

EmpowerED: Navigating Knowledge, Research & Innovation

*...advancing research, teaching, and learning
in Higher Education*

A governance perspective

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Make today matter

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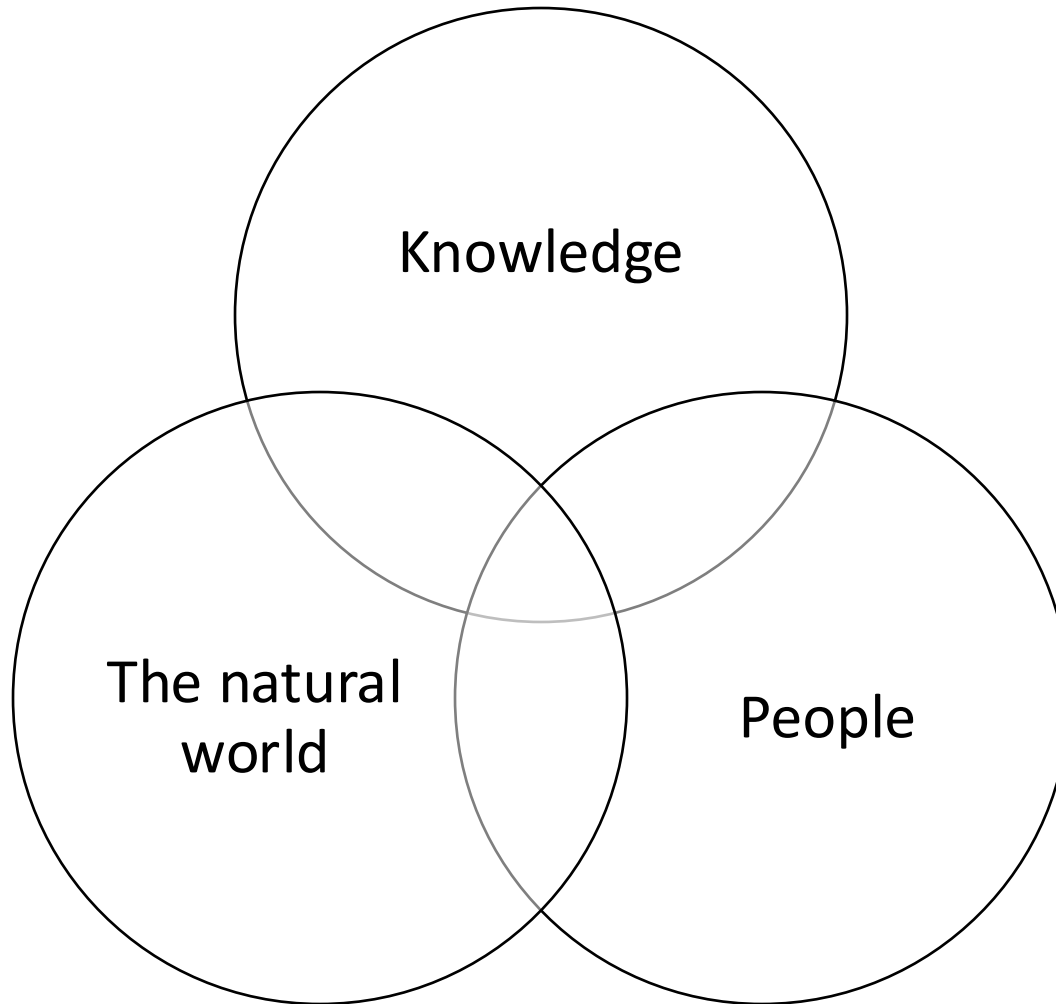
EmpowerED: Navigating Knowledge, Research & Innovation
advancing research, teaching, and learning in **Higher Education**

EmpowerED: Navigating Knowledge, Research & Innovation
advancing research, teaching, and learning in a **university**

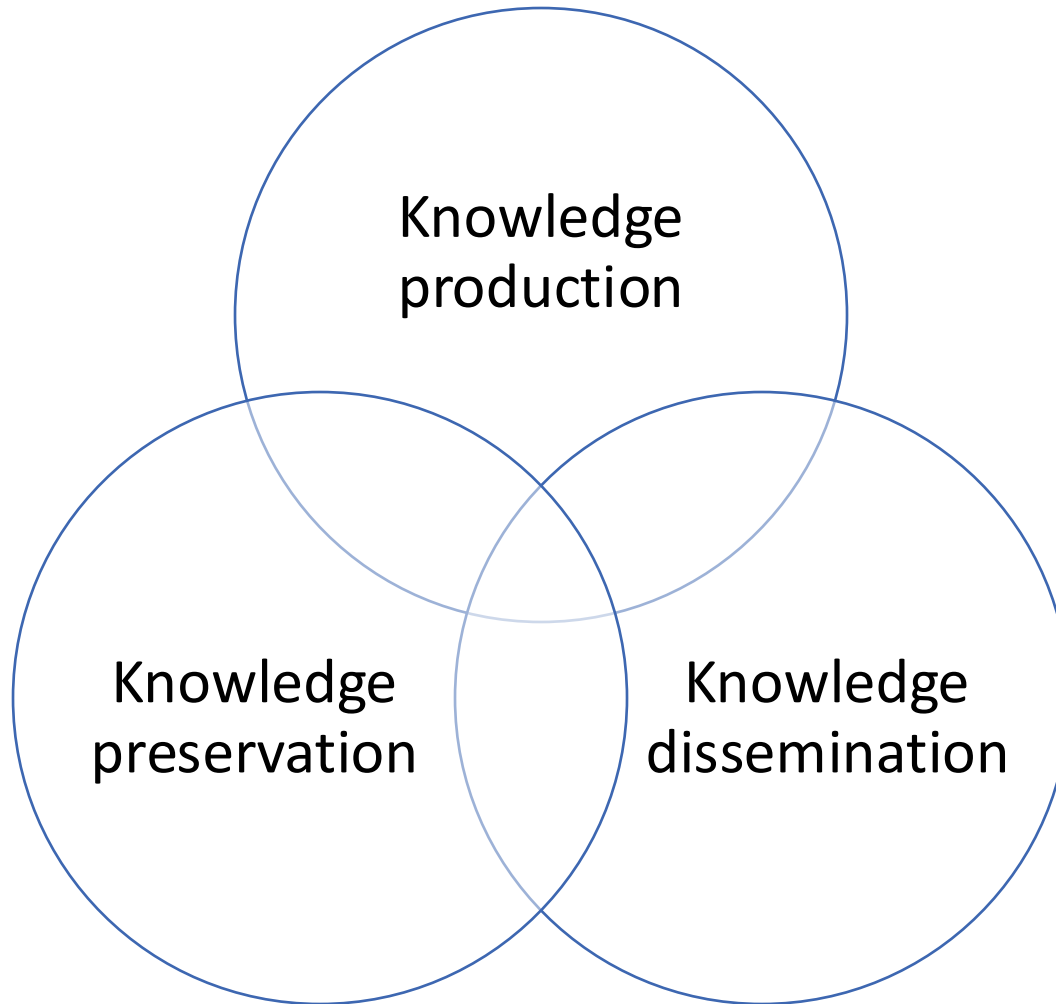
EmpowerED: Navigating Knowledge, Research & Innovation
advancing research, teaching, and learning in **academia**



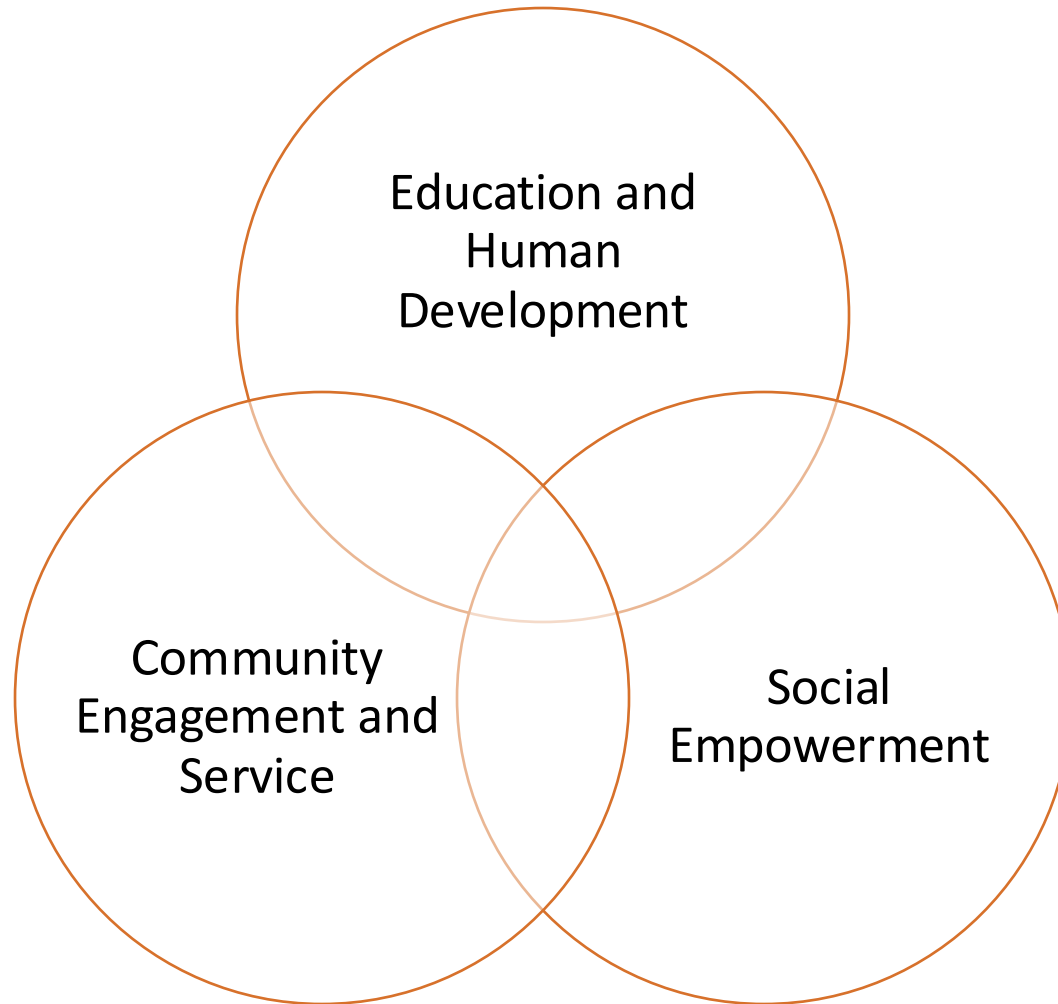
The core of university business



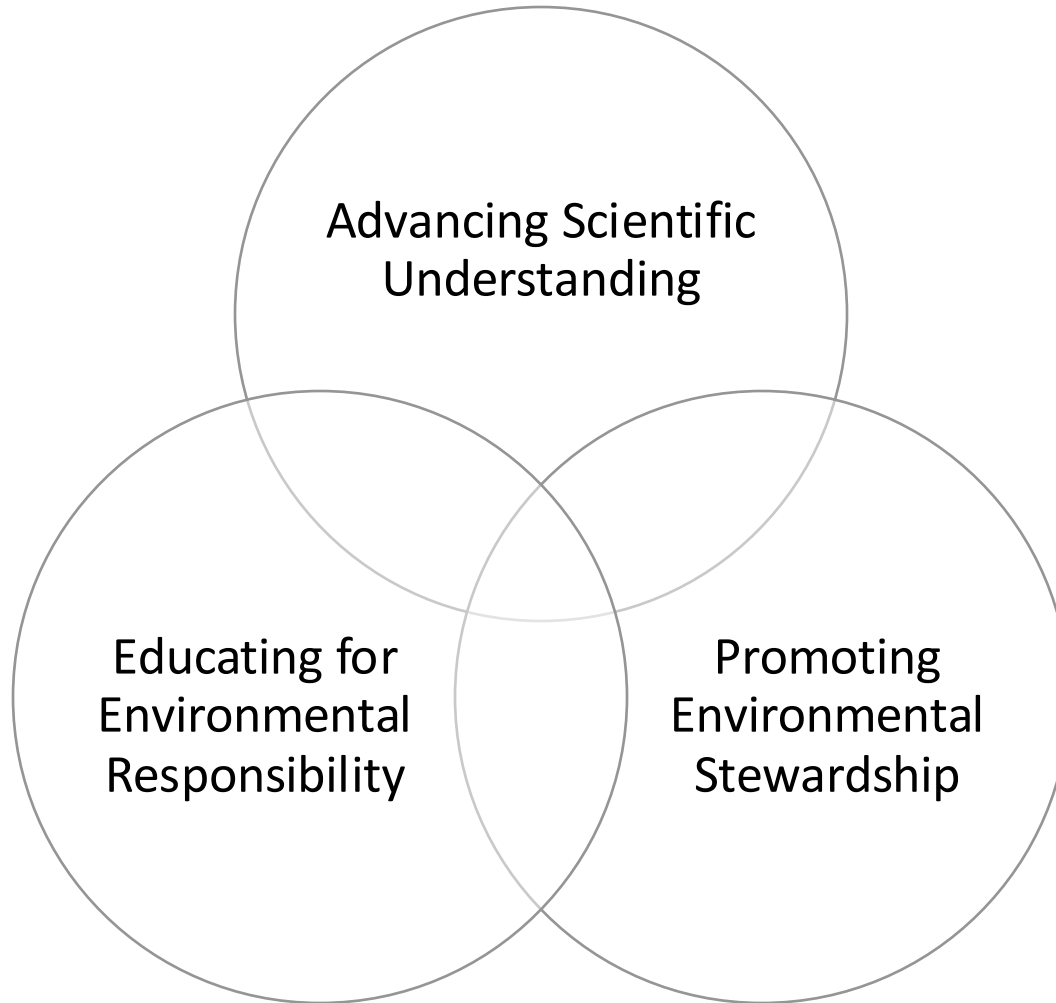
Regarding knowledge...

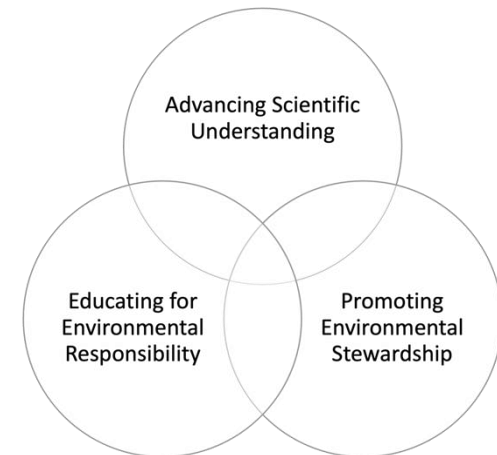
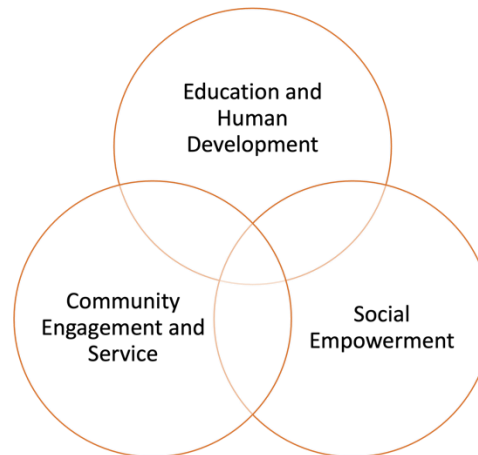
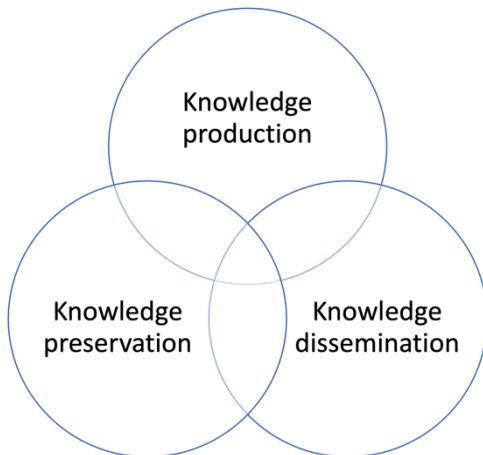
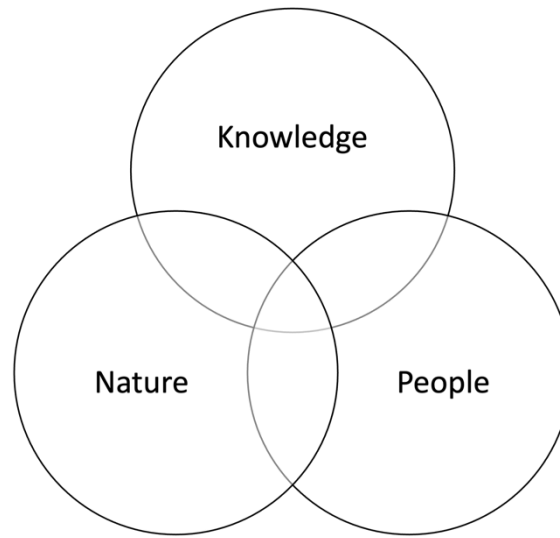


Regarding people...



Regarding the natural world...





How could AI be used to support universities in these functions?



Systems: Research

Research Management System

For managing grants, ethics approvals, and project tracking.

Institutional Repository

To store and share theses, dissertations, and published work.

Library Management System

provides access to databases, journals, and research resources.

Learning Management System

Supports teaching-related research and data collection.

Laboratory Information Management System

Manages lab samples, data, and workflows.

- Each system contributes differently to research output, and their integration adds synergy.
- ✓ weight or contribution factor of each system to research output
- ✓ level of **integration** between systems
- ✓ integration impact coefficient

Systems: Teaching and Learning

Learning Management System	for delivering course content, assignments, and online learning.
Student Information System	manages enrollment, grades, academic records, and progression.
Curriculum Management System	handles program design, approval, and updates.
Assessment and Feedback System	supports quizzes, exams, grading, and feedback.
Student Support System	provides advising, tutoring, counseling, and other academic support services.

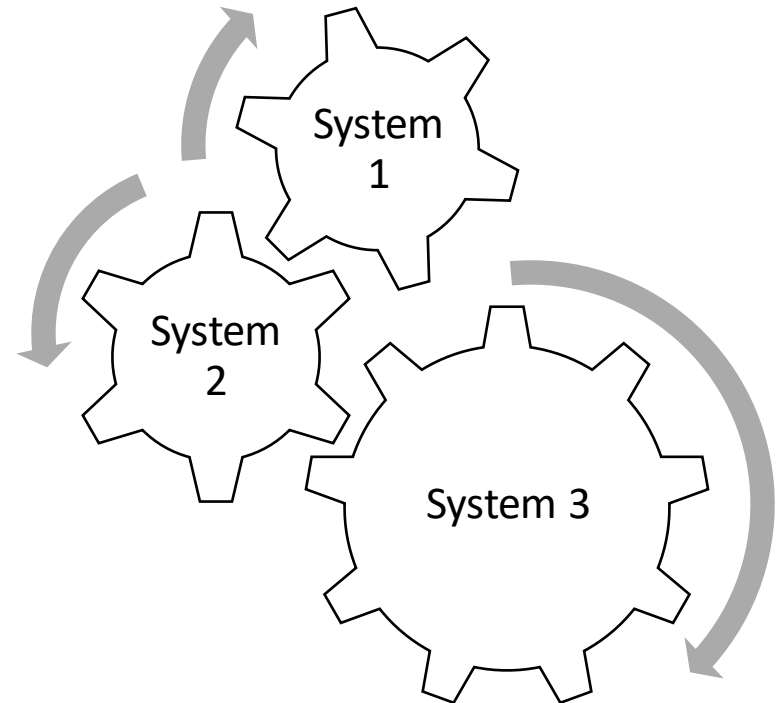
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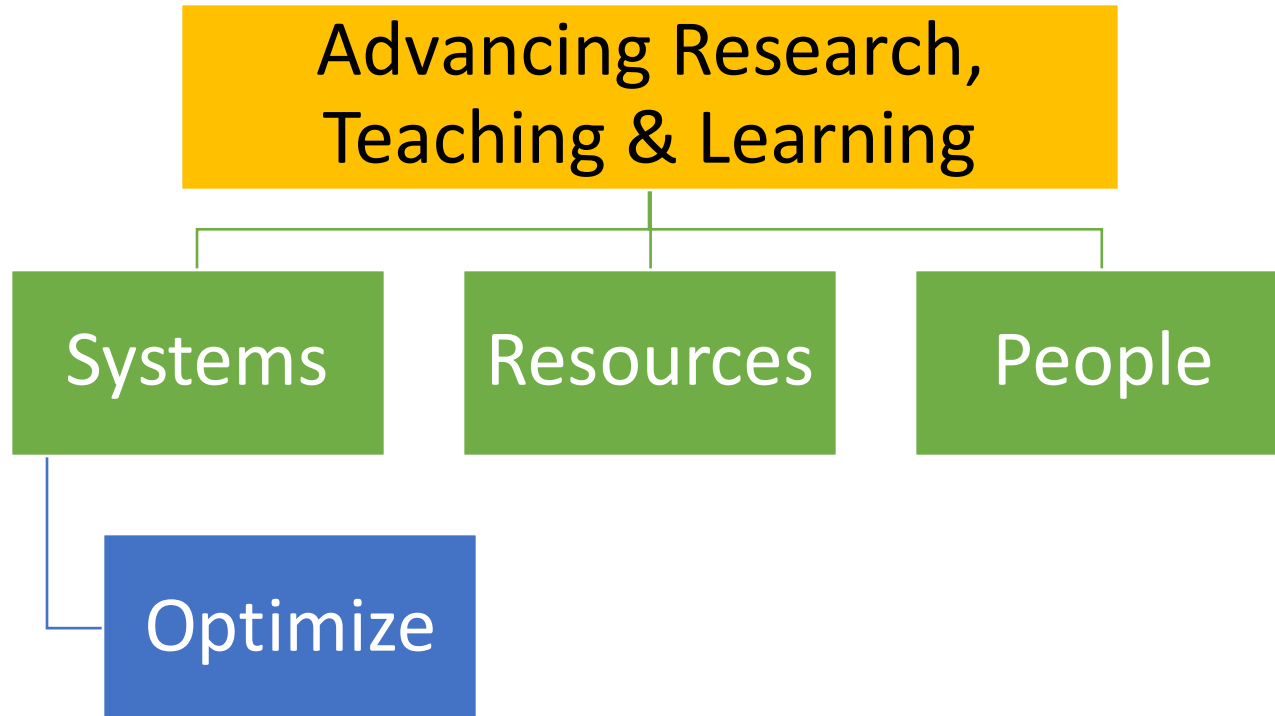
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System Optimization

Two key questions:

- How effectively are our current systems supporting the full research and teaching lifecycle across faculties?
- What opportunities exist to better integrate or upgrade systems to enhance research, teaching and learning?

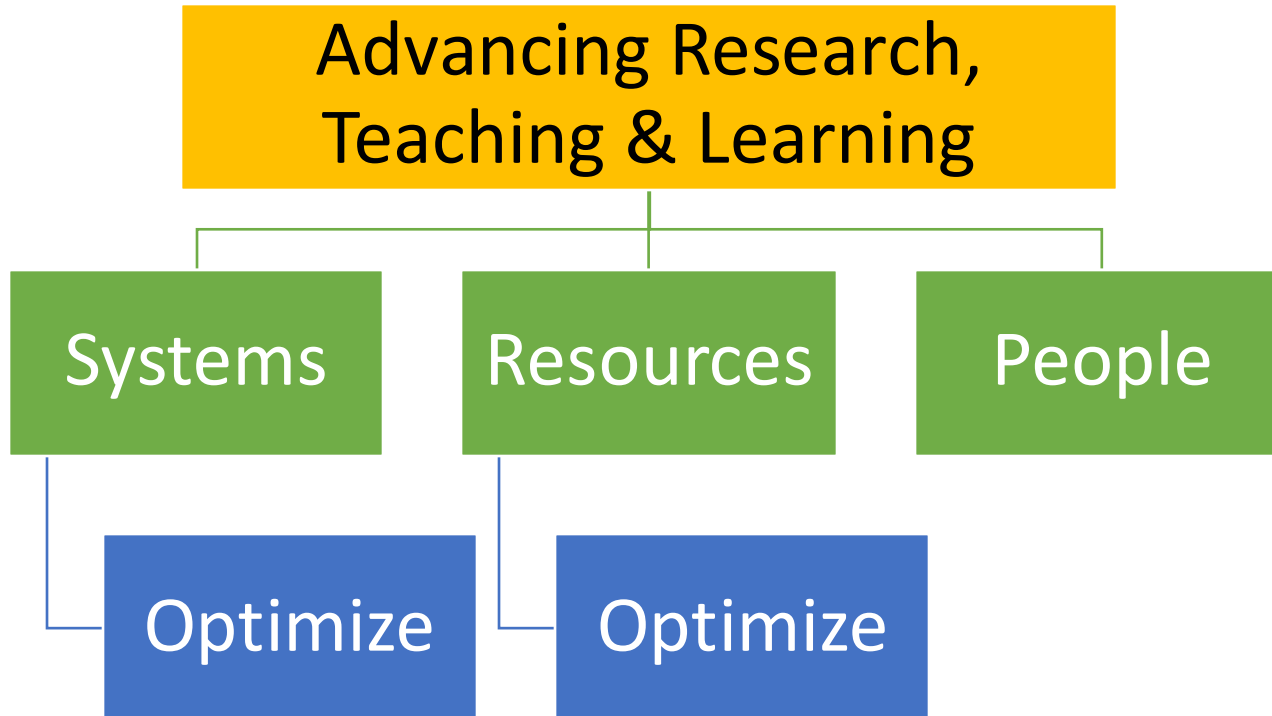




How could AI optimize university systems that enhance research, teaching and learning?

Resources: Allocation and Management

1. **Strategic Alignment** – Allocate resources based on institutional priorities and impact potential in research and teaching.
2. **Equity and Accessibility** – Ensure fair distribution of resources across disciplines, departments, and student needs.
3. **Capacity Building** – Invest in staff development, research training, and digital literacy to maximize resource use.
4. **Sustainability** – Manage resources efficiently for long-term impact, avoiding duplication and promoting reuse.
5. **Data-Driven Decisions** – Use evidence and analytics to guide allocation, monitor usage, and evaluate outcomes.



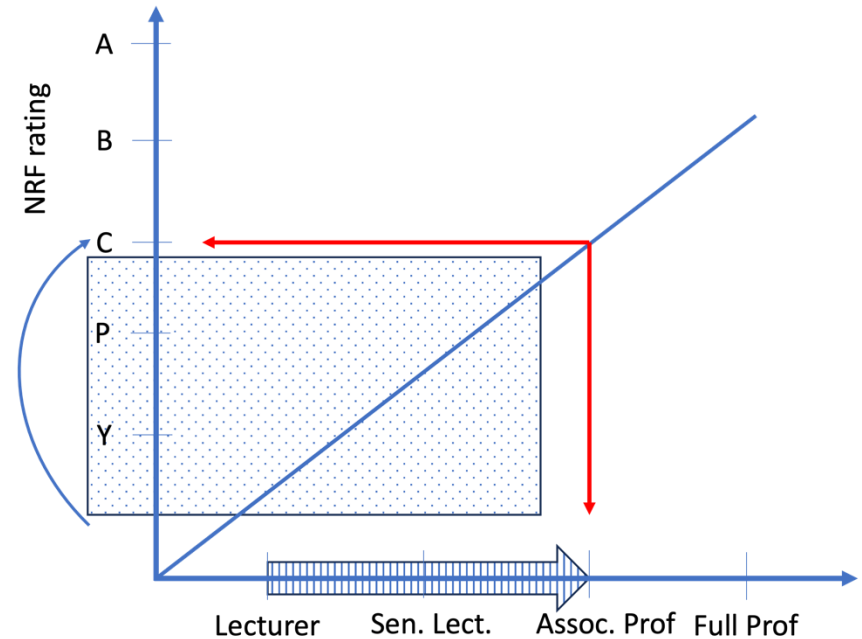
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People: Support & Development (staff and students)

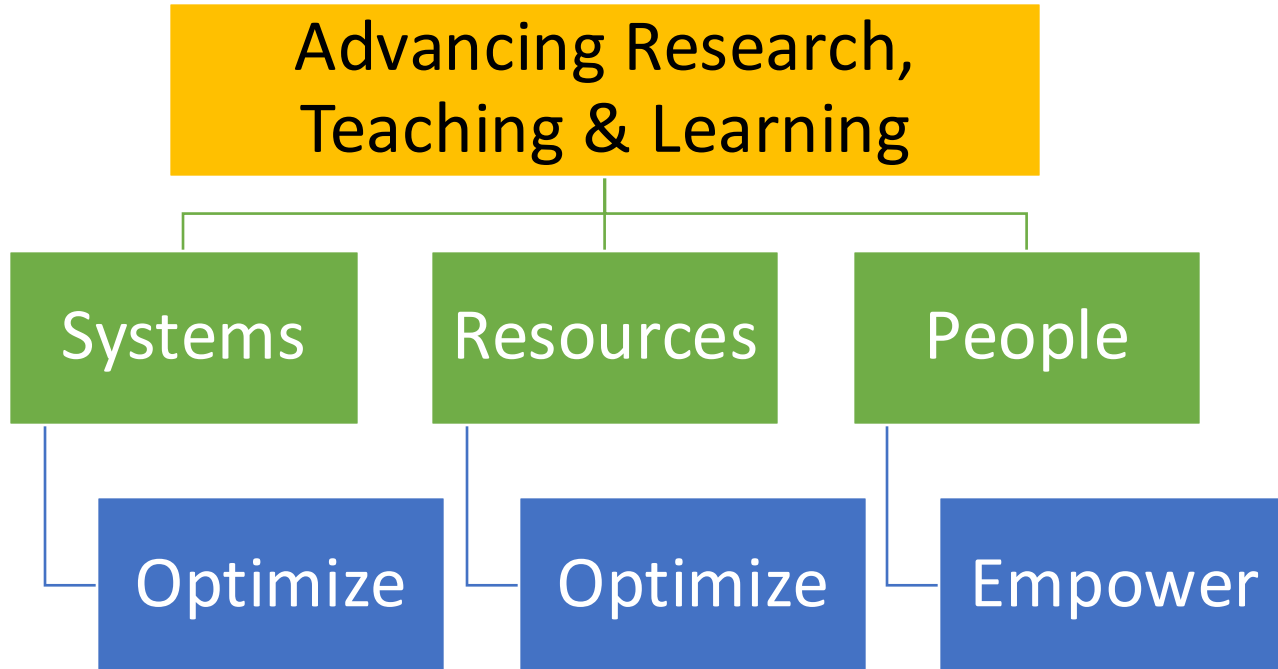
- 1. Talent Development** – Invest in continuous professional development and academic growth for staff and students.
- 2. Collaboration and Engagement** – Foster a culture of collaboration, co-creation, and active participation in academic life.
- 3. Leadership and Mentorship** – Encourage academic leadership and structured mentorship to build capacity and confidence.
- 4. Well-being and Support** – Prioritize mental health, work-life balance, and holistic support systems for staff and students.
- 5. Recognition and Incentives** – Acknowledge excellence in teaching, research, and learning through fair rewards and career pathways.

People development

- Most support from undergrad to PhD
- Slow transition from PhD to professorship
- Difficulty establishing research thrust
- Difficulties securing research grants, collaborations, and postgrad students
- Inadequate mentorship, personalized capacity building and skills development
- Late NRF rating applications



Low outputs: research papers & postgrads supervised

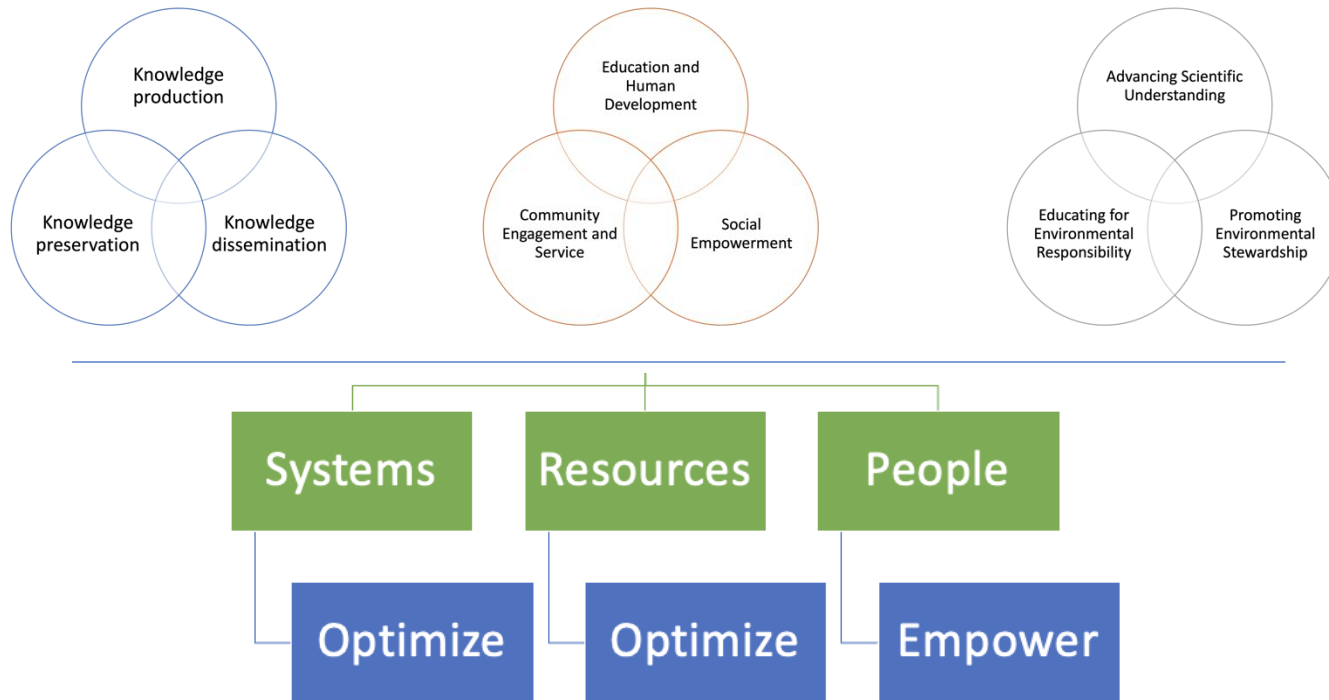


How could AI empower university staff and students for enhanced research, teaching and learning?



Knowledge

AI as an enabler





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