

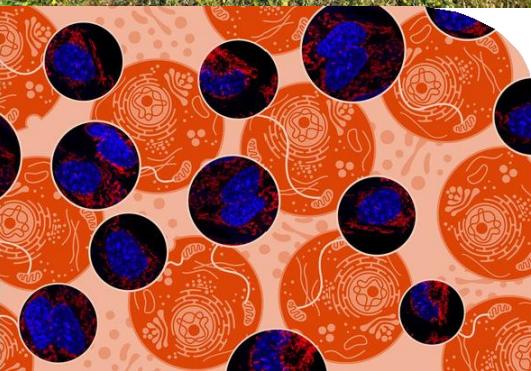
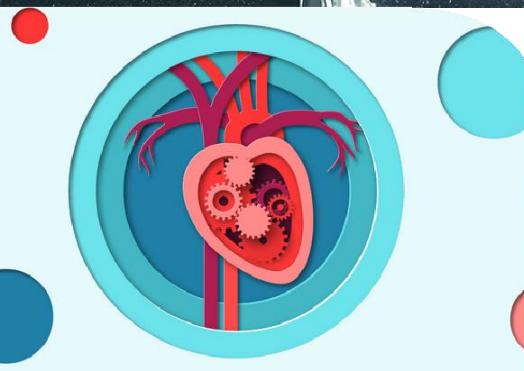


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# Research and Innovation Blueprint

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2030



# Stellenbosch University

## Research and Innovation Blueprint

### 2030

Approved by Senate: 21 November 2025

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## Introduction

Stellenbosch University (SU) is a place of discovery where staff and students advance knowledge in service of society. As a research-intensive institution, SU attracts exceptional staff, students, and scholars, offering a world-class environment that is globally connected yet deeply rooted in local and continental transformation. Guided by strong values, talented people, and a clear sense of purpose, SU is committed to research, innovation, and learning that contribute to a just and sustainable society.

SU is uniquely positioned in the South African higher education landscape to bridge world-class research excellence with local relevance and societal impact. Strong disciplinary foundations and growing inter- and transdisciplinary collaborations enable the university to address national priorities while contributing to global knowledge and innovation.

### Key strengths include the following:

- A vibrant research community, with many scholars recognised as national and international leaders.
- A dynamic postgraduate and postdoctoral cohort from across the world.
- The second-highest number of peer-rated researchers nationally.
- The highest number of Centres of Excellence and Research Chairs in South Africa.
- Central Analytical Facilities that serve academia and industry.
- Among the highest per capita weighted research outputs in the country.
- The top contributor of accredited creative research outputs.
- Recognised as South Africa's most technologically innovative campus by the Department of Science, Technology and Innovation.
- The national frontrunner in patent applications (among universities and industry).
- Strong partnerships with science councils, industry, and global research institutions.
- A growing international footprint through participation in global research networks.

SU performs strongly in the QS World University Rankings and Times Higher Education Rankings, with top subject placements in Agriculture and Forestry, Theology, Engineering and Technology, Business and Economics, and Life Sciences and Medicine. Its balanced academic portfolio enables meaningful contributions to both foundational and applied knowledge.

SU has also cultivated one of the most advanced university-based innovation ecosystems in South Africa. The Schools for Climate Studies and Data Science and Computational Thinking exemplify its transdisciplinary focus, breaking disciplinary boundaries to address complex societal challenges.

SU graduates are highly sought after for their rigorous academic training, problem-solving capabilities, and exposure to innovation and entrepreneurship. Strong ties with industry, government, and civil society enhance the employability and impact of SU postgraduates.

### Stellenbosch University's unique value propositions

SU's location and context provide distinctive research and innovation advantages, offering a living laboratory within diverse ecological, social, and economic settings.

**Agriculture and sustainability:** Situated in the Western Cape, SU leads research in sustainable farming, food security, environmental management, and public health.

**Data science and digital transformation:** SU invests in artificial intelligence, digital scholarship, and computational thinking to prepare researchers and students for the future.

Geographical advantage: SU has access to diverse ecosystems, languages, economies, and industries, and proximity to Cape Town's innovation corridor.

A transforming and impact-driven institution: SU is reimagining its historical identity within a transforming higher education landscape. It is committed to broadening access, enhancing diversity, and fostering inclusivity in research and postgraduate education. As a leading African university, SU strives to be locally relevant, regionally impactful, and globally competitive through inter- and transdisciplinary collaboration.

Research at SU is a transformative force that advances knowledge and contributes to sustainable community development. Our academics, postdoctoral fellows, and postgraduate students drive innovation and sustainable development through impactful research.

Building on a complex history, SU strives for an integrated, multilingual, and multicultural academic community rooted in critical inquiry, social justice, democracy, and human rights.

At the heart of our success are our people - the researchers, innovators, postgraduate students, postdoctoral research fellows, partners, and collaborators who shape our research and innovation agendas and expand the boundaries of knowledge. By fostering an enabling environment where people thrive, SU contributes to a sustainable and equitable future for South Africa, the continent, and the world.

### **Stellenbosch University Vision 2040 and Strategic Framework**

The SU Research and Innovation Blueprint is developed against the backdrop of significant and relevant capacity and foci that we have developed in terms of research and innovation over many years. It is also directed by global and national priority areas such as the Global Sustainable Development Goals (SDGs) 2030, the African Union's Agenda 2063 goals, the African Union–European Union Innovation Agenda, the South African White Paper on Science, Technology and Innovation (2019), the National Development Plan 2030, and the new Science, Technology, and Innovation Decadal Plan 2022–2032. It is informed by SU's Vision 2040 and Strategic Framework, which builds on its previous priorities and sets the goal to a sustainably strengthened world-class research-intensive university, in and for Africa, that through its innovation, entrepreneurial spirit, and engagement with sectoral stakeholders will be a model of academic excellence that is in service to society.

#### **Vision 2040 states the following:**

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

In the words of our Rector and Vice-Chancellor: *"Stellenbosch University aims to be a sustainably strengthened world-class research-intensive university, in and for Africa, that through its innovation, entrepreneurial spirit, and engagement with sectorial stakeholders be a model of academic excellence that is in service to society. It aims to be Africa's leading research-intensive university, on the path to becoming Africa's first Top 100 global university."*

SU's Vision 2040 and Strategic Framework sets out the institutional vision and strategy towards 2040. SU's aspirations for the realisation of Vision 2040 are as follows:

- An impeccable reputation as a proud African knowledge hub that serves the continent through research, innovation, and education.
- A transformed and integrated academic community that celebrates critical thinking, promotes debate, and is committed to democracy, human rights, and social justice with an outward, international, and future focus.
- Having an all-encompassing impact on the social, financial, and environmental wellbeing of the town, region, country, and continent, with a global reach.
- A systemically sustainable institution in economic, social, and environmental terms, as a national asset that serves the diverse needs of our communities.

**The university focuses on the following six major institutional strategic themes:**

## **OUR CORE STRATEGIC THEMES**

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Core strategic theme 1: A thriving Stellenbosch University



Core strategic theme 2: Collaborative learning and teaching



Core strategic theme 3: Research for impact



Core strategic theme 4: A transformative student experience



Core strategic theme 5: Purposeful partnerships and inclusive networks



Core strategic theme 6: Employer of choice

The full versions of SU's Vision 2040 and Strategic Framework are available here:

[www.su.ac.za](http://www.su.ac.za) > About us > Vision and strategy

Although research and innovation feeds into all six strategic themes, the primary focus of this Blueprint is on Research for Impact.

### **Research for Impact as an institutional strategic theme**

SU aims to be a leading research-intensive university in and for Africa, pursuing pioneering, socially responsive research and innovation that are rooted in local relevance and connected to the world. We harness academic excellence, diversity of thought, and strong partnerships across disciplines and geographies to generate knowledge that informs policy, advances practice, and cultivates future leaders.

Our goal is to remain at the forefront of selected focus areas through excellence, innovation, and renewal. This requires balancing continuity with transformation, ensuring that SU's research is both academically outstanding and socially relevant. Ultimately, we strive for research that not only achieves academic success but also makes a meaningful impact on society.

Research for Impact at SU means optimising the scientific, economic, social, and cultural value of our research. We emphasise inter- and transdisciplinary collaboration that benefits society at national, continental, and global levels while maintaining a strong foundation in basic and disciplinary research that underpins applied and translational work.

This commitment extends to researcher development, innovation, and a culture of excellence and integrity, ensuring that SU provides thought leadership, inclusive support, and cocreated solutions aligned with Vision 2040. Our research serves society by addressing South Africa's core challenges of inequality, poverty, and unemployment while contributing to global goals such as the SDGs.

We nurture innovation and entrepreneurial thinking as investments in a more equitable and sustainable future. By fostering collaboration among faculties, departments, and the two schools, SU supports researchers in translating ideas into impactful innovations and services.

To address grand challenges, SU continues to shift from siloed research models towards collaborative, inter- and transdisciplinary environments. Internal funding and strategic initiatives increasingly prioritise evidence of collaboration across the institution.

A key step in promoting Research for Impact is the establishment of inter- and transdisciplinary research focus areas. These are central to positioning SU as a leading 21st-century university - one that leverages its strengths to address national needs, respond to global challenges, and contribute meaningfully to the expanding knowledge economy.

As part of the implementation of Vision 2040 and Strategic Framework, SU has set out institutional goals for Research for Impact as follows:

### **Institutional goals for Research for Impact**

1. To pursue excellence in all forms of research (inter-, intra-, multi-, cross- and transdisciplinary) (research excellence)
2. To attract and retain the best research talent (research capacity)
3. To provide world-class research infrastructure, facilities, and capabilities (research infrastructure)
4. To increase SU's research publication quality and output (research output)
5. To increase the contribution of postgraduate students to research outputs (research output)
6. To achieve optimal scientific impact
7. To achieve optimal societal impact
8. To optimise the entrepreneurial and innovative capability in the university

The Blueprint addresses these goals through the identification of five broad strategic research and innovation areas (SRIAs) that define its institutional research agenda. It focuses on strengthening the basic foundations needed to achieve the goals and sustain SU's research and innovation enterprise, using five enabling framework elements. Specific initiatives linked to each of the elements have been identified for the next five years. Over the next few years, these initiatives will be further developed into specific priorities in the annual Responsibility Centre Strategy Implementation Plan, in which specific targets and measures for each initiative will be set.

### **Stellenbosch University's broad strategic research and innovation areas**

SU has five broad SRIAs that define its institutional research agenda: environmental futures, health resilience, social justice and development, innovation and society, and smart systems and digital futures.

Under each of these broad SRIAs, we drive SU's research and innovation agenda through carefully selected inter- and transdisciplinary flagship entities focused on some of the world's most pressing societal challenges.

The five broad SRIAs are the following:

## **ENVIRONMENTAL FUTURES**

### **How can integrated climate, biodiversity, and water system models be used to develop nature-based solutions that build environmental resilience in Southern Africa?**

SU aims to lead in advancing sustainable solutions for the planet's most pressing environmental challenges. We have established strengths in water research, climate science, biodiversity, and earth systems, with internationally recognised teams working on planetary health and sustainable environments. There is significant potential to expand our expertise in emerging fields such as green frontiers, urban ecology, and integrated food-energy-water systems. By fostering interdisciplinary collaboration and investing in state-of-the-art research infrastructure, we can accelerate innovation in nature-based solutions and resource management. Strategic partnerships with industry, government, and communities will further amplify our impact and help us to shape resilient environmental futures.

## **HEALTH RESILIENCE**

### **What innovative biomedical, digital health, and community-based approaches can most effectively reduce the dual burden of communicable and noncommunicable diseases in African contexts?**

We want to enhance health resilience by addressing both communicable and non-communicable diseases, with a focus on improving quality of life across diverse populations. SU is already a leader in biomedical engineering, sports medicine, public health, and research on lifestyle diseases. Opportunities exist to develop new competencies in digital health, precision medicine, and the intersection of health and social sciences, particularly in disability studies and human security. Targeted investment in research capacity, advanced laboratories, and cross-disciplinary training will enable us to respond proactively to emerging health threats. Strengthening collaborations with healthcare providers, policymakers, and international networks will ensure that our research translates into real-world health solutions.

## **SOCIAL JUSTICE AND DEVELOPMENT**

### **How can research-driven policies and interventions promote social and economic inclusion in South Africa, particularly in relation to inequality, migration, and access to digital resources?**

We are committed to advancing social justice and inclusive development, striving to create a society where human rights, dignity, and equality are realised for all. SU has a strong foundation in research on gender, racial, and cultural transformation, as well as human rights advocacy. There is scope to broaden our impact by developing expertise in areas such as migration, social entrepreneurship, and digital inclusion. Investing in community-engaged research, policy analysis, and innovative teaching methods will empower us to address persistent inequalities. By deepening partnerships with civil society, government, and international organisations, we can drive transformative change at local, national, and global levels.

## INNOVATION AND SOCIETY

**In what ways can design thinking and social innovation accelerate the development of scalable, sustainable solutions to pressing societal challenges such as housing, education, and livelihoods?**

Our goal is to harness human creativity and innovation to solve complex societal challenges and foster inclusive growth. We have established competencies in the creative arts, social innovation, and grassroots initiatives that address issues such as housing, education, and resource access. New opportunities lie in leveraging digital technologies, design thinking, and interdisciplinary approaches to amplify the societal impact of our research. Further investment in innovation hubs, incubators, and collaborative platforms will nurture talent and accelerate the translation of ideas into practical solutions. By engaging with diverse stakeholders, including industry, government, and communities, we can ensure that our innovations are relevant, scalable, and sustainable.

## SMART SYSTEMS AND DIGITAL FUTURES

**How can artificial intelligence, data science, and emerging digital technologies be harnessed responsibly to advance Africa's participation in the global digital economy?**

SU aspires to be at the forefront of developing smart systems and digital technologies that drive economic and societal progress. We have strong knowledge partnerships with industry in areas such as information technology, business management systems, and nanotechnology. There is significant potential to expand into fields such as artificial intelligence, data science, and digital infrastructure for smart cities. Investing in advanced computing facilities, interdisciplinary research teams, and industry-aligned curricula will position us as leaders in digital transformation. By fostering a culture of innovation and continuous learning, we can equip our students and researchers to shape the digital futures of South Africa and beyond.

## Our five strategic research and innovation areas



## **Application of the five broad strategic research and innovation areas to broaden the research portfolio**

SU has developed extensive expertise across a wide range of disciplines. The five broad SRIAs serve as inclusive, forward-looking frameworks that capture most of SU's research while allowing new areas of excellence to emerge. Each SRIA addresses critical societal challenges and strengthens inter- and transdisciplinary collaboration across the institution.

SU remains firmly committed to basic and disciplinary research excellence, recognising that fundamental research underpins applied and translational innovation. Sustained investment in foundational disciplines is vital to meeting current and future societal needs.

The SRIAs promote large-scale, cross-faculty collaboration, ensuring participation from basic and applied researchers alike. These efforts align closely with South Africa's triple challenges of inequality, poverty, and unemployment while enabling SU to reevaluate and prioritise areas of strength for maximum impact.

Under each of the SRIAs, SU hosts and develops a limited number of flagship collaborative research entities or 'high-rises'. These are cross-faculty schools, centres, and institutes that demonstrate the university's capacity to bring together diverse expertise and stakeholders to address complex problems. These initiatives enhance SU's visibility, competitiveness, and contribution to new knowledge, technologies, and policy development.

Individual researchers remain the cornerstone of the university's research enterprise. Their internationally recognised work strengthens SU's global standing and provides the foundation for future excellence. To ensure continuity, the Future Research Chairs Programme will nurture the next generation of research leaders, while initiatives such as 'Public Squares' create opportunities for emerging scholars to collaborate, develop new ideas, and engage with society through innovative, high-impact research that crosses traditionally disciplinary boundaries.

To enable the SRIAs to flourish, SU will strengthen mobility, communication, and partnerships across the research ecosystem - locally, regionally, nationally, and internationally - in alignment with the university's Internationalisation Strategy.

Institutional investments in inter- and transdisciplinary research - such as the School for Data Science and Computational Thinking and the School for Climate Studies - serve as catalysts for integration, innovation, and societal impact. Together with SU's 10 faculties and Centres of Excellence, these structures advance cutting-edge research and enhance the university's visibility in the global knowledge economy.

Looking ahead, SU aims to create an enabling environment that supports innovation, entrepreneurship, and collaboration at every level. By nurturing the full spectrum of research - from basic to applied - and fostering cross-disciplinary engagement, SU will continue to translate knowledge into solutions that improve lives and strengthen society.

## **Institutional processes to identify and strengthen flagship areas of research priority under each of the broad strategic research and innovation areas**

By continuously assessing societal and stakeholder needs, institutional capacity, internationally recognised strengths, and research relevance, SU proactively manages and evaluates its research direction. Under each of the SRIAs, strong existing and prospective research entities (schools, centres, institutes, and research chairs) are established and supported and external funding opportunities to sustain them are being pursued. This ensures the optimal allocation of resources, strengthens existing areas of excellence, identifies emerging opportunities, and guides strategic recruitment and collaboration.

A range of institutional instruments supports the sustainable development of these strategic areas, demonstrating SU's firm commitment to its research strategy. These include internal strategic funding and seed funding for approved interdisciplinary institutional research entities, within and alongside the traditional academic environments like faculties and departments. Internationalisation of our research is an integral part of our research and innovation agenda. Developing networks and agreements that include seed funding to initiate 'researcher-to-researcher' collaborations forms a critical part of the

instruments to advance our collaborations and international grants portfolio.

One of SU's dynamic new initiatives is the Public Squares programme launched in 2024. These inter- and transdisciplinary 'open spaces' bring researchers together to explore new ideas, develop emerging focus areas, and build skills in engaged research, public communication, budgeting, and grant writing. SU currently hosts 11 Public Squares, each addressing key societal challenges while leveraging the university's unique expertise and location to advance the United Nations SDGs and Africa's Agenda 2063.

Through these instruments, SU consolidates and strengthens areas of strategic importance at institutional level. Ongoing environmental scanning ensures responsiveness to both national and international opportunities and challenges. Participation in programmes such as the South African Research Chairs Initiative, Centres of Excellence, and major European Union and other international funding frameworks reinforces this effort.

In partnership with leading institutions locally and globally, SU is expanding its research capacity, impact, and postgraduate training excellence. Through this integrated approach, SU creates sustainable, high-impact solutions to some of South Africa's - and the world's - most pressing challenges.

The Blueprint for Research and Innovation 2030 focuses on strengthening the basic foundations needed to achieve this and sustain SU's research and innovation enterprise, using five enabling framework elements. Broad focus areas have been identified for each element, which will be further developed in specific initiatives in our annual strategic implementation plans. This will include ongoing monitoring and evaluation of the targets set for and impact of our interventions.



## **STRATEGY**

Pursue excellence in research and innovation to produce impactful research output, build strategic global collaborations, and exercise visionary leadership focused on sustainability and societal benefit.

### **Specific framework priority areas**

- Align SU's strategic research and innovation themes with Vision 2040 as well as national and international research and innovation priorities (e.g. South Africa's Science, Technology, and Innovation Decadal Plan 2032, Africa's Agenda 2063, etc.) through regular strategic reviews and adaptive planning.
- Increase and support the quality and impact of research outputs – including publications, citations, innovation, and creative outputs.
- Strengthen interdisciplinary, transdisciplinary, and international collaborations through research clusters, new 'high-rises' and Public Squares, joint research chairs, networks, and partnerships, with a particular focus on Africa.
- Expand academic excellence through the development of postgraduate and postdoctoral capacity within institutional priority areas and initiatives (e.g. our flagship research entities or so-called 'high-rises').
- Drive societal impact through knowledge exchange, entrepreneurship, innovation, and commercialisation, including patents, start-ups, and community initiatives - linking research priorities to tangible societal benefits and sustainable development in Africa.

## **PEOPLE**

Empower and support a vibrant community of skilled researchers, postgraduate students, and expert support staff to drive knowledge production and innovation.

### **Specific framework priority areas**

- Strengthen research skills and capacity across all researcher levels - including postgraduate students, postdoctoral fellows, and early-career academics - through targeted development, mentorship, and capacity-building initiatives (e.g. the Future Professors, SUNRISE, and ECAD programmes, etc.).
- Invest in professional development for research support staff, ensuring alignment between expertise and institutional research needs.
- Foster and monitor staff well-being and provide support, equitable access, and development opportunities for research career progression that focuses on satisfaction, professional growth, and long-term talent retention within the research community.

## **RESOURCES AND INFRASTRUCTURE**

Invest in and maintain cutting-edge laboratories and facilities, digital infrastructure, and funding mechanisms to enable interdisciplinary collaboration and research.

### **Specific framework priority areas**

- Provide and maintain state-of-the-art facilities, laboratories, and equipment, for example through our Central Analytical Facilities and faculty laboratories.
- Expand access to internal and external research funding by identifying opportunities and supporting competitive applications through the focused expansion of grant proposal development support.

- Establish and sustain interdisciplinary research hubs, such as collaborative research and innovation spaces, that are equipped to support hybrid collaboration and accessibility for enhanced productivity.
- Advance digital transformation by integrating research support systems (where technically feasible) and infrastructure that enable real-time data sharing, reduce duplication, and support open science, high-performance computing, and artificial intelligence-driven research tools.

## RESEARCH CULTURE

Create a supportive, inclusive, and dynamic research environment, fostering creativity, responsible practices, open science, innovation, entrepreneurship, and service to society.

### Specific framework priority areas

- Develop university-wide strategies that promote responsible research practices and values transformation, inclusivity, and academic freedom.
- Encourage innovation and entrepreneurship, including student-led ventures and creative outputs.
- Establish and strengthen platforms and initiatives to promote an inter- and transdisciplinary collaborative research culture at SU and expand undergraduate research participation.

## MEASURING OUTCOMES AND IMPACT

Develop appropriate, context-specific indicators and frameworks to measure scientific, economic, social, cultural, and scholarly research impacts and for use in evidence-based decision making.

### Specific framework priority areas

- Develop and implement the SU Research Assessment Framework to measure research quality and relevance, with context-specific indicators to measure and illustrate research impact across all disciplines at SU.
- Align institutional research and innovation impact indicators with national, continental, and global development goals.
- Conduct regular research intelligence analyses (bibliometrics, tracer studies, landscape reviews) to guide evidence-based decision making.
- Enhance the visibility of the University's research and innovation portfolio through SU's Research for Impact and Discovery platforms.
- Use performance data strategically to improve global rankings, inform investment, and strengthen impact narratives.

## CONCLUSION

SU's Research and Innovation Blueprint 2030 with its specific strategic framework areas and initiatives positions the university as a leading African knowledge hub and a future Top 100 global university. As an institution, we have a meaningful role to play in knowledge production, skills training, and building resilient and sustainable futures for everyone. The expertise of our staff and students as thought leaders will contribute to the building of our country.

Through the strategic initiatives of the research, innovation, and postgraduate studies environment, SU makes it possible for a diverse cohort of SU staff and students to apply their knowledge, skills, creativity, and ideas as thought leaders to the benefit of society, including industry, municipalities, non-governmental organisations, and government. Through its people, partnerships, and enabling environment, SU is committed to building resilient, sustainable, and just futures – for South Africa, Africa and the world.