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STELLENBOSCH  
UNIVERSITY

**100**  
1918-2018

**REPORT TO COUNCIL**  
Deputy Vice Chancellor: Research, Innovation and Postgraduate Studies

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**VERSLAG AAN DIE RAAD**  
Viserektor: Navorsing, Innovasie en Nagraadse Studies

**Prof TE Cloete**  
19 March 2021

FORWARD TOGETHER • MASIYE PHAMBILI • SAAM VORENTOE

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**STELLENBOSCH UNIVERSITY**

I 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.

**UNIVERSITEIT STELLENBOSCH**

*Ek wil 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 Rektoraat en die Raad.*

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**VISION**

Stellenbosch University will be Africa's leading research-intensive university, globally recognised as excellent, inclusive and innovative, where we advance knowledge in service of society.

**VISIE**

*Die Universiteit Stellenbosch sal Afrika se voorste navorsingsintensiewe universiteit wees wat wêreldwyd as uitnemend, inklusief en innoverend erken word en waar ons kennis tot diens van die samelewing bevorder.*

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**CORE STRATEGIC THEMES**

- A thriving Stellenbosch University
- A transformative student experience
- Purposeful partnerships and inclusive networks
- Networked and collaborative teaching and learning
- Research for impact
- Employer of choice

**KERN STRATEGIESE TEMAS**

- 'n Florerende Universiteit Stellenbosch
- 'n Transformerende studente-ervaring
- Doelgerigte vennootskappe en inklusiewe netwerke
- Genetwerkte en samewerkende onderrig en leer
- Navorsing vir impak
- Voorkeurwerkgewer

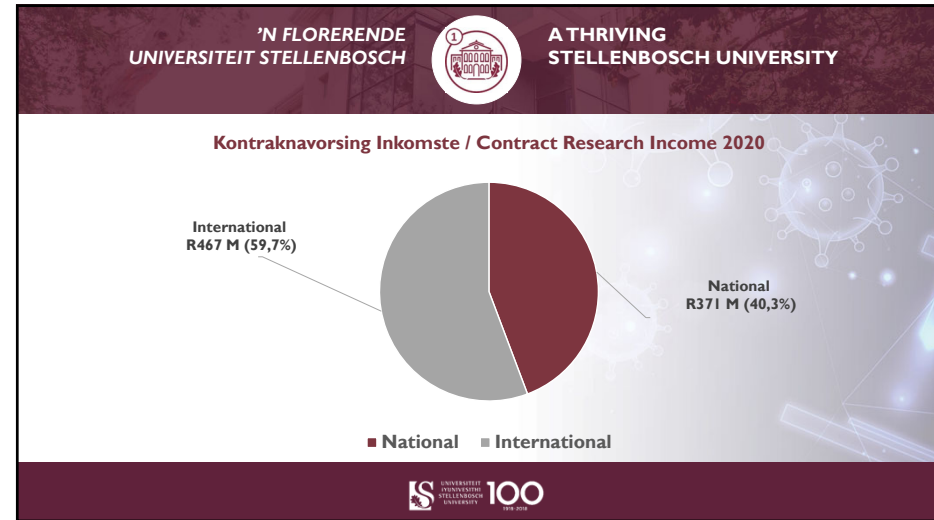
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|  | Derdegeldstroominkomste (Rand) / Third stream income (Rand) |          |          |           |
|--|---|----------|----------|-----------|
|  | 2017  | 2018     | 2019     | 2020      |
| Navorsingskontrakte / Research Contracts | R885,8m   | R783,2m  | R806,03m | R828,77m  |
| NNS/NRF                                  | R364,2m   | R235,2m  | R209,92m | R164,324m |
| Totaal/Total                             | R1,250bn  | R1,018bn | R1,016bn | R963,62m  |

Exceptional performances by Professors Grant Theron and Gerhard Walz from the Faculty of Medicine & Health Sciences resulted in a total of 10 successful H2020 grants, in addition, 6 of their Postdocs received H2020 EDCTP Career Development Fellowships.

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In 2020 COVID-19 contingency fund applications for 37 research contracts were submitted to the value of R 8 006 450.10, of which **R 7 975 096.10** was awarded.

The DVC: Research, Innovation and Postgraduate Studies, Prof Eugene Cloete, earmarked part of his 2020 discretionary funds to stimulate urgent research and innovation in this area. A total of **15 projects** were funded.

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'N FLORENDSE UNIVERSITEIT STELLENBOSCH

A THRIVING STELLENBOSCH UNIVERSITY

Significant Project

**BMRI Biomedical Research Institute**  
New Research Facility for the Faculty Medicine and Health Science

Project Value **R974,6m**  
DHET Contribution **R 200m**

18 820m<sup>2</sup> Existing Building  
16 621m<sup>2</sup> New Building  
1 680m<sup>2</sup> Basement Extension

37 121m<sup>2</sup> Total New and Upgraded Facilities

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'N FLORENDSE UNIVERSITEIT STELLENBOSCH

A THRIVING STELLENBOSCH UNIVERSITY

Bios – biobanking facility

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'N TRANSFORMERENDE STUDENTE-ERVARING

A TRANSFORMATIVE STUDENT EXPERIENCE

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'N TRANSFORMERENDE STUDENTE-ERVARING

A TRANSFORMATIVE STUDENT EXPERIENCE

Aantal M en D Studente

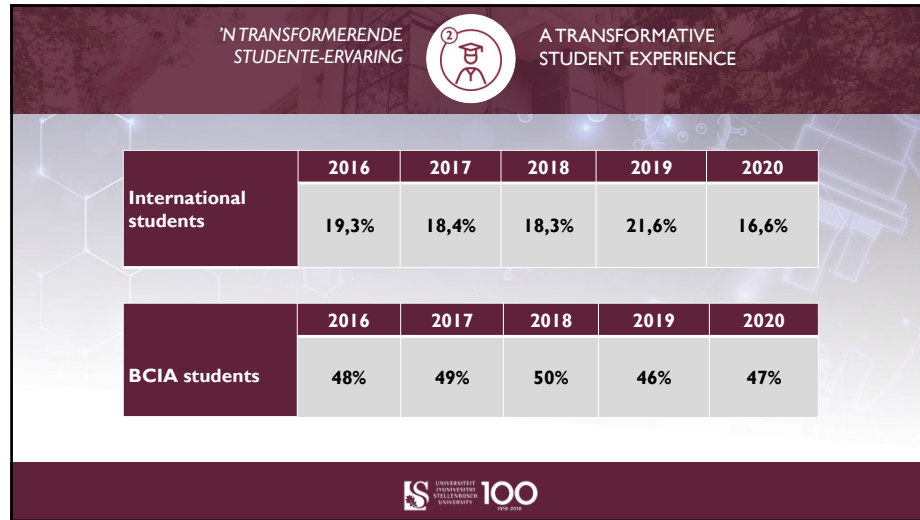
Number of M & D Students

|                    | 2016  | 2017  | 2018  | 2019  | 2020  |
|--------------------|-------|-------|-------|-------|-------|
| Magister/Masters   | 4 919 | 4 831 | 4 811 | 4 821 | 4 774 |
| Doktoraal/Doctoral | 1 497 | 1 614 | 1 645 | 1 637 | 1 607 |
| Totaal/Total       | 6 416 | 6 445 | 6 456 | 6 458 | 6 381 |

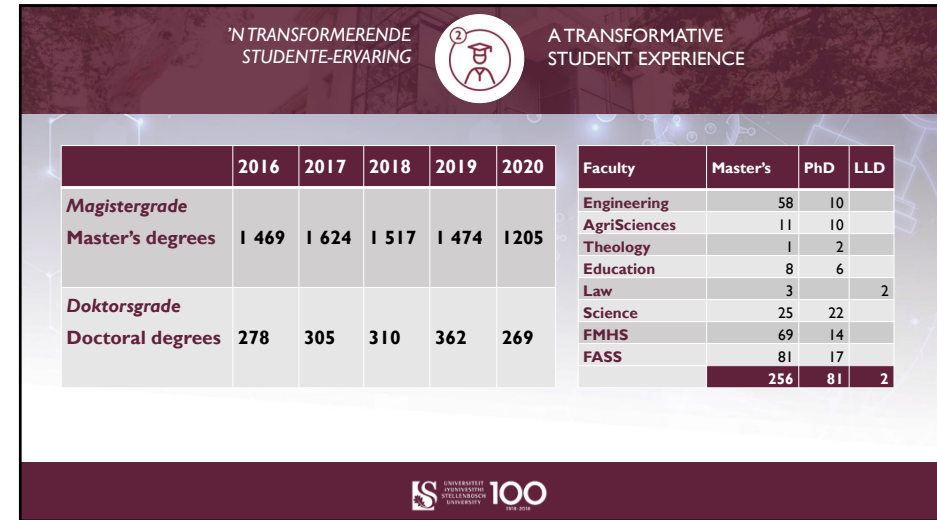
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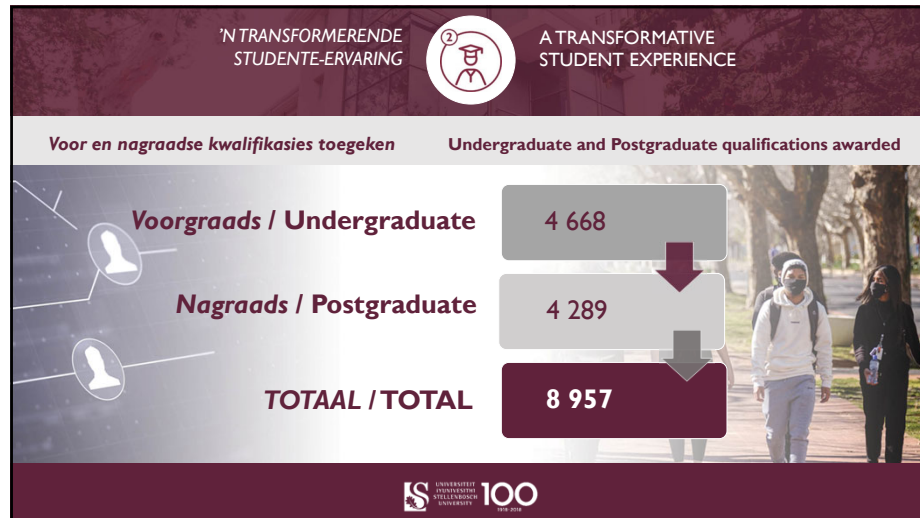




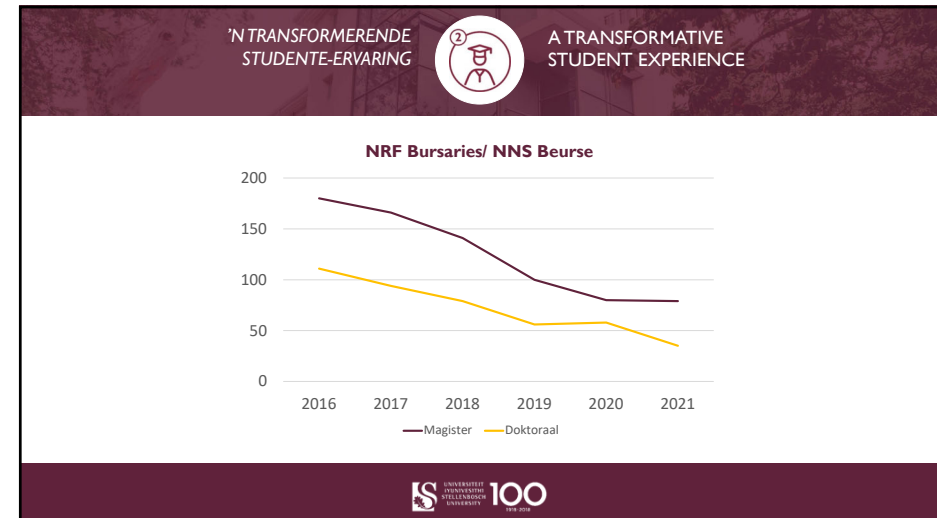
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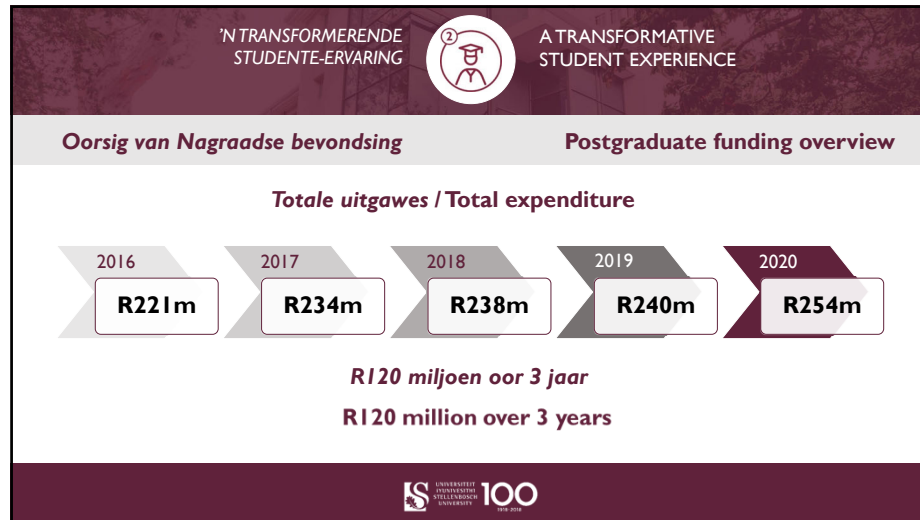
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DOELGERIGTE VENNOOTSKAPPE EN INKLUSIEWE NETWERKE  PURPOSEFUL PARTNERSHIPS AND INCLUSIVE NETWORKS


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**The purpose of the AUDA-NEPAD CoE-STI is to:**

Identify, integrate and continentally implement **proven scientific and technological innovations** from both the CSIR and Stellenbosch University and other associated partner organisations.



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DOELGERIGTE VENNOOTSKAPPE EN INKLUSIEWE NETWERKE  PURPOSEFUL PARTNERSHIPS AND INCLUSIVE NETWORKS

**MEMBER STATES PRIORITIES**

**Climate Resilience (Cairo)**

- 20% - INTEGRATION
- 10% - RURAL RESOURCES AND FOOD SYSTEMS
- 10% - HUMAN CAPITAL AND INSTITUTIONS DEVELOPMENT
- 10% - INFRASTRUCTURE
- 10% - SUSTAINABLE AND RENEWABLE ENERGY

**Human Capital and Institutions Development (Nairobi)**

- 20% - INTEGRATION
- 10% - RURAL RESOURCES AND FOOD SYSTEMS
- 10% - HUMAN CAPITAL AND INSTITUTIONS DEVELOPMENT
- 10% - INFRASTRUCTURE
- 10% - SUSTAINABLE AND RENEWABLE ENERGY

**Rural Resources and Food Systems (Dakar)**



- 20% - INTEGRATION
- 10% - RURAL RESOURCES AND FOOD SYSTEMS
- 10% - HUMAN CAPITAL AND INSTITUTIONS DEVELOPMENT
- 10% - INFRASTRUCTURE
- 10% - SUSTAINABLE AND RENEWABLE ENERGY

**Supply Chain and Logistics**

- 20% - INTEGRATION
- 10% - RURAL RESOURCES AND FOOD SYSTEMS
- 10% - HUMAN CAPITAL AND INSTITUTIONS DEVELOPMENT
- 10% - INFRASTRUCTURE
- 10% - SUSTAINABLE AND RENEWABLE ENERGY

**Science and Technology and Innovation Hub (Stellenbosch)**

- 20% - INTEGRATION
- 10% - RURAL RESOURCES AND FOOD SYSTEMS
- 10% - HUMAN CAPITAL AND INSTITUTIONS DEVELOPMENT
- 10% - INFRASTRUCTURE
- 10% - SUSTAINABLE AND RENEWABLE ENERGY

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|      |           |           |   |                         |
|------|-----------|-----------|---|-------------------------|
| Prof | Fourie    | Coenrad   | Elektriese en Elektroniese Ingenieurswese | BRICS (Rusland, China)  |
| Prof | Lochner   | Christine | Psigiatrie                                | BRICS (Indië, Brasilië) |
| Prof | Pasch     | Harald    | Chemie en Polimeerwetenskap               | China                   |
| Dr   | Malaza    | Vusi      | Fisika (Krygskunde)                       | Rusland                 |
| Prof | Wyngaardt | Shaun     | Fisika                                    | Rusland                 |
| Prof | Makunga   | Nox       | Plant- en Dierkunde                       | België                  |
| Prof | Swilling  | Mark      | Skool vir Publieke Leierskap              | Nederland               |
| Prof | Stevens   | Gary      | Aardwetenskappe                           | Frankryk                |



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GENETWERKTE EN SAMEWERKENDE ONDERRIG EN LEER 

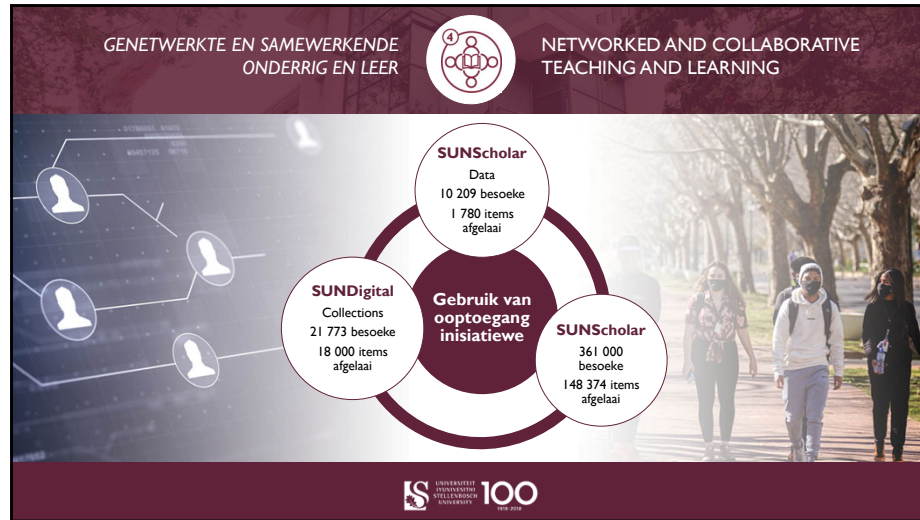
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**NETWORKED AND COLLABORATIVE TEACHING AND LEARNING**



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GENETWERKTE EN SAMEWERKENDE ONDERRIG EN LEER NETWORKED AND COLLABORATIVE TEACHING AND LEARNING

|  |              |
|--|--------------|
| <b>Completed assignments by undergraduate students</b>           | <b>3 186</b> |
| Views of module specific undergraduate e-guides                  | 18 351       |
| Attendance of online training sessions by undergraduate students | 709          |
| Views of module specific postgraduate e-guides                   | 6 388        |

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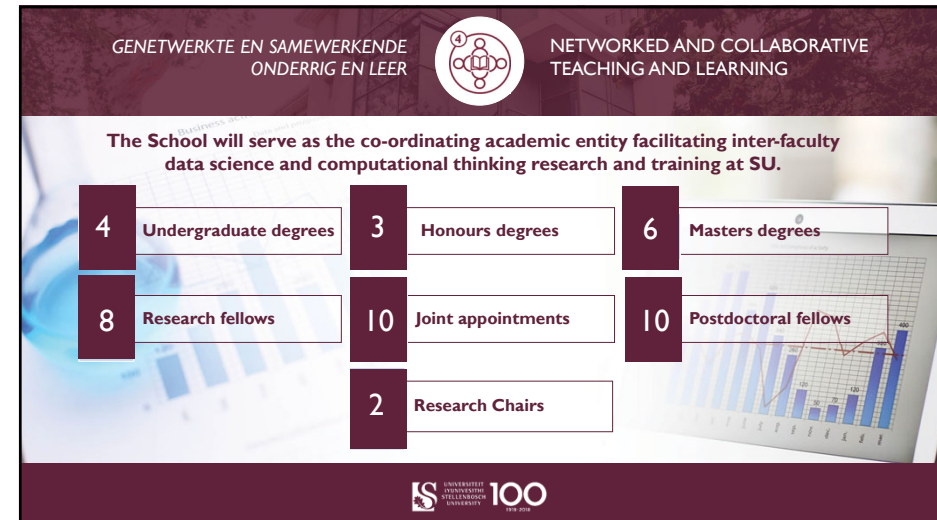
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GENETWERKTE EN SAMEWERKENDE ONDERRIG EN LEER NETWORKED AND COLLABORATIVE TEACHING AND LEARNING

**School for Data Science and Computational Thinking**  
**Skool vir Datawetenskap en Rekenaardenke**

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NAVORSING VIR IMPAK RESEARCH FOR IMPACT

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RESEARCH FOR IMPACT

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NAVORSING VIR IMPAK RESEARCH FOR IMPACT

Per Capita research publication output (DHET Report 2020)

| Univ. | Akademici (a) | Publikasies eenhede (I)<br>Publication units (I) | Per Capita (I/a) |
|-------|---------------|--|------------------|
| UKZN  | 1249          | 2286   | 1.83             |
| US    | 1181          | 2033   | 1.72             |
| UJ    | 1330          | 2276   | 1.71             |
| UP    | 1224          | 2060   | 1.68             |
| UCT   | 1184          | 1936   | 1.64             |

Per Capita publikasie uitsette (DHO0 Verslag 2020)

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NAVORSING VIR IMPAK RESEARCH FOR IMPACT

| Univ. | Akademici (a) | DHOO verslag 2020 |                  |                   |         | DHET report 2020     |  |
|-------|---------------|-------------------|------------------|-------------------|---------|----------------------|--|
|       |               | Pubs (1)          | M -graduandi (2) | D - graduandi (3) | (1+2+3) | Per capita (1+2+3)/a |  |
| UKZN  | 1249          | 2286              | 880              | 1353              | 4519    | 3.62                 |  |
| UP    | 1224          | 2060              | 1167             | 1197              | 4424    | 3.61                 |  |
| US    | 1181          | 2033              | 889              | 1077              | 3999    | 3.39                 |  |
| WITS  | 1204          | 1918              | 868              | 873               | 3659    | 3.04                 |  |
| UCT   | 1184          | 1936              | 690              | 783               | 3409    | 2.88                 |  |

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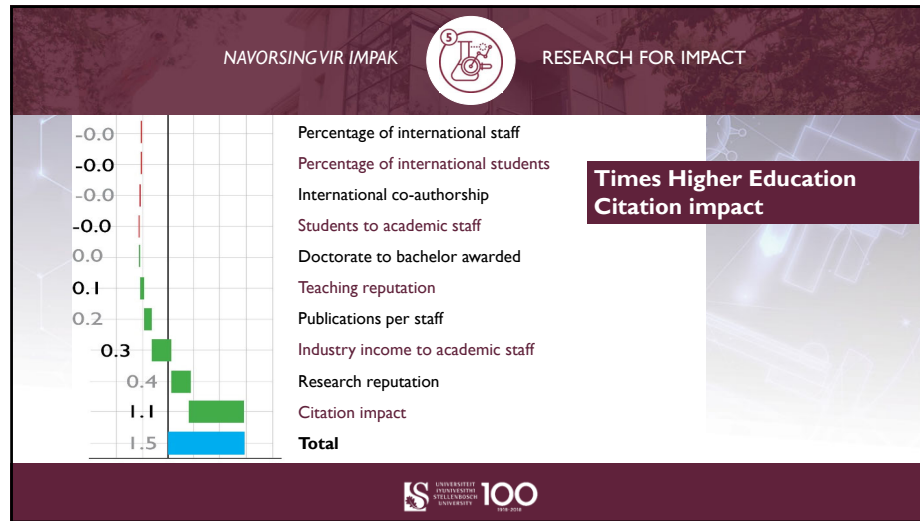
NAVORSING VIR IMPAK RESEARCH FOR IMPACT

Kreatiewe uitsette vir subsidie-doeleindes (2016 - 2018)

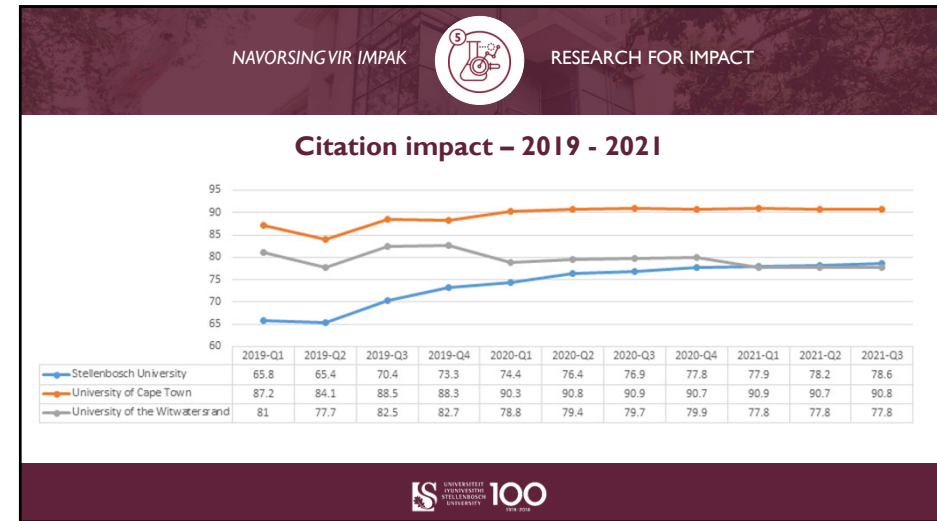
| University | Creative outputs 2016-2018 |
|------------|----------------------------|
| US         | 46                         |
| UCT        | 16                         |
| UP         | 12                         |
| WITS       | 7                          |
| NMU        | 6                          |

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NAVORSING VIR IMPAK RESEARCH FOR IMPACT

**THE ranking for emerging economies - 2021**

| Univ. | 2017 | 2018 | 2019 | 2020 | 2021 |
|-------|------|------|------|------|------|
| UCT   | 4    | 9    | 9    | 10   | 10   |
| Wits  | 8    | 12   | 11   | 11   | 11   |
| SU    | 42   | 38   | 24   | 24   | 24   |
| UKZN  | 58   | 41   | 49   | 54   | 54   |

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NAVORSING VIR IMPAK RESEARCH FOR IMPACT

| University                      | 2019 ranking | 2020 ranking |
|---------------------------------|--------------|--------------|
| University of Cape Town         | 156          | 136          |
| University of the Witwatersrand | 201-250      | 194          |
| Stellenbosch University         | 301-350      | 251-300      |
| University of KwaZulu-Natal     | 401-500      | 401-500      |

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NAVORSING VIR IMPAK  RESEARCH FOR IMPACT



SharkSafe Barrier Installation in St Paul (Reunion)




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VOORKEURWERKGEWER 

EMPLOYER OF CHOICE



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VOORKEURWERKGEWER  EMPLOYER OF CHOICE

**University Capacity Development Grant (UCDG)**

- The programme includes a mentoring component, which has matched 140 early career academic staff members with experienced mentors in 2020.

**Future professors program**

- SU gained another three entrants into the prestigious national Future Professors Programme (FPP) through its second call for applications issued in July 2020.



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VOORKEURWERKGEWER  EMPLOYER OF CHOICE

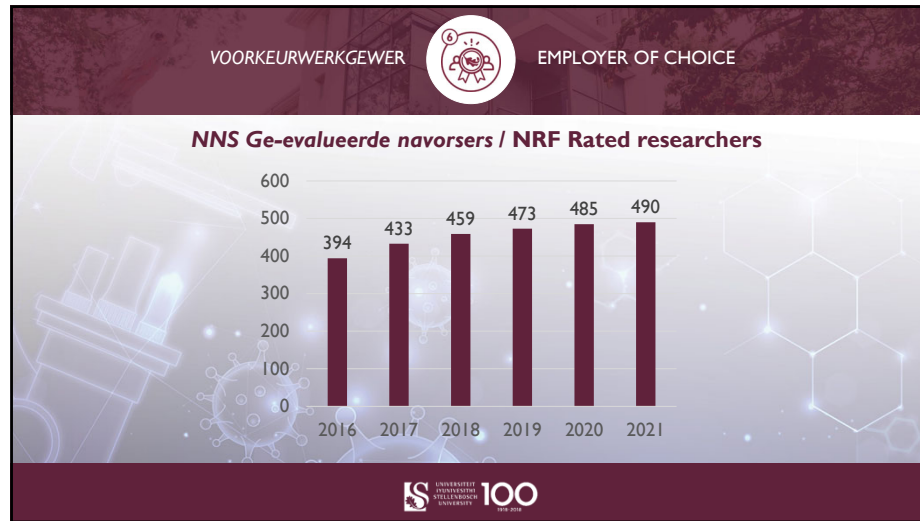
**nGAP positions awarded 2015 - 2020**



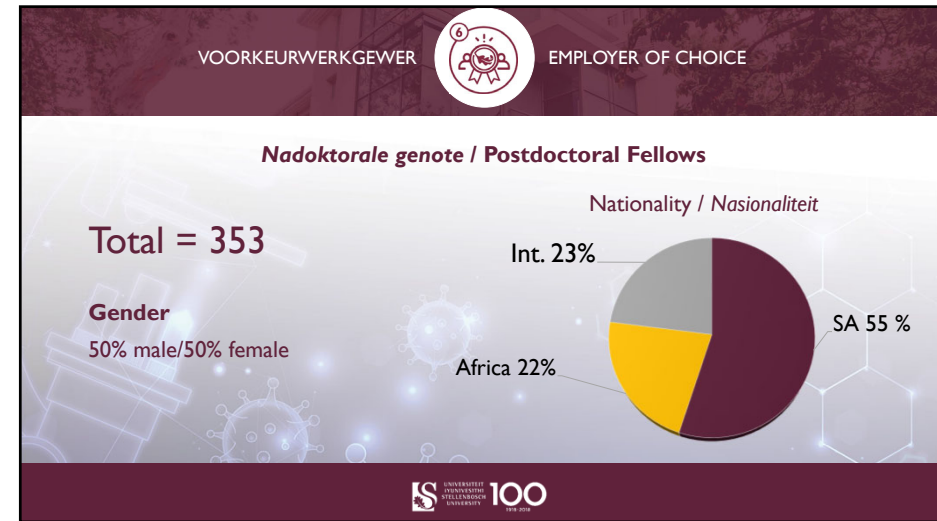
| Phase   | Year | Positions Awarded |
|---------|------|-------------------|
| Phase 1 | 2015 | 5                 |
| Phase 2 | 2016 | 3                 |
| Phase 3 | 2017 | 4                 |
| Phase 4 | 2018 | 5                 |
| Phase 5 | 2019 | 5                 |
| Phase 6 | 2020 | 5                 |



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VOORKEURWERKGEWER  EMPLOYER OF CHOICE



**Highly cited researchers**  
Professors Dave Richardson and Oonsie Biggs



**British Ecological Society Marsh Award**  
Prof Wendy Foden



**Neville Alexander Prestige Award**  
Prof Michael le Cordeur



**L'Oréal-UNESCO For Women in Science South African National Young Talents Programme**  
Dr Charissa Naidoo



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VOORKEURWERKGEWER  EMPLOYER OF CHOICE

**National Science and Technology Forum (NSTF) / South32Awards**



Dr Richard Walls      Prof Christine Lochner      Prof Conrad Mathee



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VOORKEURWERKGEWER  EMPLOYER OF CHOICE

**South African Chemical Institute (SACI) Awards**



PhD-student Jean Lombard      Dr Margaret Blackie      Prof Selwyn Mapolie



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VOORKEURWERKGEWER  EMPLOYER OF CHOICE



Dr Palesa Natasha Mothapo      Dr Caroline Pule



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VOORKEURWERKGEWER  EMPLOYER OF CHOICE


**A- Ge-evalueerde Navorsers / A- Rated Researcher**



Prof Oonsie Biggs      Prof H Engelbrecht

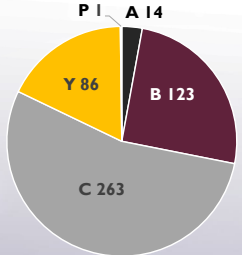


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VOORKEURWERKGEWER  EMPLOYER OF CHOICE


**P- Ge-evalueerde Navorsers  
P- Rated Researcher**

**NRF Rated/ NNS ge-evalueer**




Dr Nic Spaul





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VOORKEURWERKGEWER  EMPLOYER OF CHOICE


**NRF-First Rand Bank Grant for Sabbatical Study for Black African, Indian and Coloured Academic Staff Members**

**2020:**

- Dr Trudy Jansen from the Departement of Microbiology
- Dr Liekesteng Ned from the Departement of Health
- Dr Rizwana Roomaney from the Departement of Psychology

**To be taken up in 2021:**

- Dr Zelda Barends from the Department of Curriculum Studies
- Mr Phila Msimang from the Department of Philosophy



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VOORKEURWERKGEWER  EMPLOYER OF CHOICE

**SARChI Chair Renewals / SARChI Leerstoel Hernuwings**

|                       |
|-----------------------|
| Prof Oonsie Biggs     |
| Prof Dirk de Villiers |
| Prof Amanda Gouws     |
| Prof Anneke Hesseling |
| Prof Cherryl Walker   |



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VOORKEURWERKGEWER  EMPLOYER OF CHOICE

**Recipients of the SU Research Output Awards 2020**





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Thank you | Dankie | Enkosi

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GENETWERKTE EN SAMEWERKENDE ONDERRIG EN LEER

NETWORKED AND COLLABORATIVE TEACHING AND LEARNING

1 790 skanderversoeke

2 720 navrae oor navorsingsteun

2 614 tussen-biblioteek-lenings

619 skakelings-, bemarkings- en verhoudings bou-aktiwiteite

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VOORKEURWERKGEWER

EMPLOYER OF CHOICE

Total number of registered consolidocs

| Year | Total number of registered consolidocs |
|------|--|
| 2013 | 10                                     |
| 2014 | 12                                     |
| 2015 | 13                                     |
| 2016 | 15                                     |
| 2017 | 14                                     |
| 2018 | 16                                     |
| 2019 | 10                                     |
| 2020 | 45                                     |

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VOORKEURWERKGEWER

EMPLOYER OF CHOICE

Postdoctoral Fellows / Nadoktorale genote

| Discipline                       | % of postdocs | Count |
|----------------------------------|---------------|-------|
| THEOLOGY                         | 1%            | 4     |
| SCIENCE                          | 33%           | 105   |
| MEDICINE AND HEALTH SCIENCES     | 19%           | 61    |
| LAW                              | 3%            | 9     |
| ENGINEERING                      | 15%           | 48    |
| ECONOMIC AND MANAGEMENT SCIENCES | 4%            | 14    |
| ARTS AND SOCIAL SCIENCES         | 14%           | 45    |
| AGRISCIENCES                     | 11%           | 35    |

Nationality/ Nasionaaltelt

| Nationality | %   |
|-------------|-----|
| SA          | 55% |
| Int.        | 23% |
| Africa      | 22% |

% of postdocs

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