UFS RESEARCH STRATEGY 2009-2014

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Purpose and status of this document

This document serves as a draft of the Research Strategy that will be implemented at UFS over the next five years. It will be reviewed by different stakeholder groups in the University before its finalisation later in 2009. Two companion documents will be developed once it has been finalised:

- an Implementation Plan that will guide its implementation, to be adjusted annually, and

- a Monitoring and Evaluation (M&E) framework with Key Performance Indicators based on quantitative data as well as qualitative information - to aid in accountability, planning, improvement, marketing and funds mobilisation processes.

Context for the Strategy

Introduction

1. Over the last 15 years the higher education system in South Africa has been shaped by a rapidly changing national and international context. Globally, the knowledge-based society, competition for greater shares of the global economy and pressures on funding sources have led governments to reassess the role and resourcing of universities. New technologies, the 'marketisation' of the sector and the increasing focus on results, quality assurance and performance has been further influencing factors. The focus on their space in Africa as well as the need to massify, diversify and internationalize has prompted South African universities to reposition themselves.

2. The University of the Free State is widely regarded as one of the top six 'research-led' ('research-intensive') universities in South Africa. Pro-active initiatives have been launched since 2000 to facilitate the evolution of its research strategies (Figure 1), first shifting research development from an administrative to a strategic function, and more recently accelerating efforts to place it at the core of all academic activity. A recent external review[1] showed that it is still on the way to developing a healthy research culture, and that in spite of good initiatives and many achievements over the past five years, it faces significant challenges in identifying and exploiting its competitive advantage and niche in a highly competitive environment, and meeting changing market demands by developing new products, delivering or organising products in new ways, and finding novel ways to tap old and new resources.
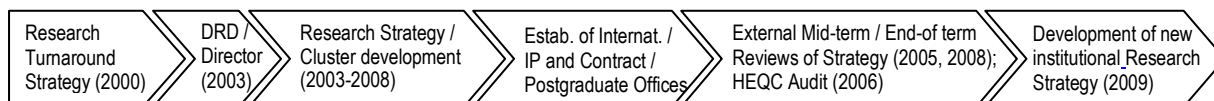
Figure 1: *Key initiatives in the evolution of the research function at UFS*

3. The UFS Research Strategy (2009-2014) provides an institutional framework to drive the next phase of research development at the University. It is part of a constellation of policies and strategies aimed at aligning research action and results with the strategic objectives of the University and with national strategies (Figure 2).
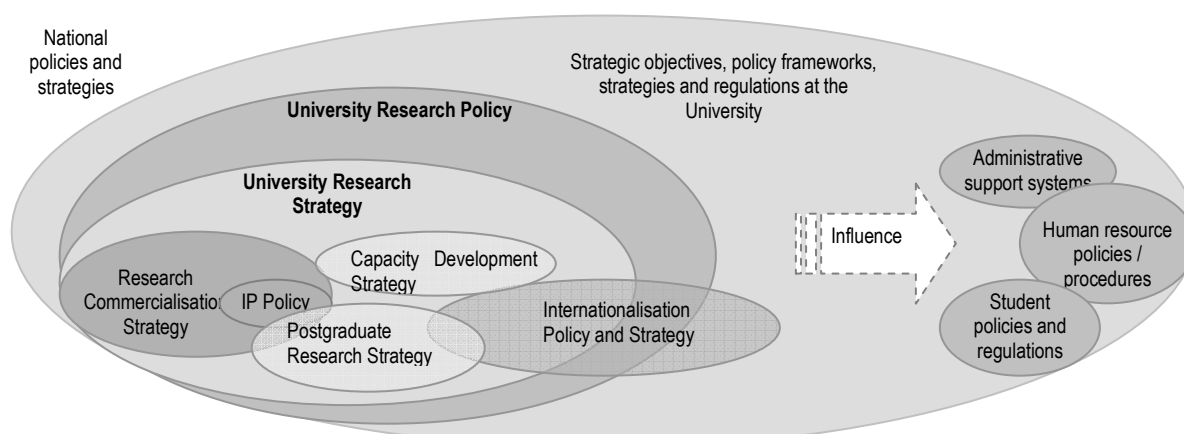
Figure 2: *Research-related policies and strategies in the UFS policy landscape*

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[1] Z Ofir (2009). *Strategic Review: Implementation of the Research Strategy of the University of the Free State (2004-2008)*. Directorate Research Development, University of the Free State, January 2009.

Use of the Strategy

4. The UFS Research Strategy (2009-2014) and its associated Implementation Plan and Monitoring and Evaluation (M&E) System will be used at all levels of the University for planning, continuous improvement, accountability, and marketing and advocacy (Table 1) in support of its desired institutional outcomes.

***Table 1:*** *Use of the Research Strategy and associated documents*

	Use of Strategy and associated documents	Instrument	Frequency
Institutional level			
Executive management	□ **Ensuring alignment** of policies, strategies, services	> 'Dashboard' highlights of performance	· Annually
	□ **Assessing** research performance in order to provide overall **strategic direction**	> Strategy; performance data; strategic evaluations as required	· Six-monthly
	□ **Advocating** (for fundraising, positioning, partnerships)	> Strategy; performance data	· As required
Strategic / Research Committee(s)	□ **Assessing** institutional and faculty performance, challenges, risks against Strategy indicators	> Report/briefing by DRD	· Three-monthly
	□ **Guiding** DRD and faculties on areas for improvement		
	□ **Reporting** to Executive	> Report/briefing	· Six-monthly
DRD	□ **Directing** Strategy implementation	> Strategy and Implementation Plan	· Monthly
	□ **Assessing** implementation and performance progress, challenges, risks	> Implementation Plan, selected monitoring data; evaluations	· Monthly
	□ **Reporting** to institutional Research Committee(s)	> Report/briefing (on selected matters)	· Three-monthly
	□ **Adjusting** institutional Strategy and Implementation Plan	> Assessment of progress, performance	· Annually
	□ **Advocating** (for fundraising, partnerships)	> Strategy; performance data	· As required
Support Services	□ **Aligning** support systems to Strategy requirements	> Strategy and Implementation Plan	· Three-monthly
	□ **Reporting** to Research Committee(s)	> Report/briefing	· Three-monthly
	□ **Communicating and marketing** the achievements and strengths of research at UFS – Communications division	> Communication briefs, website updates and other tailor-made releases based on Strategy monitoring data	· Frequently, as required
Faculty level			
Faculty Research Committees (including Deans)	□ **Developing** Faculty Strategy and Action Plans	> Based on institutional Research Strategy and Implementation Plan	· Strategies – five years; Action Plans – annually
	□ **Monitoring and assessing** implementation progress and performance, challenges, risks; **reporting** to Dean, DRD	> Monitoring system for Faculty Strategies and Action Plans	· Monthly for selected matters
	□ **Reporting** to DRD, University Research Committees	> Report/briefing	· Three-monthly
	□ **Adjusting** Faculty Strategy and Action Plans	> Assessment of progress, performance	· Annually
	□ **Advocating** (for fundraising, partnerships)	> Strategies; performance data	· As required
Research Coordinators	□ **Coordination** of monitoring and assessment of implementation progress and performance, challenges, risks – liaison with departments	> As required from the process	· As required from the process

5. The Research Strategy and its associated documents – the annual Implementation Plan and the M&E System – are part of a cascading system of instruments for planning, monitoring, assessing and improving research at the University (Figure 3).
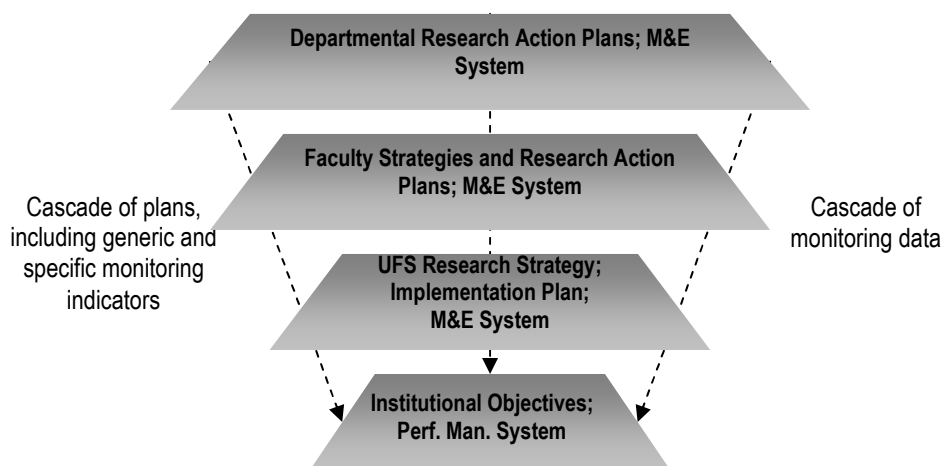
Figure 3: *Cascading system of strategies, action plans and monitoring systems*

Drivers for the Strategy design

6. The following inputs influenced the Strategy design:
- The strategic objectives of UFS and its vision to become a research-intensive University;
- International and national analyses and syntheses of experiences and good ('best') practice;
- Efforts to clarify the competitive advantage and niche for UFS and its research;
- Analysis of the immediate, underlying and root causes of the key challenges faced by UFS researchers;
- Assessment of risks and threats to success;
- The findings and recommendations of the HEQC Audit[2] and external end-of term review of the previous research strategy;
- Expertise and experiences of the institutional and research leadership at the University[3].

Guiding principles underpinning the Strategy

- *Strong, visionary University leadership*, with unwavering support for the strategic vision for research, able to take difficult decisions, and devolving operational responsibilities.
- *Responsible stewardship* of human, financial and other resources;
- *Ethical conduct* in all research related activities;

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[2] For example:
Recommendation 5: The HEQC recommends that the University of the Free State consider the need to assess critically the achievements and weaknesses of its integrated management system particularly in relation to the management's ability to deal with the quality and academic risks posed by the potential failure of its transformation agenda, and develop a strategy to sharpen the functions and responsibilities of, and between, Council, Management and Senate.
Recommendation 14: The HEQC recommends that the University of the Free State revise its strategy for the development of research, focusing particularly on the prioritisation of goals and objectives, the position of research in the management structure of the institution, and the time frames for decision making. This will ensure that the intention to become a research intensive university is appropriately supported at the operational level.
Recommendation 15: The HEQC recommends that the University of the Free State review the relationship between the University Research Committee (URC) and the PCER (Portfolio Committee for Education and Research) with a view to facilitating speedier and more focused consideration of strategic research matters.
Recommendation 16: The HEQC recommends that the University of the Free State establish an Ethics Committee at institutional level with comprehensive supervision of research ethics and all aspects of academic ethics, including fraud, in all disciplines.
[3] For example, the University Executive Management, the interim Cluster Coordinators and the Chairpersons of Faculty Research Committees participated in a strategy development workshop during January 2009, facilitated by the DRD and the end-of-term reviewer. The current document is being tabled at relevant faculty and institutional level forums for further refinement.

- *Accountability* for performance;
- A focus on *relevance, excellence and impact.*
- A culture of *continuous reflection and improvement* in strategies, actions and systems;
- A culture of *people-centred, flexible and accurate service delivery;*
- *Responsiveness* to market needs and demands for human resources, expertise and products;
- *Integration, collaboration and* synergy where appropriate for better performance.

Strategic choices

7. The Strategy has been influenced by the following strategic choices[4]:

Research-active versus research-intensive

8. UFS has committed itself to becoming a 'research-intensive' university (also sometimes called 'research-led'). The University will continue with disproportionate investment in research as part of an ongoing effort to move to this state. However, this type of university has as its main feature that the nature and content of its teaching, learning and community service are shaped by its research base. It is primarily dedicated to the quest for knowledge and marked by a spirit of critical enquiry. It commits itself to building scholarly excellence in research, learning and teaching and does not focus *primarily* on the training of people for professions. It is further characterised by the presence of pure and applied research, a breadth of academic disciplines, a high proportion of postgraduate programmes, high levels of external income and an international perspective. Postgraduate students participate intensively in research in order to develop an openness and curiosity so that they can become innovative.

9. *But* creative forces diminish when student numbers are overwhelming, and a culture of excellence cannot grow if a university's capacity is over-taxed. Therefore, if UFS is to become a research-intensive university, it has to ensure that high quality students can be attracted, that its staff have the required expertise and time, and can manage the number of students.

Teaching versus research

10. In a research-intensive university there is a strong link between research and teaching. Synergies are promoted with the intent to improve both of them. It requires that teaching has to be carried out primarily by those with a direct relationship to research, and that the research should benefit from teaching both under- and postgraduate students. Students profit by scholars who are engaged in creative endeavour and scholarship is enriched when the younger generation questions it. This requires a willingness to discuss issues in lectures, seminars, tearooms and laboratories.

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[4] This section as well as other references to good practices in this document have drawn heavily from the following:
- G Casper, President, Harvard University (1998). *The Advantage of the Research-Intensive University*, Peking University Centennial, Beijing.
- T Angelo and C Asmar, *Towards a new definition of Research-led Teaching – and Learning – at VUW*. Draft Discussion Paper. Victoria University.
- E Hazelkorn (2005).*University Research Management. Developing Research in New Institutions*. OECD, Paris. *(In particular)*
- J Taylor (2006). *Managing the Unmanageable: the Management of Research in Research-intensive Universities.* Higher Education Management and Policy – Volume 18, No 2. OECD.

11. The University will therefore encourage and exploit, wherever possible, linkages and synergies between teaching and research (and community service). There are three distinct approaches:

- *Research-led teaching* (or research-informed), where academics share their own disciplinary research with students, and teach them disciplinary research methods.

- *Inquiry-based learning*, whereby academics actively involve their undergraduate students in carrying out disciplinary research. This can lead to increased research productivity and more postgraduate enrolment.

- *Research on teaching and learning* (also known as pedagogical research or action research) where academics themselves, involving students where possible, engage in applied research on teaching and learning in their disciplines. This can be published and also lead to improved teaching.

A culture of research versus a culture of scholarship

12. A 'culture of scholarship' gives due recognition to the 'mosaic of talent' in the University, and recognises that not everyone needs to be involved in research. Modern interpretations of scholarship go beyond the discovery of new knowledge linked to research, to include the following continuum:

- Traditional academic investigation (whether basic, applied or strategic, and whether using quantitative, qualitative, practice-based or other methodologies);

- Professional and creative practice (including architecture, visual, performing and media arts, and consultancy and related activities, etc.);

- Knowledge and technology transfer (including development projects and other forms of innovation, commercialisation, prototypes, evaluation and other externally commissioned contracts, etc.)

13. Measuring scholarship can therefore include non-conventional metrics such as involvement in advanced practice, invitations or awards, innovations in a practice, or creative arts that meet certain conditions, such as genuinely contributing to new knowledge or that can be regarded as artistic development work. The product does not have to be text based, but in a form appropriate to the discipline.

14. UFS will foster a culture of scholarship that discourages mediocrity and promotes cutting edge work and innovation in the areas noted above. However, research intensive universities emphasise the first of these scholarships (although others may also be rewarded). This emphasis influences financial allocations, performance management and human resource management.

Targeted funding versus seed funding

15. The University will focus its resources on those areas in which it has, or wishes to develop a competitive advantage. Six Strategic Academic Cluster areas have been identified over the past three years through a combination of bottom-up and top-down processes. They indicate the priority areas for investment of University resources and are important determinants of its competitive advantage and niche in the South African higher education sector and beyond.

16. Although support will also be provided more broadly, all aspects of the Research Strategy will be implemented with a primary focus on these virtual Clusters in order to establish a critical mass of active researchers in strategic priority areas. They will bring staff and students together to create a 'community of scholars' in a collaborative environment (real or virtual) where researchers share ideas in an intellectually supportive, constructive and conducive environment. The Clusters will thus enhance the

chance of sustainability by creating a "dynamic environment of cascading research activity and projects which build on one another and generate vitality and opportunity".

Recruit versus grow

17. The University will invest in the support of winners and likely winners, whether attracted from outside or nurtured from within the University. Investment in researchers in the University will continue. However, there is a need to attract more research leaders and young researchers from outside the University. This will be directed by strategic needs and opportunities, and flexible regulations will be applied to recruit or retain research expertise in priority areas.

Centralised versus decentralised management of research

18. The University will continue to follow a combination of bottom-up and top-down approach. It will devolve the responsibility to develop action plans for the promotion of research to faculties and departments. However, this will be done within a centrally coordinated framework and monitoring system that provide for strategic direction and accountability, supported by a central service that can help ensure optimal benefit from opportunities.

Threats, risks and responses

19. Table 2 summarises the threats and risks identified in the external review of the Research Strategy (2003-2008), and the responses to these in the next phase of research development.

Table 2: *Main threats and risks to the development of research at UFS over the next five years, and the response in the new research strategy*

Key Threat / Risk (identified in External Review)	Strategy Response
▫ Highly **variable** engagement with research, resulting in pockets of research and a lack of critical mass that hinders the development of a healthy research culture – often in (new) disciplines without a research tradition	› Increased focus on appropriate human resource policies and incentives or penalty systems, and their effective implementation. › Strong focus on a better enabling environment for research. › Strong focus on recruitment of research-committed staff. › Emphasis on a culture of scholarship. › Further development of the Strategic Academic Clusters.
▫ Corps of academic staff active in research, including new entrants, who are overstretched with priorities other than research, and disillusioned with the lack of time for research.	› Increased efforts to find external resources for research that can buy in staff time, attract postdoctoral fellows, engage more postgraduate students, appoint interns, etc. › Finding and implementing mechanisms for time release among active researchers. › Balancing teaching and research responsibilities according to the strengths and interests of each staff member.
▫ Inadequate enabling environment due to poor management, policy conflicts and bureaucratic support service systems that are not geared to support research in a modern, competitive environment.	› Alignment of policies and procedures in order to support the notion of a research-intensive university. › Special emphasis on getting support services and academics to collaborate towards a collective vision for research performance. › Strong focus on, and use of performance indicators for research.
▫ Failure to recruit and retain sufficient numbers of research leaders and mentors of excellence as well as younger staff members – a severe problem given the ageing research corps.	› Assessment and adjustment of current policies and strategies to address this problem. › Special initiatives to mentor, support and recruit members from both groups. › More dynamic efforts to market UFS research expertise and achievements within and outside the University. › Prioritisation in order to have more resources to attract and retain persons in areas

	that give the University a competitive advantage in line with its niche.
	› Dedicated research capacity development office.
□ Large numbers of insufficiently prepared under- and postgraduate students, requiring considerable support and mentorship, absorbing research time and leading to some undesirable practices to accelerate throughput. □ Inadequate incentives for the best (post)graduate students to enter UFS at the different levels.	› Special focus on postgraduate support and mentorship, including the establishment of a dedicated office for specific services and the engagement of senior postgraduate students and postdoctoral fellows in this role. › More focused marketing efforts, especially around the Cluster initiative. › Mobilisation of funding to attract good quality students and postdoctoral fellows.
□ Inadequate focus on innovation and the protection and exploitation of intellectual property.	› Establishment of a technology transfer / research commercialisation office that will work in close collaboration with researchers, the University leadership and clients.
□ Diminishing funds from external sources as national and international budgets contract and competition becomes fiercer.	› Strong focus on innovative funding mechanisms and sources, and on partnerships in support of the mobilisation of funds. › Strong focus on attracting, retaining and rewarding high quality, active researchers. › Strong focus on enhancing the profile and reputation of the University. › Establishment of office for research commercialisation. › Further strengthening of the office for internationalisation. › Professionalise and strengthen activities of UFS Marketing in relation to research funds.

Limitations of the Strategy

20. The end-of-term review of the Research Strategy (2003-2008) highlighted four likely root causes for challenges experienced in the development of a research culture at UFS over the past five years. The Research Strategy can address only some aspects of these four interlinked factors, yet they may have a significant effect on its success. Other strategies are therefore needed to resolve the following:

i. Insufficient time for research due to high workloads, primarily as a result of the parallel medium language policy and the large number of under-prepared students at all levels. Drastic measures will have to be taken to resolve this, and will affect the way in which the University sees its position in the higher education system. The use of innovative teaching methodologies and the use of new technologies for interactive presentations in a virtual theatre, on-line teaching and e-linkages between scholars and students are examples of possible approaches.

ii. Perceptions that many support service staff members operate with old-school, inflexible approaches using procedures that are not attuned to the requirements of modern, research-oriented and technologically advanced universities. This leads to inefficiencies and frustrations, and inadequate teamwork between support services and academic programmes towards shared goals in service of the University.

iii. The insufficient number of adequately prepared students entering UFS, limiting the pool of potential postgraduate and postdoctoral researchers, or placing an undue burden on those who have to mentor them through the system. This situation is exacerbated by the significant number of national and international pressures that are challenging all universities in South Africa and internationally, including the pressure to deliver postgraduate students at high throughput rates. It is well known that the capacity of institutions to be research-intensive can be greatly affected by the number of students and by the level of their preparedness. Unless this issue is effectively addressed, it is unlikely that UFS will grow noticeably in research performance.

iv. The negative image of UFS as a location for academia. Apparent disadvantages can be turned into strengths, but sufficient energy, innovation and partnerships will have to be brought to bear to execute strategies that can turn this perception around.

The Strategy

Summary

21. The UFS Research Strategy has as primary goal the need to contribute increasingly to national and regional development and growth through the delivery of people, knowledge, innovations and solutions in selected areas that can serve the interests of the country and the continent. This can only be done if it is also in a position to contribute to global excellence in research.

22. The Strategy has therefore been designed to propel UFS into a new phase of development over the next five years, driven by research and by innovation in its broadest sense. It will be framed by a strong focus on improving the effectiveness, efficiency, relevance, impact and sustainability of its research endeavours, and will consolidate and build on the substantial progress made towards a healthy research culture over the past five years.

23. The Strategy is being led by the undertaking to move UFS from a research-active to a research-intensive[5] university, recognising the inherent challenges but also the reasons for a strong emphasis on research – sustaining the professional reputation of the institution in a knowledge-based economy and society; contributing to economic and social developments in the country and region; retaining and improving its position in the higher education system; attracting and retaining high quality staff members and students; maintaining a cutting edge curriculum; and creating a stimulating learning environment.

24. The Strategy has been informed by consideration of the comparative advantage and niche for UFS research in the higher education system in South Africa and more broadly. These are to a large extent embodied in the prioritisation of six areas for focused investment over the next five years, i.e. the Strategic Academic Clusters. These Clusters indicate broad areas of work of particular relevance to the country and continent where UFS has, or plans to develop globally recognised expertise. Furthermore, the tranquil atmosphere of the campus, the city and surrounding landscape, and the closeness to urban and rural African communities as well as targeted private sector initiatives provide an environment in which the academic enterprise can flourish in a manner unique to UFS. The numerous existing relationships and partnerships between the UFS and leading higher education institutions abroad is another advantage or strength which should be further exploited and capitalised upon to increase the profile of the University as a preferred international collaborator.

25. The Strategy has also been informed by an analysis of the root and underlying causes for the challenges that UFS researchers have faced over the last five years (Table 2), while recognising that some of these are beyond the remit of research planning.

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[5] Also sometimes called 'research-led'

26. The Strategy has been rooted in the following six interrelated, mutually reinforcing desired outcomes (Figure 5):

A more enabling environment for research

27. The Strategy will recognise that contrary to popular belief, physical location is not as important as institutional environment and culture. And while the research endeavour at a university cannot be managed as such, the institution has as major responsibility the provision of an enabling environment that makes it easier and more appealing to be a researcher at UFS, and remove inhibiting factors. These efforts will focus on policy coherence, time for research, helpful and efficient support services, systems and procedures, funding availability and mobilisation, and incentives that encourage and inspire enthusiasm for research. Incentives will include some of the elements of the most current understanding of good practices – more research time (as a priority), targeted grants, promotional opportunities, enhanced facilities, internships with the private sector or other partners, salary increases, exposure opportunities (for example to conferences) and sabbatical leave.

28. This effort will be enhanced by strategic initiatives outside the research domain aimed at lightening the burden of work on committed researchers, both emerging and experienced. It will also be critical to enhance the attractiveness of the University among good researchers – research leaders, experienced and emerging researchers as well as potential researchers in the form of undergraduate students – both within and outside the University. Strategic marketing and communication strategies will therefore be reoriented to play a role in attracting priority groups and clients and enhancing the public profile of the University nationally and internationally among potential partners – emphasising its research foci and achievements with due cognisance of what will interest the targeted groups.

29. The creation of an enabling environment will be aimed at, and should benefit all committed researchers across the University. Incentive systems can be targeted at specific priority groups and areas, taking cognisance of the unique needs of each.

Larger streams of funding from more diverse sources invested in research (internationalisation of the research platform)

30. The success of the next phase of research development at UFS will depend to a very large extent on the success with which funding will be mobilised *for* and *from* research and innovation. Information flows on national and international grants and contract opportunities, the establishment of alliances and collaborative ventures for critical mass and diversified skills towards more effective funding partnerships, and an emphasis on effective commercialisation systems and strategies will be crucial for this purpose.

31. Linkages on targeted areas with leading universities and university networks in South Africa, in Africa and on other continents will remain a priority. There are many internationally funded initiatives that link African universities in innovative ventures, for example. Under-utilised or unconventional funding sources will be a strategic focus, utilising the synergies and intersections between university research, community interventions, government interests and/or the private sector, and building on ongoing power shifts and resource flows in the world.

32. Potential sources – which will be strategically targeted as well as organically cultivated – include bi- and multilateral agencies (for example development aid agencies and the United Nations system), private foundations (for example the very active US, European and South African foundations and their networks), linkages with emerging investors from low and middle income countries (such as the fast

growing developing economies of Brazil, Russia, India, and China (BRICs)) and institutions with similar values and strengths from the old as well as emerging powers in Asia who are displaying an increasing interest in Africa. Consultancy services as well as relationships with the private sector and venture capitalists or private investors will also be a focus for the commercialisation effort.

33. Although the intent of increased funding streams is to provide a better enabling environment and incentives for committed researchers, a disproportionate amount of funding will be allocated to the priority areas defining the niche for UFS – the Strategic Academic Clusters.

'Working with Winners' (WWW)

34. This is the theme of the Strategy (*unless we want to use "Target, Enable, Connect, Grow*) and refers to winners at all levels of the research endeavour. The other pillars of the Strategy are all aimed at cultivating and enabling 'winners' to contribute – individuals who are, or who want to achieve or make a real difference through their research, and who have (or are developing) the commitment, confidence, knowledge and skills to match.

35. It will therefore be imperative to put substantial effort into attracting and supporting research champions, and to attract, retain and build the capacities of skilled research mentors as well as the next generation of good researchers – from within the country and internationally. Without significant success in this arena, it is unlikely that UFS will ever successfully evolve into a research-intensive university.

36. Human resource policies, marketing and communication efforts and incentive systems will take this into account. Specific emphasis will be placed on the development of a culture of mentorship and non-hierarchical interaction between senior and junior researchers in order to cultivate a culture of reflection and constructive debate. Competence-building can include recruitment, re-invigoration, training, reorientation and enabling.

37. It will also be necessary to devise strategies, including outside the research arena, to attract students of good quality at all levels who can feed into the UFS community of researchers. A stronger research-teaching nexus at undergraduate level will contribute, as well as internationalisation, administrative and marketing strategies that attract and support students, postdoctoral fellows and staff members during their stay.

38. Although aimed at the University as a whole, most of the attention in this area will be in the Strategic Academic Clusters, as well as in areas with real potential to be developed over time as additional priority areas / Clusters. Special efforts will be made to create and use opportunities to attract expertise to fill gaps and to establish a critical mass of experienced and emerging researchers who can place the University at the forefront of development and innovation in the targeted areas.

Setting priorities – the Strategic Academic Clusters

39. The Strategy strives to balance existing capability with potential and opportunities, optimally use scarce resources, and align institutional competencies with external environment and internal aspirations. At the core of the Strategy is therefore the concept of Strategic Academic Clusters in priority areas where the University has particular strengths, or where the leadership wishes to develop particular strengths as part of the strategic positioning of the institution in the systems in which it operates. There has

therefore been a conscious effort to shape what should be done and not only what can be done, or for what the University is best equipped at present.

40. The Clusters have been developed through an intensive and credible three year process combining a primarily bottom-up process with a top-down vision of the direction the University should take. There will be space for new Clusters to develop, but most of the energies and resources over the next five years will be concentrated on those currently in place. Their effective management and resourcing will be crucial for success, and enabling these Clusters to reach their potential is recognised as one of the biggest challenges for the development of research during this phase.

41. Although researchers should not be distracted by too many demands, the Clusters will be essential seedbeds for the different strategies aimed at making the Research Strategy work. They will have an outward-looking focus, with trans-, multi- and interdisciplinary partnerships and alliances with other universities, funding agencies, government and non-government agencies and the private sector, searching for unique opportunities in South Africa, in Africa and beyond. They will be key participants in the innovation and commercialisation initiatives, and will provide a good environment for nurturing and innovating around the research-teaching nexus (refer to section 1.5).

Effective governance and management systems

42. Two of the most critical success factors in the development of a research-intensive university are the leadership commitment to the research vision in a manner that is both credible and visible, and governance and management systems for fast and flexible strategic and operational decision-making. With this in mind, the University executive and senior management as a whole will be committed to carrying forward the notion of a research-intensive university in all their functions, including the support services.

43. The governance and management systems for research will be reorganised and streamlined to support a more strategic approach to research planning and implementation at institutional and faculty level. The committee system will be substantially improved by instituting a cascading approach to planning, monitoring, improvement, accountability and decision-making that will give direction to research for institutional results, while allowing freedom for faculties and departments to cultivate their own unique approaches to research development within the broad framework established by the Strategy. Specialised committees will be constituted as required, for example an institutional committee responsible for research ethics in the social sciences and humanities as well as the natural and health sciences.

44. Research focal points at faculty level will help facilitate a coordinated yet flexible approach in support of the central research facilitation function. These focal points will include the Chairpersons of Faculty Research Committees and the Cluster Directors, supported by dedicated Faculty Research Coordinators responsible for operational and administrative tasks. The DRD, together with the senior management of the University and the faculty focal points, will be responsible for the Strategy implementation and monitoring, and for facilitating an information flow that will make the cascading governance system work. The central support function (DRD) will provide a professional one-stop shop for information on, and facilitation of funding and partnership opportunities, research training and mentoring, strategic

project submissions, and financial and budget services (including advice and support for cost recovery, commercialisation and intellectual property).

45. The institutional Research Strategy and its Implementation Plan will provide the framework and guidance for tailor-made faculty and (where appropriate) departmental research strategies and action plans. It will be complemented by an institutional M&E system, with a cascading system of indicators as part of the Research Information Management System (RIMS), with additional information collected for strategic purposes where required. The system will have a strong focus on utility for learning that facilitates planning and improvement, and for accountability towards internal and external stakeholders. Data and information will thus not be collected unless it will be used at different levels. This necessitates a strong focus on good vertical and horizontal information flows across the University and, where necessary, to and from external stakeholders.

Goal and objectives of the Strategy

46. The goal of the Strategy is **to foster a contented, well connected and vibrant critical mass of researchers, especially in strategic priority areas, who champion the University's contribution to (i) national growth, (ii) regional advancement and (iii) global excellence.**

47. Six strategic objectives are articulated as:

i.   To create an institutional environment that will allow emerging as well as experienced researchers to thrive, with adequate time for research.

ii. To develop selected areas of work in priority themes – that is, the Strategic Academic Clusters – that provide the University with a sustained reputation for demand-driven, cutting edge, innovative and relevant work, where research and teaching are closely linked.

iii. To foster, primarily in selected areas, a critical mass of contented research leaders who inspire and mentor others.

iv. To develop, primarily in selected areas, a well prepared corps of next generation researchers – postgraduate students, postdoctoral fellows and young staff members.

v.   To increase income for and from research through a diversity of approaches, sources, partnerships and alliances.

vi. To foster effective and efficient leadership, governance and management systems that track and value continuous improvement, accountability for results, and fast and strategic decision-making.

GOAL

UFS as a **leading university in priority areas**, contributing to
(i) **national growth**, (ii) **regional advancement** and (iii) **global excellence**

Priority research areas with sustained reputation for innovation, relevance, research / teaching linkages	**More enabling environment** w.r.t. • time/incentives • policies • services • marketing	Well prepared corps of **next generation researchers**, especially in priority areas	Critical mass of contented and inspiring **research leaders and mentors**, especially in priority areas	Flexible and efficient **governance and management systems** that value continuous improvement, accountability, results and fast decision-making	**Considerably increased funding** for and from research - through diversified sources, partners, alliances, opportunities

DESIRED OUTCOMES

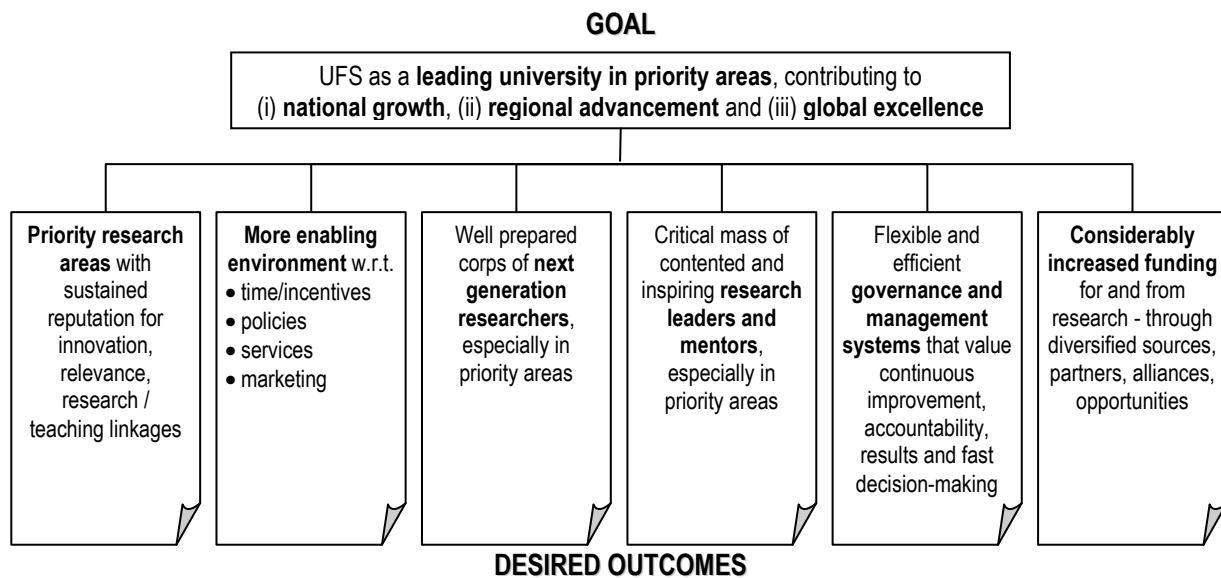**Figure 4:** *Goal and desired outcomes of UFS Research Strategy (2009-2014)*

Strategy framework

UFS Research Strategy

GOAL

To foster a contented, well connected and vibrant critical mass of researchers, especially in strategic priority areas, who champion the University's contribution to (i) national growth, (ii) regional advancement and (iii) global excellence

OUTCOMES

| Better governance, management systems | Greatly increased funding streams for & from research | Growth, profile through focus on priority areas | Better enabling environment for research | Inspiring research leaders & mentors | Well prepared, inspired next generation of researchers |

ENABLERS

University governance systems

Information - management, performance opportunities, partnerships

Funding sources

Research commercialisation & IP Office

Strategic partnerships & alliances

Strategic Academic Clusters

Streamlined, aligned policies, services

Marketing & communication strategies

Incentives systems

Postgraduate student / postdoc support

Capacity development opportunities

STRATEGIC PRIORITIES

Revise governance structures to serve purposes of research-intensive university

Establish culture of fast & flexible decision-making

Establish key performance measures – internally & externally driven

Establish cascading system for useful, timely flows of information on opportunities, partners, performance data

Define measures, metrics for culture of scholarship

Establish commercialisation, IP management systems, relationships & partnerships

Find strategic international & national partnerships, alliances, networks for funding mobilisation

Establish mechanisms to channel research income in support of Strategy

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Invest disproportionate amount of funds & energies in Strategic Academic Clusters

Establish strategic partnerships, alliances, networks in support of Cluster & market needs

Strengthen research-teaching-community service nexus

Streamline & align policies, procedures & HR contracts in line with timely delivery & requirements of research-intensive university

Reorient corporate & faculty marketing & communication strategies to attract priority groups, nurture relationships & partnerships

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Establish opportunities to encourage non-hierarchical interaction, reflection on research between students & staff

Provide a one-stop support office for postgraduate study

Refine target groups & develop equity programmes, opportunities for emerging researchers

Develop & encourage mentorship, supervisor skills development

Develop a variety of incentives systems to attract & retain critical mass - postgraduate students, postdocs, research leaders

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Establish variety of mechanisms for release of time for committed & emerging researchers & for research leaders
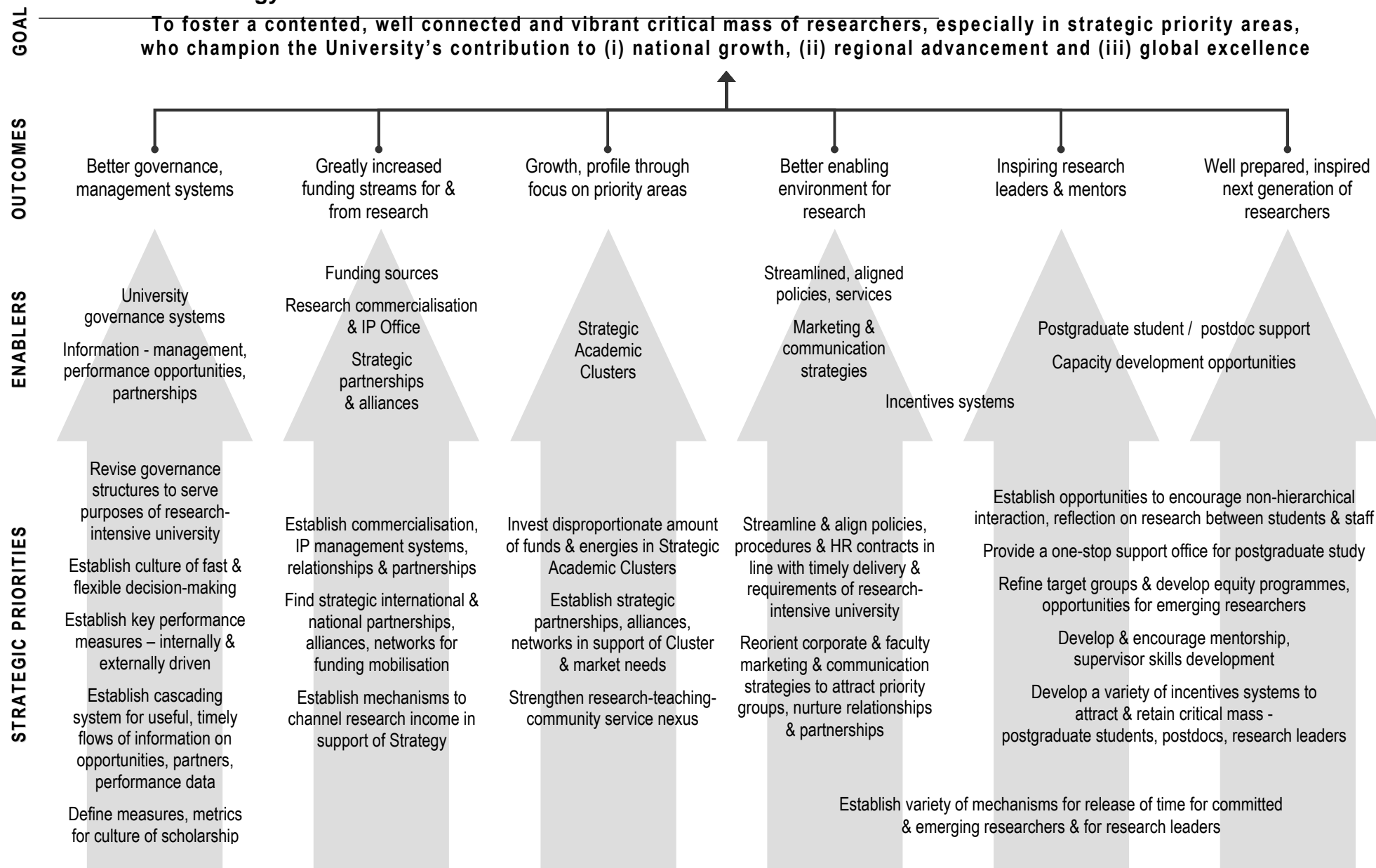
Figure 5: *Basic framework for the Research Strategy (2009-2014)*

Management and implementation framework

48. Successful management and implementation of the Research Strategy will address two key requirements, namely (i) developing shared/common research priorities and plans and (ii) finding the balance between central and decentralised decision-making and operational responsibility.

49. A key aspect for successful management and implementation is to ensure a shared understanding of the importance of research among all levels of decision-making and operations at the University. Priorities and plans based on such an understanding must be aligned from the executive management down to Department/programme level; and across academic and support functions. Subsequent formalisation and staffing of research leadership positions and structures at institutional level must be balanced with research decision-making autonomy at Faculty, Department/programme and Cluster level. Adequate representation in terms of the composition of committees and efficient, empowered working relationships between operational structures at different organisational levels (e.g. institutional and Faculty) must be ensured.

50. The requirements noted above relate to the priorities of, and the balance of responsibility between staff members/organisational structures. However, successful management and implementation is equally dependent upon adequate and appropriate capacities within these organisational structures. Key considerations in this regard include (i) staff capacity at institutional, Faculty, Departmental and Cluster level; (ii) working relationships between academic departments and support services as this relates to research development; and (iii) the location and relative importance of research within the institutional governance and management structure.

Staff capacity within the Directorate Research Development (DRD)

51. Given the increase in research activity on campus over the past five years and the articulated goal to position UFS as a research-intensive university, the office responsible for strategic and operational management of research is not optimally equipped in terms of strategic and operational staff capacity. This has also been pointed out by the External Review. For example, only one staff member is responsible for all activities related to the critical function for research commercialisation. The same is true for the postgraduate student support function, and activities related to research information and communication operates on a part-time contract basis. Operational capacity has been supplemented through informal co-opting of staff members outside the DRD, but this arrangement is not ideal and often not effective, as it is dependent upon the goodwill of such external staff members.

52. Apart from the Director Research Development, the DRD has very little strategic capacity and influence. Recent appointments have focused on increasing capacity for strategic decision-making and planning. However, due to limitations on the number of possible staff appointments, all staff members carry a heavy administrative burden, which detracts from essential strategic activities.

53. Ideally, the DRD should be afforded a staff compliment proportionate to its objectives and workload, and also reflecting the importance of research for the University. This would require the appointment of 2 to 3 additional Senior Lecturer Equivalents (SLE) – new staff members at administrative, technical and management level. Alternatively, a formalised (DRD-funded) arrangement should be made with Faculties and Clusters (where appropriate), whereby full-time Research Coordinators are appointed and situated

at Faculty level to work in close cooperation with DRD staff members in all areas of research support. This would dramatically increase the capacity of the DRD to communicate, to execute its regular work more efficiently, and to focus on strategic management[6].

Working relationships between the DRD and other support services

54. The alignment of processes and systems is a critical requirement for the creation of an enabling environment for research. It has been noted before that the operations of some of the other UFS support services pose a significant obstacle to the efficiency of the DRD and its ability to do its work effectively. The importance of research for the University must be clarified at the level of (among others) Finance, Human Resources, Library and Information Services, Marketing, the Planning Unit, the Publications Office, Strategic Communication, Student Academic Services and the Centre for Higher Education Studies and Development (CHESD – specifically with respect to their staff development function). In essence, these services are an integral part of the effort to become a research-intensive university and appropriate capacities must therefore be made available.

55. The DRD currently has effective working relationships with some other support services, such as Computer Services and Internationalisation. These relationships are mostly informal and based on the goodwill of specific staff members. Formalising these relationships through articulating management's commitment and by allocating responsibility for liaison with the DRD to specific operational staff members within each of the relevant support services will be critical to ensure effective management and implementation of the new Research Strategy.

Location of DRD within the institutional governance and management structure

56. Current developments at institutional level suggest an imminent overhaul of the governance and management structure and system of the University in its entirety, including the executive management and decision-making committee structures. Overarching changes in these structures, as well as changes with specific relevance to the management of research, have been recommended by the recent HEQC audit[7]. The planned overhaul needs to be informed by the vision of the new Research Strategy. In turn the Strategy also needs to be aligned with the revised institutional governance and management structure.

57. Relevant institutional structures include:

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[6] A good example of the effectiveness of such collaboration is the relationship between the DRD and the Research Coordinator at the Faculty of Economic and Management Sciences. This position is currently funded by the Faculty and has proved extremely useful not only to support the activities of the DRD at Faculty level, but also to maintain effective communication of research information to the Faculty and its departments.

[7] For example:

Recommendation 5: The HEQC recommends that the University of the Free State consider the need to assess critically the achievements and weaknesses of its integrated management system particularly in relation to the management's ability to deal with the quality and academic risks posed by the potential failure of its transformation agenda, and develop a strategy to sharpen the functions and responsibilities of, and between, Council, Management and Senate.

Recommendation 14: The HEQC recommends that the University of the Free State revise its strategy for the development of research, focusing particularly on the prioritisation of goals and objectives, the position of research in the management structure of the institution, and the time frames for decision making. This will ensure that the intention to become a research intensive university is appropriately supported at the operational level.

Recommendation 15: The HEQC recommends that the University of the Free State review the relationship between the University Research Committee (URC) and the PCER (Portfolio Committee for Education and Research) with a view to facilitating speedier and more focused consideration of strategic research matters.

Recommendation 16: The HEQC recommends that the University of the Free State establish an Ethics Committee at institutional level with comprehensive supervision of research ethics and all aspects of academic ethics, including fraud, in all disciplines.

- Possible repositioning of Research in management structure of the University (refer to recommendation 14 of the HEQC Audit below).
- Revision of the composition and terms of reference of the <u>University Research Committee</u>, allowing this committee to concentrate on effective strategic management of research at an institutional level and delegating any operational or administrative tasks;
- Establishment of an institutional <u>Ethics Committee</u> with specific responsibility for research ethics in all disciplines (i.e. social sciences, humanities, health and natural sciences);
- Establishment of a <u>Higher Degrees Committee</u> responsible for postgraduate research;
- Revision of the composition and terms of reference of the <u>Entrepreneurial Clearance Committee</u>, to respond to efforts to increase commercialisation of research and to proactively facilitate the generation of third-stream income from research;
- Revision of the composition and terms of reference of the <u>Information Technology Committee</u>, to include responsibility for prioritising strategic research information management within the information systems of the University;
- The <u>Strategic Clusters Management Board</u>, established to strategically direct and inform the development of the Strategic Academic Clusters (inaugural meeting scheduled for 29 May 2009).