



forward together · saam vorentoe · masiye phambili

**ProfT E Cloete: Vice-Rector: Research, Innovation and Postgraduate Studies
Report to Council**

**ProfT E Cloete: Viserektor: Navorsing, Innovasie en Nagraadse Studie
Verslag aan die Raad**

26/03/2018

© The content of this presentation is confidential.



forward together · saam vorentoe · masiye phambili

The Research, Innovation and Postgraduate Studies portfolio has gone from strength to strength in the past five years, positioning Stellenbosch University (SU) as the leading research-intensive university in South Africa. I attribute this to an incredible team effort. I therefore wish to acknowledge and credit the deans and vice-deans for research, the senior directors in my responsibility centre as well as SU researchers in general for their initiative and dedication. I also appreciate the support of the Rectorate and Council.

Die portefeulje Navorsing, Innovasie en Nagraadse Studie het gedurende die afgelope vyf jaar van krag tot krag gegaan en die Universiteit Stellenbosch sodoende as die voorste navorsingsintensiewe universiteit in Suid-Afrika geposisioneer. Ek skryf dit toe aan 'n merkwaardige spanpoging. Daarom wil ek graag erkenning en krediet gee aan die dekane en visedekane vir navorsing, die senior direkteure in my verantwoordelikhedsentrum sowel as US-navorsers in die algemeen vir hulle inisiatief en toewyding. Ek waardeer ook die ondersteuning van die Rectoraat en die Raad.

© The content of this presentation is confidential.

Presentation outline/ Aanbieding uitleg

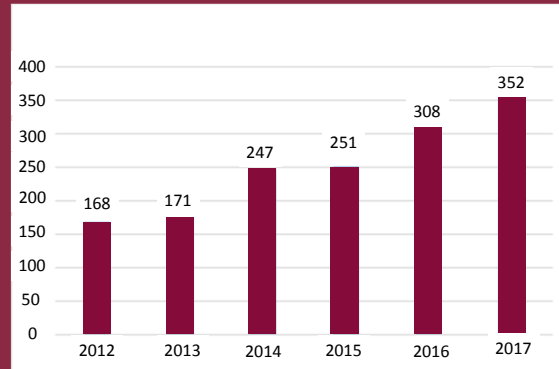


- Knowledge base/ Kundigheidsbasis
- Research excellence/ Navorsingsuitnemendheid
- Student success/ Studentesukses
- Innovation/ Innovasie
- Research focus areas/ Navorsingsfokusareas
- Contract research income/ Kontraknavorsing inkomste
- International rankings/ Internasionale ranglyste

Knowledge base | Kundigheidsbasis




Postdoctoral fellows | Nadoktorale gennote



Postdoctoral fellows | Nadoktorale gennote



Faculty	2015	2016	2017
Agrisciences	53	49	44
Arts & Social Sciences	25	37	47
Economic & Management Sciences	5	10	11
Education	6	7	6
Engineering	25	27	32
Law	3	2	3
Medicine & Health Sciences	54	59	75
Military Sciences	0	1	1
Sciences	110	108	111
Theology	4	5	6
Total/Totaal	285	305	352

44% International/ 44% Internasionaal

Postdoctoral awards | Nadoktorale toekennings



41 young researchers received Thuthuka awards in 2017 to the total amount of R 2 495 337.

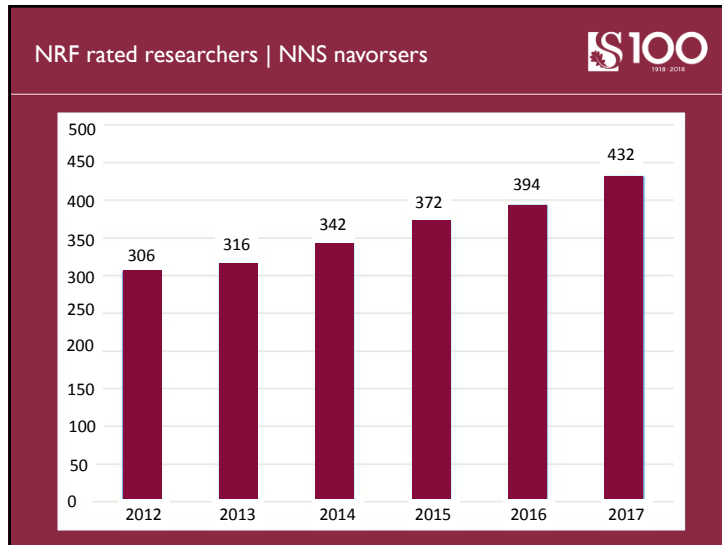
Research chairs | Navorsingsleerstoele



	2013	2014	2015	2016	2017
SARCHI chairs/ leerstoele	18	19	24	24	25
Other chairs/ Ander leerstoele	5	9	11	17	18
Total/Totaal	23	28	35	41	43

AB InBev research chair: Department of Agronomy in 2017

SA Research Chair in sugarcane bio-refining: Department of Process Engineering



Research awards | Navorsingstoekennings

Royal Society of South Africa awards: South Africa awards in 2017:



- Prof Guy Midgley (Botany and Zoology) is the first recipient of the newly instituted Marloth medal.



- Prof Bert Klumperman (Chemistry and Polymer Science) won the 2018 John FW Herschel medal.

The fact that the Society honoured two researchers of the same university in one year is truly exceptional and a reflection of their outstanding contributions.

Research awards | Navorsingstoekennings



Vice Rector's awards for research productivity 2017
Viserektor toekenning vir navorsingsproduktiwiteit 2017

Research awards | Navorsingstoekennings

**2016/17 National Science and Technology Forum (NSTF)/South32 awards:**

- Prof Guy Midgley (Botany and Zoology)
- Prof Helmut Proding (Mathematical Sciences)
- Prof Resia Pretorius (Physiological Sciences)
- Dr Thorsten Becker (Mechanical and Mechatronic Engineering)
- Prof Wikus van Niekerk (Centre for Renewable and Sustainable Energy Studies)
- Prof Eugene Cloete (Vice-Rector: Research, Innovation and Postgraduate Studies)
- Prof Lingam Pillay (Vulamanz Development Team, Process Engineering)
- Dorette du Plessis (Limbovani Outreach Programme, Centre for Invasion Biology)

Research awards | Navorsingstoekennings

**Department of Science and Technology (DST) Women in Science award**

- Prof Resia Pretorius of the Department of Physiological Sciences, was honoured with a DST Women in Science award in August 2017.



Research awards | Navorsingstoekennings

**Five SU researchers received membership of the Academy of Science of South Africa (ASSAf):**

- Prof Cheryl Walker (Sociology and Social Anthropology)
- Prof Leslie Swartz (Psychology)
- Prof Mark Tomlinson (Psychology)
- Prof Ashraf Kagee (Psychology)
- Prof Taryn Young (Epidemiology and Biostatistics)



Research awards | Navorsingstoekennings



The Division for Research Development (DRD) won two national awards for its contribution to research management in Southern Africa. Ms Aasima Gafoor received the earlo career award for excellence in research management



Research outputs | Navorsingsuitsette



	2012	2013	2014	2015	2016
Weighted research output per capita	3.08	2.97	3.03	2.92	3.11
Research publication output per capita	1.36	1.47	1.50	1.32	1.58

Book publication units | Boek publikasie eenhede



Institution	2016
SU	284.93
UKZN	275.47
WITS	241.68
UNISA	238.71
UJ	228.20
UCT	223.56

Research excellence | Navorsingsuitnemendheid



Institution	Per capita research publications units	Weighted output per capita
SU	1.58	3.11
RU	1.56	3.11
UP	1.61	3.06
UKZN	1.49	2.94
WITS	1.53	2.69
UCT	1.53	2.65

SU Plant breeding lab | US Plantteling lab



<https://www.facebook.com/stellenboschuniversiteit/videos/10155868264283421/>

SU Simulated operating theatre
US Gesimuleerde operasie teater



<https://www.youtube.com/watch?v=cmk52lt-w8>

Student success | Studentesukses

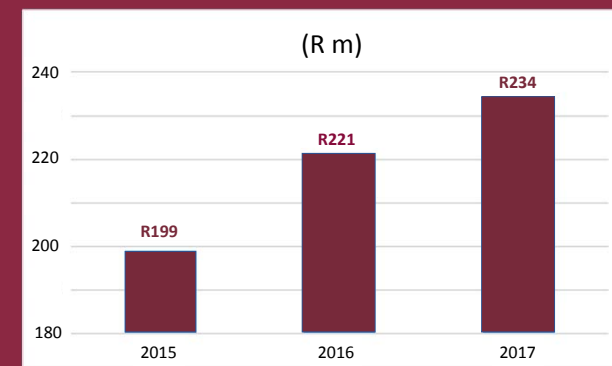


Student success | Studentesukses



	2013	2014	2015	2016	2017
Master's students	4 735	4 717	4 848	4 919	5 005
Doctoral students	1 331	1 385	1 473	1 497	1 703
Total	6 066	6 102	6 321	6 416	6 703

Student support | Studente ondersteuning



Student support | Studente ondersteuning



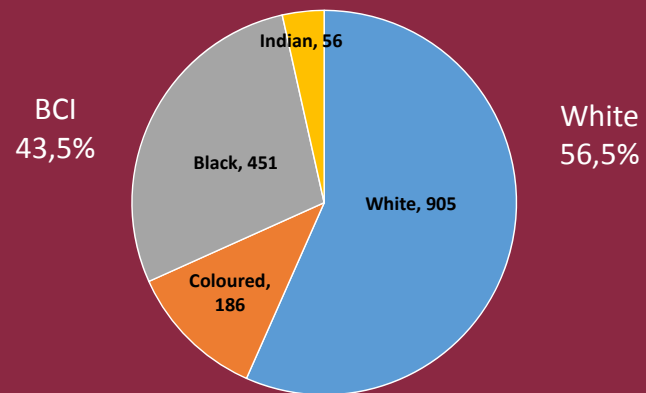
Source/Bron	2015	2016	2017
Institutional funds/ Institusionele fondse	R23 201 655.00	R24 587 130.00	R30 296 548.00
Private sponsorship/ Privaat skenkings	R10 423 081.00	R16 399 748.00	R18 478 805.00
External funds/ Esterne fondse	R165 606 440.00	R180 921 398.00	R185 295 855.00
Total/Totaal	R199 231 176.00	R221 908 276.00	R234 071 208.00

Student success | Studentesukses

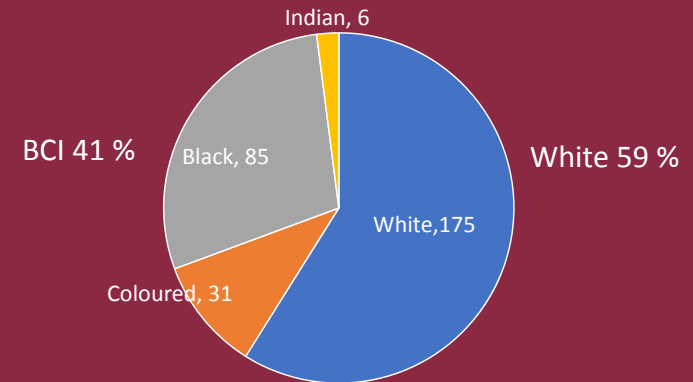


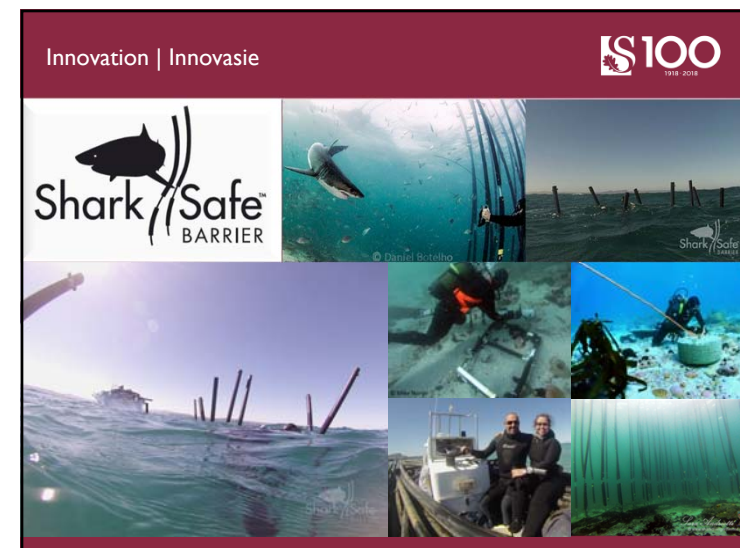
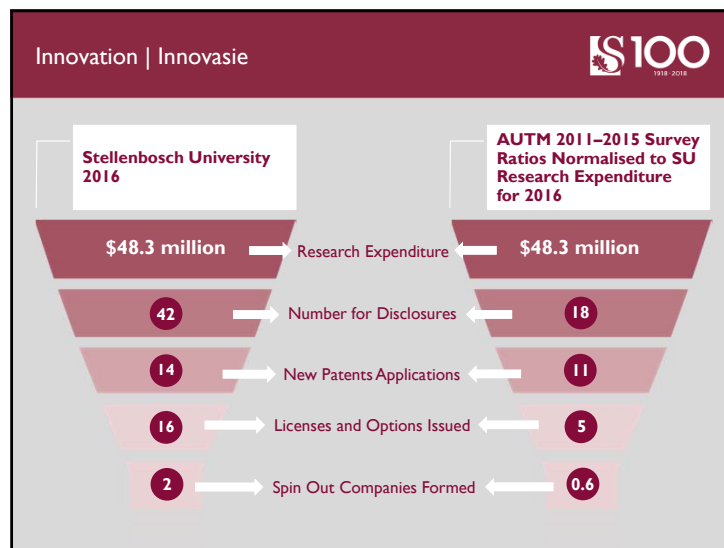
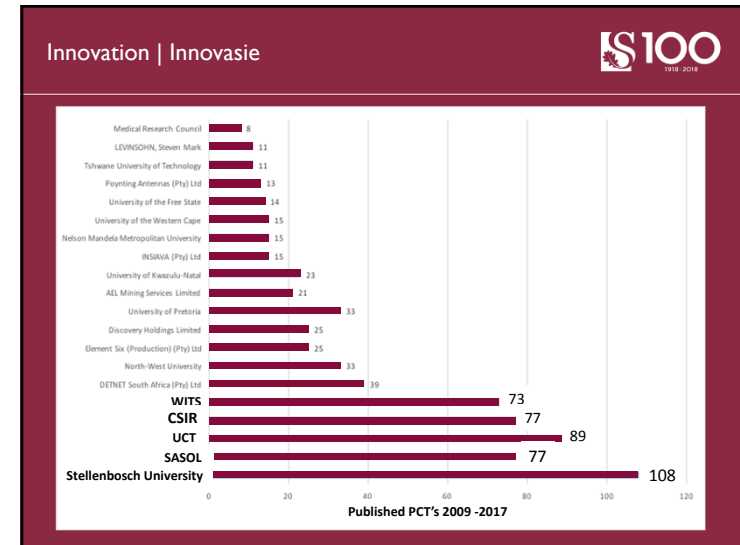
	2013	2014	2015	2016	2017
Masters degrees	1 301	1 293	1 378	1 391	1 620
Doctoral degrees	225	234	267	278	305

M – graduati demographics/ M – graduati demografie



D – graduati demographics/ D – graduati demografie





Innovation | Innovasie

IS100
1918 - 2018

BRIDGIOT
Remote Intelligence and Control

DROPULA™
BY BRIDGIOT




Prof Thinus Booysen

Innovation | Innovasie

IS100
1918 - 2018

THE SMART WATER METER CHALLENGE

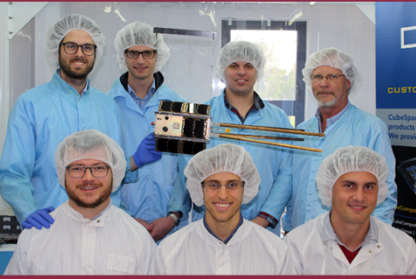



Hector Peterson Secondary, who was able to save a million litres of water per month. By February 2018, 21-million litres of water was saved at 100 schools with Shoprite South Africa Group's Smart Water Meter Challenge.

Innovation | Innovasie

IS100
1918 - 2018

SU's third satellite in space



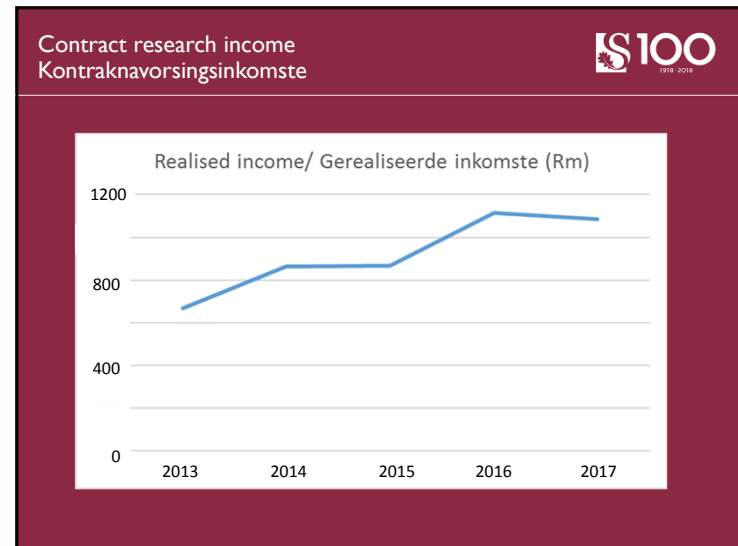

CubeSpace led by Prof Herman Steyn of the Department of Electrical and Electronic Engineering making headlines. Its ZA-AeroSat satellite was launched on 18 April with an Atlas V rocket from Cape Canaveral in the United States.

Centres/Institutes | Sentra/Institute

IS100
1918 - 2018



1. Centre for Competition Law and Policy
2. Centre for Bioinformatics and Computational Biology
3. Institute for Child and Family Health Research
4. ARUA Energy Centre of Excellence



	2013	2014	2015	2016	2017
Research contracts	R477,1m	R585m	R637,2m	R1,78bn	R885,8m
NRF/THRIP	R160,3m	R198,3m	R224,1m	R367m	R364,2m
Total	R703,4m	R878,9m	R1,18bn	R2,158bn	R1,250m
Realised yield	R669,1m	R864,2m	R866,6m	R1,113,8m	R1,086m

International rankings Internasjonale ranglyste		QS World University Rankings		S100			
		2016		2017		2018	
		World position	National position	World position	National position	World position	National position
Times Higher Education		401–500	3 rd	401–500	3 rd	351–400	3 rd
QS World University Rankings		395	3 rd	361	2 nd	361	2 nd

PERFORMANCE WITHIN INSTITUTIONS IN SOUTH AFRICA

Ranking Category	Overall Rank	Stellenbosch University Rank	Other Institutions Rank
Overall	191	2	
Academic Reputation	155	3	
Employer Reputation	197	4	
Faculty Student	395	9	1
Citations per Faculty	207	1	
International Faculty	153	2	
International Students	252	6	

Top Rank in Country ↑

■ Stellenbosch University
■ Other

International rankings
Internationale ranglyste

100
1919 - 2018



In baseball, my theory is to strive for consistency,
not to worry about the numbers. If you dwell on
statistics you get shortsighted, if you aim for
consistency, the numbers will be there at the end.

(Tom Seaver)

izquotes.com

