



SPEAKING NOTES – ACEO : MR MIKKI XAYIYA
EVENT : #CEO_ConversationsWithYouth
DATE : 26 JUNE 2020
VENUE : MAIN BOARDROOM
TIME : 10:00

Programme Director allow me to pass my salutations to:

My Colleagues in Exco, all fellow staff members of the HDA:

Most importantly, our young members of the HDA family.

Good morning,

Programme Director, the theme of my short presentation is “**SMART CONSTRUCTION IS THE FUTURE**”.

1. I am deeply honoured and privileged to be afforded an opportunity to make remarks about the role, space and relevance of youth in our core business as HDA. I will do exactly that.

WHERE IT ALL BEGAN

2. One thing is for certain, building activities are as old as humans themselves. It is generally understood that construction during the primitive times consisted of mud huts and stone monoliths such as Stonehenge. Historians tell us that traditional construction as we know it today, began to take shape in ancient Egypt and Mesopotamia. As humans abandoned nomadic life, they built permanent shelters. The Egyptian Pyramids are some of the first examples of large scale and permanent structures.

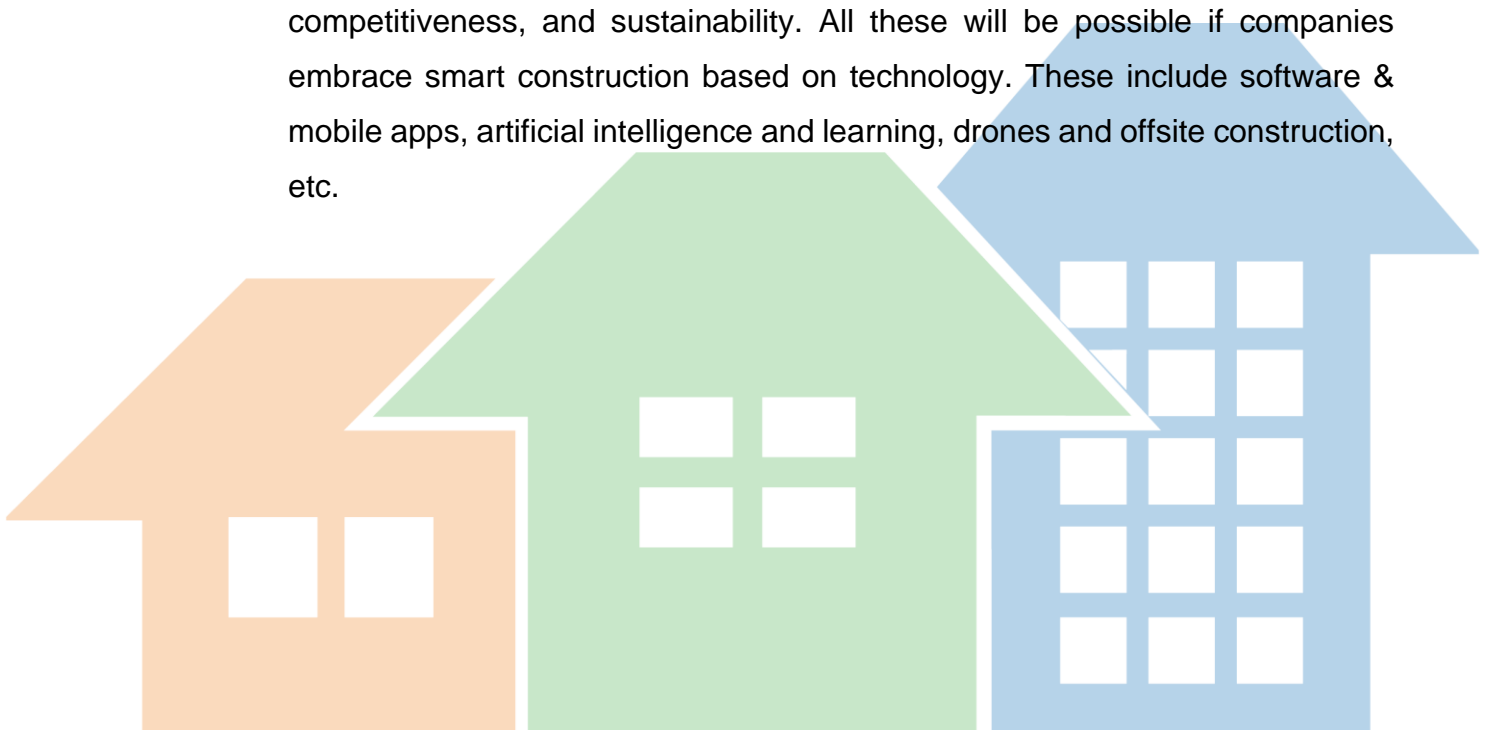
3. As the population grew and urbanisation took over, construction quickly became a staple of civilisation. Although this type of construction is a far cry from buildings we see today, this type of activity laid the foundation for contemporary construction.

RECENT PAST

4. At the heart of human civilization is innovation. A common factor in all iconic buildings, structures and landmarks the world over is that someone sat down and became creative and innovative. Some of the greatest iconic buildings, structures and landmarks that come to mind are: (i) Hagia Sophia in Istanbul, Turkey, (ii) The Guggenheim- in New York City, USA, (iii) Taj Mahal -in Agra India, (iv) Dancing House-in Prague, Czech Republic, (v) The Pyramid of Giza- in Giza, Egypt, (vi) Acropolis of Athens- in Athens , Greece. **May I say that the list is endless.**

THE FUTURE

5. I will not dwell in the present. It is all here for all to see. I will rather dwell in the future. This is where we as the HDA invite our youth to focus. This is where the trends in construction are steeped into. This is where nations, like in the 20th century, will be differentiated. This is where Africa, if it were to truly realise its renaissance, ought to invest in. The future of construction is efficiency, competitiveness, and sustainability. All these will be possible if companies embrace smart construction based on technology. These include software & mobile apps, artificial intelligence and learning, drones and offsite construction, etc.

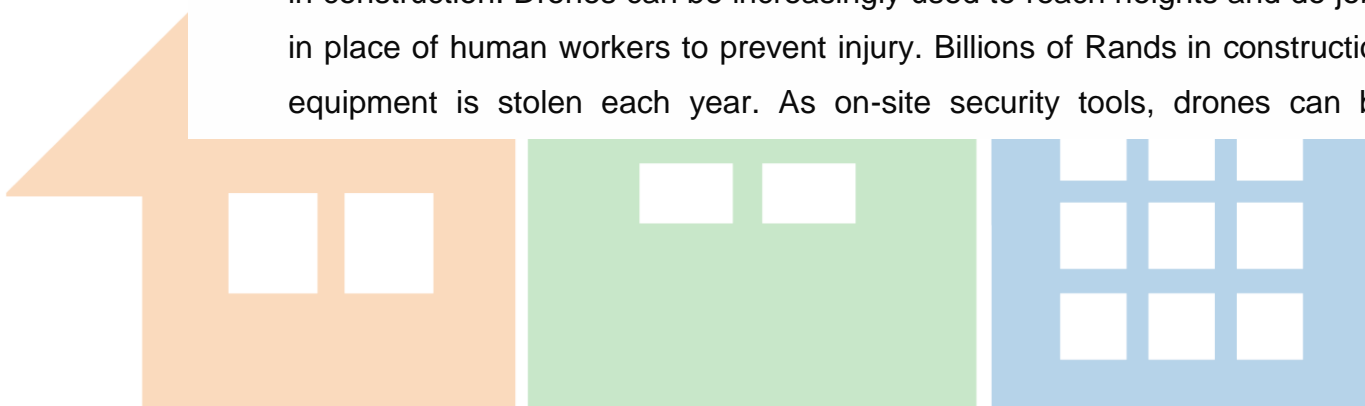


EFFICIENCY-IMPROVING TECHNOLOGY

6. The biggest differentiator for builders and developers in the near future is certainly technology in construction — specifically, the innovations that can enhance efficiency.
7. Forbes Council member [Amir Baluch MD](#) points out the coming impact of blockchain technology on construction. Experts see it as being a powerful component in providing a more secure and fast-moving workflow that gives all parties involved more confidence and productivity. Simply put, it is a system that tracks transactions across a peer-to-peer network. It continuously tracks updates of digital records.
8. Smart contracts offer all organisations in a project a shared system to do business, allowing them to buy, track, and pay for services. Rather than getting contracts and tracking deliverables from all separate parties, firms will soon use smart contracts as an all-in-one tracking system where rules and deadlines are set and the blockchain enforces them. This system will make for faster closeouts, increased security, better project tracking, and an automated supply chain.

DRONE USAGE

9. Drone usage in construction continues to be one of the fastest growing trends, with usage rising by 239 percent year over year. The technology offers far more uses than just aerial photography for real estate and [commercial efforts](#). **I am proud that we at the HDA is using this technology to advance our work.** Today's drones are used for rapidly mapping large areas over long distances, producing valuable aerial heat maps and thermal images. The advancing drone software provides real-time, actionable, data that can be used for rapid decision making, streamlining the entire construction process.
10. Personal safety and equipment loss continue to be the biggest areas of liability in construction. Drones can be increasingly used to reach heights and do jobs in place of human workers to prevent injury. Billions of Rands in construction equipment is stolen each year. As on-site security tools, drones can be



leveraged to reduce labour costs and minimize the risk of theft. That keeps projects on schedule and moving faster too.

11. More advanced future uses include monitoring equipment use and incorporating Artificial intelligence and learning (AI) to organize moving [construction equipment](#).

AUGMENTED REALITY (AR)

12. The [augmented reality](#) (AR) is expected to be worth hundreds of billions of Rands in the near future as it continues to provide new applications. On the client front, **AR** means efficient project staging and making pre-construction projects tangible for buyers and tenants.
13. For the builders and developers, **AR** facilitates the use of wearable technology as well as 360-degree video to enable:
 - a) 3D visualisation of future projects on their surrounding environment
 - b) Automated measuring of buildings
 - c) Fast and affordable simulation of architectural and structural changes
 - d) Safety training and hazard simulations

MOBILE TECHNOLOGY

14. Mobile technology is already a top priority for all construction disciplines. It provides many applications from real-time inspections to on-site accountability and being able to measure spaces with just a mobile phone camera. Mobile apps in the marketplace include [AirMeasure](#) and [Infotycoon](#). Those without complete mobile connectivity will be at a productivity and sales disadvantage in the near future. **The HDA is in the process of developing an app that will be utilised for our core business and land identification and beneficiary experiences. We are indeed moving with the times (4th Industrial r4evolution)**



BUILDING INFORMATION MODELING (BIM)

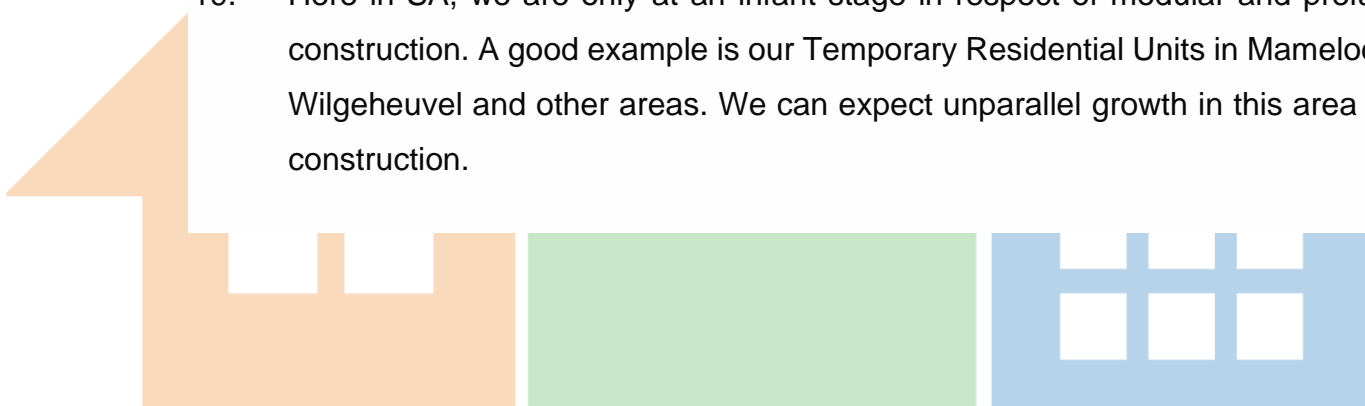
15. Building information technology (BIM) will and is helping industry leaders stand out with better efficiency. **BIM** allows users to generate computer representations of buildings and utilities. The ease of managing these models and sharing data can enable superior prefabrication of parts, leading to on-time and accurate completion. [Autodesk](#) describes it as an intelligent 3D model-based process to help professionals manage buildings and infrastructure.”

CONSTRUCTION MANAGEMENT SOFTWARE

16. Having great construction management software is a vital component for remaining competitive, building a valuable business, and mastering operational efficiency. While each software service may have slightly different functions and features, the best holistically tackle end-to-end needs from RFIs to compiling data, sharing files with mobile teams, budgeting, document storage, payroll, and HR, monitoring inventory and project management. There are already in the market a few [construction management](#) software solutions.

MODULAR & PREFABRICATED CONSTRUCTION

17. Modular and prefab construction has enjoyed a major movement over the past few years. [Construction Dive](#) predicts modular construction will continue to grow year on year, driven by the lack of skilled labour and affordable and growing material costs. As the technology supporting off-site constructed modular units improves, we can expect to see a lot more activity in this sector. Many smaller builders have developed innovative, green building designs with this method, increasing their market visibility and boosting client trust.
18. New technology has also enabled these prefab and modular buildings to get taller and taller. An example is the recent opening of the 21-story CitizenM Bowery Hotel in NYC.
19. Here in SA, we are only at an infant stage in respect of modular and prefab construction. A good example is our Temporary Residential Units in Mamelodi, Wilgeheuveld and other areas. We can expect unparalleled growth in this area of construction.



GREEN CONSTRUCTION

20. Green construction has become the expected standard by homebuyers, renters, and commercial tenants. Unfortunately, many sustainable and eco-friendly features remain a luxury, despite their long-term savings. Though this may substantially change over the next few years, it remains the future.
21. Whether it is pressure within the construction industry, demand from end customers or regulations, expectations are that [renewable energy](#) will continue to grow as a percentage of overall consumption. That is a huge market, given buildings are still responsible for 40 percent of our national energy consumption and 30 percent of greenhouse gas emissions.
22. Green construction includes both the technology to lower a building's carbon footprint and the use of resources and building models to reduce the use of resources. Perhaps an even greater driver of green building is proof of its value for occupants. Research shows that green buildings can have a positive [psychological and physiological impact](#).

CONCLUSION

23. **Programme Director**, I want to conclude by saying: The future of the construction industry trends is changing the business and global landscape. Rising prices, scarce skilled labour, and regulatory challenges may only become tougher over the next few years. By adopting new practices, leveraging new technologies, and investing in new projects, builders and developers can reduce risk, win more contracts, and enjoy profitability.
24. Overall, the outlook for the construction industry is positive. This is also confirmed by the Minister of **Finance's Supplementary Budget Speech** two days ago. Infrastructure development is a key driver in reviving our economy from the doldrums. **The challenge is left to our youth to cease the opportunity**, find their role, occupy the space and innovate for humanity's development and survival.

The baton is in your hands. I thank you!

