



SATN

SOUTH AFRICAN TECHNOLOGY NETWORK
TECHNOLOGY FOCUSED UNIVERSITIES



ANNUAL REPORT 2018



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Acronyms

CPUT : Cape Peninsula University of Technology

CUT : Central University of Technology

DEA : Department of Environmental Affairs

DHET : Department of Higher Education and Training

DPSA : Department of Public Service and Administration

DUT : Durban University of Technology

E-WASA : E-Waste Association of South Africa

EWSETA : Energy and Water Sector Education and Training Authority

HEQSF : Higher Education Qualification Sub-Framework

MUT : Mangosuthu University of Technology

NQF : National Qualifications Framework

OQSF : Occupational Qualification Sub-Framework

PI : Performance Indicator

QCTO : Quality Council for Trades and Occupations

RIEC : Research, Innovation and Enterprise Committee

SASCE : South African Society for Cooperative Education

SATN : South African Technology Network

SAQA : South African Qualifications Authority

SETA : Sector Education and Training Authority

TIA : Technology Innovation Agency

TUT : Tshwane University of Technology

UMP : University of Mpumalanga

VUT : Vaal University of Technology

WACE : World Association for Cooperative Education

WIL : Work Integrated Learning

WSU : Walter Sisulu University



Chairperson's Message



Prof LR van Staden
Chairperson

I am delighted to present the annual report of the South African Technology Network (SATN) for the period January to December 2018. As a consortium of technology-focused universities, the SATN's mandate is to promote relevant, impactful and globally competitive qualifications, research and innovation towards a knowledge-based economy. I am pleased to report that the SATN successfully fulfilled this mandate and met its immediate objectives during the period under review.

Furthermore, the SATN's strategic direction remained underpinned by a strong commitment to governance excellence at all levels. For this, I wish to thank the esteemed members of the SATN Board, as well as the secretariat.

This annual report captures a number of the SATN's many achievements during 2018 and the board and the secretariat will continue to focus on the activities and strategic priorities reflected in this report.

The government's announcement on 16 December 2017 to provide fully subsidised higher education and training for poor and working-class families also influenced initiatives undertaken by SATN during the period under review. This policy decision to address funding challenges in higher education is proof that education is a central pillar in the fight to rid the country of the enduring and debilitating socio-economic legacy of apartheid colonialism and its resultant triple challenge of discrimination based on race, gender and class-based poverty, inequality and unemployment.

To this end, the SATN developed new initiatives with funding from agencies such as the Technology Innovation Agency (TIA), the Energy and Water Sector Education and Training Authority (EWSETA), the Department of Environmental Affairs, the Department of Public Services and Administration, as well as the Department of Higher Education and Training. These initiatives aim to encourage entrepreneurship, job creation and new skills development to ensure greater engagement and participation with communities in close proximity to the member institutions.

Another highlight of 2018 was the SATN conference on The Role of Universities in the 4th Industrial Revolution. The conference not only attracted respected researchers and scientists from eleven countries who presented their work, but also highlighted some of the SATN member institutions' contributions to 4IR. Discussions clearly pointed to the role that technology-focused universities and their long-standing partnerships with business and industry would play to ensure that South Africa becomes a global player and innovator in the 4th industrial revolution.

Furthermore, the working partnerships that the SATN has forged with institutions in Ireland, the Netherlands, Korea, Japan and India, as well as on the African continent yielded positive results with SATN member institutions conducting exchange visits and developing programmes for future research and thematic colloquia during the period under review.

As the SATN prepares for the development of its new strategic plan and 2020 international conference, consideration will be given to policy matters, future funding, the aligned Higher Education Qualifications Sub-Framework (HEQSF) and Work Integrated Learning (WIL) in order to continue to positively contribute to the higher education sector of South Africa.

The year under review was once again rewarding and challenging for the SATN. On behalf of the board, I wish to extend my gratitude to Dr Anshu Padayachee for her astute leadership and drive and to Ms Christelle Venter for her outstanding administrative support. I also express my appreciation to all the board members for their contributions during 2018.



CEO Message



Dr. Anshu Padayachee
CEO SATN

2018 has been a year of tremendous achievements for the SATN and its member institutions, despite the ongoing debate around long-term funding of the higher education sector and the Fees Must Fall Protests.

Among the many achievements were:

- 🏛 SATN hosting the International Conference on the Role of Universities in the 4th Industrial Revolution held on 11-13 September 2018, which attracted speakers and participants from different countries;
- 🏛 Student Entrepreneurship Workshop (funded and co-hosted by the Technology Innovation Agency) was held on 10 September 2018, which focused on the key paradigm changes on the 4th Industrial Revolution and its impact on new business ideas.
- 🏛 Strengthening partnerships in the innovation and entrepreneurship space with key stakeholders, including government and business.
- 🏛 Promoting e-waste in partnership with the Departments of Environmental Affairs and the Public Services and Administration. Five of the SATN member institutions now host the first e-waste pre-processing facilities.
- 🏛 SATN member institutions have focused on preparing its students for the changing nature of work and designing courses to inspire entrepreneurship and innovation.

Our continued success relies on the relationships we form, the connections we make and the partners. We have invested significantly over the last year in developing a creatively rich partnerships with other consortium across the globe, Government and business and Industry in South Africa. All of these partnerships have already yielded positive outcomes for our member Institutions.

The Higher Education Qualification Sub-Framework (HEQSF) Alignment project was a dedicated activity that kept the sector busy with ensuring that the qualifications offered by member institutions are aligned for the HEQSF implementation 2020. The SATN HEQSF Committee was formed to provide support and direction in ensuring that our universities are in readiness to implement the new HEQSF. The HEQSF Committee members are commended for their time, effort, robust engagement, support and sharing of policies across the sector.

It is gratifying to know that our strategy, vision and approach fit perfectly with where the country is now heading. I am hopeful that there will be an extensive and open consultation to develop a long-term and sustainable funding solution that protects and strengthens the accessibility and quality of our higher education system. In this regard, I wish to thank the committee who worked tirelessly on the Performance Indicators of our member Institutions. The information guided us in identifying areas that needed support and enhancement and assisted significantly in providing data for funding proposals.

I wish to also give thanks to the WIL committee for their support in submitting comments to the DHET on the new WIL policy and for their contributions in the WIL conference in 2018.

The SATN has made significant investments in our research and development programmes through the assistance of funding from the National Research Foundation, DHET and individual Institutions over the past two years.

I would like to acknowledge the outstanding support of Ms Christelle Venter for championing all of the many programmes that we hosted in 2018. This was no easy task but she did so with excellence. I would also like to place on record my sincere thanks to and our support teams, namely the Project Task teams and especially Ms. Kogie Pretorius for managing all the activities of the HEQSF Task Team. Ms Colleen Titus, Prof Ahmed Wadee, Mr Sizwe Nkambule, Ms Nadira Kercivel, Ms Candice Webster, Mr Sandile Mzolo and Mr Buntu Nondumo who supported the SATN Secretariat in the conference organisation and the E-Waste project at the five member institutions.

I wish to acknowledge with gratitude the support and advice of the SATN Board in discharging my duties. While we have much to celebrate, we also know that there is a lot more to do. The coming years are likely to see considerable change and disruption in the higher education sector. It is therefore imperative that our proposed new strategy development in 2019 will enable us to respond to the challenges ahead. We look forward to sharing the next stage of our journey together.





1.The SATN in 2018

The SATN is the voice of its member institutions, advocating on behalf of and supporting our members in achieving their aims and objectives. The SATN members include six universities of technology and two comprehensive universities, two international institutions and TIA. The sector offers a unique system of higher education, which allows students to progress from level 5 to level 10 of the NQF. Guided by its Vision, the SATN offers its members opportunities to participate in a series of activities in the field of higher education and research. In achieving its strategic objectives, the SATN has established vital partnerships with key stakeholders in government, with international higher education institutions, business and industry, in its endeavour to achieve its goals and activities.

1.1 SATN Vision

The SATN is a consortium of technology focussed universities and organisations established to promote relevant, impactful and globally competitive qualifications, research and innovation towards a knowledge-based economy.

1.2 SATN Strategic Objectives

-  To act as an advocacy and lobbying agency for the consortium.
-  To be a catalyst for socio-economic development.
-  To promote and enable research and innovation.
-  To support active participation of graduates in the economy.
-  To mobilise mutually beneficial national and international education, business and industry networks and partnerships.
-  To promote marketing and branding of the SATN as a technology focussed education, training and research institution.

2. Governance

The Board of Directors of SATN comprises the ten Vice Chancellors of technology focussed universities and the CEO of TIA. As custodians of the consortium, the Board put in place mechanisms to ensure sufficient oversight of the organisation's controls and functioning.

The Board held three meetings on the following dates to discuss, debate and evaluate its objectives and activities:

-  19 March 2018
-  26 July 2018
-  21 November 2018

The meetings discussed matters of critical concern to the sector such as Funding of Work Placed-Based Learning. The SATN consulted its member institutions and submitted a detailed proposal to the DHET in April 2018. This is an ongoing concern that requires further engagement with the DHET.



Prof LR van Staden (TUT)
Tshwane University of
Technology (TUT)



Dr Chris Nhlapo
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Prof T Mayekiso
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Prof G Zide (VUT)
Vaal University of
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Prof R Midgley
Walter Sisulu University



Dr Tjama Tjivikua
Namibia University of Science
and Technology



Prof Dr - Ing. F.W.O. Aduol
The Technical University of Kenya



CEO: Mr Barlow Manilal
Technology Innovation Agency

3. Strategic Task Teams






The SATN established four Task Teams with representatives from all its member institutions to deal with sectoral priorities. The Task Teams met during the year to address matters requiring urgent and strategic action, thus ensuring that best practices and expertise was shared across all the institutions. A summary of the Task Team activities is presented below.

3.1 Work Integrated Learning Task Team Meeting and Workshop

The SATN recognizes that our students are facing a changing workplace. Almost every industry and profession are seeing an increase in the use of technology. The WIL Task Team provided the platform and an identity for SATN member universities to share best practices, engage and discuss the challenges confronting universities, students and business and industries in implementing WIL and creating a culture of collaboration in the WIL community.

Given that government has identified the 4th Industrial Revolution as a strategic driver, the curriculum of technology focussed universities should create new opportunities and jobs to increase employment in the country. The success of our graduates is a priority and we have seen a clear association between an internship and finding a job. We recognize the importance of the balance between our students learning the content of their discipline, and gaining an understanding of technological and data literacies and the work environment. The challenge remains for increased discussions and engagements with business and industry as employers, to be accelerated.

The WIL Task Team continued with its focus on:

-  A collective effort to strengthen research and co-operative education practice, with published work on WIL including the ongoing recognition of WIL in curriculum and assessment strategies.
-  Recognizing WIL as an integrated component in education qualifications, whereby several meetings and workshops were held to engage on the draft qualification for the Advanced Diploma in Education with specialization in WIL, which was developed by members of the WIL Task Team. Whilst the process is ongoing in finalizing the qualification, a generalist qualification with specific modules as electives to allow for more flexibility where appropriate, was supported.
-  Continued engagement on the positioning of co-operative education in the differentiation debate and the relationship universities have with the DHET, other state entities, SETAs, industries and economic sectors.
-  The inclusion of WIL costing model in the National Funding Framework.
-  Discussing and critiquing the WPBL Policy, (which aims to improve education and employability opportunities for young people) highlighting the challenges and refining the policy further before publishing it for public comment (Workshop was held on 6 June 2018). The draft policy document is long overdue and clearer guidance is required on how the funding framework is transformed to improve graduate employability and capacity to contribute to the economy. The draft policy also requires further consultation and debate whereby the WIL Task Team will make further recommendations to the DHET on the revisions to be made in terms of WIL.

The SATN was represented at the WIL Africa 2018 Conference 'From Policy to Implementation' which was held on 18-20 July in Durban and was hosted by SASCE; TVET Colleges in the region, Mangosuthu and Durban Universities of Technology. The SATN members led many of the discussions at this conference.

The SATN is represented on the SASCE Board and WACE which provides the membership with updates on the state of WIL locally and internationally.

3.2 Performance Indicator Task Team (PI)

Over the years, the PI Task Team has produced an annual performance indicator profile for the sector which is presented to the SATN Board for actioning. The PI document has been used as the guiding document with indicators and markers as to where the SATN should be focusing its core activities.

Despite the challenges in the collection of data across the sector, the PI Task Team continues to engage with the various departments within the member institutions. A sector wide data governance and management system is emphasized to ease the access to institutional data.

The PI Task Team recognized the need to expand the data warehouse to import and incorporate data from a range of sources such as Facebook, LMS, Blackboard, surveys and assessments. At the same time, the housing of a centralized database for the SATN is important to provide continuity data access. A SATN dashboard will be with the assistance of IDSC who has a peer sharing information database.



3.3 Higher Education Qualification Sub-Framework Task Team Meetings and Workshops (HEQSF)

The scale of the HEQSF alignment process for universities of technology has been extensive over the years and has resulted in a changed landscape for the sector. The readiness of institutions to align their qualifications for the implementation date i.e. 1 January 2020, a date non-negotiable by the Minister of Higher Education, has been a resource intensive process.

As part of the HEQSF alignment process, qualifications were divided into Categories A, B and C. A large number of Master's and Doctorate programmes were categorised as Category A. Category B included mostly Diplomas and some degree programmes. Most of the UoT programmes were categorised as Category C, which required a complete overhaul of the qualifications.

The Task Team identified the following critical risks in terms of the HEQSF alignment and implementation and defined its activities as follows:

-  **Articulation** – Develop guidelines, principles and procedures to identify, refine and reformulate inter-institutional arrangements and agreements between member institutions, and between member institutions and TVET providers and thus mitigate against the risks of reduced programme/qualification transferability and student mobility, reputation, and the negative impact on the credibility and integrity of all qualifications aligned to the HEQSF.
-  **Marketing of the HEQSF** Qualifications at National and Institutional Level whereby the first public advertisements were placed in selected newspapers in 2017 and continued on an annual basis until the phase out date for the alignment of HEQSF qualifications. Member institutions are further involved in other advocacy campaigns to ensure that all stakeholders, internal and external are informed on the HEQSF implementation and its requirements.
-  **Policy development and renewal** – A source document identified policies, date of applications, scope and requirements and implications for policy renewals at institutions, where applicable. Some of the legal concerns were raised and discussed with the relevant staff including Registrar's and Institutional Planners.
-  **Funding and resources** – in all activities leading to the readiness for the HEQSF alignment of qualifications which has an impact on staffing requirements, institutional support, teaching and learning, accreditation processes, etc.
-  **Prioritisation of programmes** - An assessment on the impact of the prioritisation of certain programmes for HEQSF alignment was undertaken. Institutions identified priority programmes (diplomas and degrees) which were submitted to the DHET and CHE for approval after the 28 March 2018 deadline.



Several meetings and workshops were held with the sector and the relevant national agencies (DHET, CHE and SAQA) whereby member institutions addressed the challenges and risks relating to the HEQSF implementation. The work of the Task Team has resulted in a more positive and enabling environment to address the challenges and concerns in meeting the implementation deadline.



3.4 Research, Innovation and Enterprise Committee (RIEC)

The objectives of the RIEC is on Research and Development, Enterprise Development, Entrepreneurship Development, Innovation and Commercialisation and Internationalisation. Whilst the work of the RIEC on its objectives is continuing, the following activities are highlighted:



Research Ethics and Integrity Framework – The framework document is intended to provide guidelines highlighting the key issues and flexibility to accommodate changes such as the fourth industrial revolution and its impact on research.



Research Information Management Systems – three of the SATN member institutions have migrated to the new research management system 'Converis' a system that is powering research excellence.

In February 2018, the member institution Clarivate Converis's Project Team met with Clarivate to discuss the implementation of Converis, and went live in September 2018. All Member institutions agreed to commence with the DHET Research Outputs (Pubcount) module from March 2018.

4. SATN Partnerships and Special Projects

The SATN continues to play a central role in creating opportunities for its member institutions through strategic partnerships and the identification of collaborative projects that are mutually rewarding. Partnerships continues to be of fundamental importance to SATN to develop and maintain strong multifaceted partnerships with universities worldwide. These partnerships provide opportunities for students and researchers to internationalise their knowledge, experience and work, as well as underpin SATN's increasing visibility and prominence in promoting it's member institutions.

4.1 Curriculum development for Waste Sciences and Technology in partnership with Technology Innovation Agency and Energy and Water SETA

The SATN responded to the calls from the DEA, and the DPSA for the establishment of pilot e-waste container based dismantling facilities at five member Institutions. The enterprises commenced operations in April and were supported by a training programme in dismantling through a generous grant from TIA and EWSETA. This also included the development of an NQF level five curriculum that will be offered at SATN member institutions to support the Waste Recycling sector in South Africa. This TIA/EWSETA grant also contributed to ensuring the upskilling, training human capacity to populate this industry, support for enterprise development, creation of downstream business opportunities through beneficiation of by-products of dismantled fractions, research and innovations and importantly awareness raising in Education institutions.

The SATN also joined hands with a private recycling consulting company and E-WASA to develop a training manual for dismantling of E-waste.



4.2 The Tirello Bosha Waste Recycling Enterprise Programme with the Department of Environmental Affairs and Department of Public Service and Administration

The project was launched by the DEA and the DPSA at the VUT Science and Technology Park. This project not only responds to the Universities' community engagement agenda but is also contributing to skills development, job creation research and innovation agenda of the Universities. This programme included establishing five container-based e-waste dismantling and recycling facilities at the following sites:



Central University of Technology;



Vaal University of Technology and;



University of Mpumalanga;



Walter Sisulu University of Technology.



Tshwane University of Technology;

The Universities were provided with a retrofitted container, a vehicle for collection of ewaste, and all related equipment required for start-up of the business. In addition, the managers of the business were put through an enterprise development training sponsored by TIA and the EWSETA and 10 dismantling and recycling staff were put through an intensive train the trainer programme in recycling at Exigo recycling in Panipat India. Several students have since engaged in the Masters programmes at the above institutions to research various aspects of E-waste recycling. The VUT Science and Technology Park is currently working with Exigo Recycling on the development of the prototype of an E-waste shredder for Africa.

Training programme for staff from Container Based Programmes in India
Training staff for Containers at Exigo Recycling in India. Mr Errol Gradwell (CEO EWSETA) addressing the team of Trainees.



4.3 Partnerships with the Quality Council for Trades and Occupations (QCTO) Qualifications Development – Occupations Identified in the Waste Sector

Following on requests from EWASA, the SATN and EWSETA agreed to pursue the development of SAQA registered occupational qualifications within the waste sector. Over 16 Waste streams were identified which include but not limited to chemical, rubber, electronic (E-Waste), plastic, paper waste, waste to energy, and nuclear. This is further supported by the need for skills within SA in conjunction to the looming issues of pollution, and the responsibility of government to respond to this crisis.

A pre-scoping workshop was held on 24-25 January 2018 and it was agreed that there was an urgent need to develop e-waste suite of qualifications under the Occupational Framework of Qualifications (QFO) that are most critical. To this end the EWSETA has indicated financial support for the qualification's development and following its application to the QCTO, approval was given to develop the E-Waste qualifications. The application was approved as the Environmental Manager (Pollution and Waste Manager), a holding qualification, which will accommodate the following waste qualifications as Skills Programmes:

- 🏠 Refuse Sorter;
- 🏠 Material Recycler;
- 🏠 Recycle or Rubbish Collector;
- 🏠 Waste Material Sorter & Classifier;
- 🏠 Chemical Waste Controller;

The process for the qualification development going forward will entail:





- 🏠 Identification of expert practitioners in the sector (people qualified in the occupation/s and include assessors, educationalists, workplace practitioners, etc.) and stakeholders.
- 🏠 Workshops to develop occupational profiles.
- 🏠 Progress reporting on the process.
- 🏠 Verification of occupational curriculum and external assessment specifications document by all identified constituencies (broader consultation).
- 🏠 Submission to the QCTO.










4.4 SATN Capacity Development Programmes: Partnership with the Department of Higher Education on the UCDP National Collaborative Grant for Staff Capacity

The partnership between the DHET and SATN is to ensure the production of a new cohort of PhD's within the staff compliment of SATN member institutions over a 3-4-year period, an enhanced supervisor capacity and an increased number of academic publications in accredited journals. The bespoke programmes to deliver these goals and targets have been researched and tailored to accommodate fifty (50) new PhD staff over a three-year period, three hundred and sixty (360) supervisors over three years and one hundred and eighty (180) candidates trained in writing for academic publications.

The capacity building programme is aligned to the goals of the UCDP, the SATN, the National Development Plan and the Research and Development Strategy of the DHET and DST namely:

-  To increase the percentage of academic staff with PhDs by 2030 and contribute to towards achieving the 75% target.
-  To enhance the quality and quantity of supervisors to support the increased production of post graduate qualifications.
-  To ensure an increased percentage of publications in accredited journals.
-  To ensure that up to 60 percent of the candidates embarking on this programme are black women in response to the transformation agenda of the DHET.

The advantages of pooling resources in a programme of this nature for the sector are the following:

-  Providing a cost-effective model that guarantees a community of practice across institutions and in partnership with international institutions.
-  Ensuring the capacitation of academic staff to PhD level, supervisor enhancement and publication targets are met within a specified time.
-  Enhancing the development of the high-level technology focus through developing new communities of practices and to support research development within the institution.
-  Through a joint programme (cohort model) which will enable the development of new research focus areas for collaboration among emerging researchers and through generating research from the bottom up, thereby sustaining meaningful partnership developments.
-  A high standard in Staff Qualification Capacity Development will be delivered through a shared model through drawing on a pool of the best researchers and scholars nationally and internationally to raise the quantity and quality of staff at the institution.
-  The programme will ensure the production of high-quality journal publications. (SATN has a partnership with the International Journal for Science, Technology and Society.) The Writing for academic publications programme will yield results within each year and staff can run such programmes within their institutions after a three-year period.
-  The programme will provide the administrative and academic support required in the successful delivery of the UCDP programme.



The postgraduate strategic grants programme attracted 82 applications with funding in place for fifty applicants from the DHET. The SATN has hosted the following workshops over the course of the year which includes Supervisory Workshops for academic staff and Writing Workshops:

Workshop	Dates	Number of Persons Trained
<i>Supervisory Workshop</i>	<i>22-23 March 2018</i>	<i>19</i>
<i>Supervisory Workshop</i>	<i>4-5 June 2018</i>	<i>19</i>
<i>Supervisory Workshop</i>	<i>11-12 June 2018</i>	<i>21</i>
<i>Academic Writing Workshop</i>	<i>25-27 June 2018</i>	<i>17</i>
<i>Academic Writing Workshop</i>	<i>3-5 September 2018</i>	<i>16</i>
<i>Supervisory Workshop</i>	<i>1-2 October 2018</i>	<i>21</i>
<i>Academic Writing Workshop</i>	<i>18-20 October 2018</i>	<i>20</i>

The workshops were facilitated by a team of seasoned researchers from South Africa and the SATN International Research Partners.

4.5 SATN Capacity Enhancement Programmes

The SATN, in response to the Ministers call for the production of a critical mass of quality Masters, PhDs, Supervisors and Academic Publications from universities across South Africa, as well as in response to the targets set in the NDP, developed a unique and bespoke set of programmes in this regard. The programmes have been developed, tested and refined by a team of national and international experts to meet the quality and “time to completion needs” of especially the new generation universities and the technology focussed universities.

The objectives of the SATN Programme are to strengthen the teaching and research capacity of institutions; enable qualified academics to deepen their knowledge of research methodology in their disciplines; ensure that they complete their Masters and PhD programmes in the required time; enhance their supervision skills and ensure submission of high-quality papers for publication to accredited journals.

Since the delivery of these programmes to universities over the past three years, the outcomes and outputs have been phenomenal. (see reviews and evaluation results of the programmes on the website www.satn.org.za).

4.6 Partnerships in Africa and Beyond

The SATN is continuously liaising with networks of universities and organisations in Africa and other international countries to strengthen its member organisations and to provide international recognition and standing.

To this extent, the SATN has successfully signed Memorandum’s of Understanding with Technological Higher Education Association Ireland, Commonwealth Association of Polytechnics of Africa, Australian Technology Network, National University of Singapore, RUTGERS University in the US. The outcomes of these partnerships have resulted in ensuring the implementation of our staff exchange, joint research and joint funding initiatives.

5. SATN International Conference held on 11-13 September 2018

4TH INDUSTRIAL REVOLUTION: ROLE OF UNIVERSITIES

This conference was a huge success in respect of networking with the international and local participants, government, business and industry.

The Role of Universities in the 4th Industrial Revolution provided the conference with the platform to explore:

- 🎓 How institutions internationally are addressing the challenges presented by the 4th Industrial Revolution;
- 🎓 Understand the demands of business and industry;
- 🎓 Hear the voices of students;
- 🎓 Showcase university innovations, and
- 🎓 Network with all stakeholders.



The overall aim of the conference was to share new developments and initiatives, provide opportunities for policy makers, academics, practitioners, industries and businesses to strengthen partnerships, gain a broader perspective on addressing issues and contextualising the 4th Industrial Revolution against our own country situations within a more global agenda.

The conference argued strongly, that for higher education to deliver future generations with the right set of skills and knowledge, an imperative question must be asked regarding how higher education would be affected by the 4th Industrial Revolution and how the delivery of education will be transformed. In response to this, SATN member institutions declared their commitment to ensuring that those who teach and learn at their respective institutions will prepare for the challenges and opportunities that the 4th Industrial Revolution brings.

There is no doubt that the conference achieved its expected outcomes of informing and sharing knowledge and experiences with policy makers, practitioners, scientists, students and lecturers on the latest research, innovations, developments and the needs of industry as well as created opportunities for new networks. The SATN received an overwhelming support for partnerships and internships for our students. Giving our students an international experience will equip them to be global citizens who can contribute to the future of South Africa.





Student Entrepreneurship Workshop Facilitated by TIA in Partnership with The SATN on 10 September 2018







Thought Leadership Workshop: Kick Starting the 4th Industrial Revolution

Students from the SATN member institutions were invited to attend the one-day workshop facilitated by TIA and to thereafter attend and participate in the SATN International Conference scheduled from the 11-13 September.

Seventy students attended this programme from the members institutions. The students were also requested to prepare a draft idea, concept or pitch which was revised and adjusted during the course of the workshop. The workshop was facilitated by seasoned entrepreneurs such as Mr Sherwyn Singh, founder of Hypergrowth-Buzz in the UK, Mr Ademir Bassanei, Professional Coach and expert Consultant in Mechatronics, Brazil and Ms Senisha Moonsamy, Head of Innovation and Skills Development, TIA.



The objectives of the Workshop were to:

-  Provide students with the key paradigm changes that will arise from the 4th Industrial Revolution and how their business ideas will be impacted upon.
-  Assist students to understand the concepts of entrepreneurship.
-  Refine student's current business ideas.
-  Provide support on enterprise development.
-  Prepare the students for the final pitch of their business ideas.
-  Provide pointers to students on how to take their ideas to market.

In addition, the workshop focused on enhancing student's abilities to combine entrepreneurial skills with the available technology of this digital age in order to adapt to the economy for the 4th Industrial Revolution and highlighted the potential impacts that the 4th Industrial revolution will have on the entrepreneurial sector.

The top three students from WSU, CPUT and TUT, were given the opportunity to visit an international company for a full week and refine their business ideas with international venture capital organisations. They were placed at Hypergrowth Buzz and Exigo Recycling.

6. Branding and Marketing the Sector

The SATN has played a key role in marketing and advocating on behalf of its member institutions, through collaborative initiatives, training workshops, funding opportunities, coordinating data collection and information dissemination thereby adding value for the sector in higher education. The SATN's Website and Social Media is continuously updated on all its activities. The SATN has produced a marketing video showcasing its member institutions which is available on its website.

7. Conclusion

The SATN had a successful and fruitful year filled with many lessons on how best to prepare graduates to meet the demands of the 4th Industrial Revolution, as well as make meaningful and impact contributions to the South African society. With the help of our member institutions and the strength of our national and international partnerships, the SATN will continue to raise the profile of its member institutions, equip them with the knowledge and skills to create a world-class experience for their students, open and create research-driven programmes and workshops for graduates, and promote entrepreneurial opportunities which will create a generation of job creators, not seekers. The SATN will continue to strengthen its partnerships with Government, build relationships with regional and international institutions and cement its reputation as a champion of technology-focussed higher education in South Africa.



8. SATN Secretariat



Dr Anshu Padayachee
Chief Executive Officer



Mrs Christelle Venter
Administrative Officer

Contract Appointments



Ms Colleen Titus
Administrative Assistant



Mrs Kogie Pretorius
Projects Co-ordinator



9. Financial Report

South African Technology Network Trust

(Registration number: IT913/08)

Annual Financial Statements for the year ended 31 December 2018

Detailed Income Statement

Figures in Rand	Note(s)	2018	2017
Revenue			
Income Received		17,209,561	9,219,039
Other income			
Other income		4,000	-
Interest received	9	452,807	446,947
Gains on disposal of assets		-	4,250
		456,807	451,197
Operating expenses			
Administrative expenses		(1,832,967)	(1,087,495)
Bad debts		(13,937)	(285,000)
Bank charges		(19,180)	(7,912)
Conference expenses		(2,414,436)	-
Depreciation, amortisation and impairments		(108,312)	(67,158)
Employee costs		(2,472,191)	(2,088,252)
ITEC expenses		(32,113)	(19,771)
Penalties and interest		(39,758)	(27,932)
Project expenses		(7,840,925)	(3,860,904)
Provision for bad debts		-	(39,952)
Subsistence and travelling expenses		(374,519)	(670,476)
Profit and loss on exchange differences		(701,127)	-
		(15,849,465)	(8,154,852)
Operating surplus	8	1,816,903	1,515,384
Finance costs	10	(60,521)	(45,413)
Surplus for the year		1,756,382	1,469,971

South African Technology Network Trust

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Annual Financial Statements for the year ended 31 December 2018

Statement of Cash Flows

Figures in Rand	Note(s)	2018	2017
Cash flows from operating activities			
Cash (used in) generated from operations	12	(1,873,298)	1,314,968
Interest income		452,807	446,947
Finance costs		59,947	(45,413)
Net cash from operating activities		(1,360,544)	1,716,502
Cash flows from investing activities			
Purchase of property, plant and equipment	2	(66,063)	(185,559)
Sale of property, plant and equipment	2	-	28,260
Net cash from investing activities		(66,063)	(157,299)
Cash flows from financing activities			
Finance lease payments		(147,426)	122,830
Total cash movement for the year		(1,574,033)	1,682,033
Cash at the beginning of the year		4,808,042	3,126,009
Total cash at end of the year	4	3,234,009	4,808,042

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Annual Financial Statements for the year ended 31 December 2018

Statement of Changes in Equity

Figures in Rand	Accumulated surplus	Total equity
Balance at 01 January 2017	2,265,262	2,265,262
Surplus for the year	1,469,971	1,469,971
Other comprehensive income	-	-
Total comprehensive income for the year	1,469,971	1,469,971
Balance at 01 January 2018	3,735,233	3,735,233
Surplus for the year	1,756,382	1,756,382
Other comprehensive income	-	-
Total comprehensive income for the year	1,756,382	1,756,382
Balance at 31 December 2018	5,491,615	5,491,615

Note(s)

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Annual Financial Statements for the year ended 31 December 2018

Statement of Comprehensive Income

Figures in Rand	Note(s)	2018	2017
Revenue	7	17,209,561	9,219,039
Other income		4,000	4,250
Operating expenses		(15,849,465)	(8,154,852)
Operating surplus	8	1,364,096	1,068,437
Investment revenue	9	452,807	446,947
Finance costs	10	(60,521)	(45,413)
Surplus for the year		1,756,382	1,469,971
Other comprehensive income		-	-
Total comprehensive income for the year		1,756,382	1,469,971

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Annual Financial Statements for the year ended 31 December 2018

Statement of Financial Position as at 31 December 2018

Figures in Rand	Note(s)	2018	2017
Assets			
Non-Current Assets			
Property, plant and equipment	2	193,981	236,230
Current Assets			
Trade and other receivables	3	2,672,437	750,709
Cash and cash equivalents	4	3,234,009	4,808,042
		5,906,446	5,558,751
Total Assets		6,100,427	5,794,981
Equity and Liabilities			
Equity			
Accumulated surplus		5,491,615	3,735,233
Liabilities			
Non-Current Liabilities			
Finance lease liabilities	5	135,716	172,743
Current Liabilities			
Trade and other payables	6	436,165	1,860,143
Finance lease liabilities	5	36,931	26,862
		473,096	1,887,005
Total Liabilities		608,812	2,059,748
Total Equity and Liabilities		6,100,427	5,794,981





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