us on a path of evolution into a magazine that not only brings our readers the latest trends in concrete, but also brings you news in the construction industry that's as solid as concrete.

Exhibitions, advertising and face to face marketing are the only ways in which you can generate sales while building your brands. It is our aim at *Concrete Trends* to do all in our power to assist you in this field and remain the voice of authority in the industry.

You can look forward to our ongoing commitment to bringing you relevant editorial and industry news as you will see in this the first issue of 2020. It remains one of our aims to empower you with knowledge in fields that might not be your main focus like exhibitions, social media and other technical applications.

As the Publisher of *Concrete Trends* I would like to extend an open invitation to all our readers and advertisers to get in contact with me regarding issues you would like to read about or any industry news.

Welcome to the evolution of concrete reporting and happy reading! ■

## SHAKING UP THE PRECAST INDUSTRY

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# Concrete buildings, pavements and structures function as storehouses of atmospheric carbon

Concrete buildings, pavements and structures are silently absorbing carbon dioxide from the atmosphere. It appears to such a degree that the built environment represents one of the world's largest storehouses of carbon. Yet this information is currently excluded from global, national, and regional greenhouse gas accounting methods.

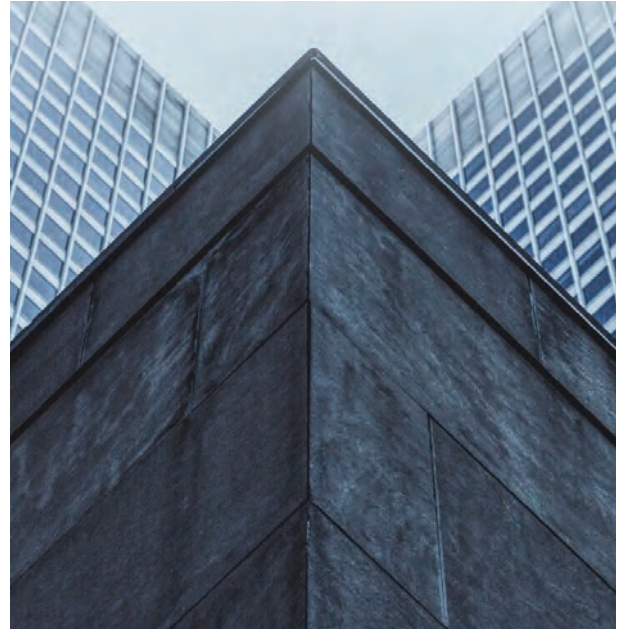
This is the main message from peer-reviewed scientific studies summarized in a paper released today by researchers at CalPortland Company.

Concrete, the world's most popular building material, constitutes a large portion of the global built environment. The production of Portland cement, which is an ingredient of concrete, is commonly identified as a major contributor to greenhouse gas emissions. Often the story ends there. CO<sub>2</sub> emissions occur when calcium carbonate, the main component of limestone, is exposed to intense heat as part of the cement production process. These emissions come from both the burning of fuels used to heat the cement kiln and from the CO<sub>2</sub> released from the raw carbonates used to make cement. This process is called calcination.

The process of calcination is not chemically stable and therefore is reversible. CO<sub>2</sub> in the atmosphere reacts with the hydrated cement in concrete and carbonates are regenerated. Exposed concrete in the built environment absorbs carbon dioxide through the reaction of CO<sub>2</sub> with concrete compounds resulting in CaCO<sub>3</sub>, the main component of limestone. This reaction permanently removes CO<sub>2</sub> from the atmosphere and binds it in a stable state within concrete. This process is called carbonation.

Considerable attention has been paid to quantifying the industrial process emissions from cement production, however the natural reversal process of the uptake of CO<sub>2</sub> during concrete's complete material life phases is just beginning to receive the consideration it deserves.

In the past few decades there have been many studies that have examined factors affecting the capacity of concrete to absorb carbon dioxide from the atmosphere. One of the more recent studies from the Swedish Environmental Research



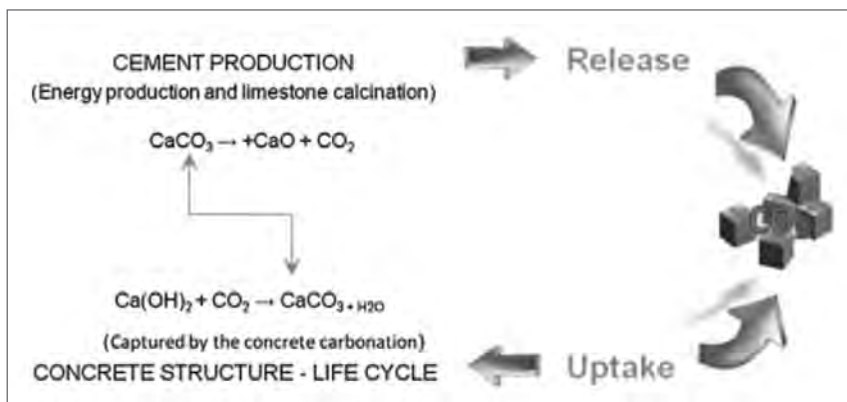
Institute (SERI) examined data from several European countries to develop practical models to gauge the extent of CO<sub>2</sub> uptake by concrete globally in the built environment.

The researchers developed several approaches and statistical models of increasing complexity to come up with valid estimates of general CO<sub>2</sub> uptake by concrete.

The Tier 1 model provides a simplified approach for use on a national basis relative to the annual emissions associated with cement production in the same year. It has two options for the calculation of CO<sub>2</sub> uptake. Option A uses the mean value of 20% for estimating uptake of CO<sub>2</sub> over the life of concrete structures. Option B uses this mean value minus a standard deviation factor for estimating CO<sub>2</sub> uptake resulting in 15% uptake.

The standard deviation adjustments are designed to account for various factors that could affect the rate of carbonation. Such factors include the length of time of exposure to the atmosphere, humidity, porosity of the concrete, cement type, and water to cement ratios.

Many organizations and companies are actively working on measures to reduce greenhouse gas emissions. Having a better appreciation of the level of CO<sub>2</sub> uptake by concrete can help us develop better strategies to mitigate the impacts of climate change. As this paper and several noted studies clearly show, carbonation in cement products represents a substantial carbon sink that is not currently considered in emissions calculations. ■



# Ultra-high performance concrete used in pressed concrete products – made with EIRICH mixing equipment

**U**ltra-high performance concrete (UHPC) has special properties, and manufacturers of prefab products expect that it will be used more and more in the years ahead as the applications horizon continues to expand. Machine components made of UHPC already exist. The German company “Betonwerk Lintel” is the first manufacturer to use UHPC since 2015 in the production of pressed concrete products.

The manufacturer produces concrete products which are made of UHPC and are marketed under the Brevolith brand. The company exploits specific properties of UHPC, namely near-zero porosity, high structural density and high strength. The concrete is virtually impermeable to liquids including salt solutions, making it highly durable. UHPC has these properties because the fines have a high packing density. Special plasticizers are used to reduce the amount of water needed.

Brevolith is used, for example, to make special curbstones which are an enormous improvement in municipal road construction. They are very strong and much less susceptible to damage caused by road salt.



EIRICH Intensive Mixer RV12W

Due to the high proportion of fines and the low water content, UHPC places special demands on the mixing equipment. Numerous trials carried out by university researchers and prefab manufacturers in recent years have shown that Eirich mixing technology has substantial advantages in UHPC processing such as short mixing times (e.g. wet mixing times < 60 seconds), in many cases lower plasticizer consumption, etc.

During the UHPC mixing process, every cement particle must be coated with plasticizer. Mixers which generate maximum shear forces in the mixture have distinct benefits. The EIRICH mixing system is ideally suited for these applications. The material being mixed is transported by the mixing pan, which means that fewer mixing tools are needed at the bottom. Even at high tool speeds (in the case of UHPC up to 20 m/s), there is no increase in friction and wear.

The German company has been using Eirich mixers for facing concrete for about 25 years. In 2015 an RV12W (250 l) was delivered for UHPC production. The swivel-head bridge with mixing tool easily swings up and out (see photo), providing easy access for cleaning the mixer. ■



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# Building the community from the ground up

It is imperative to the growth of the South African economy, and our social responsibility, that big businesses support small businesses within the construction industry and give back to the community. This is according to Pherdy le Roux, managing director at the Gauteng branch of GVK-Siya Zama, a leading construction company that recently worked with local small, medium and micro enterprises (SMMEs) on a local community-work-based project, at Paterson Park in Johannesburg.

Paterson Park – aimed at bringing a diverse and stimulating recreational facility to the community, seeking to provide a safe space that facilitates the development of fundamental skills like reading and writing in conjunction with sport, physical activity and health to stimulate growth and development in the community.

“From a construction perspective, we ensured that Paterson Park is birthed from the community, for the community, says le Roux. “More than 50 percent of the work, from ground up, was allocated by the company to over ten different community-owned SMMEs in and around the area. This exceeded the contract requirement of a 30% local contractor spend and cements GVK-Siya Zama’s commitment to the development of communities.”

As each SMME was appointed and commenced with their respective trades on the project, management training for the directors of each company was provided. These workshops included management of construction resources, the application of quality principles on a site, contract documentation, and the implementation of site administration and procedures. Once the course was completed, each participant received an accreditation certificate. GVK-Siya Zama also provided a full-time coordinator as part of the mentorship programme. The training programme ensured that every appointed local subcontractor was set on the road to success and was given the necessary skills and training to ensure that they could successfully complete works on site.

Along with this, 35 local employees received training during this period of seven months in specialised skills such as



*Pherdy le Roux,  
managing director at  
the Gauteng branch  
of GVK-Siya Zama*

plumbing, bricklaying, plastering and paving. Each of these trainees received accreditation certificates which now enables them to continue working in the industry.

While the Paterson Park project first and foremost allowed people to have input into the development of their own community, it also uplifted the community through job creation and income generation for community-based companies. The Paterson Park project is indicative of the success GVK-Siya Zama has achieved working with local communities. It also highlights the benefit of industry leading processes and training initiatives provided by the contractor.

Le Roux further explains that the project offers long term benefits to the community with the creation of a variety of facilities, including:

**Learning and creativity:** The park targets academic growth by providing a state of the art library, a craft centre to facilitate artistic expression and growth, and an amphitheatre for community-organised shows, presentations and recitals. It includes an administrative building, security house and generator to ensure optimal functionality at all times.

**Sporting:** Paterson Park is equipped with an Olympic-style swimming pool and splash pool with a grandstand for spectators. Another grandstand graces a full size soccer field, while there are two smaller five-a-side fields, as well as two tennis courts, a multi court and a basketball court, with a pavilion. To top it off the park offers an enclosed multi-function sports hall with a fully equipped gym. While specific titles have been given to these facilities, they all act as multi-use platforms.

“All members of the community, from the public to clubs and schools, will have open access to Paterson Park. GVK-Siya Zama believes that the vested community journey from construction to end use will play a huge role in uplifting the community,” he says.

“As such, it is vital for the industry to realise that projects can be successfully executed through community participation endeavours that empower local SMMEs and offer growth where it is so sorely needed,” le Roux concludes. ■





## African Construction Awards – call for nominations

**T**he African Construction Awards, powered by the National African Federation for the Building Industry (NAFBI), recognises key players in the construction industry. The Awards highlight the year-round pursuit of excellence, through the passion of leading professionals, entrepreneurs and rising stars working in the industry. The awards bring together 300 of Africa’s most renowned industry professionals, many of them long standing attendees of the event, for a celebratory dinner.

**Do you know a deserving candidate? Nominations are now open in the following categories:**

**Individual categories:**

- Women in construction award: Young entrepreneur/Rising star
- Lifetime achievement award: Women in concrete and construction
- Female innovator of the year: African smart cities award

**Organisational categories:**

- Media and communications excellence award
- Smart city technology
- Smart architectural design

“ I have a strong opinion about getting woman into key leadership roles, by educating and upskill in order for them to advance into these positions.”

**Charne Karaolis, Managing Director,  
MSHEQ Health and Safety  
Consultants (Private)**



**NOMINATIONS CLOSE 30 MARCH.**

**Download our submission form: [www.africanconstructionawards.com](http://www.africanconstructionawards.com)**

## Meet the 2020 adjudication panel:



**Riefqah Abrahams**  
Director, Archi Cape Town,  
South Africa



**Christine Breet**  
Board Member, International  
Association of Business  
Communicators – (IABC  
Africa), Board Member,  
International Association  
for Public Participation,  
Southern Africa (IAP2)



**Shaakira Chohan**  
Architect  
Development  
Manager,  
Johannesburg  
Development Agency,  
South Africa



**Margaret S.M Ezekiel**  
Chief Quantity Surveyor,  
National Housing  
Corporation – NHC,  
Tanzania



**Theona Govender**  
Financial Planner/  
Financial Advisory,  
PPS, South Africa



**Mandy Jayakody**  
Director, Aquile  
Projects, South Africa



**Charne Karaolis**  
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MSHEQ Health and  
Safety Consultants,  
South Africa



**Rahdia Khatieb**  
Director, Archi Cape  
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**Zanele Mabathoana**  
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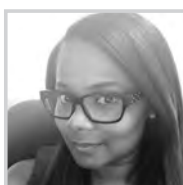
**Sandi Mbutuma**  
Managing Director,  
Azzaro Quantity  
Surveyors (Pty) Ltd,  
South Africa



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Planner and Cost  
Estimator, Tshwane  
University of  
Technology,  
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Director: Enterprise  
Wireless Solutions,  
Huawei, South Africa



**Kea Mokhukwane**  
Managing Director,  
Kgarebana Civil &  
Structural Engineers,  
South Africa



**Thobekile Ndlovu**  
Managing Director,  
Thobethulani Trading,  
South Africa



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Publications,  
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Executive Director,  
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**Flavia Tau**  
Director, Tumagole  
Trading Enterprise,  
South Africa

For more information about the nomination process and supporting documents contact Roshenda Barendilla:  
E: roshendabarendilla@dmgevents.com | T: +27 21 700 5513

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**dmg** events

# CESA calls on Ramaphosa for political and policy certainty

**12** February 2020 Consulting Engineers South Africa's (CESA) is called on President Cyril Ramaphosa to deal with the slow pace of change in addressing both policy and political uncertainty in the country.

"Further delays in the implementation of infrastructure projects serves only to decimate our already struggling construction sector," states Chris Campbell, CEO of CESA.

While acknowledging the larger issues that the country currently faces, CESA as the key role player in the Infrastructure Development process is calling on Government as a short to medium term measure, to utilize the capacity that exists within the private sector to, firstly, capacitate the state, and also to mentor some of the young engineers that are currently employed by the state. The Owner's Engineer concept needs to be embraced as a short-term intervention, as well as secondments from the private sector, to boost public sector capacity. CESA's members are also willing to volunteer some of their services, within a structured framework, to unlock project opportunities.

"Let's make South Africa one big construction site again in order to kick start the economic growth that will lead to job creation and investment," says President of CESA, Sugan Pillay

While CESA welcomes the establishment of the Infrastructure and Investment Office and is pleased to see that it resides within the Presidency. CESA has long been calling for

an Engineer General to oversee major infrastructure development in the country and believes that this office will become the de-facto Engineer General in the country.

CESA is also cautiously optimistic that the Infrastructure Fund that will be housed within the Development Bank of South Africa (DBSA) will also start to gear into action, so that funding for project preparation can be unlocked. ■

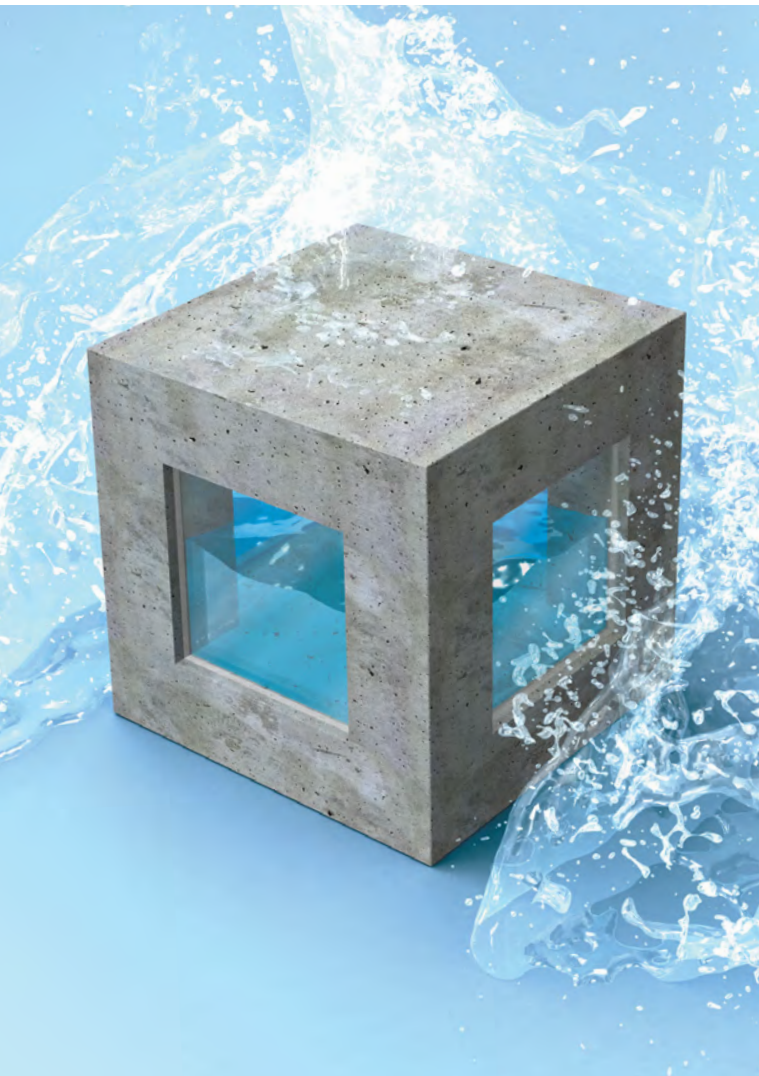
## Concor Construction wins Eskom contract

The CEO of Concor Mr Lefu Lucas Tseki has announced that they have been awarded a significant contract by Eskom for the extension of Majuba Power Station's Ash Disposal facility (ADF).

"The awarding of this tender signals the faith of the market has in Concor's stability, depth of experience and engineering heritage" said Mr Tseki. ■



Mr Lefu Lucas Tseki, CEO of Concor.



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# IVECO launches new X-WAY range dedicated to light off-road missions in South Africa

**T**he Stralis X-WAY is specifically developed for vocational and construction logistics missions, which provides for on-road applications requiring off-road mobility.

IVECO has officially launched the new X-WAY range specifically designed for light off-road missions with the biggest payload in its segment. The new vehicle was presented to the construction sector at a two-day event which was held in Hartbeespoort on 17 and 18 September.

Master of Ceremonies Springbok Rugby legend Bakkies Botha co-hosted the launch with IVECO South Africa senior management and construction industry experts. Guests had the opportunity to meet the ex-Springbok icon and to test drive the fleet of IVECO vehicles available on site.

“The X-WAY truck combines the outstanding on-road performance of the Stralis range with the robustness of the Trakker. “We now have a product that is equally at ease in on- and off-road conditions, and is designed specifically for construction logistics,” stated IVECO Product Marketing Manager, Elvis Mutseura.

During the launch event, David Metelerkamp, senior economist at Industry Insight – a thought leader and consultant to the construction industry in South Africa – presented an overview of South Africa’s economic situation, concluding that despite a challenging outlook, there are still pockets of opportunity in the country’s construction segment.

Elvis Mutseura commented: “The X-Way is a tool for efficient operation, and in the country’s economic context, it provides an effective means to protect margins and make the most of the opportunities that exist in the construction market.

For example, the low tare mass of these vehicles allows the operator to maximise on payloads on the outward journey, while on the return leg the low weight translates into lower fuel consumption. This is a compounding benefit that accrues over the entire lifetime of the truck.”

IVECO delivers a competitive Total Cost of Ownership with its offer on the X-Way and is available at a recommended retail offer of R1 350 000, with a complete package including a 3 year 600 000km warranty on the driveline, long service intervals of 40 000 km for long distance use and 20 000 km for short distance use, driver training and telematics. “We invite interested operators to contact us to request the use of a demo truck\* and experience first-hand the capabilities of the vehicle,” stated IVECO South Africa Head of Sales, Martin Liebenberg. “With 24 sales and service points in Southern Africa, our dealer network is positioned and available to provide efficient support and meet all our customers’ needs,” he added.

“The X-WAY was received with enthusiasm and appreciation from the audience, and we are looking forward to providing a vehicle with capabilities positioned to meet the needs of the construction logistics segment in Southern Africa,” commented IVECO South Africa Managing Director, Julian Dango. “We are confident that with a product providing best-in-class payload productivity and versatility we can help our customers to overcome current and future economic pressures as a sustainable partner for their transport needs.”

To request the use of Iveco South Africa’s X-WAY demo vehicle please contact your nearest IVECO dealer. ■



# Geotechnical Engineering in Africa



Professor Michal Topolnicki

The book, entitled *A Guide to Practical Geotechnical Engineering in Africa* was officially launched by Keller's Prof Michal Topolnicki, senior technical advisor, at the 17th African Regional Geotechnical Conference in Cape Town, held between 7 and 9 October 2019. The conference was attended by both local and international delegates.

## A celebrated tradition

This latest edition maintains the 50-year tradition of updating this now well-established textbook every 10 Years.

The first two editions published in 1976 and 1986, respectively, entitled *A guide to piling and foundation systems* illustrate Franki as a piling company and the Southern African branch of the worldwide Belgian-owned Franki group. Franki started as a small piling company in Southern Africa after the Second World War and expanded into a significant piling company during the 1950s and 1960s.

The second two editions, published in 1996 and 2008, respectively, are both titled *A Practical Guide to Geotechnical Engineering in Southern Africa*.

The development of Franki's in-house geotechnical design capability is demonstrated by the significant sections on design and the co-authoring of Gavin Byrne as a senior member of the Franki team, for both these editions.

## New chapters

The new Fifth Edition, co-authored once again by Gavin Byrne – together with Dr Nicol Chang as Technical Director of Franki and Dr Venu Raju as the Keller Group's director: Engineering and Operations – depicts Franki's expansion through the African continent and the Indian Ocean Islands.

The ownership of Franki Africa by the Keller Group, the largest geotechnical contractor worldwide, is reflected in the significant change and evolution of the book's content, the inclusion of colour into the graphics and illustrations, as well as the doubling of the pagination from 270 pages in the First Edition to 540 pages in this Fifth Edition.

The new edition incorporates the deep foundation, lateral support, design, marine and limited ground improvement content of the third and fourth editions, and adds Keller's extensive range of ground improvement, grouting and associated design methodologies.

Trenchless technology and the introduction to Limit State Design are an added feature of the comprehensive publication.

The foreword by Professor Peter Day, recognised internationally for his delivery of the Terzaghi Oration as a leading geopractitioner of the African region. ■

## Africa's first Hybrid power plant

Construction of the first hybrid power plant in Africa has commenced. Windlab's global CEO Mr Roger Price confirmed the report and said the project will be developed to international standards.

Situated in Meru County in Kenya, the hybrid project dubbed 'the Meru County Energy Park' will be a large-scale facility that combines wind, solar PV and battery storage. The facility will feature up to 20 wind turbines and more than 40,000 solar panels.

The project is a public-private partnership. The Meru County Government, through the Meru County Investment and Development Corporation (MCIDC) will own part of the project once it is operational and Windlab will own the other portion of the project. The deal also includes capacity building and knowledge transfer efforts.

Upon completion, the plant is expected to produce a total of 80MW of power. Additionally, the Government has already set up a US \$47m kitty in partnership with the World Bank to fast-track the uptake of viable solar and clean cooking solutions.

"As Kenya moves to implement the medium-term Big Four agenda, promotion of predictable and sustainable renewable



Hybrid renewable power plant

energy is key to guarantee successful realization of the manufacturing pillar. The project would help shore up manufacturing in the country," said Mr Roger Price.

"We are excited to bring world-leading innovation in the renewable energy sector and project development expertise to Meru County, Kenya. The partnership would hasten benefits of the projects to residents," the CEO added.

Over 70% of Kenya's electricity is generated from renewable clean energy sources. Of these, geothermal remains the most significant source as the country focuses on increasing geothermal capacity and weaning off thermal sources. ■



# Panel of industry experts look at alternative curing techniques

**A**t the 2020 Quality in Concrete Slabs Luncheon and Forum during the World of Concrete, four industry experts discussed curing of slabs from industrial to decorative.

Dave Hoyt with Curecrete and chair of ACI Committee 310/308-TG2 Curing Decorative Concrete Joint Task Group, led off by describing recent research to evaluate the best methods for curing three different types of slabs: one suitable for polishing, one with a stamped surface, and one with exposed aggregate. The research, conducted at California State University, Chico, looked at abrasion resistance and water absorption for surfaces cured with various techniques like silicates and wet curing blankets. The results, unfortunately, were inconclusive so the committee is looking ahead to further investigations.

"The objective of curing is to develop a quality paste at the surface of a slab," said Clark Branum with Diamatic USA and the current chair of ACI-ASCC Committee 310, Decorative Concrete. But the industry needs to look at this closely and try to develop some alternative curing methods

that are effective but have fewer negative impacts on the finished surface, especially for decorative slabs or slabs intended to be polished.

Bob Harris, Structural Services Inc. and a decorative c expert, said curing is our Achilles heel since often it's the lowest paid worker doing this last step. "Improperly spray-applied cures can dramatically effect a finished polished floor," he said, "creating differential curing that result in streaks even when polished." He showed slabs that had to be ground down deep enough for aggregate exposure to get a consistent appearance. Harris encouraged anyone using wet curing techniques to scrub the surface to remove any efflorescence as soon as possible after removing the curing blankets – at least within 2 or 3 hours – to avoid surface imperfections.

Scott Tarr, North S.Tarr Concrete Consulting, discussed the basics of curing and the use of what he calls passive curing. "Anytime the relative humidity is over 80%, it's humid enough that active curing isn't necessary." But he cautioned that if the humidity drops suddenly, then you're in danger of drying out the surface, even with a hard troweled finish. ■



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# ICON prepares Groundwork for Colliery Extension near Delmas

**T**he ICON Group is close to completing the groundwork for the Canyon Coal Colliery Extension situated on the outskirts of Delmas. The contract awarded to ICON in October 2019, valued at R2,5million is expected to be complete in February 2020 in preparation for the extension of the colliery aimed at substantially increasing the mine's production output.

"Our technical capability and keen pricing played a key role in winning this prestigious project, coupled with our extensive in-house range of bulk earthworks equipment", states Wayne Neary, Managing Director for the ICON Group.

Wherever possible ICON is making use of local labour and services sourced from the surrounding communities in alignment with Canyon Coal's commitment to developing the communities in which they operate.

Neary went on to state that safety at the mine is a top concern and there are very stringent safety requirements in place.



ICON's pro-active focus on safety ensured that the company is in full compliance with all criteria often exceeding the mine's strict requirements. ■



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# Aurecon takes bold steps to transform into an African-focused business

**10** February 2020: Engineering, design, and advisory company Aurecon Africa has taken a bold step to demerge from the global Aurecon brand to position itself as a business aimed at the African market. In October 2019, Aurecon officially announced the separation of the African business from the Aurecon Group, effective from 1 January 2020.

While being part of a global engineering and advisory firm has helped the company achieve immense successes and growth over the past decade, the landscape has changed, requiring agile, locally-relevant, and Afrocentric solutions.

“Having all decision-making and ownership in the hands of Africans will increase our agility and capability to deliver appropriate and relevant offerings,” Aurecon Africa Chief Executive Officer Gustav Rohde comments. Prior to his new role, Rohde served as Aurecon’s global Chief Operating Officer, and played a key role in preparing the company for a digital rich-future.



Aurecon Africa Chief Executive Officer Gustav Rohde

The company is undergoing many changes, including a total rebranding process, with a completely new name in Zutari, which reflects the company’s African heritage. The name was derived by combining two Swahili words *mzulia* (invent) and *nectari* (nectar). Swahili is the most spoken language on the continent.

The new name reflects Afro-optimism and Pan-Africanism and appeals to a global audience. It balances analytical and technical engineering with creativity and innovation to demonstrate that the new company is about much more than traditional engineering.

In positioning the new company for success, Aurecon Africa recently achieved a Level 1 Broad-Based Black Economic Empowerment (B-BBEE) status. Three recent senior appointments, with Rohde at the helm, will assist the new entity to nurture its skills, supplier, and socio-economic development goals. “B-BBEE has always been a strategic imperative for us, and therefore our Level 1 status is an important affirmation,” Rohde adds.

Other appointments include amongst others, Joseph Ndala has been appointed as a Director and Chief Financial Officer for Africa. Imraan Mahomed has been appointed eThekweni Office Manager. Bulelwa Leni has been appointed East London Office Manager.

Dr. Lulu Gwagwa, Chairperson of Aurecon Africa, is encouraged and excited to see the new direction in which the company is going. “I am very proud to be part of this journey, and I look forward to steering the new company towards success. ■



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## Kwanobuhle waste-water treatment

**K**wanobuhle, a large township on the outskirts of Uitenhage in the Eastern Cape, had a waste water treatment works that was long overdue for refurbishment. Projects of this nature are often overlooked; however, given the magnitude of the impact of these works on the community, the decision was taken to refurbish the WWTW. Access to clean water is after all, a basic human need.

Wastewater treatment is a process used to remove contaminants and convert it into an effluent, which can be returned to the water cycle with minimum impact on the environment. In municipalities, this process takes place in water treatment plants, where pollutants are removed and broken down. This recycling plays a vital role in the use and sustainability of scarce resources.

Ibhayi Contracting took on the responsibility of rehabilitating the Kwanobuhle Wastewater treatment plant. The project began in January 2019 and is expected to be completed 18 months later in July 2020.

The rehabilitation process which ordinarily is no easy task was made simpler using Sika products. The concrete wall repairs on the plant were conducted using two products: SikaTop Armatec-110 EpoCem reinforcing protective coating and the Sika Monotop-615HB high build repair mortar.

The latter being a repair and reprofiling mortar for structural concrete. The aerators and digesters were also lined with Sika Monotop-612 by trowel application, to reprofile the concrete surfaces. Sikagard-720 EpoCem, a protective coating, was subsequently applied as a 2mm thick layer to the Sika MonoTop-612. Sikagard 720 EpoCem is a thin film sealer, made from epoxy and cement-based fillers, used on vertical and horizontal surfaces. It is a unique product that provides concrete protection and acts as a moisture barrier to allow for the rapid application of an epoxy coating onto surfaces with high moisture contents.

Sikagard-63N epoxy, a high chemical-resistant coating, with a long track record in wastewater treatment plants, was applied to complete the buildup. Finally, all joints in the structures were sealed with Sikaflex Pro 3i and Sikadur Combiflex.

Given the state of disrepair of the WWTW, it was achieving nowhere near full capacity. Project challenges were inevitable expectations and most, such as labour disputes, were dealt with readily. However, once the digesters and aerators are complete, all would have been achieved to ensure project success. The community of Kwanobuhle can look forward to this redevelopment as it is surely one that will stand the test of time; and is certainly...not a waste. ■



# Stella Ndabeni-Abrahams visits the innovation hub in Tshwane

**T**shwane, 03 February 2020. In recognition of the need for partnership in addressing South Africa's challenges regarding economic development, job creation and innovation, The Innovation Hub recently had the honour of hosting the Minister of Communications and Digital Technologies, Ms Stella Ndabeni-Abrahams. The visit, which took place on 24 January in the presence of key role players from The Innovation Hub (TIH), was arranged to showcase TIH's capabilities in business incubation and technological development focused on skills development.

Advocate Pieter Holl, The Innovation Hub CEO and Mr Tsietsi Maleho, General Manager for Partnerships, provided with insights into the various enterprise and skills development initiatives which help local entrepreneurs address social, technological and environmental challenges through sustainable business development. One such offering is the The Innovation Hub's eKasiLabs initiative, which offers business development support, advice, infrastructure and networking and funding opportunities to start-ups in various townships. "It is vital for us to not just focus on the start-ups in our precinct here in Tshwane, but to leverage our resources to the wider community to ensure that they don't get left behind in the Fourth Industrial Revolution (4IR). There are many business opportunities out there, and we want to empower people with an entrepreneurial mindset to develop in a way that is sustainable and far-reaching," said Mr Tsietsi Maleho.

Aside from this focus on the township economy, The Innovation Hub also has programmes helping companies in

the key sectors of smart industries (including ICT and advanced manufacturing), Bio-economy and the Green economy. The myriad ways in which The Innovation Hub contributes to South Africa's economic development while taking into account the country's urgent need for skills and technological development was not lost on Minister Ndabeni-Abrahams.

"To really address our country's challenges, we don't just need entrepreneurs, we need innovators. Everything you have said to me this morning – your emphasis on solution-driven work and helping entrepreneurs with an evidence-based approach to the challenges we are faced with – this is just what we need," said the Minister. "As government, and through our work with SITA, we need to stop producing resellers of other people's technology and products. We need to give more South Africans the opportunities to develop the capabilities and products we need here, and I see this is exactly what you as The Innovation Hub are doing."

Minister Ndabeni-Abrahams spoke about the state of innovation that is currently lacking in the country, stating that new solutions should be embraced. "We need to look at the wider innovative solutions being presented to us, and not reject what we do not know. We do not know everything, and looking at locally-developed solutions to local challenges is the way forward. We are entirely too dependent on foreign technology." Recognising that good ideas need time and space to grow.

The visit concluded with a tour of various tenants of The Innovation Hub, which provided the Minister with a first-hand view of the solutions being developed and the services offered to start-ups. ■



# Investigation into financial misconduct

The country's body of construction contractors Master Builders South Africa (MBSA), has called for an urgent meeting with the Minister of Higher Education, Science and Technology. The meeting is meant to provide clarity on the standing of thousands of learners who are in training programmes supported by the CETA.

The Construction Education and Training Authority was placed under administration by Minister Nzimande on the 29 January 2020 to facilitate an investigation into allegations of financial mismanagement and maladministration.

"We have thousands of learners placed with building contractors on learnerships, apprenticeships and candidacy programmes and the immediate concern is to ensure that placing the CETA under administration does not result in unintended consequences for these programmes and for skills development in the construction sector." said MBSA President Mr John Matthews.

Matthews confirmed that MBSA was aware of ongoing challenges at the CETA, which were causing significant delays in late payments of training grants, bursaries and stipends to employers and learners. At just below 10% of the total labour force of the country, the construction industry remains one of the largest employers in the country.

However, the lack of qualified and experienced workers has been cited as one of the biggest threats facing the industry. To improve delivery of skills programmes in the country, Minister Nzimande made an undertaking to implement a Contract Management System to keep track of the flow of



funds, so that financial management becomes more transparent within the Department. He also indicated that there would be consequences for individuals who fail to comply.

"As an industry body, maintaining a steady supply of the required building skills for the country is at the core of what we do for our members, and we remain committed to working with the Minister to ensure that the CETA is more effective and delivers the skills needs of the industry. We also support any action aimed at entrenching good corporate governance and better performance, but we are concerned that this development may jeopardise current skills programmes and those that are planned for the near future" said Matthews.

Master Builders South Africa (MBSA) is a Federation of registered employer Associations representing contractors and employers in the construction industry, and is regulated in terms of Section 107 of the Labour Relations Act 66 of 1995. The Federation's nine Master Builders Associations, and three Affiliate Associations represent more than 3500 contractors and employers in the industry. ■

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# Upskilling vital to construction industry

*Written by: Anthony Keal, group skills facilitator at Master Builders Association Western Cape (MBAWC)*

According to the recently released Quarterly Labour Force Survey by Statistics SA, 40.1% of people between the ages of 15-34 were not in employment, education or training in Q4 2019, highlighting the fact that skills development is more important than ever. Amid positive job creation news, it is now especially vital for the construction industry to adapt to advancing standards and adequately train the emerging workforce.

The construction industry currently contributes 8.3% to total employment numbers and has shown a positive uptick in job opportunities according to the recently released Career Junction Index - which revealed a notable increase in hiring activity in the construction and building sector.

The opportunities for small, medium and micro enterprises (SMMEs), or subcontractors, have been growing over the past 20 years, especially as large contractors subcontract out the majority of their work, with their main aim being to ensure the employment of site supervision to manage risks, quality and productivity.

However, SMMEs in the building sector often do not have the continuous workload required to place young people on appren-

ticeships. In addition, due to the casualisation of labour, small businesses also cannot sustain employment over long periods.

As such, it is great to see that in the past year, many Centres of Specialisation have been established in the hope that many more young people strive to become artisans of the future.

The Department of Higher Education, through the Quality Council for Trades & Occupations (QCTOs), has also embarked on developing Skills Programmes. These skills programmes often are not scoped by experts in the industry but by instructors from technical and vocational education and training (TVET) colleges. Once published, these skills programmes will become part-qualifications. This system suits the Collective Agreement as our T4, T3 and T2 will be formally recognised.

We are proud that the Master Builders Association in the Western Cape (MBAWC) has a Skills & Education Trust that runs free courses for those already involved in or wishing to enter the construction industry. These skills programmes assist with growing the workforce in the construction industry. The Trust will issue a certificate of receipt of donation and these receipts are recognised by all South African National Accreditation System (SANAS) approved verification agencies.

Another advancement for growing access to higher education in South Africa is the new Broad-Based Black Economic Empowerment (BBBEE) Codes of Good Practice amendments which came into effect in December 2019. The amendments have introduced a new scorecard indicator whereby employers can now provide bursaries for tertiary education to students and claim points. We urge any corporates in the industry who are able to provide this opportunity to please do so.

In order for the construction industry to survive and thrive it is vital to invest in the future workforce by way of upskilling and

continued learning. It is important to note that ongoing training should be considered a Key Performance Area for each site. If the variety of construction enterprises make every workplace a training area, we will see an improvement in quality and productivity. The MBAWC suggests that each business sends at least one supervisor on a mentorship programme in 2020.

As an industry, it is necessary for members to take up the role of being leaders in training Construction Supervisors, Health & Safety Officers and Apprentices, as well as upskill their workforce through numerous short skills programmes. ■

## Workplace Trends: Welcoming the iGeneration into the workplace

*Lyndy van den Barselaar, managing director, ManpowerGroup South Africa*

**A**s the oldest of millennials (those born between 1981 and 1996) are well into adulthood, a new generation of workers is now entering and shaping today's workforce. Born between 1995 and 2009, iGen (or Gen Z) is the first global generation of digital natives.

For the first time in history, today's workplace is made up of five different generations working together – thanks to lifestyle improvements, later retirement ages and earlier career starts. Unlike the previous generations, these young people are experiencing the world of work through this altered lens.

According to ManpowerGroup's Talent Shortage 2020 research, titled: *Closing the Skills Gap: What Workers Want*, iGen's are ambitious, hungry for cash and career development, yet already, women and men have differing desires. Women rank pay twice as much as their next priority – developing skills – while men say skills and career matter almost as much as pay. As more tertiary-educated women than men enter the workforce for the first time after decades of unequal pay, women know their rights and money matters.

For businesses, generational diversity will assist with driving innovation, skill diversity, organisational flexibility and the opportunity for strategic mentoring and skills transfer between generations. Essentially, a multi-generational workforce will present organisations with a competitive advantage in the ever-evolving world of work. Now, what does the entry of this fifth generation of workers mean for workplace trends in the near future?

### Skills are king

Many organisations may be looking to alter their recruitment processes to be in line with the working generation's needs, as well as their own business needs. This could mean recruiting candidates primarily based on capabilities and transferable skills, rather than work experience and specific qualifications – as employability today is less about what candidates already know, and more about their capacity to learn.

### Strong focus on development

Further to this, as the world of work evolves and the lifespan of skills diminish, employers will be expected to prioritise a culture of continuous learnability and skills development within their

organisations in order to nurture talent. Mentoring and career coaching will also need to become a priority.

Not only will this support the personal and professional development of their existing and future workforce, but ensures that the organisation is flexible enough to remain relevant in an ever-evolving environment.

### Focus on flexibility

With both Millennials and iGen's looking for jobs that provide them with the opportunity to have a flexible schedule, more organisations will offer workplace flexibility in order to attract and retain this talent for the long-term.

### Changing structures

With more Millennials stepping forward into roles that shape the future of work and working environments, and younger leaders at the forefront of organisations, it's likely that organisational structures will begin to change. Junior employees will have more direct working relationships with their senior leaders, opening the doors for two-way mentorship between generations. As a result, there will be more opportunities for iGen workers to influence business strategies in future.

### Increased values

Younger generations are increasingly environmentally and socially conscious, and look to work with organisations that prioritise purpose and meaning in their work – such as sustainability, diversity, and inclusivity, for example.

Organisations are becoming more open about what they stand for and how their employees will be contributing positively to their business and communities; Sbondokule Mkhize (LWBC). ■



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## Versatile precast concrete equipment shelters

Batteries and equipment for cell phone towers, security surveillance electronics, photo-voltaic and wind farms and other high-value support and back-up equipment are often the target of theft or damage due to their accessibility. The risk of theft is easily reduced by the installation of Equipment Shelters from Rocla.

Rocla has in the past, partnered with entities such as Transnet and South African Railways (SAR) to provide custom-designed precast concrete security units to house all the equipment that is required to control the signalling units. These units are placed alongside the railway track next to the signal units.

The precast concrete Equipment Shelter is a durable concrete structure that can be custom-designed to meet the client's requirements. The concrete structure is able to withstand rigorous attempted break-ins that typical brick and mortar solutions are vulnerable to.



Security box shelter.

The design team at Rocla ensured that the unit design was practical for handling and transportation, yet strong enough to deter possible break-in attempts. A replacement cost of sensitive equipment is incredibly high, and the Equipment Shelter is a seriously solid solution to reduce tampering, theft and damage.

Cast in one complete structure, with a cast-in base, and thick high strength walls, makes the Equipment Shelter virtually impenetrable. Damage to or entry through walls or the roof is also reduced due to the use of a very high steel content in the manufacture of the units.

Each unit has two holes on side for handling and installation, a specialised heavy duty door and sufficient space inside for equipment and movement. These holes will also provide sufficient ventilation, while still maintaining the security of the unit, for equipment housed inside.

The Equipment Shelter is a cost-effective and reliable solution that can be applied across a multitude of industries, and manufactured to specifically meet customer's requirements. ■



# Risk Management South Africa

The Institute of Risk Management South Africa (IRMSA) is looking forward to the launch of their IRMSA South Africa Risk Report 2020 on 18 February. This will be the sixth edition of this report and looking back over the past five editions it is disappointing to see that so many risks have materialised.

The risks, which include unemployment, fraud and corruption, income disparity and failure of governance, have not just already materialised, it has actually deteriorated e.g. unemployment.

Looking ahead, risks that are making its way onto the South African and Industry risk radar are climate change, which has sporadically been included on South Africa's risk profile, social disobedience, and pressure on South Africans' Chapter 9 institutions, which include the Public Protector and the South Africa Human Rights Commission.

While the risk profession in South Africa isn't lagging behind its international peers, board members, executive committees and CEOs of South African organisations should expect more from their risk managers.

Business must actively involve their risk managers and to actively be exposed to the business-critical information so that they can bring value to decisions.

Risk managers are expected to confidently comment on the strategy and performance of an organisation and contribute to the company's agility by delivering quality, timeous and relevant information.



"For example, a risk manager with quantitative analytics skills who takes this approach can be more predictive and support the business' strategy with alternative futures, which will lead to better decision-making.

Risk manager who adds the most value to an organisation's performance is the one who has accepted the notion that risk is about the future and that uncertainty is not confined to a risk register but that the integration of strategy, risk and resilience is a critical next step, if not already adopted.

Reflecting on the risks that have materialised over the past five years, many things have to be done differently. The first is ethical leadership, accompanied by pervasive and persistent accountability and consequence management. A very critical paradigm shift required by leadership is that risk responses that were effective in the past are not guaranteed to address. ■

## South Africa's PPC is the newest corporate member of WCA

The World Cement Association announced today that PPC, a leading provider of cement, lime, ready-mix concrete and aggregates across sub-Saharan Africa, has joined WCA as a Corporate Member.

"Over the next 30 years, the cement industry will grow faster in sub-Saharan Africa than any other region. What happens in Africa really matters to the future of the worldwide industry," says Ian Riley, CEO of WCA. "We are pleased to welcome one of the leading cement producers in sub-Saharan Africa and look forward to working together to promote an efficient and sustainable industry."

With over 3,300 employees and eight clinker plants in South Africa, Botswana,



DRC, Ethiopia, Rwanda and Zimbabwe, PPC operates an annual cement production capacity of around 11.5 million tpa. In Southern Africa, PPC also serves customers through a network of 26 ready-mix plants, five aggregates quarries, two fly ash plants and a lime operation.

"We expect that WCA will help us to leverage and expand our existing expertise to achieve best practice in cement operations for the benefit of our customers and to further improve our environmental performance," explains Mr. Roland Van Wijnen, CEO of PPC. "Through WCA, we are also looking to connect with the worldwide cement industry and stay up to date with the latest developments". ■



## What makes an efficient precast wall production line?

**E**lematic is well-known globally for hollow core technology but the company also has a strong product line for precast wall element production, with three ready layout concepts – the SEMI, PRO and EDGE – depending on the amount of automation and production capacity needed.

But there are many other solutions available. “We have a wide range of other layout options for different capacities which have been proven to perform well in many existing factories. Our strength lies in our customized wall production solutions,” commented Toni Koitmaa, Product Director, Wall Technologies, Elematic, based in Finland.

### A full range of wall manufacturing equipment

One device that seems to be making a huge difference in improving the efficiency of wall production lines is the central transfer wagon, especially when the product range includes both simple, fast moving elements and complex panels that require more production time. “The central wagon moves the elements that take more time to be fabricated away from the main line so bottlenecks in production are avoided. This allows the elements that are fabricated faster to move forward and makes production very flexible,” Koitmaa points out.

Pre-defined processes and proper documentation during the whole manufacturing process are important to ensure consistency in production and quality control. “Table moulds, for example, are a long-term investment. You have to ensure that the moulds can support the requirements set for the wall element. Table moulds have to be flat and straight and must withstand the load placed on them without bending. It takes a lot of expertise to make mould tables within strict tolerances,” Koitmaa says.

The casting machine is another crucial piece of equipment.

Elematic’s Comcaster is, in Koitmaa’s words, “very unique, very accurate and fast,” while allowing for lower water-cement ratio. It can also cast stiffer grades of concrete than conventional casting machines and reduces surface finishing time.

Decreasing waste in the precast production process and improving cost-efficiency and safety are goals to keep in mind. “You can use half the usual amount of wood needed for table moulds, battery moulds and column- and pillar production by using the right shutter system. The FaMe system is comprised of push button magnets and aluminium side forms to replace wood and steel, which leads to substantial savings.” Koitmaa adds that the FaMe system was designed to improve work safety and lower the chances of finger injuries.

Battery moulds, which are used to cast solid load-bearing walls, can likewise have a big effect on efficiency. The cold shutter system, which is offered by very few equipment manufacturers in the industry, practically doubles the capacity of a standard battery mould. By transferring the cold shutter plates to the battery mould after the previously cast elements has been taken out, the casting cycle is significantly accelerated. “The cold shutter system really speeds up the production cycle since only casting and hardening take place inside the battery mould. Using it is a great way to increase capacity,” Koitmaa explains.

Digitalisation also goes a long way towards reaching peak efficiency. “Using digital systems can help you get the maximum capacity from precast lines by optimising the process at different stages of production, leading to faster delivery time and saving on resources,” Koitmaa said. At this year’s BAUMA, Elematic launched the WallMES, as part of the digital Plant Control solution for precast plants. ■

**CEMENT AND CONCRETE PLAY A CENTRAL ROLE IN TRANSPORT INFRASTRUCTURE, ESPECIALLY FOR SOUTH AFRICA'S MAJOR PORT, RAIL AND ROAD PROJECTS.**

200 thousand tons of cement was supplied to the south section of the Gautrain Rapid Rail Link project, by a leading South African supplier of construction materials.

124 000m3 was the total volume of concrete supplied to Durban Harbour's national project to widen and deepen the port's entrance.

At least 643 thousand cubic metres of concrete will be used for the N3 upgrade from Durban to Pietermaritzburg in South Africa!

**TO MEET WITH KEY AUTHORITIES RESPONSIBLE FOR DRIVING THE REGION'S TRANSPORT INFRASTRUCTURE PROJECTS AND HEAR FIRST-HAND WHAT THEIR CONSTRUCTION REQUIREMENTS ARE, PLEASE CONTACT:**

Steve Lee  
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# WAMPEX – the mining equipment hub

**W**ith 6.9% year on year growth predicted in 2020 and accelerating to 7.4% year on year in 2021, Ghana's mining industry contributes in no small measure to the impressive GDP growth the economy is chalked to achieve in the next 2 years.

Mostly thanks to a growing mining sector (accounting for 5% of the country's GDP with minerals making up about 37% of total export). Mining industry equipment is also expected to witness a strong growth in the medium to long term, thanks to the surge in market conditions and technological advancements.

"The West African Mining and Power Expo in Ghana is a great way to network with the regional mining industry." said Gurminder Singh Malik, President of International Business Strategy,

Bull Construction Equipment, Ghana is one of the largest producers of gold in Africa, with an output of more than 4.8 million ounces. The country also produces commercial quantities of bauxite, iron ore and manganese. The country's gold sector is split between large multinational mining and small-scale mining performed by local companies.



Significant market opportunities exist for large earthmoving equipment to analytic and assaying devices and materials. The dmg group is proud to be presenting the 16th edition of The West African Mining and Power Expo in conjunction with the Ghana Chamber of Mines 3 – 5 June 2020 in Accra, Ghana.

"The West African Mining and Power Expo (WAMPEX) provide a unique opportunity for equipment suppliers to team up with local potential clients in a very cost effective

way. Meeting with over 2500 of West Africa's mining value chains and concluding business deals that would normally take months to finalise in just a few days." Devi Paulsen dmg.

"The conference and exhibition has progressively become West Africa's main platform for thought leadership in mining and power. We welcome all participants to our beautiful country" Sulemanu Koney, CEO, Ghana Chamber of Mines

If you are interested in participating in this exciting business venture contact us to learn about the commercial opportunities available at this trade expo. ■

**Contact: Dean Lundall on phone: +27 11 783 7250  
or email: deanlundall@dmgevents.com**



# Watertight admixture advances level of waterproof concrete for SANCCOB

**D**rawing on the latest admixture technology to adapt to changes in the cement industry, the innovative Sika Watertight Concrete system not only increases the use of replacement materials but allows the use of a wide range of aggregate types. Here is prime case study of how Sika WT-200 P helped protect the newly constructed exercise pools for SANCCOB.

Southern African Foundation for the Conservation of Coastal Birds (SANCCOB), operating in Table View for 33 years and having treated nearly 100 000 seabirds, SANCCOB (Western Cape) was in desperate need of new modern facilities. Over the years, it has become synonymous with conservation of the endangered African penguin and is a leader in seabird rehabilitation, chick-rearing, veterinary care, as well as contributing to ground-breaking research. This meant the organisation's capacity needed to increase to save more birds, improve the standard of care and educate more people about seabird conservation.

Even good quality concrete will allow water to permeate the surface; thus the need for a good waterproof concrete mix that safeguards the exercise pools from damp and water leakage. The application of concrete supplied contained Sika's



*Foundation to start building penguin pools.*

watertight solution, Sika WT-200 P, to provide a durable, watertight finish. The volume of capillary pores provide a pathway for water on one side of the structure and air on the other. The volume of capillary pores in the concrete matrix is proportional to the water/cement ratio. Understanding and controlling water/cement ratio is the basis of concrete technology and, as well as permeability, how it affects the strength and durability of concrete. In addition the special formula and ingredients of Sika WT-200 P enhances the self-healing properties of concrete and will improve the ability to heal concrete cracks. ■

## The recession and the future of Corporate Real Estate

**T**he announcement of South Africa's third recession since 1994 has sent shock waves across the country. While we all saw it coming, the market shrinkage reported by Stats SA confirms one thing: we have now reached our lowest point since 2009.

Industries such as agriculture, the country's catalyst for job creation and future economic growth, is down by -7.6% and more than 10 000 jobs have been cut in the past three months alone. Interestingly, finance and personal services saw some positive growth which usually reflects in the office market.

John Jack, CEO for Galetti Commercial Real Estate notes that although this news is not good, this has been reflected in office and industrial property demand for quite some time now.

"Large vacancies exist specifically within the office sector. That said, we are seeing increased demand for offices which

saw a nett take up in the Bryanston and Sandton nodes of just under 30000 m<sup>2</sup> in January and February of this year".

"There are clear trends taking place in the industry. Tenants are hard pressed to move from their existing space given the costs of relocating. They remain at their current premises but continue to negotiate reduced rates and this puts major pressure on the market," he explains.

"At the same time, companies have reduced their head count to reduce their salary bill and in doing so they now require less office space which contributes to the vacancies we are seeing".

Jack also notes that interestingly, the tenants who are looking to sublet space are often the landlords biggest competition being able to offer far better terms for their space. "We have recently concluded a lease where the exiting tenant was able to offer two years rent free to the incoming sub-tenant," he explains. ■

# Debugging social media – part 1

**T**he boom in social media platforms has been fuelled by the increased take-up of mobile devices like smartphones and tablets, as we veer away from desktops. Businesses are increasingly recognising social media as a valuable, inexpensive tool to reach out to their key stakeholders, engage with them in today's globalised world and, in so doing, reduce the communication gap that once existed.

In a world that's become mostly digital, are we becoming more like Neanderthals? During the past few years, humans have been changing. Interestingly, our visual intelligence is actually increasing, while verbal intelligence is on the decline. According to a UCL study, the way we communicate is becoming more caveman-like. Modern man is moving more towards a "pictographic form of communication". Prof John Sutherland from University College London embellishes this when he says: *"This harks back to the caveman form of communication, where a signal can convey a full range of messages and emotions."* Today's fastest-growing social media platforms are visual-based. This number is increasing and 84% of communication is visual. Basics have become more important than ever and excellence in visual communications is now the most important factor in the digital age.

The social media revolution started 15 years ago with Facebook and is now racing ahead with new developments

almost daily. The scariest element of all this for the population over 50 is certainly the technology and terms used by the "experts" and understanding all the different platforms.

I'd like to return to basics, as this tends to be the best way of understanding communications. Social media in its simplest form represents platforms on which to communicate with people and clients. In old media terms, we had radio, with many different channels as options. The same goes for TV. When it came to printed matter, newspapers and magazines were options for our advertising/communications and these choices were based on who these media platforms reached, ie if the target was a general broad-based consumer audience, then perhaps the choice would be YOU magazine. If we wanted to speak to financial people in management, we'd go to the Financial Mail. This further broke down to consumer or business publications.

Social media is, in essence, no different, other than the fact that it's streamed via the Internet and not paid for, as with "old" traditional media (TV and radio licences, or buying magazine). When speaking to "experts", we're often lost because of terms and technical issues. Most of the time, huge numbers are spoken about and how we should or shouldn't interact with these platforms. In order to simplify, I'm dividing these "new" communication platforms referred to as "social media" into two basic categories: "the message" and "visual".



### The message

We used to hear the term “content is king”. In fact, the communication and methodology by which it’s delivered is king. If your advertising or message is weak, so will the response be.

- In years gone, by when doing print advertising, you had a whole page to carry your message and if it was interesting enough for readers, they read it. Social media is more like billboard or magazine cover slugs: you have only a few seconds to grab the attention of potential customers. During those few seconds, you’re judged by your visual communication. On average, a person is distracted after just eight seconds
- On “old” media platform (radio, print and TV), you had far more time, potential clients had fewer options and, lastly, they paid for the delivery platforms. Now everybody is a media owner via social media, with millions upon millions of messages being sent out on free distribution platforms. The market has certainly become more complicated and, not as often perceived, “cheaper” or “easier”, if you’re looking for real results.
- In the past you had 30-second TV and radio adverts and in print, you could buy from a double-page spread down to a business card-sized space. Now you’re faced with media that’s not time-restricted. You’re not forced to watch adverts, as you were on TV or radio. You can no longer explain your services or product in lengthily worded adverts, as was done in print media.
- Media consumers have become lazy to read and are more inclined to “hear and see”. As a result, in order to get your message across, it’s critical that:
  - o You understand your target audience.
  - o You link the best media platform that speaks to your target market.
  - o You use social media platforms with your own database to develop a targeted campaign.
  - o You use video and photos to communicate your message, rather than words. Make sure the presenter is recognised by the target market as being from the same “tribe”, ie if you’re selling a book to lawyers. then make sure the presenter can put across the message sounding like a lawyer.
  - o Still as applicable today, make sure you have a “call to action” build into your campaign.
  - o As before, ensure that you continue your communication, rather than giving only a once-off message. However, be careful not to continue sending the same message over and over, as modern media has an “unsubscribe” or “block” facility and you don’t want to lose potential clients this way.
  - o Planning your campaign is critical:
- What do you say?
- How do you say it?
- How do you visually present it?
- Remember, nothing has changed in marketing. Although the distribution channels are mainly free, you still need to be professional to stand out and achieve success.
  - o Work with people who can assist with channel selection.
  - o Get professional help with script and production.
  - o Measure success or failure to improve future development.

- o Build your own contact list.
- o Stay updated and fresh; have something new on a regular basis.

### Use of visuals on social media platforms

According to a study by *SOCIAL MEDIA TODAY*, stock photography posts only drove 12% of engagement, while content with original graphics drove 40% of content and videos drove 23% of engagement.

With social media feeds constantly clogged with updates and news, it’s easy for information to get lost in the noise and reams of text. Words alone won’t grab the attention of the social media audience. Integrating them with compelling visual content, however, can boost your audience.

Why are visuals so powerful? It comes down to the way our brains receive and transmit information. Numerous neurological studies have pointed out that our brains are tuned to processing visuals at a vastly greater speed. In addition, they can retain and transmit much more information when it’s delivered visually. A group of MIT neuroscientists found that the brain can identify images seen in as little as 13 milliseconds. Furthermore, consider the following:

- (a) The human attention span has dropped to eight seconds.
- (b) Ninety-three percent of all human communications is visual.
- (c) Humans process visuals 60 000 times faster than text.
- (d) Eighty-one percent of people only skim content they read online.
- (e) People learn 40% better when visuals are included.
- (f) Eighty-five percent of online shoppers use product videos to make decisions.
- (g) It’s predicted that 82% of all Internet traffic will be video by the end of this year.
- (h) Seventy-five percent of the world’s population watch videos on smartphones.
- (i) Fifty percent of our brain is involved in visual processing.

### Social media platforms

These change frequently and each site is also developed and expanded upon rapidly. All social media platforms need constant assessment as the preferred carrier and to ensure the message fits the carrier “style and fashion”. Today’s fastest-growing social media platforms are visual-based. This number is increasing and 84% of communication is visual-based.

We’ll touch on a few different platforms, but be warned: this is not intended as a research document to plan your social media strategy. You need far more comprehensive research and development.

I want to warn against “specialists” who’ll try to bamboozle you with technical aspects and lose you along the way. Make sure you maintain control in this conversation, explaining what you want to achieve. Let them explain how you can do so and get more than one opinion if you’re not comfortable. Remember, awareness is great, but if it’s sales you’re after, then the correct methodology must be implemented.

Likewise, competitions and give-aways are all very well, but the web has many people who are “professional” competition entrants and not all potentials will translate into possible clients. ■

*To be continued in issue two of 2020.*

9 - 11 JUNE 2020 | Gallagher Convention Centre, Johannesburg, South Africa

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# AFRICA'S US\$497BN CONSTRUCTION INDUSTRY IS BOOMING!

## MORE CONTENT ON OFFER IN #20PLENTY, BUILDING AFRICA TOGETHER!

The 2020 built sector is significantly different when compared to only a decade in the past. Traditional methods have been improved using innovative practices, while others have been scrapped completely in support of more efficient approaches. Such a movement calls for learning and development to accommodate sector disruptions – the very reason the African Construction and Totally Concrete Expo ensures forward-looking content to all those in the built environment.

### MINISTERIAL KEYNOTE AND STAKEHOLDER ENGAGEMENT FORUM:

The construction industry is ripe for disruption and digital transformation is no longer a choice, but a necessity. For many African countries, the future is already here – as is the 4IR. Through a strategic discussion, the region's brightest minds will take attendees on a deep dive into how today's technology is transforming the continent's oldest industry.



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The free-to-attend technical talks allow professionals to step off the project site and uncover new approaches that will grow their business. In an intimate learning environment, industry experts will highlight how today's construction projects should be planned, designed, operated and decommissioned.



### RETURNING FOR THE 4TH EDITION:



Smart Cities Week Africa will take place from 9-12 June 2020 at the Gallagher Convention Centre in Johannesburg.

One week of activities will be dedicated to Africa's smart city ambitions, part of the 4th African Smart Cities Summit.

It will include key site visits in Johannesburg and Cape Town to see smart city solutions in action, a night-school for architects and urban planners, a prestigious awards ceremony and live product demos on the expo floor.

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# Tokyo House tests environmentally-friendly concrete made from volcanic ash

*Dramatic slices on the corners of this building bring in sunlight and make the three-story structure seem bigger on the inside than it actually is. Courtesy ©Atelier Tekuto*

The Japanese firm Atelier Tekuto has specialized in developing new construction methods in the course of designing over 200 houses. When a midcareer couple, both chemists, knocked on the firm's door requesting "a challenging piece of architecture that is environmentally friendly," the architects took the opportunity to invent a 100 percent renewable concrete material for the R Torso C House in Tokyo.



*3D printed concrete, made from sand and volcanic ash.*

Rather than using sand as its fine aggregate, shirasu concrete uses the volcanic ash produced by a fast-moving current of gas and rock known as a pyroclastic flow – a natural resource found in abundance in the south of Japan's Kyushu island (the last volcanic activity in the region was this past July). "River sand is scarce in Japan, while the use of sea sand in construction is on the verge of being banned," says Atelier Tekuto's principal Yasuhiro Yamashita. "Shirasu concrete can bring big economic benefits to the region."

The firm teamed up with experts from the University of Tokyo and experimented for a full year with the composition



*Section through ancient concrete made with volcanic ash.*



of the concrete, performing quality tests and making mockups to meet legal requirements and obtain government approvals. In all this, Roman engineers were the role models – the builders of the Roman Empire are said to have used ash from pyroclastic flows in concrete structures such as the Pantheon 2,000 years ago. The Japanese version has a different composition, is made of local ingredients, and is adapted to contemporary building standards.

Yamashita claims that not only is the concrete environmentally friendly, but also that its high density, absorption capacity, and natural pozzolanic reaction (which gives it the properties of cement) make it particularly strong and durable.

Atelier Tekuto does not make a secret of the composition of the buildings' skin. The benefits of shirasu are freely shared on a newly established digital platform called the Regional Material Utilization Network (RMUN) in the hope that this will help "develop and vitalize regions all over Japan, and in any [volcanic] nation for that matter." ■

# LafargeHolcim CEO endorses worldwide initiative to promote human rights

LafargeHolcim CEO Jan Jenisch has joined today the Call to Action for Business Leadership on Human Rights by the World Business Council for Sustainable Development (WBCSD).

Leaders who join the initiative commit to making human rights more than just a risk and compliance issue for their companies – they will actively promote them as part of their company's commitment to social responsibility.

"I hope that by giving my personal commitment to this Call to Action we can highlight the importance of this topic for LafargeHolcim. We have always strived to be a valued member of the communities where we live and work and a model corporate citizen on a global level. Standing up as a promoter of human rights shall further advance these goals," comments Jan Jenisch, CEO of LafargeHolcim and member of the Executive Committee of WBCSD.

LafargeHolcim's approach to managing human rights is fully aligned with the UN Guiding Principles on Business and Human Rights, which establish guidelines for preventing, addressing and remedying infringements of human rights.



LafargeHolcim CEO Jan Jenisch

Over the last five years, LafargeHolcim has invested CHF 240 million in community projects. In 2019, 6 million people benefited from these investments.

LafargeHolcim promotes transformative change in the human rights dimension through such longstanding policies as its Supplier Code of Conduct and its Human Rights due diligence methodology.

With the promotion of the CEO Guide to Human Rights, the 41 signing leaders in 20 countries send a clear message on the need to elevate the ambition concerning human rights.

Peter Bakker, President and CEO of WBCSD: "The Guide presents a bold unprecedented declaration by company leaders, whose companies' actions and policies influence vast global supply chains. We are very happy to see Jan Jenisch from LafargeHolcim personally endorse our global initiative to promote human rights in business and we are convinced that his leadership will inspire other CEOs to support this critical cause for a fairer and more sustainable world." ■



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# Utilising exhibitions and live events in tough times

By Devi Paulsen, Vice-President: DMG Events

**Lead generation, networking, thought leadership, brand awareness, recruitment and competitor intelligence are just some of the reasons live events or exhibitions are key tools in a marketing arsenal.**

**N**ot only can exhibitions and marketing events prove to be the most cost-effective marketing medium, but they've been shown to be the most impactful, particularly when markets are under pressure. To maximise their value, the strategies you employ before, during and after an event are critical.

Three leading South African event experts offer guidelines for maximising your event investment wisely.

## VOICE OF CREDIBILITY

Upholding world-class standards for the African exhibition industry, the Association for African Exhibition Organisers (AAXO) keeps on top of developments in the industry and constantly provides a platform to advise and share best practices with its members. In an ever-changing and extremely competitive environment, working with an AAXO member is your assurance of quality and credibility. Visit: [www.aaxo.co.za](http://www.aaxo.co.za).



## SOCIAL MEDIA

Exhibitoronline.com's 2018 Social Media Survey revealed that nine out of every 10 marketers used social media as part of their exhibition marketing plan. Furthermore, 83% of them said social media had helped them achieve their corporate objectives to improve existing and prospective client relationships.

Ensuring that you've activated a social media campaign during a live event provides an excellent opportunity to build and grow your market.

**Projeni Pather, Chairperson of AAXO and MD of Exposure Marketing, shares eight easy steps to make your event social media campaign a success**



1. **Before the event.** Start your campaign at least one month in advance across all your social media platforms. Start with a "Save the Date". Even if followers can't join you at the event, they'll still have solid engagement with your brand.
2. **Join the conversation.** Ensure your social media activity is a part of the overall event conversation by using the official



event hashtags and event handles. This will ensure that everyone who follows the hashtag will learn about your presence and your posts will be visible to all attendees.

3. **Expo artwork.** Get all the online promotional artwork from the event organiser and use it, along with the official hashtags and event handles, to expose your brand to potential customers researching the event online.
4. **Booth activity.** Use your social media platforms to share with your followers everything that's taking place at your exhibition booth. Get their attention with regular updates on specials, demos, giveaways and any other activations.
5. **Keep the conversation going.** Conversations must be two-way! Reply to your audience. Be ready to respond to their comments and questions. Make sure you have all the basic event information, such as ticket prices, FAQs and expo social media handles. Tag the event organisers into questions for which you might not have the answers.
6. **Post valuable content.** Give your followers content they'll value. Review topics that are trending and tie your brand into the content chain.
7. **Plan ahead.** Use the event to create fun and exciting content for your followers. Bank content you gather at an event for post-event posts.
8. **Social media report.** Make sure you include your social media campaign results and details as part of your post-event reporting and ROI measurement. Assess engagements, content that did or didn't work and monitor your brand's growth in followers and engagement over the event period.

Used correctly in conjunction with your exhibition strategy, social media will not only enable you to have one-on-one conversations before and during an event, but will also provide an opportunity to engage your brand with new and prospective customers long afterwards.

## PLANNING

**Justin Hawes, MD of Scan Display, advises how to make the event process seamless and cautions not to forget about the basics**



1. **Choose the right show.** Look at the show's objectives, visitor and exhibitor profile and time-frame to ensure it works with your overall marketing strategy. Use data to support your decision-making.
2. **Determine/Communicate your objectives.** Clarify and communicate your objectives, measurements and goals of the event with your team and event organiser.
3. **Start early.** Take advantage of early-bird rate benefits to make the experience more cost-effective. Planning early makes it easier to ensure you're working towards your goals.
4. **Select the right partners.** Choose a local contractor whenever possible for cost- and time-efficiency and to avoid costly sub-contracting costs.

*It isn't the economy – it's the decisions you make in tough times that matter most.*

*According to the Centre for Exhibition Industry Research, it costs on average 22% less to contact a potential buyer at an event than through traditional field sales calls and nine out of 10 visitors to exhibitions have an influence on the buying of their company or organisation. Live events remain a wise investment providing both long- and short-term benefits and a higher percentage of measured qualified leads.*

5. **Your team's time at the show and choosing the right people to man your booth are critical.** Plan every detail of what your team will do and even wear. Pre-schedule prospect meetings. Ensure your team are clear about what products will be on display, what the event objectives are and that they're ready to engage visitors.
6. **Stand out.** Speak to the event organiser and the show contractor about innovative ways to make your booth more interesting.

7. **Take a walk.** Walk around the event, evaluate what your competitors are doing on their booths and collect ideas for future events.
8. **Follow-up and feedback.** Contact all the leads that were generated at the show immediately and track their life-cycle.
9. **Analyse ROI. After an event, establish whether your initial objectives were met.** If they weren't, analyse why.
10. **Experiment.** Look for ways to make improvements in future and build on what worked.

## TRENDS AND INNOVATIONS

With digital transformation on the tip of everyone's tongues, a number of innovations can make your event participation run much more smoothly and help you create more of a buzz. **Leshem Naidoo, Johannesburg Branch Manager: GL Events,** shares event trends to watch out for in 2020.



1. **Create an experience.** Develop activities (at your booth or around your participation) that allow for mindful interaction and give attendees a memorable experience.
2. **Sustainability.** As the green movement grows, consider paperless options, ie screen displays for lead capture and business match-making, digital signage and if you offer food and beverages at your booth, ensure that you're using sustainable and recyclable options.
3. **Wifi.** Not only is connectivity important for your team manning your booth, but Wifi can provide a great "pull" for attendees to visit your booth. A number of cost-effective options are now becoming available through mobile phone operators.
4. **Millennials are king.** The South African population is made up of 27% millennials. Make sure you give consideration to this group when finalising your presence at an event. This could include providing device charging stations or using high-tech engagement activations.
5. **Artificial intelligence (AI)** is one of the most transformative technological evolutions and provides opportunities to improve customer service and the overall experience. AI options range from chatbots and virtual assistants to networking tools and are real crowd-pullers. ■

# SCANDISPLAY

// Your exhibition and event partner



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# Innovandi – the global cement and concrete research network

**A**ccelerating global collaboration on cement and concrete innovation – an important step in climate action:

- The network connects industry with scientific institutions to drive new ways of working and innovations
- It builds on the industry's long-held commitment to ensuring a sustainable future

The network ties together the cement and concrete industry with scientific institutions to drive and support global innovation with actionable research.

It aims to decisively build on the industry's sustainability progress such as achieving an 18.3% reduction in CO<sub>2</sub> per tonne of cementitious product since 1990 and increasing the use of alternative fuels eight-fold in that same timeframe.

The network intends to research the areas of process technology (including the impact of co-processing, efficiency of clinker production and implementation of CCUS/ technologies) and products. This will include the impact of clinker substitutes and alternative binders in concrete, low carbon concrete technology and improve the understanding of CO<sub>2</sub> reduction through re-carbonation.

24 companies from across the cement and concrete industry, including cement and concrete manufacturers, admixture specialists and equipment suppliers, have already committed to the initiative, with scientific institutions and additional companies set to join as its begins work.

As part of the new initiative, the GCCA also intends to establish an annual Innovandi global conference to promote collaboration on innovation and research in the sector. ■

### About the GCCA:

Launched in January 2018, the Global Cement and Concrete Association (GCCA) is dedicated to developing and strengthening the sector's contribution to sustainable construction. The GCCA aims to foster innovation throughout the construction value chain in collaboration with industry associations as well as architects, engineers and innovators.

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**TECHNICRETE**



# Readymix Trucks – your greatest investment can be your greatest asset

**T**he concrete mixer truck is a crucial part of any readymix operation and contribute significantly to construction projects every day. It not only constitutes a significant investment, at a cost of close to R1M or more, but its effect on the quality of concrete and the overall environmental and carbon impact of business and construction projects cannot be denied.

Moreover, the mixer truck and driver is undeniably the public face of the readymix concrete operation, as is seen on the roads and construction sites.

Ready-mixed concrete was patented in Germany in 1903, but the means of transporting it had not developed sufficiently well to enable the concept to be exploited. There were significant developments in the USA in the first quarter of the 20th century. The first delivery of ready-mixed concrete was made in Baltimore in 1913 and the transit-mixer was born in 1926. Some companies operated telehoist tipplers for a while, but it was the rotating drum mixer which prevailed and developed into the modern truck mixer which has really made the supply of ready-mixed concrete commercially viable. The current shape of truck mixer drum, relying on reversible action for loading and mixing then contra-rotating for discharging, developed into the late 1950s, by the 1980s the most common size, based on a three-axle chassis, mixes and transports six cubic metres of concrete. Larger units (carrying nearly 9 m<sup>3</sup>) and smaller ones (down to 2.5 m<sup>3</sup>) are in use, but the industry has accepted the 6 m<sup>3</sup> truck mixer as the basic fleet unit.

The ready-mixed concrete industry has tended to outpace the construction industry in its willingness to innovate. Not all new ideas survived commercial pressures, mainly because purchasers were not always willing to pay a premium for an improvement in quality or service.

In addition to the energy applied during mixing, in a highly agitated system, the cement particles will disperse, making the overall fresh concrete more flow able. While in a slow agitated system, the cement particles will coagulate and thus thicken the overall fresh concrete. The rheological properties of the fresh concrete depends on the proportions of each constituent as well as on their quality. However, conditions like the shear rate during transport can play a major role on final workability. That is, a concrete batch with seemingly target slump at the



ready mix plant can become unsuitable at the building site due to thixotropic thickening, caused by insufficient agitation during transport. The decrease in the slump during transport in a truck mixer can be up to 90 mm, this could lead to the refusal of acceptance, or in the case of acceptance, make successful casting in awkward sections or through congested reinforcement difficult, resulting for example in honeycombing. This the reason why drums have to be kept clean and free of buildup, as the shear rate of the blades reduces significantly with any buildup of concrete around the blades.

It is because of the impact that the truck mixer has on the business of readymix concrete that there are such a lot to consider when evaluating a mixer truck, apart from just the cost.

To achieve a full 6m<sup>3</sup> and 8m<sup>3</sup> load of concrete the drum needs to be light weight to avoid overloading of the truck (due to SA road laws). The mixer drum has to be manufactured with an extreme wear resistant outer drum and mixing blades inside. The material of choice for the drum and blades is 30MnB5 which has high wear resistance while also allowing ductility for reduced fatigue stress fracturing over the life of the drum.



To achieve high quality ready-mix, especially in the South African market where dry batching is predominantly used, the mixing blades are critical as well as the spacing. Blades have to be high wearing at a spacing suitable for intensive mixing. The drum has to be capable of high quality dry-batch mixing with a slower RPM, due to the blade configuration and close blade centres. The slower mixing speed results in less wear and tear on the drum for a longer life as well as lower diesel usage due to lower RPM during mixing and discharge.

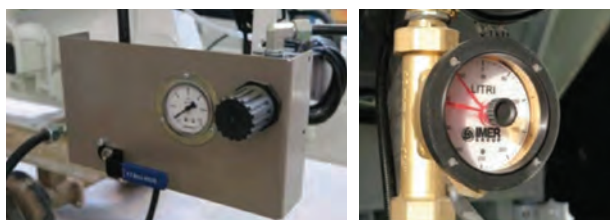
Drums with oversized heavy duty PMP hydraulic systems ensures longevity of the pump and motor capable of higher torque ratings.

The drums must have light weigh chutes for easy movement and lower driver fatigue in moving, carrying and washing of the chutes. Multiple heavy duty safety locks for anti-rotation during lockout for cleaning of the drum inside, is preferable.

All water containers have to have accurate measuring systems to ensure that correct feedback can be given to the plant and concrete technologist if or how much water was added to concrete. Make sure that concrete is mixed for at least 5

minutes when the truck arrives on site or when any water was added, before discharge starts.

In the premixed concrete industry, truck mixers have to be loaded, driven from place to place and discharged, all with no loss of time. Even if larger quantities of concrete or unusual consistencies are handled, the situation is no different. For economical results, low running cost and easy operation are essential.



All components have to be easily accessible and designed to make maintenance as simple as possible. Smooth surfaces and covers keep contamination with dirt to a minimum.

Machines have to be designed in such a way that safety is the priority without compromising on its quality. A low centre of gravity ensures safe driving on all terrains and is the key to good road dynamics. Wide-set rollers ensure optimum support of the drum, especially when driving off-road.

Delivering concrete economically means fast loading, rapid road travel and no loss of time when discharging it on site. Their drum geometry must enable rapid acceptance and discharge of the concrete, optimal mixing action and maximum load capacity. Forces from the drum have to be transmitted uniformly by the mounting brackets and the complete vehicle and its superstructure rated for long, trouble free life. All controls have to be laid out for maximum user convenience.

A generously-dimensioned ladder with spacious access platform, designed in compliance with the respective statutory guidelines, is tremendously beneficial for the operator during daily operation.

Emissions (specifically, CO<sub>2</sub> emissions) are the most notable environmental impact of a delivery fleet.

Emissions are both a financial burden and an environmental burden, but they can be reduced with careful attention to fuel choice, average truck delivery time, fuel efficiency and driver operation, all of which are addressed in this section. Strategies involving the mixer truck can help reduce both the embodied energy of concrete and the carbon footprint of the plant. To improve fleet efficiency consider the following strategies:

- Develop a fleet fuel consumption plan, with fuel efficiency goals, route planning measures, idling reduction plans, and any other components to maximize fuel efficiency within the delivery fleet.
- New truck purchases should be lightweight and fuel-efficient models. Retrofit trucks with fuel efficient engines.
- Implement a route planning efficiency program, such as GPS tracking and minimal right turn planning, for each delivery.

- Implement an idling reduction plan that includes strategies to measure and reduce truck idle time during loading and delivery, with a timeline for plan implementation and goal achievement. Practice just in time delivery to minimize idling at the job site, or off peak delivery to minimize idling in traffic.

Train drivers on the following:

- Driving habits (eco-efficient driving)
- Procedures on the construction site (turn off the motor, if not used for re-mixing or unloading concrete)
- What to do in case of an accident or material damage
- Procedures at the plant (residual concrete, cleaning the truck, washing stations, on-site traffic)
- Product knowledge
- Truck maintenance (service and repairs)
- Occupational safety and Personal Protective Equipment (PPE)
- Reporting to the dispatcher lost loads and other abnormal incidents on the construction site or during transport, e.g. carry oil binder on the truck and dispose of used oil binder in a proper manner.

First rule about overloading is to know the rules and meanings of the data plate. These are the parameters that drivers will be measured against when directed to a weigh bridge.

The meanings for the symbols on the data plate:	
GCM	Gross combination mass – manufacturers rating
D / T	Permissible combination mass – legal rating
GVM	Gross vehicle mass – manufacturers rating
V	Permissible vehicle mass – legal rating
GA 1	Manufacturers all up operational front axle rating
A 1	Permissible (legal) all up operational front axle rating
GA 2	Manufacturers all up operational rear axle rating
A 2	Permissible (legal) all up operational rear axle rating
P / D	Power (Dryfkrag) – kW
T	Complete vehicle tare with body and accessories excluding payload
NO ONE MAY ALTER A DATA PLATE TO SUIT THE CIRCUMSTANCES – THESE FIGURES ARE CAST IN STONE.	

Remember to check the individual tyre ratings as they will influence the total loading capacity of the truck.

Truck tracking is paramount to continued knowledge about the trucks whereabouts and feedback on its performance. The dispatcher at the concrete plant is responsible for utilising a suitable tracking system on all readymix trucks. Drivers may be in constant radio contact with dispatch or may drive a truck with a GPS system linked to a software system. The dispatcher should be aware of the status of the truck, including loading, mixing, transit to jobsite, holding at the jobsite, unloading, water being added, retempering, washing out, transit to the plant and even the slump of the concrete of all the vehicles in their fleet.

It is clear that thorough control of the fleet of readymix trucks can give any readymix concrete company a competitive advantage in both quality and service, notwithstanding the lowering of carbon emissions. ■

*Written by Johan van Wyk*



# Umgeni Road interchange

**T**ravel on KwaZulu-Natal's N2 Freeway major coastal route has been transformed in recent years with the construction of a series of impressive upgrading and interchange projects, some aptly described as engineering marvels.

Proud to have played a key material-supplier role in many of these projects, Lafarge South Africa continually adapts to better serve customers and their worksites with tailor-made integrated solutions for major projects. As a member of the international LafargeHolcim group, a world leader in building materials, the local company has access to unique global resources, innovative technology and experience, enabling it to contribute to the success of infrastructure development programmes.

The holistic approach adopted by Lafarge has meant that contractors benefit from having the support of the widest range of building materials and services delivered under one name, signature and management. "The typical arrangement of multiple suppliers and its frequent blurring of responsibility can be avoided with a more efficient site supply management structure," says Mike Fisher, Head of Infrastructure at Lafarge South Africa. "This also minimises the



*The award-winning Umgeni Road interchange.*

risk of major supply errors in the structuring of large projects, which are often the cause of project delays and penalties."

The construction of the major Umgeni Road interchange straddling the N2 Freeway in Durban features two incrementally launched bridges crossing over each other. The project was the winner in its category of the 2015 prestigious Fulton Award for excellence in civil engineering. ■

## Experience the Progress.



### Benefit of Liebherr wet concrete batching plants

- Liebherr have been supplying wet concrete batching & mixing plants to the South African readymix and precast market for several decades.
- Liebherr offer a range of wet batching & mixing plants for various outputs and applications
- Our factory-trained service technicians and original parts ensure that the life of the plant is maximized. We are supporting Liebherr plants which are over 20 years old and we will continue to support all our customers into the future.
- Liebherr wet batching & mixing plants produce consistent-quality and homogenous concrete
- Liebherr batching software such as BCS and MPS offer high accuracy in batching, allowing for reductions in the mix design margin which results in a saving of cement.
- Liebherr plants are designed for a long lifespan which allows for a lower cost of ownership
- Liebherr ring-pan mixers are designed to ensure that the concrete is always in the path of the mixing blades with the proven ring-channel effect. This results in concrete being mixed quickly and efficiently.
- Dry batching plants do not actually produce concrete; they batch material into a truck, which then mixes the material with water to form concrete.
- Wet batching plants produced ready-mixed concrete, ensuring homogeneity before leaving the plant yard.
- With dry batching plants, concrete is mixed in the truck which essentially means that concrete which comes from a dry plant operation is mixed by diesel engines, which is generally far less efficient than electric motors.
- By mixing concrete thoroughly before discharging into the truck mixer, wet batching plants allow for fuel savings because the truck mixers do not need to mix the concrete at high revs; the concrete is slowly agitated in transit to prevent segregation.
- Because the truck mixers do not need to do high-speed mixing, wet batching plants reduce wear and tear across the fleet of truck mixers. Truck mixers are typically the highest capital investment in a ready-mix concrete operation. Reducing wear and tear on the largest expense makes economic savings.

Liebherr-Africa (Pty) Limited  
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 Durban: (031) 701-1381  
 Windhoek: (0926461) 23-6720  
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# LIEBHERR

The Group



## CHRYSO helps secure future of Kariba Dam

The multi-million Euro engineering project to reshape the plunge pool at the base of the Kariba Dam wall incorporates the use of CHRYSO's concrete admixtures to ensure optimal results. Working closely with main contractor Razel-Bec is Mart Solutions, the Zambian distributor for CHRYSO® Southern Africa.

"Any large and complex project like this one demands ongoing collaboration, which started about two years before the concrete work began in October 2019," says Mart Solutions director Martie Coulson. "Teamwork is vital between Mart Solutions, CHRYSO® and Razel-Bec to ensure the specified concrete mixes are achieved to the consultants' exacting standards."

The world-class project at Kariba Dam will see the building of a temporary coffer dam downstream of the main wall, allowing the deep plunge pool to be drained, reshaped and stabilised. This will reduce the backward scour in the pool, cre-

ated by water released by sluices in the dam wall; the concern is that this scouring is edging towards the dam foundations.

The admixture CHRYSO® Aquabeton ZA is playing a key role in allowing concrete to be placed underwater, to create a foundation for the coffer dam's seven piers. "This highly specialised admixture assists in minimising washout and segregation of fresh concrete when placed underwater," Coulson says.

Among the range of CHRYSO solutions provided by Mart Solutions is CHRYSO® Omega 162 superplasticer, which is an important component of the concrete mix design for the seven piers. These large pier structures will range from 250 tonnes to 700 tonnes in weight. The first of these, currently under construction, will measure 5,5 metres tall when complete. "CHRYSO® Omega 162 reduces the need to add extra water, and so increases the durability of concrete," she explains. "This admixture also improves cohesion and lowers viscosity in the concrete mix, leading to improved homogeneity and superior off-shutter finishes."

CHRYSO® Fuge B, which is a pore-blocking permeability reducer for mass concrete, is also being used. This reduces the size of the capillaries, thereby almost completely eliminating the penetration of water under pressure. This is important for the piers on this project as they are constantly in contact with water. The piers are being slip-formed as hollow structures, from a specially-built rig in the Zambezi River. When the piers have achieved the minimum required height, they are floated into position, secured to the foundation and filled with concrete.

Facilitating the release of formwork from the concrete piers is CHRYSO® DEM S, a versatile mould-release oil for timber or steel. Mart Solutions is also supplying the Kariba project with construction chemicals from CHRYSO's a.b.e. range. The polymer bonding liquid a.b.e. Duralatex is applied to the cone holes in the piers, and these holes are then filled with a.b.e. DuragROUT – a non-shrink grout for sealing. ■



*The first concrete pier set to float, which has a total length 5 metres.*

# Basilisk SA self healing concrete

The watertightness of a concrete structure is for a big part dependent on the occurring of cracks. Due to the presence of cracks, water can easily seep through the structure and cause leakage nuisance. However, concrete is known for having self-healing properties in the field of preventing leakage. When designing a concrete structure for wet environments, engineers usually depend on the self-healing capability of concrete for the calculation of crack managing steel reinforcement. Yet, time after time practice shows that very often self-healing fails with leakage as a result, especially since the last decennia. But why is this? Why can't we rely on the passive self-healing capacity of concrete and what can active autonomous healing do about this?

Let's start with the mechanisms which provide passive self-healing in concrete. Self-healing in concrete is known to be caused by four processes which can occur simultaneously, but also may serve as water tightening on their own. The techniques are the following:

- The formation of calcium carbonate (limestone)
- Loose particles blocking the crack path
- Ongoing hydration of unbound cement particles in the crack
- Swelling of the cement matrix

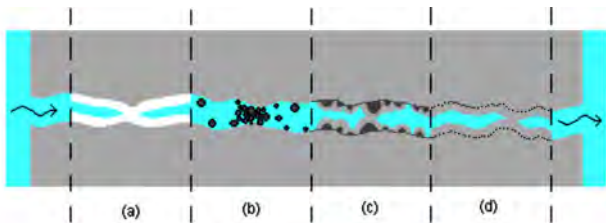


Figure 1. Mechanisms for self-healing (after [1])

Even though these processes seem quite self-evident, it seems to be not sufficient to fully assume watertightness. After all, for self-healing to be able to occur by (one or more of) these mechanisms, it has to meet some important conditions, and so has limitations.

First, the crack has to be stable. These are typically cracks that are crossed by steel reinforcement and are considered dormant. Unstable cracks are usually working joints, and will mostly occur around pour breaks. Secondly, penetrating liquid should not be aggressive nor have leaching properties. Lastly, the flow rate in the crack should not be too large, thus the crack width shall not be too big.

Provided that the above mentioned conditions are met, autogenous healing may occur for crack widths up to 0.2 mm, according to Lohmeyer's table, see fig 2. This table shows the relation between critical crack width and ratio of liquid head and wall thickness. The graph is based on practical observations and is accompanied by the results of two other researchers Meischner and Schiessl. But for engineers the values of Lohmeyer have the preference for practical applications, most probably because it is on the more safe side.

But why do we still see leakage in practice? Well, the earlier mentioned four mechanisms may either be outdated or perhaps overestimated.

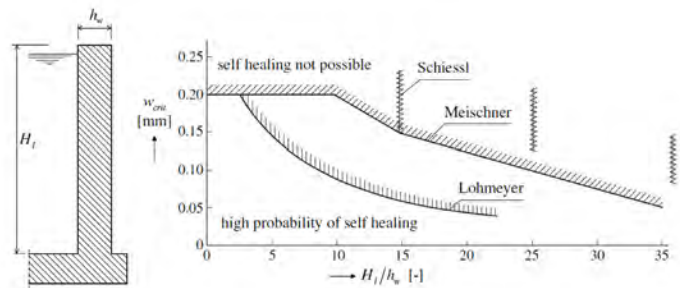


Figure 2. Lohmeyer's table (after [3])

## Formation of calcium carbonate

The cement in concrete consist of several products, including calcium hydroxide ( $\text{Ca}(\text{OH})_2$ ). This calcium hydroxide can react with carbon dioxide ( $\text{CO}_2$ ) present in the air in the crack or in the penetrating water and form calcium carbonate ( $\text{CaCO}_3$ ), also known as limestone. But it so happens that calcium hydroxide easily dissolves in water. As a result, a part of the calcium hydroxide available on the surface of the cracks will dissolve in the penetrating water and wash out of the crack during leakage. Because of the highly presence of  $\text{CO}_2$  in the outside air, the calcium hydroxide will react only at this point with  $\text{CO}_2$  and form limestone (calcium carbonate). Therefore, the lime will precipitate on the outer surface around the crack, rather than form inside the crack. In the pictures below, the results of limestone formation in regular concrete is compared to concrete with active self-healing capabilities, thus concrete with Healing Agent.

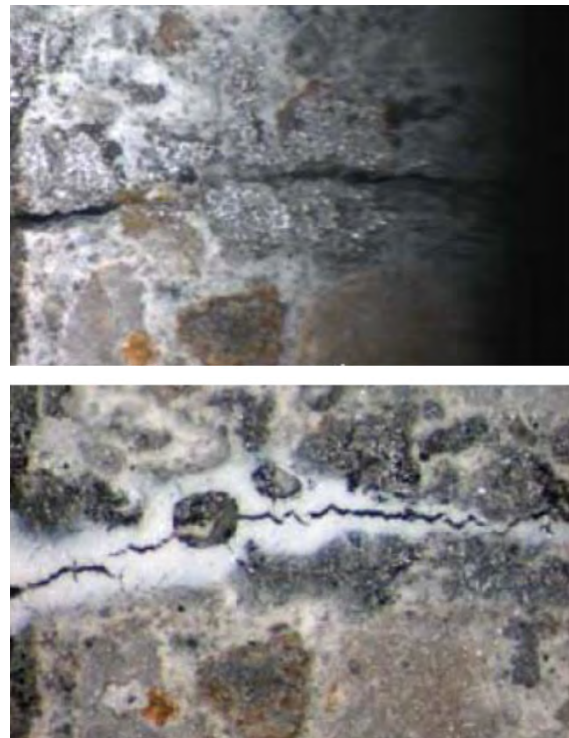


Figure 3. Control concrete before and after healing. Precipitation of lime on the surface around the crack is clearly visible.

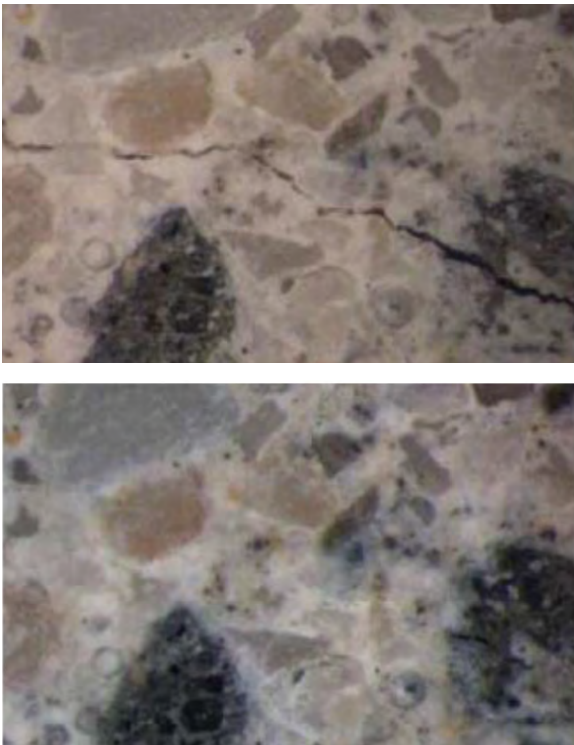


Figure 4. Concrete with Healing Agent before and after healing. The inside of the crack is clearly filled.

### Loose particles blocking the crack path

For loose particles to be able to block the flow path in a crack, we have to speak of quite young concrete. This may be unbounded cement particles which can occur in only young concrete or other loose material. In fact, it is a very weak mechanism to rely on and just assume for loose particles to clump together and block the path. Also with higher flow rates, the chances are small for these particles to hold on in the crack.

### Ongoing hydration

Researches in the past have shown that the capacity of autogenous healing depends on the amount of Portland cement clinker and in particular the size of the cement particles. The coarser the cement, the bigger the self-healing capacity of the concrete. If a crack occurs through a big sized particle, then as a result the unbounded part of this particle will react with the penetrating water and will hydrate, with cement stone as an end product. This will further tighten the crack till there is no more water available. This is the case when the crack is sealed through this phenomenon. However, big cement particles are in contrast to the developments through the last decades in the field of mixture compositions for low CO<sub>2</sub> profiles and fast strength developments. This development may be the reason why we see less self-healing.

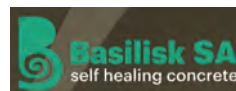
High amounts of CO<sub>2</sub> emission during the production of cement is a common discussion in the cement industry. Worldwide, cement producers are put under pressure by the government to lower the CO<sub>2</sub> profile of their cement. But a low CO<sub>2</sub> profile and fast strength development, demands binders with low clinker content and fine grind. The replacement of clinker with ground granulated blast-furnace slag or with fly ash may lead to less capability of self-healing. Fine grind will no longer provide unreacted cement in a later stadium, because small particles will be fully hydrated. Besides, continuation of

the hydration process, caused by un-hydrated cement particles, is believed not to happen. The reason for this is because the distance between the two crack faces is generally too large to be bridged by hydration products.

Moreover, to manage crack formation in watertight structures, usually the cement composition will already be preferred with less clinker to lower hydration heat which will minimize cracks. And as mentioned above, less clinker may lead to less self-healing capability. However, in this type of cement compositions, crack sealing may be expected in (only) younger concrete. The slower development of cement may lead to healing caused by ongoing hydration of remaining unreacted cement provided that there is water available in the crack. But again, only the case in younger concrete before it reaches the ultimate strength.

### Swelling of the cement matrix

Swelling may occur when the concrete is exposed to an environment with high relative humidity. The cement stone will absorb water and this will cause the stone to expand. But the healing capacity caused by swelling is actually very low and depends very much on the environment. Studies have shown that healing caused by swelling in the cement matrix lies between 0,005 mm to 0,01 mm. Adding swelling materials to the matrix may lead to increase of the healing capacity. After all, they are capable of absorbing huge amounts of water and this will lead to swelling. Because of the absorbing property, in a later stadium they can also be used as internal water source in concrete for healing mechanisms. Still, the healing capacity of swelling materials in concrete is moderate and may be expected up to 0,025 mm. As a matter of fact, swelling in concrete may cause even more cracks as well because of internal expanding due to e.g. delayed ettringite formation. Also, adding certain components makes it no longer subject to autogenous healing. ■



Editorial supplied by Basilisk SA  
self healing concrete  
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## LafargeHolcim inaugurates FastCarb

France: Following a successful trial that began in December 2019, LafargeHolcim has inaugurated a FastCarb CO<sub>2</sub> absorption accelerator into concrete production at its Val d'Azergues cement and concrete plant (integrated capacity 0.4Mt/yr) in Lozanne. The technology involves the capture of CO<sub>2</sub> from the plant's cement kiln for reinjection into concrete produced with recycled aggregates. François Petry, LafargeHolcim France managing director, said the installation 'fits perfectly into our Lafarge 360 approach for more responsible construction.' The five-pillar approach consists of alternative fuel substitution and development, power consumption reduction, formulation of new cements, cooperation with Airium insulation solutions and assistance with low-carbon building design. ■



# Basilisk SA

## self healing concrete



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### CONTACT DETAILS:

Basilisk-Contracting BV  
2 Assegai Street  
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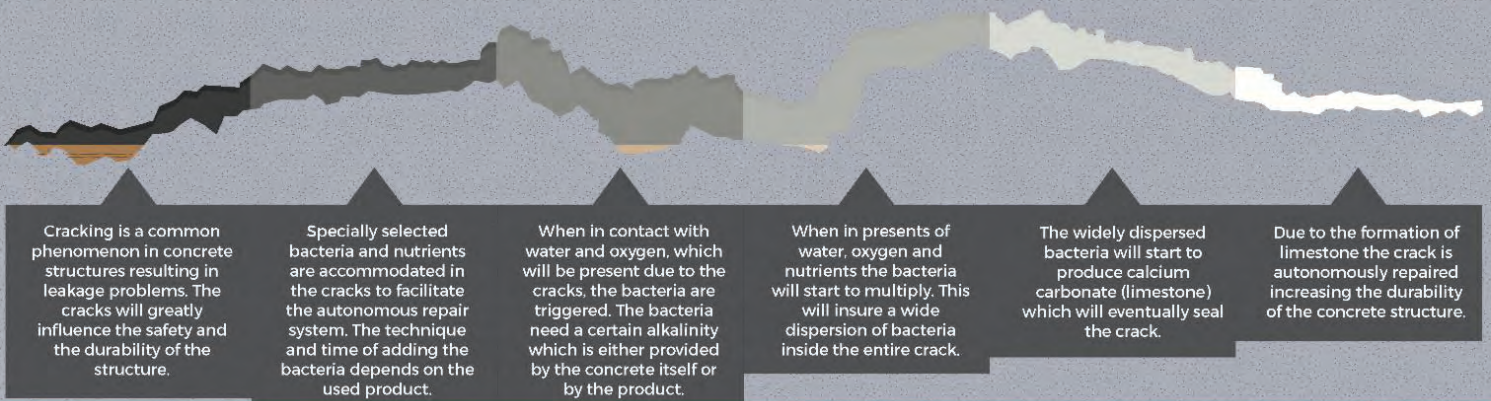
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## it's magic

Since Roman times men build constructions using concrete as an all-round building material. While ordinary concrete can handle substantial compressive loads, tensile and flexural load carrying capacity is however limited. Even when reinforced with steel rebars, concrete is sensitive to crack formation. Cracking can result in a number of problems such as water leakage, frost damage and reinforcement corrosion. These detrimental phenomena shorten the functional service lifetime of concrete constructions substantially and require therefore costly maintenance and repair actions. For difficult to reach constructions manual inspection and repair is however often not possible or otherwise even more expensive. A solution to avoid costly maintenance and repair actions is provided by self-healing concrete. In 2010 the Delft University of Technology invented self-healing concrete: concrete of the future. After founding the company Green-Basilisk in 2014, self-healing concrete became available for the market. From now on concrete is able to self-repair cracks, making constructions more durable thereby increasing its service lifetime while reducing maintenance and repair costs. Basilisk Self Healing Concrete is a true innovation as its patented bio-based technology is recognized by the European Patent Office by nominating it for the 2015 European Inventor Award. In short,

Basilisk Self Healing Concrete will make constructions last longer, while at the same time reducing costly maintenance and repair. The choice for owners who consider construction life cycle costs.



# Bacteria and sand engineered into living concrete

Cement and concrete haven't changed much as technology in over a hundred years, but researchers in Colorado are revolutionizing building materials by literally bringing them to life. The method developed, presented January 15 in the journal *Matter*, combines sand and bacteria to build a living material that has structural load-bearing and biological function.

The team created a scaffold out of sand and hydrogel for the bacteria to grow in. The hydrogel retains moisture and nutrients for the bacteria to proliferate and mineralize, a process similar to the formation of seashells in the ocean. Combining the three, the researchers created a green living material that demonstrates similar strength to cement-based mortar.

"We use photosynthetic cyanobacteria to biomineralize the scaffold, so it actually is really green. It looks like a Frankenstein-type material," says senior author Wil Srubar, who heads the Living Materials Laboratory at the University of Colorado Boulder. "That's exactly what we're trying to create, something that stays alive."

The hydrogel-sand brick is not only alive, but it also reproduces. By splitting the brick in half, the bacteria can grow into two complete bricks with the help of some extra sand, hydrogel, and nutrients. Instead of manufacturing the bricks one by one, Srubar and his team demonstrated that one parent brick could reproduce up to eight bricks after three generations.

"What we're really excited about is that this challenges the conventional ways in which we manufacture structural building materials," says Srubar. "It really demonstrates the capability of exponential material manufacturing."

Concrete is the second most-consumed material on earth after water. The production of cement, the powder to make concrete, alone is responsible for 6 percent of CO<sub>2</sub> emissions, and concrete also releases CO<sub>2</sub> when it cures. The method developed by Srubar and his team provides a green alternative

to modern building materials. However, there is a trade-off with this green material.

The brick needs to be completely dried out to attain the maximum structural capacity (i.e., strength), but at the same time, drying stresses the bacteria and compromises its viability. To maintain structural function and ensure microbial survivability, the concept of optimum relative humidity and storage conditions is critical. Utilizing the humidity and temperature as physical switches, the researchers can control when the bacteria grow and when the material stays dormant to serve structural functions.

"This is a material platform that sets the stage for brand new exciting materials that can be engineered to interact and respond to their environments," says Srubar. "We are just trying to bring building materials to life, and I think that is the nugget in this whole thing. We're just scratching the surface and laying the foundation of a new discipline. The sky is the limit."

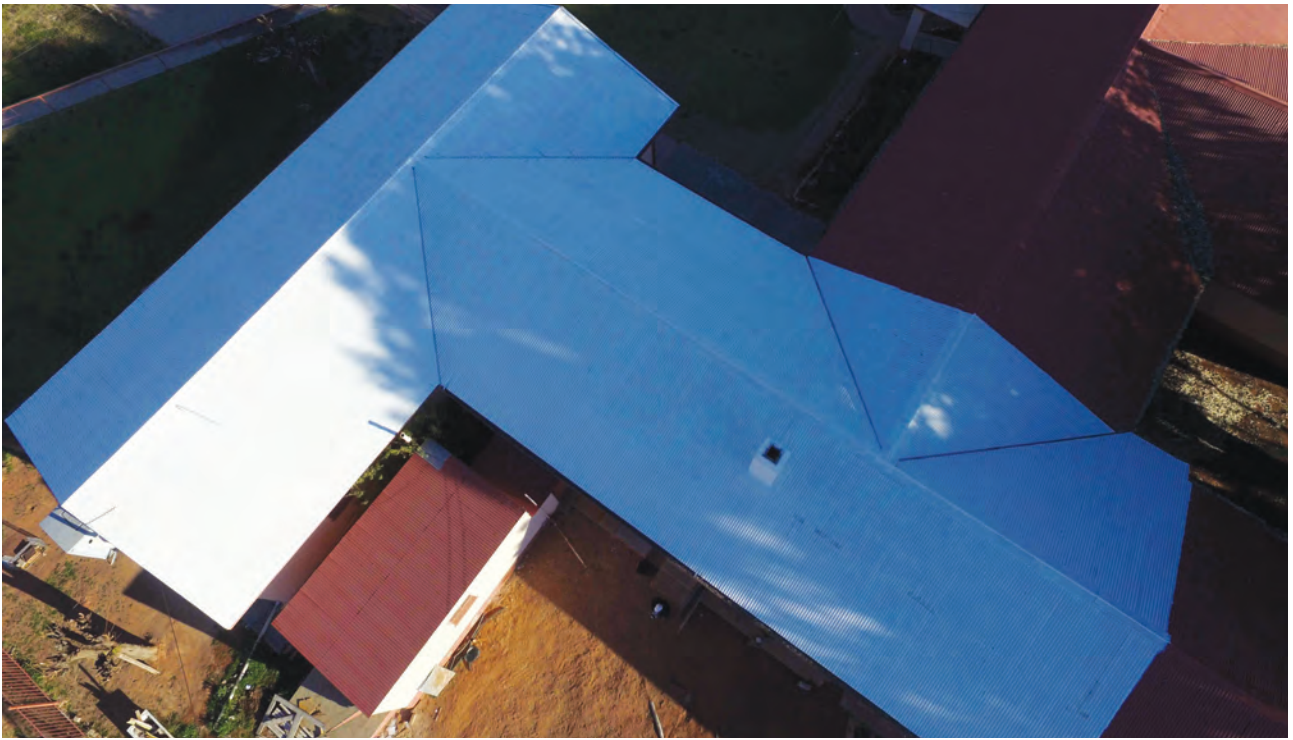
The next step for Srubar and his team is to explore the numerous applications that the material platform brings. Srubar envisions introducing bacteria with different functionalities to the material platform to create new materials with biological functions, such as ones that sense and respond to toxins in the air. Other applications include building structures where there are limited resources like the desert or even another planet, Mars.

"In austere environments, these materials would perform especially well because they use light from the sun to grow and proliferate with very little exogenous material needed for their growth," says Srubar. "It's going to happen one way or another, and we're not going to be trucking bags of cement all the way to Mars. I really do think that we'll be bringing biology with us once we go." ■

**Editorial prepared by: College of Engineering and Applied Science at Colorado University Boulder**



*This photograph shows green photosynthetic Cyanobacteria growing and mineralizing in the sand-hydrogel framework. The living material has similar strength to cement-base mortar.*



## SANEDI underway with large-scale home cooling initiative

**T**he South African National Energy Development Institute (SANEDI) is rolling out a low-tech cooling solution to communities across the country. This initiative is driven by the Kigali Cooling Efficiency Program (K-CEP) with the aim of rapidly up scaling the deployment of solar-reflective 'cool' roofs in developing countries, suffering heat stress and lacking widespread access to cooling services.

"We were thrilled when we received the grant last year and couldn't wait to get underway with rolling out this initiative. Starting in August, the grant came just in time for the scorching South African summer, which is felt most in the Limpopo province reaching an average of 35°C," said Denise Lundall, Project Officer, Energy Efficiency Cool Surfaces at SANEDI. "We have found that we can reduce indoor daytime temperatures in low-cost housing by almost 10°C by applying the reflective coating." This can make a substantial difference to the daily lives of many South Africans.

### Strong competition

Deployment has been smooth thus far, with sights set on the next large Million Cool Roofs Challenge grant to be awarded in 2021. The next grant, a sum of \$1 million, will be awarded to the country-team that has demonstrated the best sustainable and transferable model for rapid deployment of cool roofs and best meets the judging criteria.

"With nine others competing for this grant, we have our challenge set out for us," says Lundall. Teams from Bangladesh, Senegal, Philippines, Niger, Rwanda, Côte d'Ivoire, Kenya, Indonesia and Mexico are hard at work rolling out thousands of square meters of cool roofing, while meeting certain standards and criteria. "Developing countries are a clear target for the

Cool Roofs initiative, as it is not just about lowering ambient air temperatures but also supporting socio-economic development in those affected communities."

For South Africa, the project has been undertaken with local municipal authorities, to coat no less than 25 000 m<sup>2</sup> of roof area. SANEDI provides energy efficiency awareness training to the communities for their buy-in. In each community, a group of unemployed local residents are selected, professionally trained and certified, and then employed by the project to apply the specialised coating. "Through awarding these grants, part of K-CEP's aim is to demonstrate the benefits of cool roofs and stimulate demand so that a market can be developed and eventually self-sustained in these developing countries," notes Lundall. This makes South Africa an ideal candidate, as the country faces the highest unemployment rate out of the ten countries aiming for the larger 2021 grant.

### Benefits abound

"While the reflective coatings can make life more comfortable for people living in rural areas where there is no access to cooling technology, cool roofing also brings benefits to urban areas. Substantial energy savings can be achieved in buildings which make use of mechanical cooling technology (air conditioners), as the intervention reduces base and peak demand for cooling energy."

Added to that, the environmental benefits are clear. "The whitening of 100 m<sup>2</sup> of grey roofing cancels the warming effect of 10 tons of CO<sub>2</sub> emissions. Globally, this cancels 500 medium sized coal power stations' worth of greenhouse gas emissions," concludes Lundall. ■



## Are trade shows worth it? Absolutely, if planned correctly!

**E**xhibitions and trade shows are a unique chance for potential customers to see, touch and experience your product or service first-hand. Nine out of 10 visitors to exhibitions/trade shows have an influence on the buying of their company or organisation. So how does one ensure a successful exhibition?

Your company might make a wide variety of the best products, but at a trade show you are selling yourself: people have to buy your brand identity before they purchase your products. There are certain formalities to trade shows, but exhibition professionals say success hinges on the strategies used before, during and after the event. This article does not claim to be the “blueprint” of a successful exhibition, but aims to make readers aware of what is needed in broad terms, while offering tips for getting the most out of an event.

Before the show As with any marketing plan, it is crucial that you identify your objectives. Are you launching a new product, raising the company profile, spreading brand awareness, contacting a new market, re-launching existing products, conducting market research or measuring up the competition? What you want from the show will affect your decisions and how to proceed.

### Planning

- The earlier you book your stand, the better the position you can secure.
- Work with the fair organisers to secure branding, staff passes, parking, etc.
- Find out what the organisers are doing and dovetail your marketing with theirs.
- Decide what you want in the form of a stand or shell scheme (mainly provided by the trade fair) or an open space to build your own stand from scratch. This decision is normally based on budget and product.
- Find out about restrictions placed on stand designs by the organisers, ie do not glue things to the walls, respect fire and health regulations, etc.

- When planning your stand, follow the three-second rule: it takes three seconds for a visitor to pass your stand. Make sure they know what you do, notice your stand and have a good reason to visit it.
- Find a “hook” for the stand. Many other companies offer similar products and you need to distinguish yourself so that visitors come to your stand, rather than others.
- Have training sessions with staff before the show to ensure they are knowledgeable about the products and that they also know how to ask questions that elicit more than just a “yes” or “no” from clients.
- Prior to the fair, promote your presence at the show on your website, social media and trade publications as widely as possible.
- When planning the show, select your best sales people to man your stand for maximum impact.
- Set up meetings with clients at your stand before the show starts.
- Direct mail campaigns that give people a reason to visit your stand.

During the show. This is a critical phase. You have invested good money in your display and human resources, so you need to get the best possible return on investment. Managing a stand at an exhibition requires organisation and strong attention to detail. Before the big day, make sure you have the following:

- Good lighting. Dark stands are dead stands.
- Simple, but striking exhibits. Do not complicate the message you are trying to convey. It should be seen and noticed in three seconds.
- Research has shown that over 75% of an exhibition stand’s effectiveness and therefore return on investment comes down to the people manning the stand.
- Staff must look professional and keep a rotation schedule.
- Teach your staff the following:
  - Stand up and greet attendees in front of the booth.
  - If seats are needed, use tall stools that create contact at standing eye level.



- Smile and make eye contact.
- Speak to trade show attendees, not colleagues.
- Sit down only if you are with a client who also wants to sit down.
- Do not cross your arms or legs and keep your hands out of your pockets.
- Avoid fidgeting and leaning against walls and furniture.
- Be enthusiastic and polite.
- Thank attendees for spending time at the stand when they arrive and leave.
- Ensure the stand is tidy and neat every day.
- Your staff must dress in a way that is professional, but friendly.
- Do not crowd the stand with too many staff.
- Your stand must have adequate space for the volume of traffic you attract.
- No personal belongings or litter should be on the stand in view of visitors.
- Ensure that you have enough product at the stand. Also, have plenty of business cards and write the name of the show and your stand number on them when giving them to potential clients.
- During the trade fair, update your social media platform with news from the show.

After the show many people overlook this critical step. Do the following within a week of the event, or you will lose a lot of the value the show offered:

- Check to see that all show leads have been followed up.
- Assess the results of show against objectives.
- Evaluate the results against investment.
- Communicate these outcomes to the stand team and thank them for their efforts.
- Contact all the people you met during the trade fair. Send personalised e-mails to thank them for visiting and give them more information about your company and products.
- Start working on your plans for the next trade show and identify mistakes made during the previous one that you need to avoid.

#### What prompted booth visitation across all segments – combined (Source Maqqrketech Inc 2010)

	Reason for visiting %
Obtain product information	32%
Recognised the name of the company	20%
Happened to pass the stand	20%
Giveaways	17%
Greeted by staff at the stand	13%
In-booth activity	11%
Product demonstration	11%
Wanted to see a representative	10%
Booth appeal	6%
Refreshments/hospitality at the stand	8%
Advertising/promotion	5%
Invitation	1%

## This KZN town is set to get a massive investment

**A**manzimtoti on the South Coast of KZN is fast becoming an investor hot spot as it prepares to become the site of a massive new automotive park.

Gavin Parkins, a commercial and industrial agent at Seeff Amanzimtoti, said the town is expected to receive a boost when building commences of the KZN Automotive Supplier Park (ASP) in Illovo.



Completion of the project is predicted as early as August 2022, he said.

The ASP model has been used with great success in three previous locations in South Africa, Parkins said.

“The Gauteng Provincial Government/AIDC Automotive Suppliers Park in Rosslyn Pretoria North servicing Nissan and BMW, Ford South Africa, National, Provincial and Local Government initiated Tshwane Automotive Special Economic Zone (SEZ) in Pretoria and the Sunnyridge Automotive Supplier Park in East London.

“These initiatives resulted in thousands of personnel being relocated from areas across South Africa to create centralised automotive industrial zones servicing the local motor manufacturers.

Parkins said that the R11 billion Dube Trade Port Auto Suppliers Park in Kingsburgh will service Toyota, MAN Trucks and Volvo Automotive – the largest development of its kind in South Africa.

Once completed the 1,000 Ha project is anticipated to create more than 25,000 new jobs and also includes the construction of thousands of new affordable homes. ■

# Construction Thor:

In support of *Concrete Trends'* quest to consider the people in the construction industry, Construction Thor ponders human evolution, and those pesky sales calls.

Nothing was ever built though destruction. You cannot build your own brand by breaking down someone else's. As a matter of fact, it does not say a lot about the character of the person who has to find fault in someone else and someone else's brand in order to make a sale. I know that the human race is hardwired to first see the negative and that it is a survival instinct to see the negative, in order to flee the predators. The fact of the matter is that the human race keeps claiming that they evolved from the Neanderthal times into modern man, but has not evolved out of a basest negativity. Coupled with an expectation of getting everything for free, makes for a very dangerous situation. The fact remains that someone always has to pay and nothing is ever for free, just because the person getting it and not doing the paying.

I am reminded of students burning universities because they want tertiary education for free. Have you wondered who is paying for that education? Government? Who gives government the money to pay? Lo and behold, it's your family that is working and paying taxes that provides government with the means to pay for "free" education. It all comes full circle! The student that's too lazy to get a job to pay for themselves, gets the money from their family to study. Take that as your first lesson in political studies.

The same goes for students that burn universities because they cannot study in their own language. Do you go to a car dealership and complain that you can't buy groceries? Similar to the difference between as car dealership and a grocery store, each university has their unique product offering. If you can't get the product that you want from that university, go

to the one who has the product you are looking for and get it there. If there is not a university with such a product, then build one. Be the entrepreneur that brings a unique product to the people. Burning a university just means that there are now less stores that offer the product of education, more students to a class and less attention for each student.

There is a popular theory that the difference between man and animal (or is it machine) is self-awareness, complex reasoning and contemplation of the afterlife. In order to achieve human status it is thus necessary to reason with oneself and ask yourself questions about what you are doing and how it affects those around us. One of the best questions to ask is: "Is what I'm doing helpful or hurtful, to me and those around me?" Do what is helpful, even if it makes a small difference now, it will have a big effect later. When contemplating the afterlife, think about what you leave behind for those after you, rather than thinking where you are heading after life.

Finally, for you sales representatives out there that don't answer your phones and don't call customers back, how do you expect to make any sales? Gone are the days where you could sit back and sales would just come to you. I know that we are inundated with marketing calls from call centers, and that face to face marketing is still best, in order to get a meeting, you have to call first. So, if a customer calls and leaves a message, call them back, or they will give the business to someone who cares and takes calls.

We will leave a legacy, whether you want to or not. Only you can control what legacy you will leave behind. Ask yourself what people will say about you when you are gone to the afterlife. Will you be the one who built a university with a unique product offering, or the one that never answered his/her phone? ■



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