

Today's research is tomorrow's innovation: A practical approach on the place of a researcher and academics in commercializing research and the transformation of Africa

M-health (ACTs)

Presentation by Marcia Mkansi

Contents

- Introduction of the problem
 - How and when they were encountered?
- Proposed solutions to the problem (How they were overcome)?
- Demo
- Market structure
- Team
- Q& A

Research/ Societal Problem

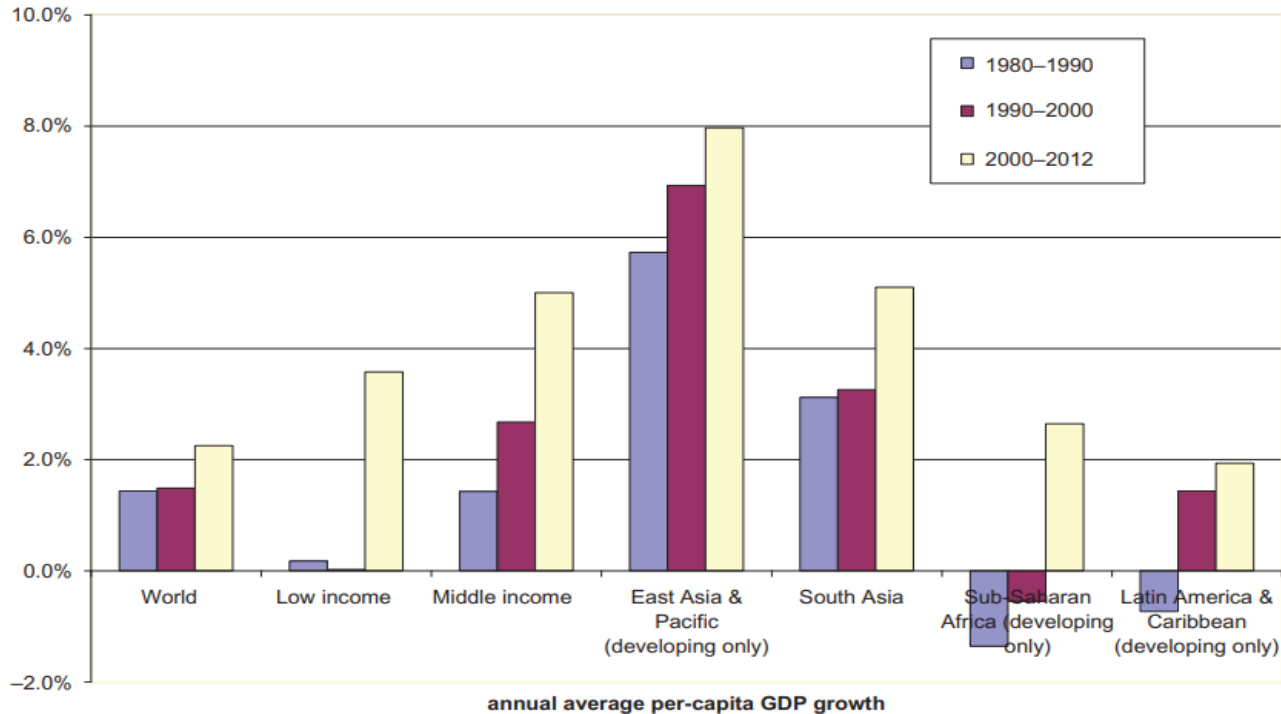


Figure 1: Growth performance of country groups since 1980.
Source: World Development Indicators, World Bank.

- *One of the critical challenges for African growth is to contribute to the development of a shared agenda for the transformation system of Higher Education and to re-position the institutions in this sector to play more meaningful role in the transformation of Africa ... Former President and chancellor Mbeki*

Rodrik (2018)

Research/ Societal Problem



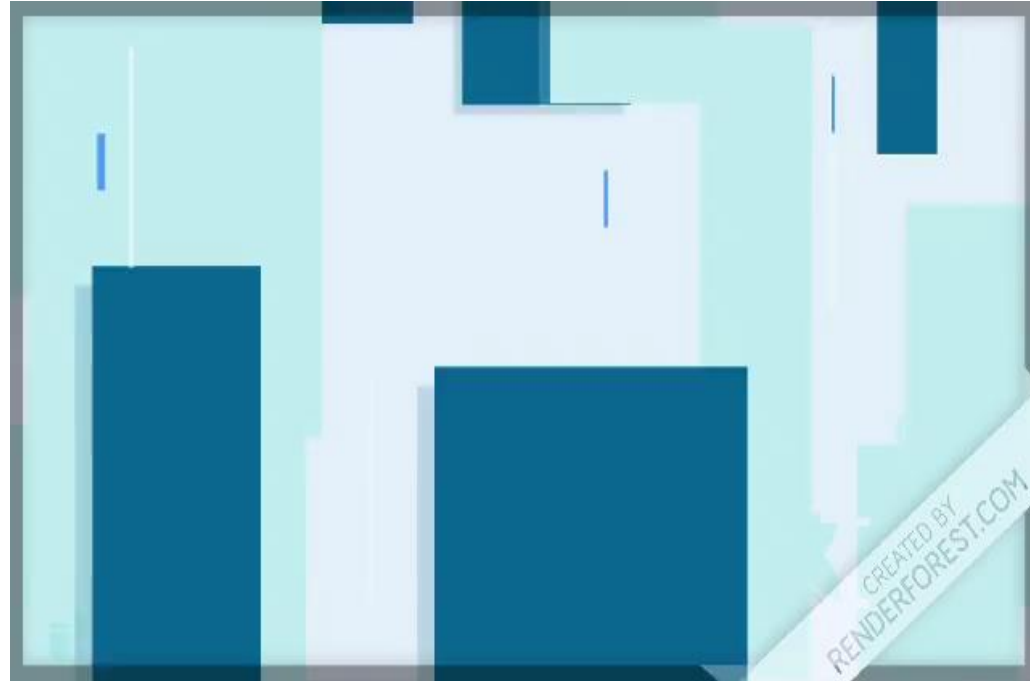
Video adapted from WHO (2018)

- According to the World Health Organization, malaria remains a major public health issue in sub-Saharan Africa (SSA) and considerably contributes to child morbidity and mortality.
- In 2018, **SSA accounted for 94% of world malaria deaths**, of which **67% were children under five** (WHO, 2019).
- The burden is heaviest in sub-Saharan Africa, where **an estimated 90% of all malaria deaths occur**, and in children aged under 5 years, who account for **78% of all deaths**.
- In 2018, **there were 213 million malaria cases and 360,000** related deaths in the African region, accounting for more than 90 percent of cases worldwide.

ACTs Demo: Micro, Market, Macro



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ACTs Demo: Micro, Market, Macro

11:10

Supply Chain for ACT

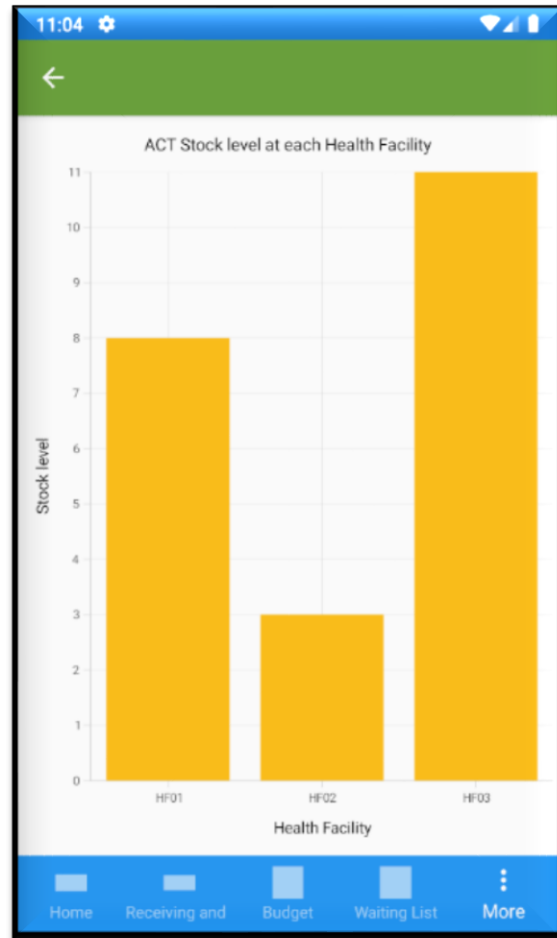
on Mobile

Username

Password

LOGIN

Login



Dashboard



11:20

Create new Order

Employee ID
EMP00004

Order QTY
10

Supplier ID
SUP000001

SUBMIT

Home Receiving Budget Waiting List More

Order



11:06

Dispense ACT Drugs

Employee ID
EMP00004

Health Facility ID
HF01

Drugs on Stock
8

Patient Information

Patient ID

Patient ID

SEARCH

Scan or Enter Barcode

Home Receiving and Budget Waiting List More

Dispense

Market Structure



Business Model Canvass and Market

Key Partners

- DoH
- Malaria control centres
- Health care centres
- WHO
- Pharmaceuticals
- Telecommunication industry

Key Activities

- Backend upgrades
- Front end activities
- Sales
- Marketing and branding
- Research and development
- Pilot

Key Resources

- ICT and Data
- Experts knowledge
- Networks
- Legal support
- Relationship with IS companies

Value Proposition

- Collaboration between suppliers and hospitals
- Cost reduction by 20%
- Ease of use
- Convenience
- Waste reduction by 30%
- Affordable system
- Real time data (inventory)

Customer Relationship

- Information sharing portal
- Mutual decision
- Transparency
- After sales support
- Engagements

Channels

- IS companies
- DoH/ Ministry of health
- WHO
- Word of Mouth
- Direct contact

Customer Segments

Micro

- Hospitals
- Clinics
- Health care

Market

- Pharmaceuticals
- Suppliers
- Distributors
- Research groups

Macro

- Funders
- Donors
- government

Cost Structure

Backend, frontend, sales and marketing, operational and professional fees

Revenue Streams

- Subscription (lease)
- Transaction or SaaS (pay per transaction)

Investment and Projections

Potential Revenue Projections								
Year	South Africa Hospitals	Revenue (Rand)	Revenue (USD)	Uganda Hospitals	Revenue (Rand)	Revenue (USD)	Total Revenue (Rand)	Total Revenue (USD)
1	4,303	R473,330	\$28,617	3,792	R417,120	\$25,219	R890,450	\$53,836
2	4,303	R860,600	\$52,031	3,792	R758,400	\$45,852	R1,619,000	\$97,884
3	4,303	R1,506,050	\$91,055	3,792	R1,327,200	\$80,242	R2,833,250	\$171,297
4	4,303	R1,721,200	\$104,063	3,792	R1,516,800	\$91,705	R3,238,000	\$195,768
5	4,303	R2,151,500	\$130,079	3,792	R1,896,000	\$114,631	R4,047,500	\$244,710
Assumptions								
Staff using the product in hospital (Year 1 - 11, Year 2 - 20, Year 3 - 40 and Year 5 - 50) Staff usage will be scaled up as new products are introduced.								
South Africa Revenue is arrived at: $4303 \times 11 \times R10$. Year two: $4303 \times 20 \times R10$ Hospitals = 4303 Price = R10								

Competitive Advantage

Competitive Advantage

- In order to gain competitive edge advantage, ACTs focus on developing the integrated end to end system
- The ACTs team is also investing more on increasing their footprint through horizontally and form strategic alliances with other information system providers.
- Their Sustainable cost structures and revenue streams allows the group to continuously achieve their targets of recruiting more than 1500 healthcare centres per year

Competitive Strategy

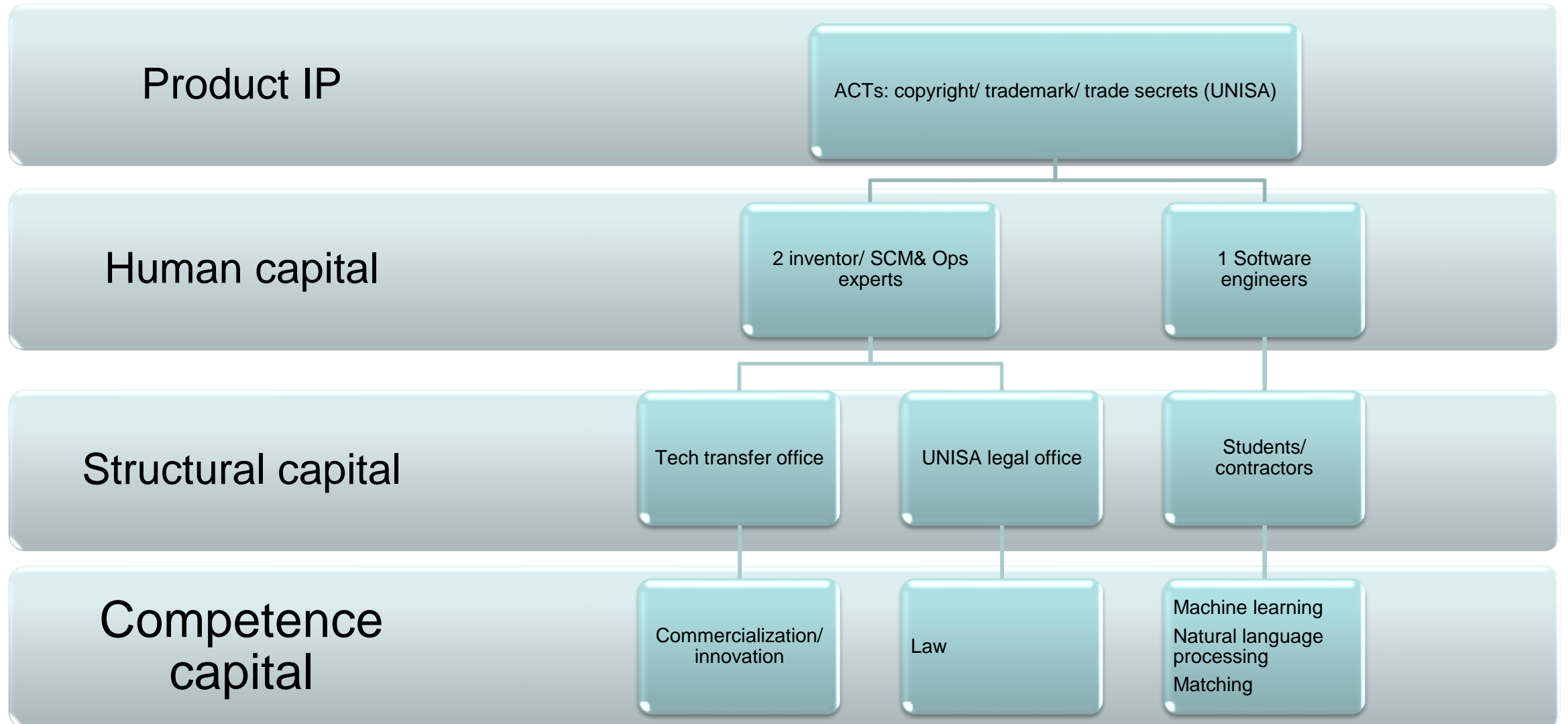
Competitors

- ❖ SAP
- ❖ Oracle
- ❖ Sage
- ❖ Pilldrop
- ❖ iWander
- ❖ Remote area medical

Superior features

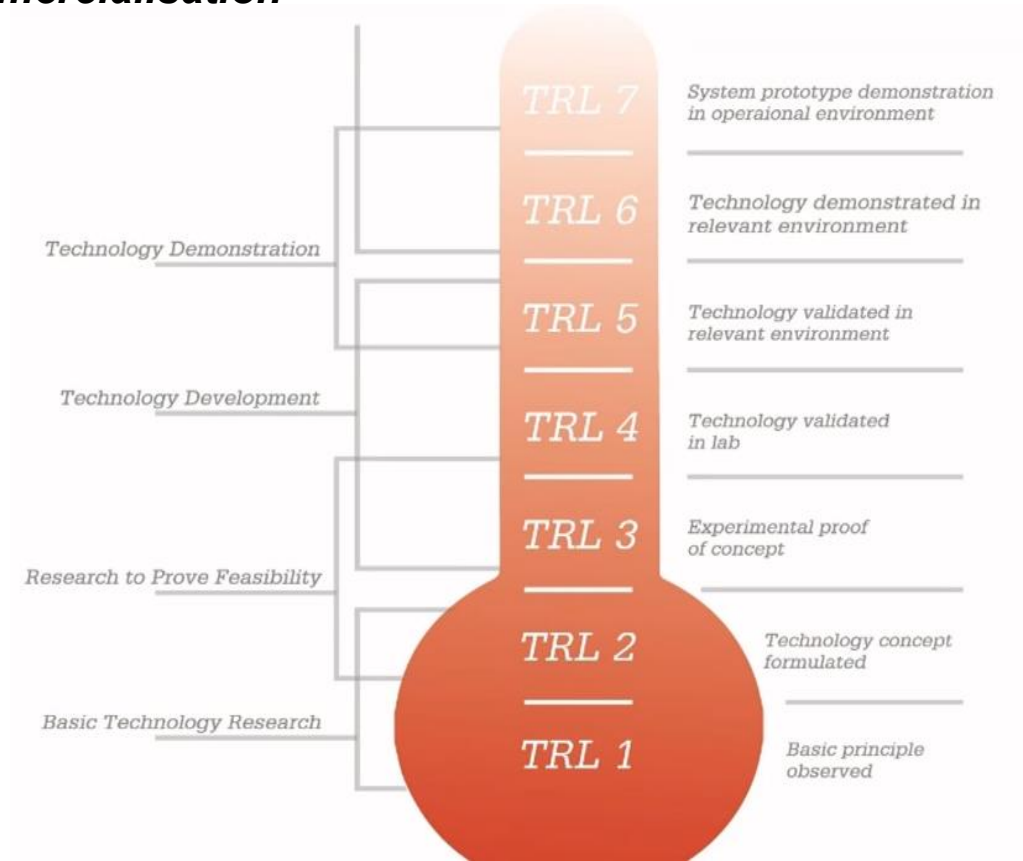
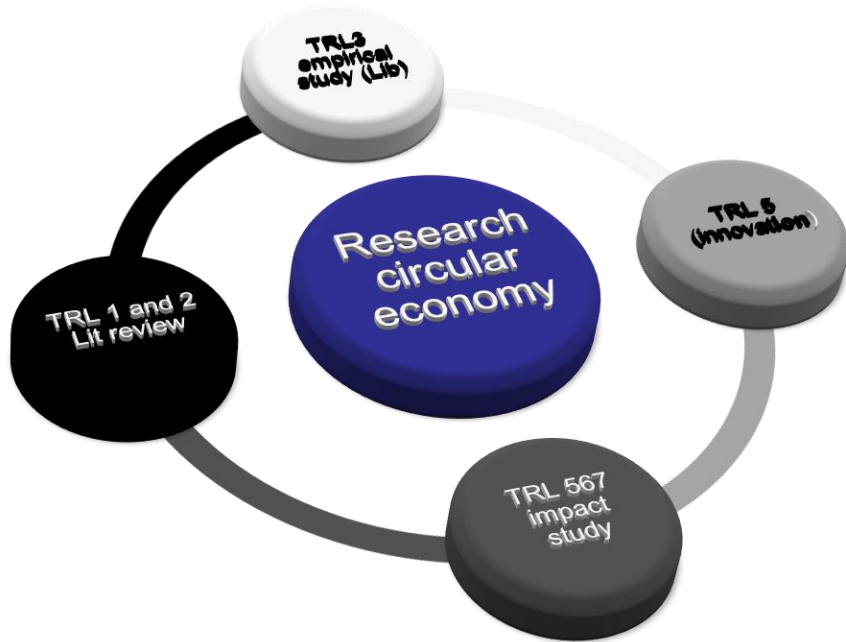
- ❖ Unique database
- ❖ Tacit knowledge embedded in teams
- ❖ Customized learning
- ❖ Deep learning
- ❖ Economic order quantity features (EOQ)
- ❖ Live tracking
- ❖ Dashboard
- ❖ Production order quantity (POQ)
- ❖ Affordability
- ❖ Knowledge economy
- ❖ Regeneration of opportunities

Team and Intellectual property



UNISA Imperatives: Productivity, Transformation, Sustainability, Influence.

Research, Master's and Doctoral studies, Innovation and Commercialisation



Productivity

- Accredited outputs i.e **NPC**
- M&D graduates i.e **Rcircular**
- Patents and disclosures i.e. **Trim**
- Weighted research outputs

Industry alliance

Transformation

- Active profile of scholars
- Best supervisors i.e **B clinic**
- Best M&D profile
- Niche area research in top journals

Africa Cntr Inno Entre exc

Wealth creation (vested interest)

Sustainability

- Grants i.e **endowment, workshops**
- Subsidy earning (research outputs)
- Staff with PhDs (i.e **funding workshops, clubs**)
- M&D throughput (**funding awards, guide time**)

Policy advocates

Influence

- Top journal publications
- Rated researchers
- Endowed chairs
- research bibliometrics

Quality (i.e. NRF gene pool tracking <30)

University's position

	2015		2016		2017		2018		2019		% Growth
	Actual	Position	Actual	Position	Actual	Position	Actual	Position	Actual	Position	2018/2019
Publication Output	1328,60	6th	1441,49	6th	1283,50	8th	1299,27	8th	1366,62	8th	5,2%
Research Masters Graduates	513	6th	655	5th	532	7th	527	7th	551	8th	4,5
Doctoral Graduates (unweighted)	235	4th	296	3th	286	4th	296	4th	334	4th	12,8%
Doctoral Graduates (weighted)	705	4th	888	3th	858	4th	888	4th	1002	4th	12,8%
Total weighted Research Output	2546,60	6th	2917,13	6th	2673,50	6th	2715,26	7th	2,919.62	8th	7,6%
Weighted Output Per Capita	1,48	12th	1,63	11th	1,49	13th	1,47	13th	1.56	12th	6,1%

College Research outputs: 2017 -2019

College	DHET Journals	IBSS Journals	ISI Combined List	Norwegian List	SciELO List	Scopus Journals	Grand Total
College Human Sciences	74.50	15.08	148.85	0.50	32.87	131.37	403.16
College Law	56.00	12.33	7.25		4.83	24.33	104.75
College of Accounting Sciences	3.83	1.50	1.50			5.50	12.33
College of Agriculture and Environmental Sciences	1.00		73.63		1.00	27.33	102.97
College of Economic and Management Sciences	33.58	35.83	31.09		4.33	76.31	181.15
College of Education	19.25	23.67	16.87		3.53	44.50	107.82
College of Graduate Studies	3.25	0.50	3.33			6.00	13.08
College of Science, Engineering and Technology	2.67	1.50	100.25		2.50	60.12	167.03
Graduate School of Business Leadership	3.83		3.33			11.00	18.17
Interdisciplinary Research and Graduate Studies	4.83	1.75	19.32		2.33	11.05	39.30
Other, Administration and Professional	3.17	0.50			0.50	0.83	5.00
Trans-disciplinary Research Institutes		1.00	1.00			4.25	6.25
Tuition and Facilitation of Learning			0.75			2.00	2.75
#N/A	1.00	2.00	0.17		1.00		4.17
Grand Total	206.91	95.67	407.35	0.50	52.90	404.59	1167.92

TABLE 15: NRF RATED RESEARCHERS BY COLLEGE, 2009-2020

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	% change 2019/2020
CAS							1	1	2	2	2	4	100,0%
CAES	2	2		2	3	5	8	11	12	16	16	18	12,5%
CEDU			1	7	8	7	13	14	10	10	10	15	50,0%
CEMS	8	11	13	14	15	16	15	19	15	18	18	19	5,6%
CGS				4	7	11	13	18	13	20	20	14	-30,0%
CHS	33	39	40	28	35	40	49	59	60	76	76	76	0,0%

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	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	% change 2019/2020
CLAW	32	37	31	28	31	32	34	33	26	32	29	19	-34,5%
CSET	22	22	23	21	25	33	39	44	46	47	51	56	9,8%
GSBL						3	5	4	3	5	5	6	20,0%
PRG		2	2	5	7	4	5	4	2	3	2	2	0,0%
TMALI									1	2	2	2	0,0%
TOTAL	97	113	110	109	131	151	182	207	190	231	231	231	0,0%

College Innovation outputs: 2017 -2019

Submitted vs Awarded creative outputs

Institution	Innovations Submitted	Units Claimed	Units Awarded
SU	24	48	47
UCT	28	56	41
WITS	18	36	16
UP	24	48	15
UKZN	4	8	7
NMU	3	6	6
UWC	3	6	5
RU	4	8	2,67
UJ	1	2	2
CPUT	1	2	2
UNISA	1	2	2
OVERALL	111	222	145,67*

Claimed vs Awarded Innovations (%), 2019

Institution	Units Claimed	*Units Awarded	**Units Awarded
SU	21,6%	97,9%	21,2%
UCT	25,2%	73,2%	18,5%
WITS	16,2%	44,4%	7,2%
UP	21,6%	31,3%	6,8%
UKZN	3,6%	87,5%	3,2%
NMU	2,7%	100,0%	2,7%
UWC	2,7%	83,3%	2,3%
RU	3,6%	33,4%	1,2%
UJ	0,9%	100,0%	0,9%
CPUT	0,9%	100,0%	0,9%
UNISA	0,9%	100,0%	0,9%
OVERALL	100,0%	65,6%	65,6%

Summary, Questions & Answers

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