MANAGING MEASUREMENT: PLANNING AND STEERING RESEARCH PRODUCTIVITY

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Planning and steering for research productivity

Our business is knowledge production in the 21ˢᵗ century
- A spiral of building on prior knowledge
- Competitive, cooperative and collaborative
  - the structure of the global academy
  - networks and network technology
  - variation and shared knowledge are stimulants for building and developing

- **The goal is high research productivity**
  - Requires monitoring to enable steering and planning
- **Monitoring requires accurate and relevant measuring**
  - if we can't measure we can't monitor
  - internal institutional coordination

The framework for planning for research productivity

The strategic plan*

- **Goals**
  - Establish the aims of the institution
  - Underpin the overall vision

- **Targets and norms**
  - Establish the levels and standards to be achieved
  - Based on metrics and benchmarks

Implementation
  - Dynamic and continuous
  - Flexible

UP 2025 – Vision

'to be a leading research-intensive university in Africa,

recognised internationally for its quality, relevance and impact,

and also for developing people,

creating knowledge and

making a difference locally and globally.'

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UP 2025 – 5 Strategic goals

Five strategic goals structure the long-term trajectory of the University:

1. To be a leading research-intensive university
2. To strengthen the University's international profile
3. To strengthen the University's impact on economic and social development
4. To pursue excellence in teaching and learning
5. To increase access, throughput and diversity.

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The implementation plan -

Goal 1: To be a leading research-intensive university
Key target: Position in the international rankings

Strategies

- Increase research output
- Set minimum research output norms
- …..
- …..

System level indicators

- – Rankings
- – ISI field rankings
- – NRF ratings
- – Weighted research outputs
- – ….

Focussed actions

- Increase research output
- Set minimum research output norms
- …..
- …..

Responsibility

- Executive portfolio
- Senior management role
- Support service role
- …..

Plan – Do - Review

Planning and Doing

- Set (year 2012) the base line
- Put plans in place
  - 5 year implementation plan
  - Establish expectations
  - Create awareness
  - Introduce interventions:
    - Academic development
    - Strategic appointments
    - Support interventions
    - Resource allocation
    - Focus areas, institutes and centres…

Reviewing the data

- Changes in indicator values
- Trends
- Variation
- …..

Data needed

- Papers and citations by staff member for each year
- Papers and citations by department for each year
- Papers and citations by faculty for each year
- Incoming research funding for each half year can be done with Finance and DRIS
- Research grant applications made, and awards received
- Themes, Named Chairs, Units, Programmes
- Annual identification of changing areas of excellence (from ISI data)
- Staff/Student ratios
- Database of rated staff members and ratings
- Database reflecting international staff and students
- Alumnus employers and contact details
- Data for post-graduate student progress
- etc …..
- …..

Examples - Interventions related to indicators

Publications and impact

Productivity and efficiency
Increasing citations / High Impact journals
Enabling environment

International staff and student numbers

Internationalisation

Visibility

Enabling environment
Communication, promotion, marketing

Data and monitoring – the _review_ part

1. **Data gathering processes and collation system**

2. **Reviewing the data**
- Is the information correct?
- Have the right data been collected?
- Is the data set complete?

3. **Monitoring and evaluation of the data**
- Regular and timely collection
- Made readily accessible, with awareness of availability
- Made accessible for cross-analysis and multi-factor analyses

4. **Extending the range of data to give more comprehensive coverage**
  - Identify actions to be taken

Measuring and reporting performance (1)
Internal data

- Interpretation and interrogation
  - Diverse metrics
  - Diverse goals
  - Coping with diverse outcomes*

- Implications and consequences
  - Making sense of the measurements
  - Identifying weak points
  - Making new plans
  - Introducing new steering interventions

*Clusters of disciplines show wide diversity –
- Approach to research
- Speed in setting up research projects
- Time to achieve results
- Time to achieve publication
- Impact factors, citations
- …

→ *Differentiation*

Steering to complement planning

Monitoring and measuring → knowing and acting

- Impact on external measurements
- Impact on internal strategies - changing plans and targets
- Diversity of outcomes across the university
- Goals applied at the next level

- **Review → re-plan → back to doing**
  - **Interim data and iteration**
  - **Making sense of measurements**
  - **Identifying weak points, stalling or falling performance**
  - **Revising plans and engaging with people**
  - **Measuring more often**
  - **Flexible approach to planning and engaging with the strategy**

Steering interventions and differentiation

Access to reliable data allows for refining and adjusting plans
→ Improving performance and sustaining development

- **Increasing / adjusting existing norms and targets**
  - Set different norms for academic post levels
  - Differentiate norms by discipline

- **Review norms and targets**
  - Differentiate departments / disciplines with respect to norms and targets
  - Set targets at individual level
  - Benchmark individuals and departments with peers, internally and at other universities, per discipline

Measuring and reporting performance (2)
External data

Ranking information

- Levels of influence*

- Reputation data

- Value

- Shortcomings

– Institutional progress
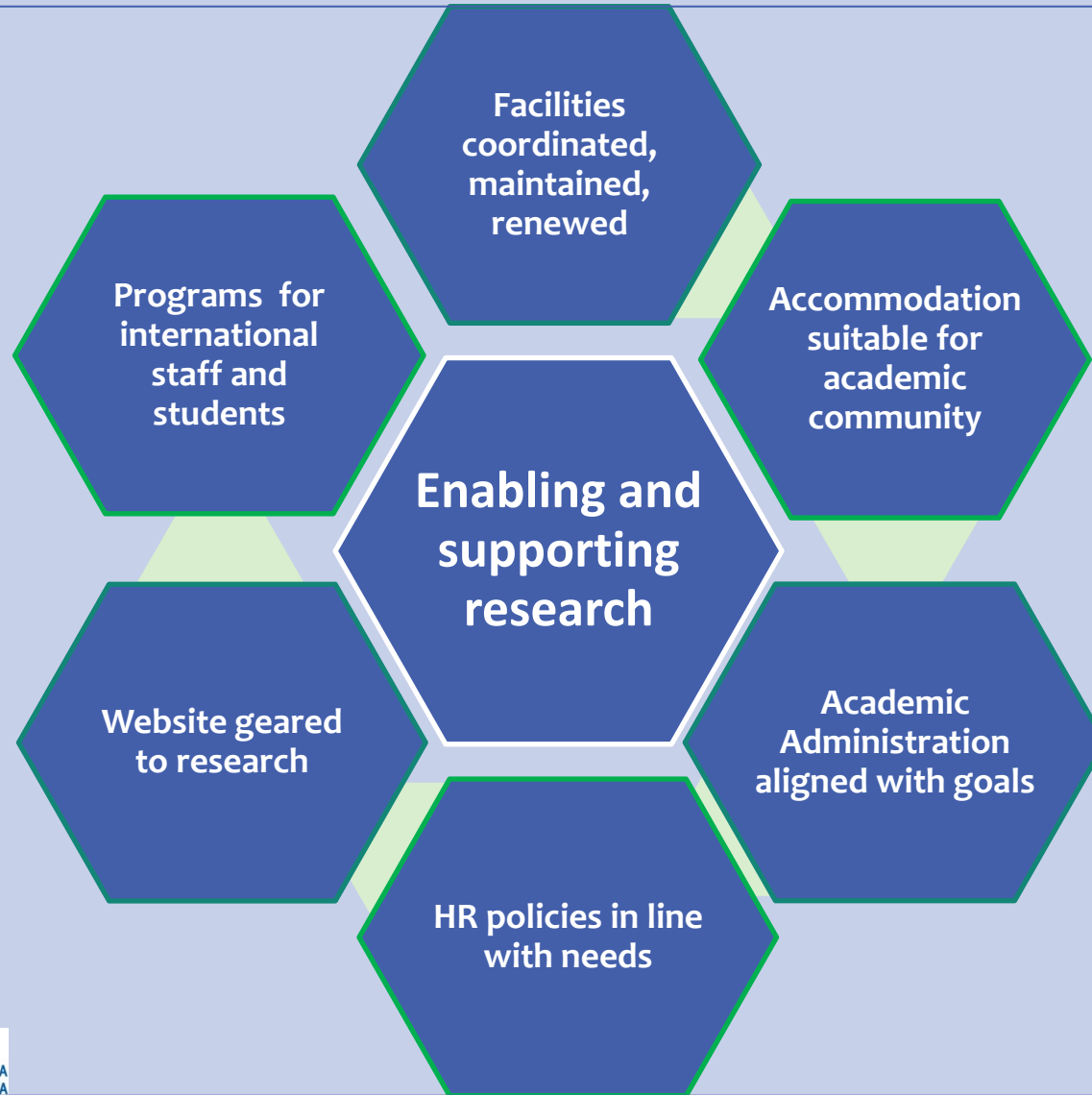– Local context

Reputation information

- Identification and development of relationships

- Peer review lists
  - Alumni and employer list
  - Academic peer review list
    - Collaborator networks
    - International interactions
    - International partnerships
    - …..

The enabling environment

- Facilities coordinated, maintained, renewed
- Programs for international staff and students
- Accommodation suitable for academic community
- Enabling and supporting research
- Website geared to research
- Academic Administration aligned with goals
- HR policies in line with needs

Communication, promotion, marketing

Communicate plan to staff clearly and effectively

Communicate research areas and successes – nationally and internationally

Work closely and continuously with journalists / media

Report research findings and developments for publishing

Build strong relations with employers of graduates

Related influencing factors

Institutional approaches to:

- Recruitment

- Funding

- Internationalisation

Institutional "culture"

- Research commitment and performance

- Impact on undergraduate teaching

- Impact on post graduate student supervision and student performance

- Academic staff cooperation and mutual support

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