

# Architect and Builder

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# 2020 SAPOA

## Property Development Awards for Innovative Excellence



The SAPOA Property Development Awards made a welcome return after being postponed last year due to Covid-19. The awards are seen as the most important awards for any commercial project in South Africa. Despite the pandemic, it is testament to the quality of projects developed over the year that many of the categories were still competitively contested.

- 64 Overall Winner & Corporate Office Development & Sustainability Award**  
The Connexion, Centurion
- 66 Interiors Category**  
The Base, Bryanston
- 68 Mixed Use Developments Category**  
117 on Strand, Cape Town
- 70 Rural & Small Town Developments Category**  
Maluti Crescent, Phuthaditjhaba, Free State
- 72 Refurbishment Category & Heritage Award**  
32 on Kloof, Cape Town
- 73 Residential Development Category**  
Units on Park, Hatfield, Pretoria
- 74 Innovative Category**  
Engineering 4.0, University of Pretoria
- 77 Transformation Award**  
Towers Main, Johannesburg
- 78 International Development Category**  
Kirsch Pharma Healthcare, Wedemark, Germany
- 80 Other Development Category**  
Parklands College Secondary School, Cape Town
- 82 Industrial Development Category**  
Shoprite Whitey Basson Distribution Centre, Brackenfell
- 86 Retail Refurbishment Development Category, Large Regional Mall**  
Masingita Mall, Giyani, Limpopo
- 87 Retail Refurbishment Category, Small Boutique**  
Constantia Emporium, Constantia, Cape Town

### JUDGES

- Zinon Marinakos**  
DSA Architects International
- Anthony Orelowitz**  
Paragon Group
- Christian Roberg**  
Abland
- Craig Sutherland**  
Sutherland Engineers
- Dean Narainsamy**  
AECOM
- Ruldolf Nieman**  
Vukile Property Fund
- Nonku Ntshona**  
Nonku Ntshona & Associates  
Quantity Surveyors
- Pieter Engelbrecht**  
Growthpoint Properties
- Lianie Minny**  
NsBroll Property Group
- Ken Reynolds**  
Nedbank CIB
- Sandy Mbutuma**  
Azzaro Quantity Surveyors
- Wessel Van Dyk**  
GASS Architecture Studios
- Itumeleng Mothibeli**  
Vukile Property Fund
- Hashim Bham**  
BTKM Quantity Surveyors





SAPOA

INNOVATIVE DEVELOPMENTS

PROPERTY DEVELOPMENT  
AWARDS FOR INNOVATIVE  
EXCELLENCE

Proud Winner

INNOVATIVE DEVELOPMENTS

Engineering 4.0 University of Pretoria



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## Engineering 4.0, University of Pretoria

### INNOVATIVE CATEGORY



Engineering 4.0 is the first phase in the masterplan to create an Engineering, Built Environment and IT (EBIT) focused precinct, as a learning facility and developmental, research and large scale testing laboratory. User clients include EBIT (learning, office, reception, display, large-scale laboratory spaces and infrastructure), SANRAL (training and reference laboratory) and CSIR (bitumen testing laboratory).

The environment is respected in preserving the indigenous forest and grassland and enhancing biodiversity. The main longitudinal laboratory spine (210 x 30m) is supported by movement corridors on either side being services or pedestrian movement. Ancillary reception and social interaction spaces, auditorium, teaching, office and reception areas link up to the main spine radially to the public side and storage, manufacturing and sub-laboratories from the server side.

The architecture consists of large-scale concrete tilt up panels in combination with a steel structure and full height glazed façades to enhance the interaction with the natural surrounds. The design departs radically from a typical civil engineering surround and as the site boasts a mostly indigenous forest and significant Moot grassland, a plan to enhance the biodiversity was integrated. Foreign vegetation was eliminated and architecture introduced to vacated areas, allowing the environment to flow into the building through perforated shade screens and full height glass façades and tilt-up doors to open to the atrium learning space which is also enhanced with planters.

'Board and chalk' principles are replaced with interactive exposure learning opportunities, particularly necessary in the practical built environment. The introduction of the Strong Floor provides the opportunity for designing and building various elements in the laboratory and then put under pressure to breaking point and performance

measured. This component is visually exposed and students can witness procedures behind safety glass. The 1.2m deep foundation to the Strong Floor has been opened to witness reinforcing, the sewer duct has a viewing panel and the server room has a glass façade. All ceilings are open to expose all services, all floors are scoured down to expose aggregates and a sun ingress diagram has been introduced to witness sun patterns. The architecture strives throughout to immerse the student in their study field in all aspects of the surrounds.

This type of operation and the appropriate architectural infrastructure satisfy the enquiring minds of students in a safe and innovative environment. The connectedness with the natural environment throughout, reinforces the contrast associated with heavy engineering.

The building is a trendsetting labyrinth of excellence that breathes innovation on a multitude of levels and provides the spine for further integrated growth both in the architectural and operational spheres.

**Development Manager:** University of Pretoria

**Architect:** ARC Architects

**Project Manager:**

MDSA Project & Construction Management

**Quantity Surveyor:** Gro2 Consulting

**Structural & Civil Engineer:** Aurecon

**Electrical Engineer:** Conscius Consulting Engineers

**Mechanical Engineer:** Spoormaker & Partners

**Fire Consultant:** CKR Consulting Engineers

**Acoustic Engineer:** Linspace Acoustics

**Environmental Consultant:**

ARC Architects (Coordination)

**Heritage Consultant:** HPA

**Landscaping:** Insite Landscape Architects

**Main Contractor:** WBHO

