

The Interconnectedness and Typology of NMMU Engagement Projects

(Extracts from research CHET report prepared by Van Schalkwyk, Francois, 2014.
University Engagement as Interconnectedness).

Research questions and limitations

1. *Interconnectedness:*

How are academics negotiating the tension between engaging with those external to the academy *and* strengthening the core functions of the university?

2. *Differentiation between disciplines:*

How can we explain the observable differences in engagement strategies adopted by academics in different disciplines?

In addition to the two main questions the study also provided information on:

- *the Engagement Typology and Characteristics* of the projects per faculty and entity
 - staff responses to open questions to determine *staff views on engagement* as the third core function of the university.
- The research project *did not*:
- Assess the impact of engagement projects on communities
 - Assess the quality of engagement projects or their outputs

Notes on methodology

- Projects only (smallest unit of activity)
- Projects selected across faculties
- Structured questionnaires completed by leaders of engagement projects and follow-up meetings for clarification and input from participants
- Indicators for **articulation** and for **academic core** developed; weighed scores for each. Each project plotted according to their scores on these two dimensions

Articulation Indicators – collectively they provided a picture of the extent to which projects were linked strategically, externally and epistemologically in a manner that is both sustainable and enduring.

Academic Core Indicators- provided information on the extent to which engagement activities serve to strengthen the academic core of the university.]

Engagement Projects

Faculty	Projects	Faculty	Projects
EBEIT	27	SCIENCE	20
eNtsa	10	Innoventon	10
AMTC	8	GMMDU	5
Industrial Engineering	3	Physics	1
Info Tech	5	Zoology	2
Building	1	Stats	1
EDUCATION	7	Agriculture	1
ARTS	7	BES: Dev Studies	5
HEALTH	14		
Nursing	10		
Other	4		
TOTAL PROJECTS	80		

Engagement as (inter)connectedness

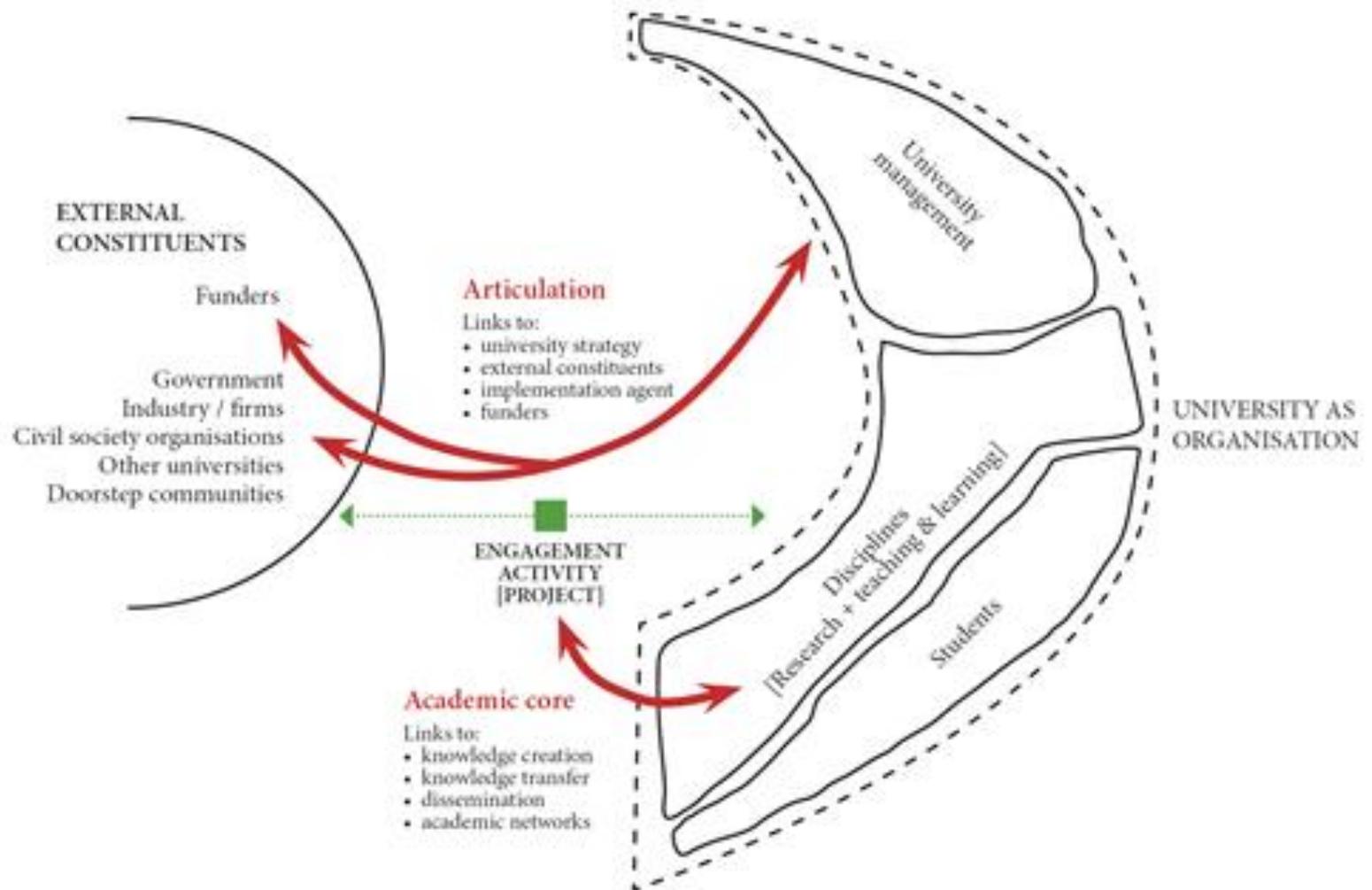
Connectedness- The relationship between engaging with communities external to the university on the one hand and strengthening the core activities T/L & R on the other.

Interconnected – Engagement activities that strengthen the academic core and that are highly articulated. They are well connected to both external and internal constituencies, and are in alignment with the policies and values of both.

Disconnected –Engagement activities that are closely linked to external constituents but that weaken the academic core and are poorly articulated

Creating the **continuum of connectedness** that extends from **interconnected** to **disconnected** provided the basis for the quantification of the engagement projects when these projects were **graphically plotted** according to both their **articulation** and **academic core scores**.

Articulation and linking to the academic core as dimension of interconnectedness



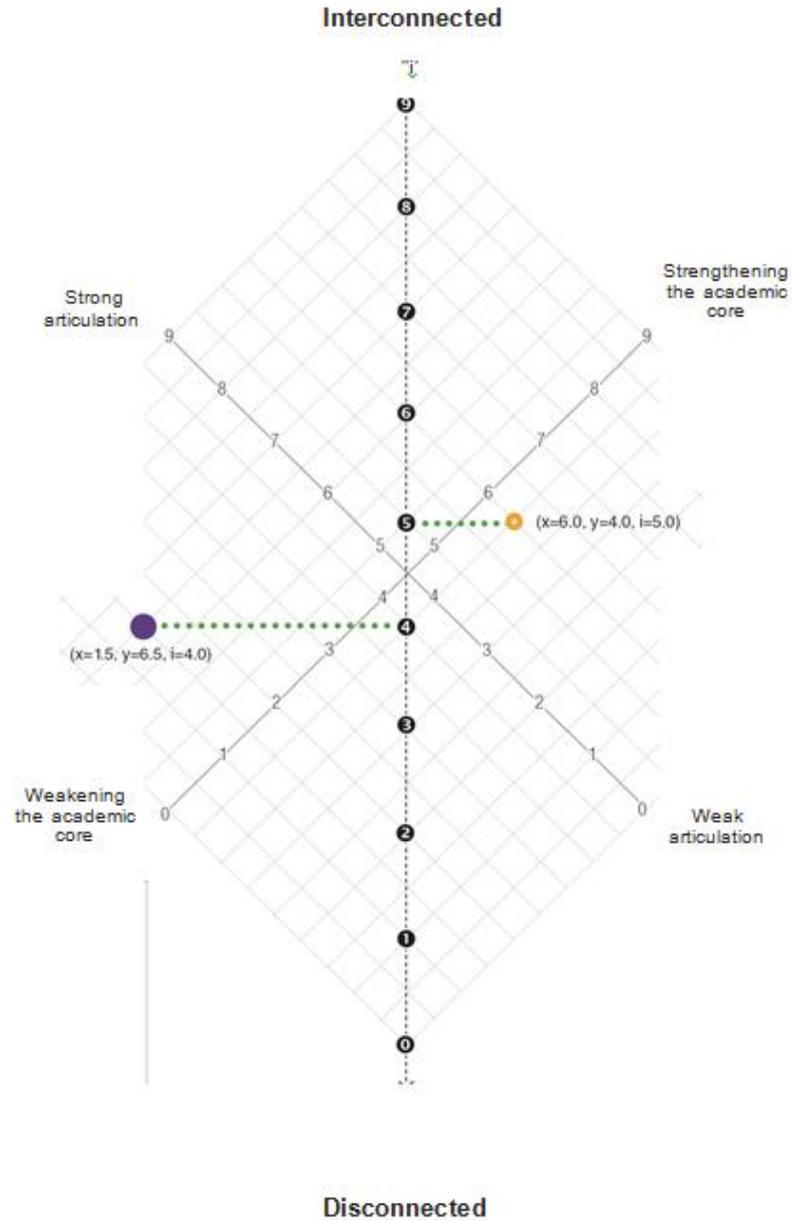
Weighted scores

	Articulation Indicators	Q	Score	Max score
A1	Alignment between project and university development objectives	A1.1 A1.2 A1.3	For each project objective in alignment with university mission/vision = 0.25	1.00
A2	Initiation/agenda-setting	A2.1	Self-initiated = 1	1.00
		A2.2	Proposal more than one author = 0.5	0.50
		A2.3	Project plan/ TOR flexible = 1	1.00
		A2.7	Advisory group and meets at least once p.a. = 0.5	0.50
A3	Links to external stakeholders (non-academic) and to implementation agencies	A2.6 A3.1.2	For each link to an external stakeholder = 0.25	1.00
		A3.2 A3.3 A3.4	Direct link to implementation agency = 2 OR Indirect link to implementation agency = 1 OR Self-implemented = 1	2.00
		A4.1	For each source of funding = 0.25	1.00
		A4.1	Long-term funding (more than 3 years) = 0.5	0.50
A4	Funding	A4.1	Renewable funding (at least one source) = 0.5	0.50

	Academic Core Indicators	Q	Score	Max score
C1	Generates new knowledge or product or data	C1.1	New knowledge or product = 1.25 OR New data = 0.5	1.25
		A1.4 C1.2.5	Publicly available = 0.25	0.25
		C2.1 C2.3.2 A1.4	Postgraduates linked to project = 0.5	0.50
C2	Dissemination	C1.2.2 C1.2.3 C1.2.4 C1.2.6 C1.2.7 C1.2.8 C1.2.9	For each publication/presentation listed = 0.25	2.00
C3a	Teaching/curriculum development	C2.1 C2.2	Changes to courses/modules = 1 OR New courses/modules/programmes = 2	2.00
C3b	Formal teaching/learning of students	C2.3.1 C2.3.2	Students involved = 0.5	0.50
		C2.4	Participation in project is course requirement = 1	1.00
		C2.5 C2.6 C2.7 C2.8	Other roles for students in project = 0.25 per role	0.50
C4	Links to academic networks	A3.1.1	Links to academics from other universities = 1	1.00

Quantifying Interconnectedness

- Interconnectedness operationalised along the two *dimensions* of **Articulation** and **Strengthening the Academic Core**
- The various aspects relating to these two dimensions were converted into a set of **8 indicators** (4 per dimension) **with a score assigned to each indicator**. Each dimension could score a maximum of 9 by adding up the scores of each of the four indicators for each dimension.
- On basis of indicator score totals for articulation and academic core **the projects were plotted on a graph** – depicting the intersection between articulation and strengthening the academic core in order a graphic representation of **the extent of interconnectedness of each project**.
- An **interconnectedness score** is shown by inserting a **third axis** which bisects the articulation/strengthening the academic core quadrants which ranges from (-9) (Disconnected) to (9) (Interconnected)
- A score for interconnectedness(plotted on third axis) was calculated by halving the sum of the articulation and academic core values for each project.



A Temporal Dimension

It should be emphasised that the research project provided a **snapshot of the projects at a specific time** and that projects or projects that were in the final stages of completion, may at the time of the study, score low in terms of strengthening the core, but have the potential of scoring high in the future as scholarly outputs are produced.

The study collected data on **existing scholarly outputs** linked to the projects-planned, in progress and unpublished outputs were not considered.

Raises the important point in relation to how the NMMU uses this engagement measurement tool: it is designed to **track the performance of projects** over time and simply not to provide a snapshot of a population of completed engagement projects.

BOX 1: OCEAN TURTLE TASK FORCE PROJECT

The Ocean Turtle Task Force Project brings together representatives from national turtle focal points in the Comoros, France, Kenya, Madagascar, Mozambique, Seychelles, South Africa and the UK. The representatives evaluate sites of potential international importance for the conservation, protection and management of sea turtles. The project aims to identify sites of particular ecological, but also socio-economic, cultural and educational value. Local conservationists meet annually for capacity-building exercises and for sharing data on the challenging topic of conserving migrating sea turtles.

NOTES ON THE PROJECT

Alignment with NMMU strategy: Links to 3 of the 4 NMMU strategies. One of the few projects to link to the strategy of NMMU being an African university. Did not link strongly to NMMU's strategy of creating a diverse range of educational opportunities.

Initiation and agenda-setting: Initiated by the United Nations Environmental Programme. Proposal multi-authored, deviations to proposal permitted and project outputs publicly available. Advisory group in place and meets annually.

Links to external constituents: Government, NGOs, industry (regional fishing industry bodies) and fishing communities.

Funding: 3 sources, all for 2 years, renewable.

Implementation: New interventions to protect sea turtles developed for the tuna fishing industry; development of technology to record and track turtle migration.

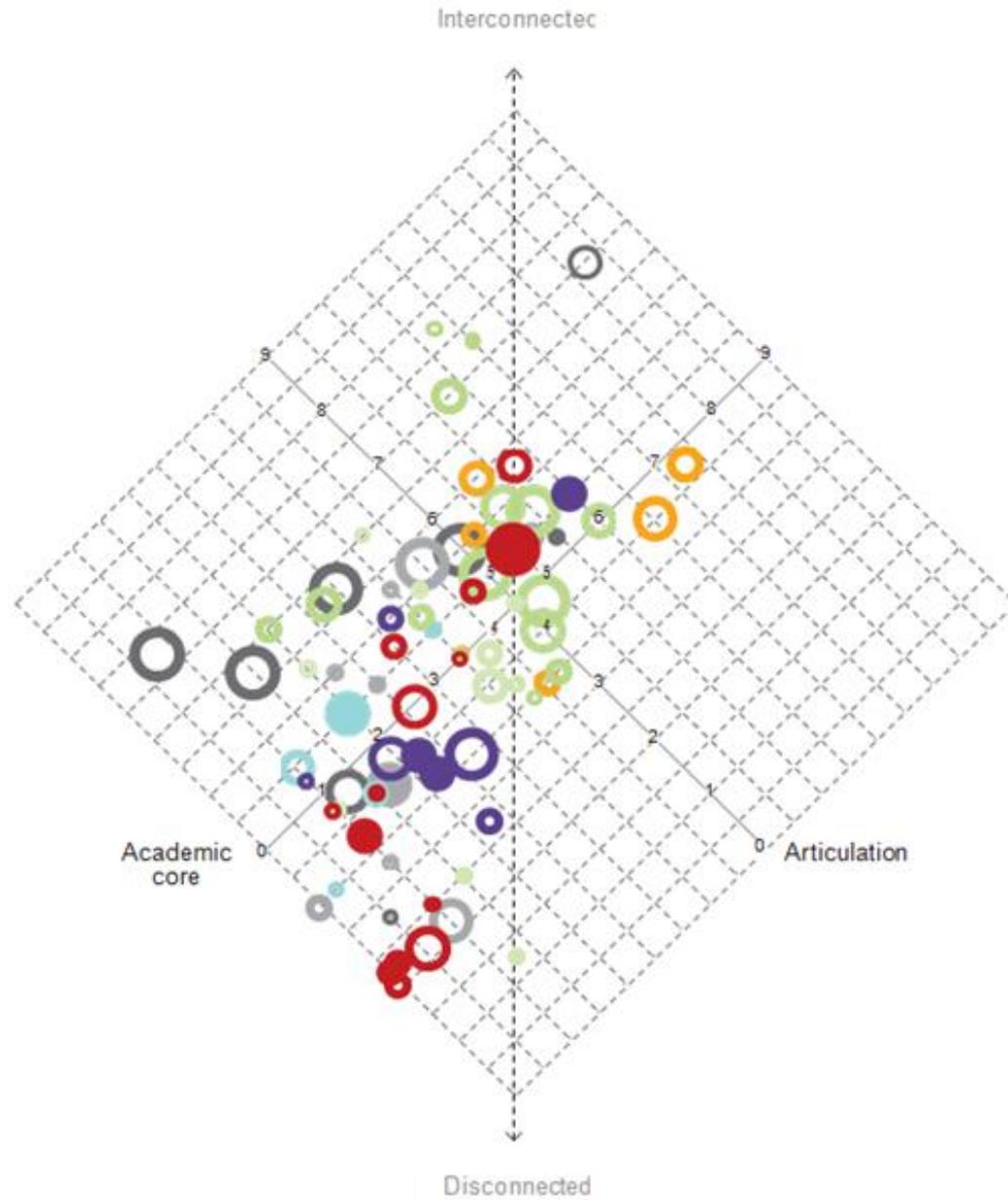
Creation and transfer of knowledge: Findings published in academic journals, as web articles and in the print media. Findings presented at academic conferences and public talks held. Project led to the introduction of a new 15-week module on marine biology. Postgraduate students participated in the project as part of the research. Undergraduates involved in the form of interns. This project was one of very few of NMMU that included a network of international academics.

Articulation Indicators	Description	Maximum score	Project score
Alignment between project and university strategic objectives	Link to specific institutional objectives	1.00	0.75
Initiation/agenda-setting	Self-initiated	1.00	0.00
	Proposal more than 1 author	0.50	0.50
	Project plan / TOR flexible	1.00	1.00
	Advisory group and meets at least once p.a.	0.50	0.50
Links to external stakeholders (non-academic) and to implementation agencies	For each link	1.00	1.00
	Direct link to implementation agency OR Indirect link OR Self-implemented	2.00	2.00
Funding	Each source of funding	1.00	0.75
	Long-term funding (> 3 years)	0.50	0.00
	Renewable funding (at least 1 source)	0.50	0.50
ARTICULATION SCORE		9.00	7.00
Academic core Indicators			
Generates new knowledge or product	New knowledge or product OR New data	1.25	1.25
	Publicly available	0.25	0.25
	PhDs	0.50	0.50
Dissemination	For each publication/presentation listed	2.00	1.50
Teaching/curriculum development	Changes to courses/modules OR New courses/modules/programmes	2.00	2.00
Formal teaching/learning of students	Students involved in project	0.50	0.50
	Participation in project is course requirement	1.00	1.00
	Other roles for students in project	0.50	0.25
Links to academic networks	Links to academics from other universities	1.00	1.00
ACADEMIC CORE SCORE		9.00	8.25

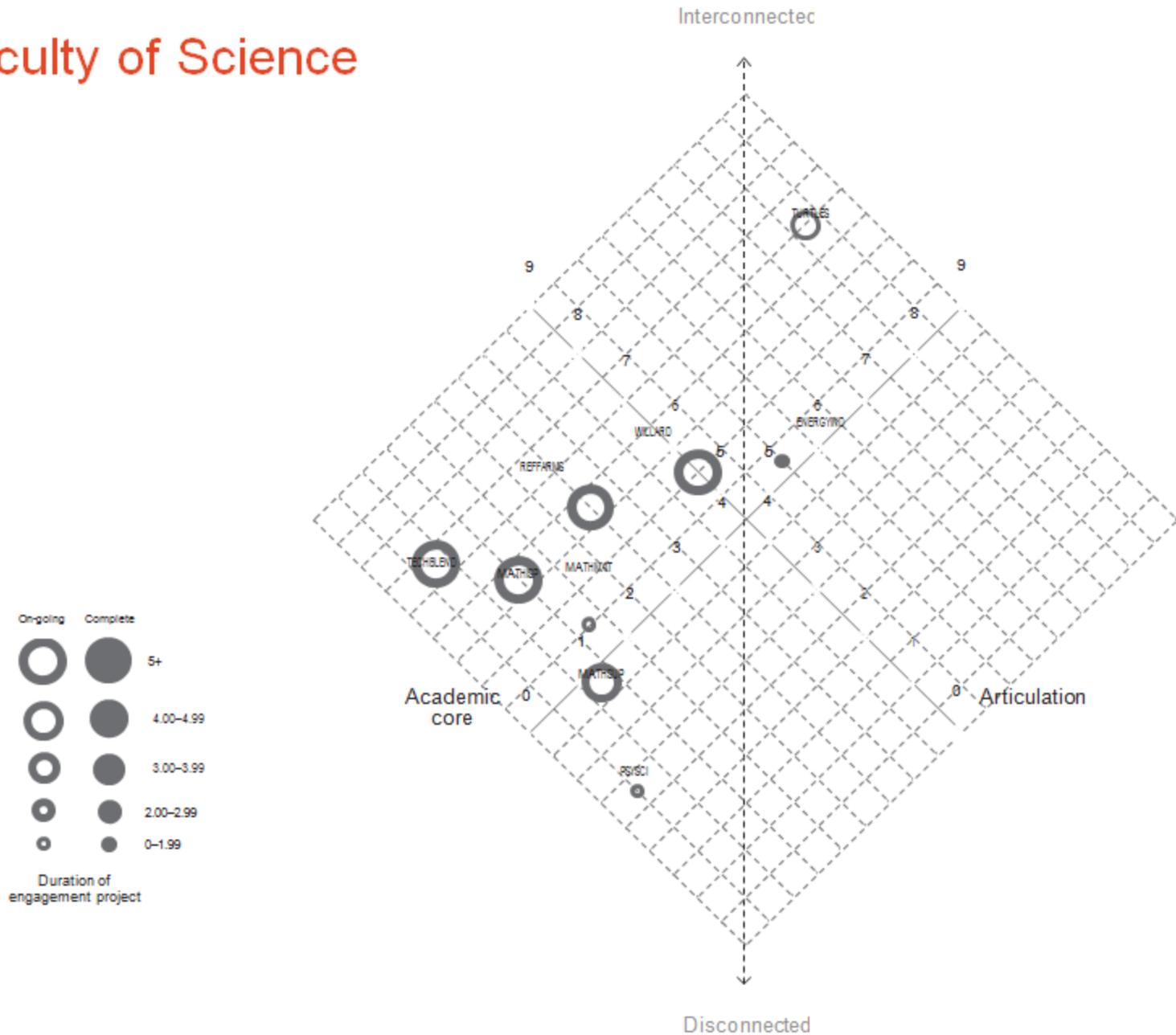
INTERCONNECTEDNESS SCORE: 7.625

NMMU

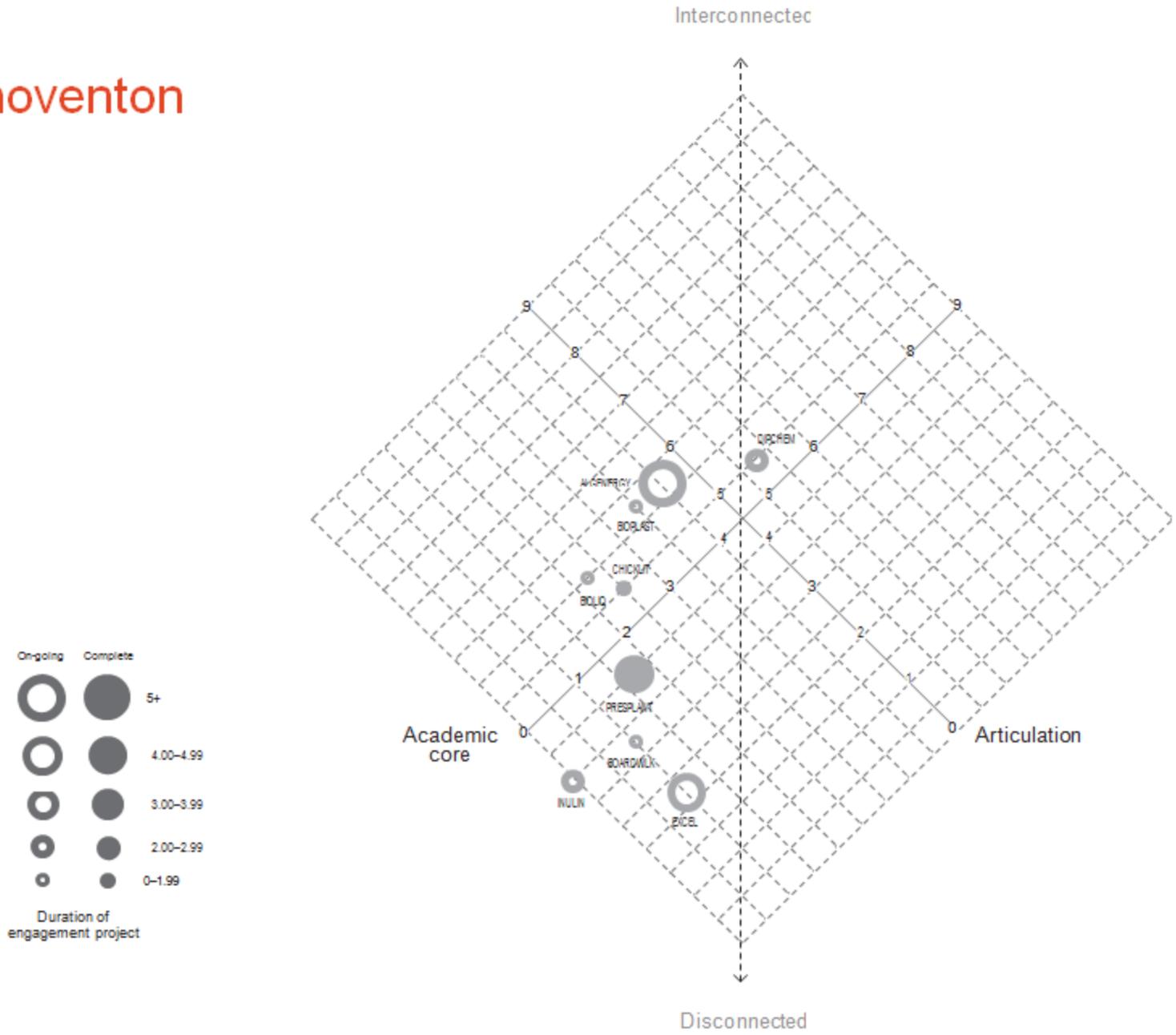
- FACULTY
- Science
 - Science: Innovention
 - Arts
 - Business and Economics
 - Engineering, BE and IT
 - Engineering: Entsa
 - Health
 - Education



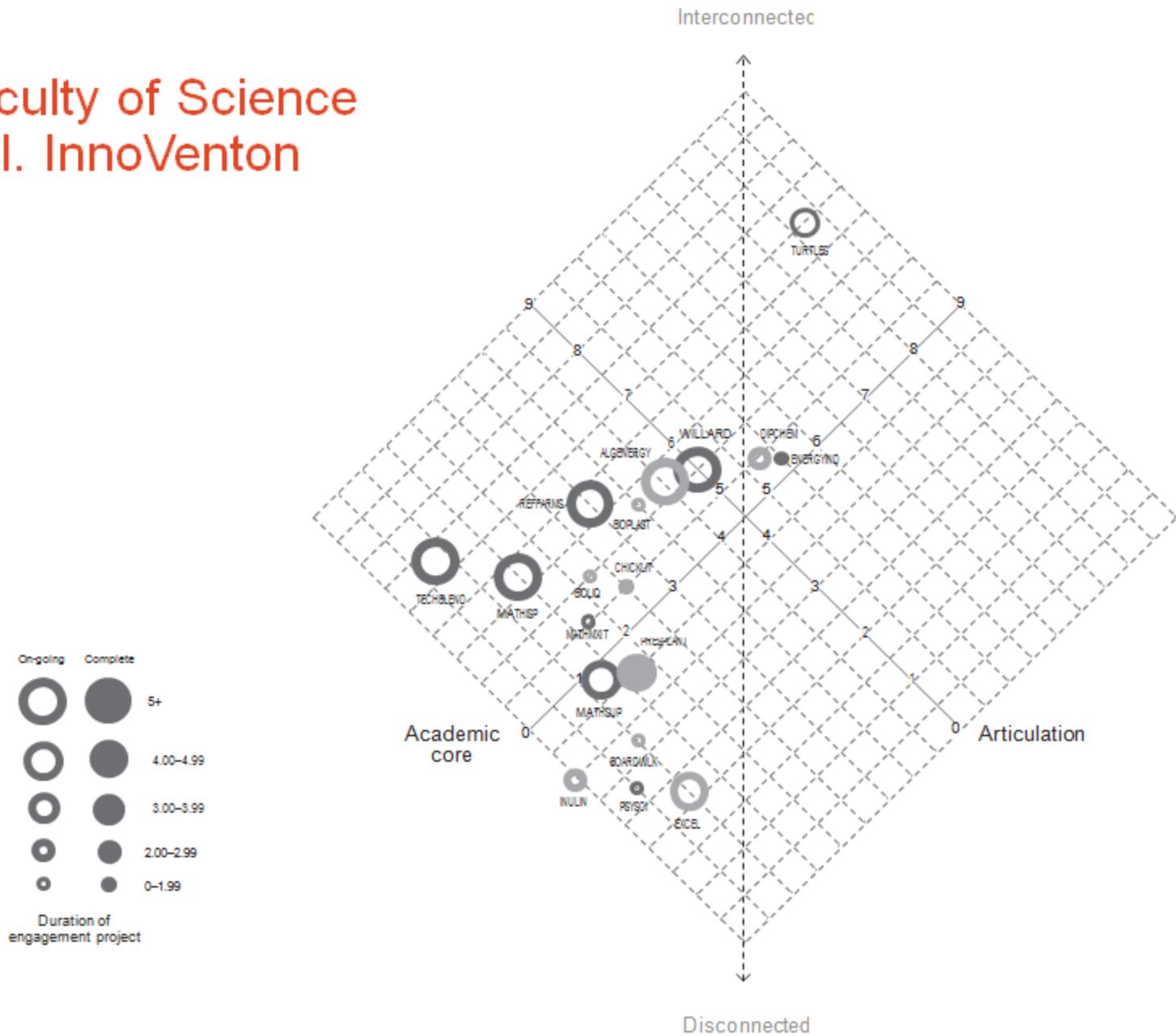
Faculty of Science



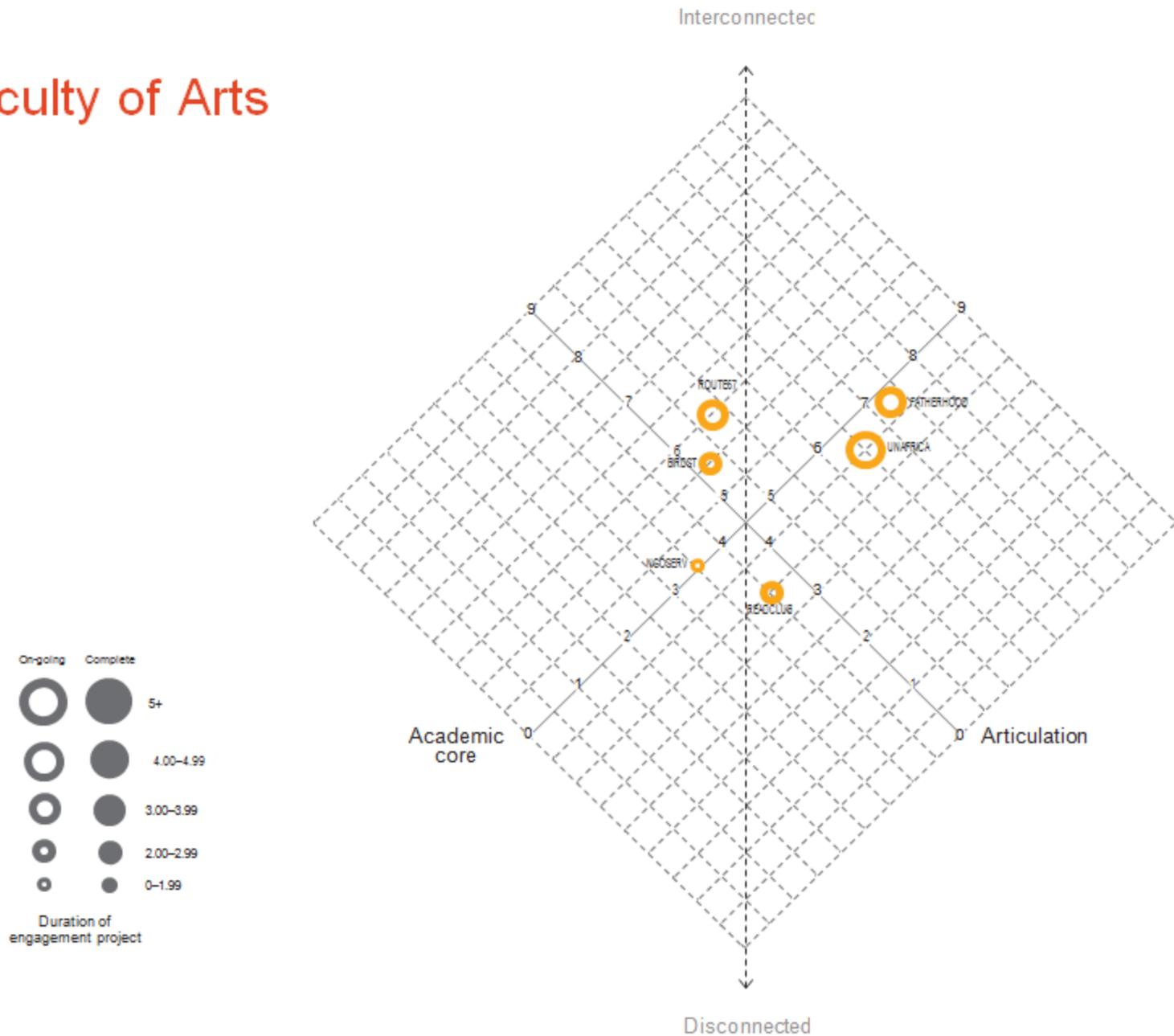
Innovention



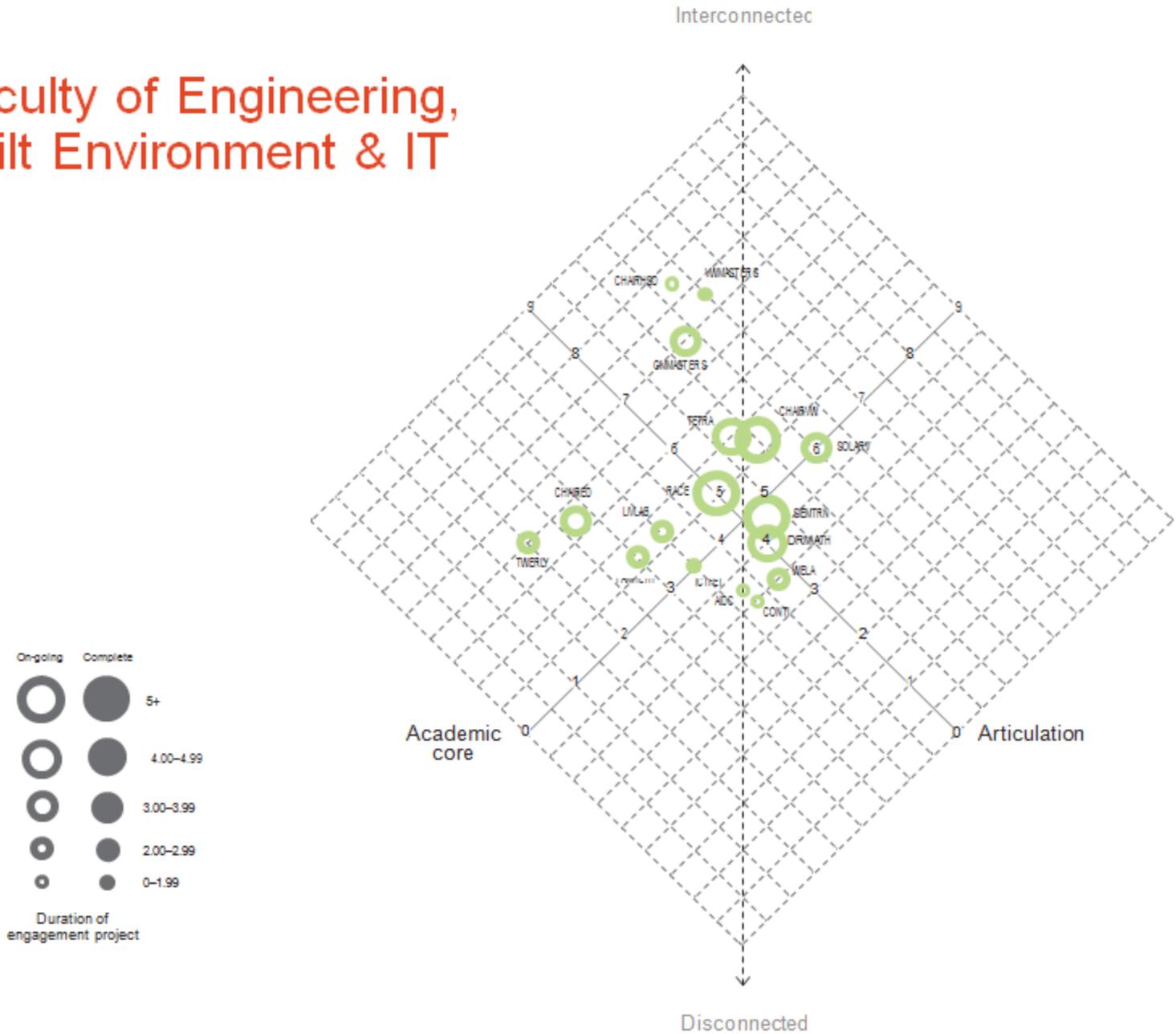
Faculty of Science incl. InnoVenton



Faculty of Arts



Faculty of Engineering, Built Environment & IT



General Observations

- Projects score higher on **articulation** than on strengthening the academic core. Many projects still in the early phases, and therefore have the potential to score more highly on the academic core indicators as these projects mature.
- The low scores can also be attributed to:
 - Knowledge created by some of the projects through contract research is not publicly available.
 - Many of the projects (24%) receive funding from industry which results in embargo's being placed on the dissemination of knowledge (Science and Engineering Faculties).
- NMMU's Africa development mission is not integrated into the university's engagement project objectives.
- Engagement is mostly with regional stakeholders (particularly government, industry and communities). No or very little engagement with other universities regionally or nationally.
- Based on the current snapshot, **Arts** and **Engineering** are doing best in managing the tension between engaging externally and strengthening the core.
- **Possible lack of awareness in the project planning phase of the potential to link activities to the academic core.**

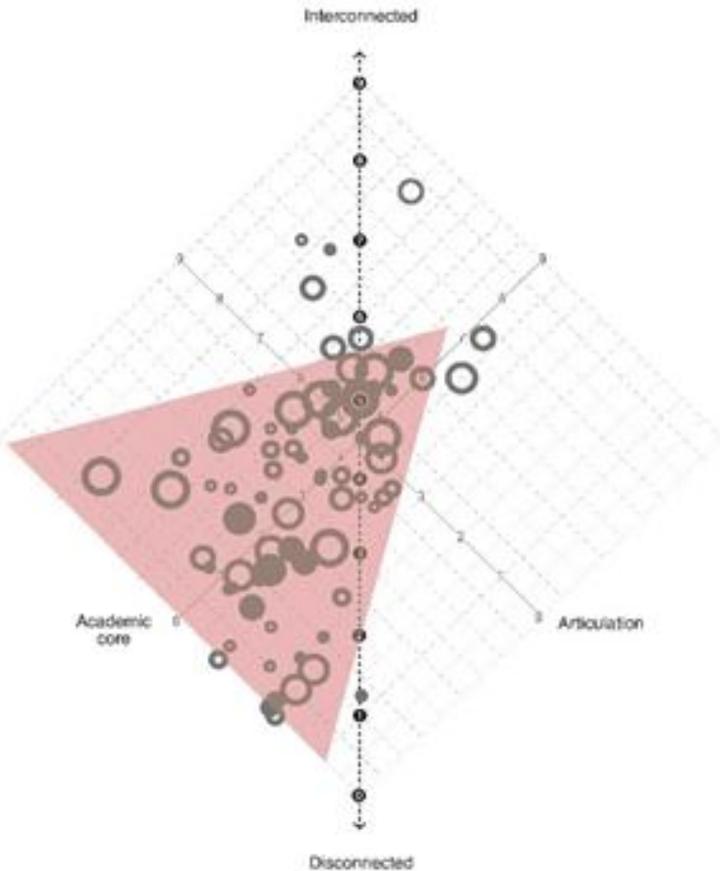
- Most prevalent sources of project funding - Government depts/agencies (40%), Industry (24%) and NMMU (13%).
- Senior academics are mainly involved with engagement activities, but projects are also often managed by additional capacity in the form of contract staff for the duration of the project.
- The use of contract staff is not likely to strengthen the academic core as they are often only employed for the duration of the project which limits their ability to disseminate findings or link the project to the faculty's teaching activities.
- Importance of how NMMU uses this engagement measurement tool: it is designed to **track the performance of projects over time** and not simply to provide a snapshot of a population of completed engagement projects.

- Certain projects may have lower academic core scores due to a **differentiated approach** in terms of engagement project co-ordination and management based on the vision and mission of a specific department or entity.
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- It is possible that some their projects may individually not score well, but the entity or department as a whole may do so when the projects are **clustered**.
- In other words the sum of the parts (**combination of projects**) need to be considered before dismissing a co-ordinated and well managed cluster of projects as not strengthening the academic core.
- Although some of the engagement projects may have scored low on contributing to the academic core, it does not mean that these projects were not making a valuable contribution to institutional, faculty and entity engagement objectives. This rationale is specifically relevant and applicable to the InnoVenton, AMTC, eNtsa and five nursing projects forming part of the study

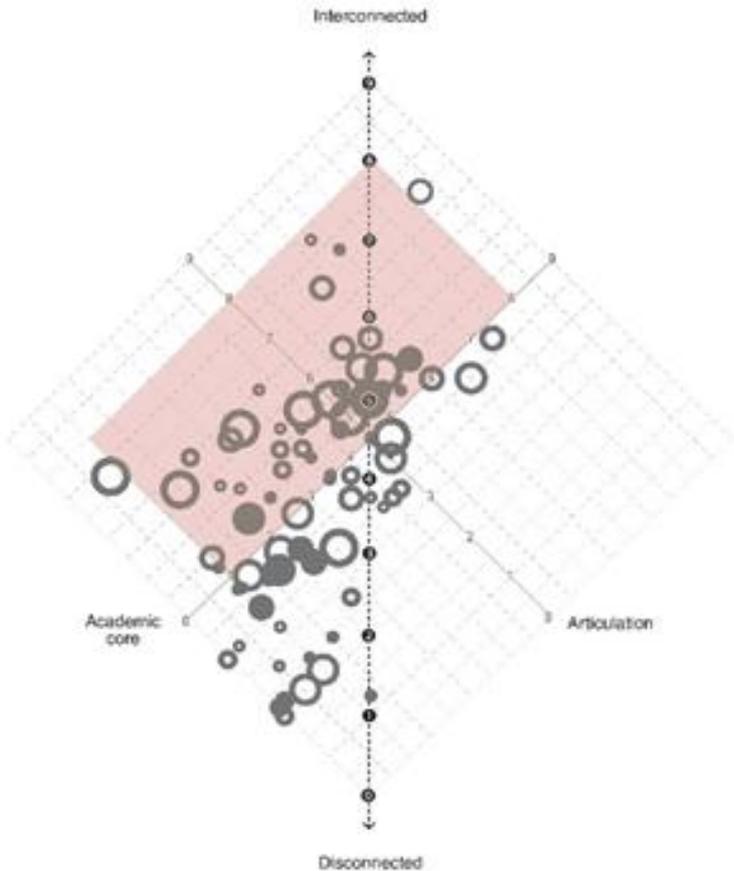
Engagement Activities: Institutional Type and Focus

- The Interconnectedness charts reveals the usefulness of the device as a visual guide to whether engagement activities are linking to teaching and learning or research or to both.
- It is apparent from the **pyramid distribution of engagement activities** that the majority of the current projects are not strengthening the academic core .As a comprehensive university with engagement activities that link to both core functions, the institution should strive towards a **more rectangular distribution** of activities. (Engagement Strategic Goals 1 & 3)

Current shape of engagement activities at NMMU



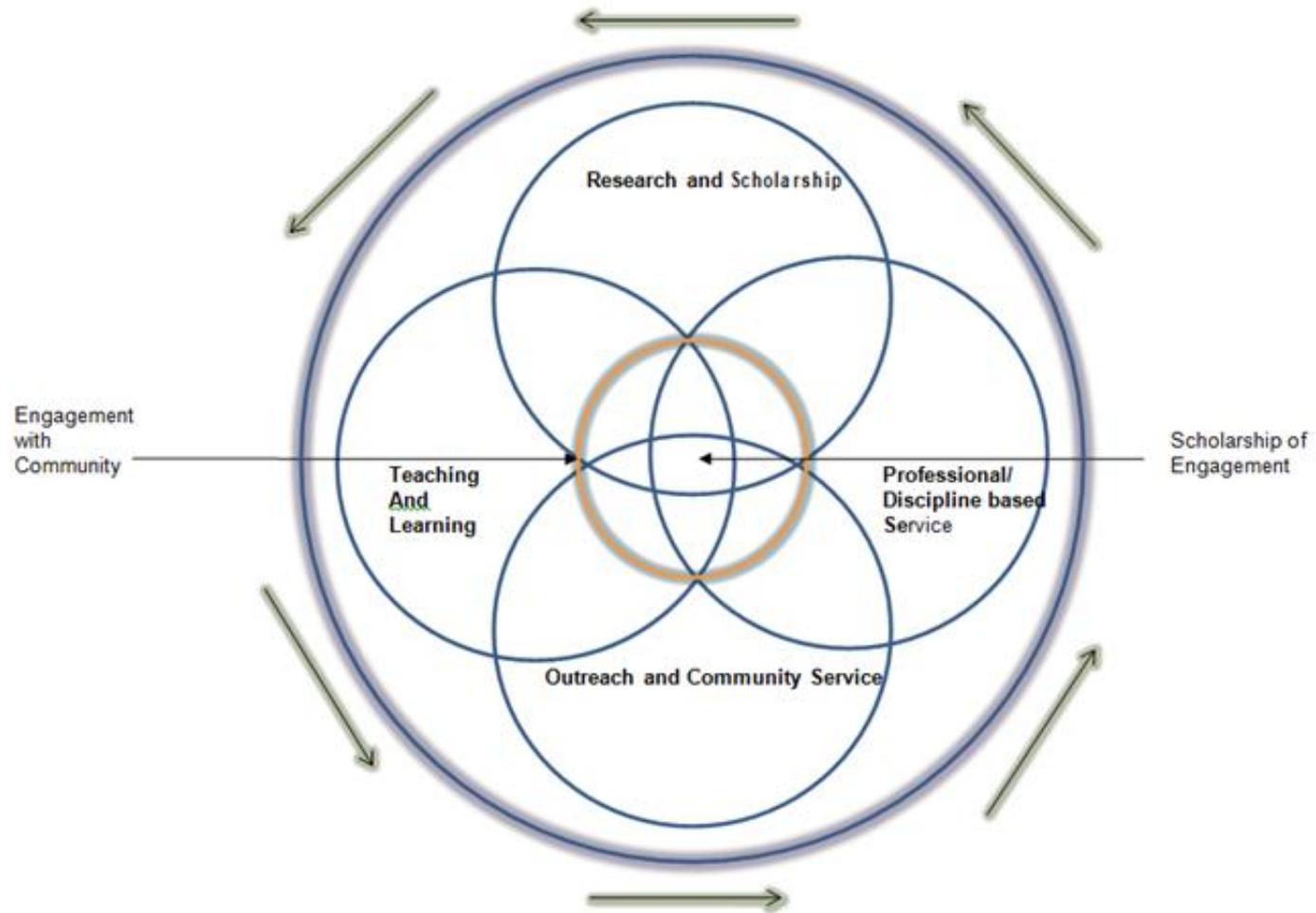
Proposed shape of engagement activities at a comprehensive university



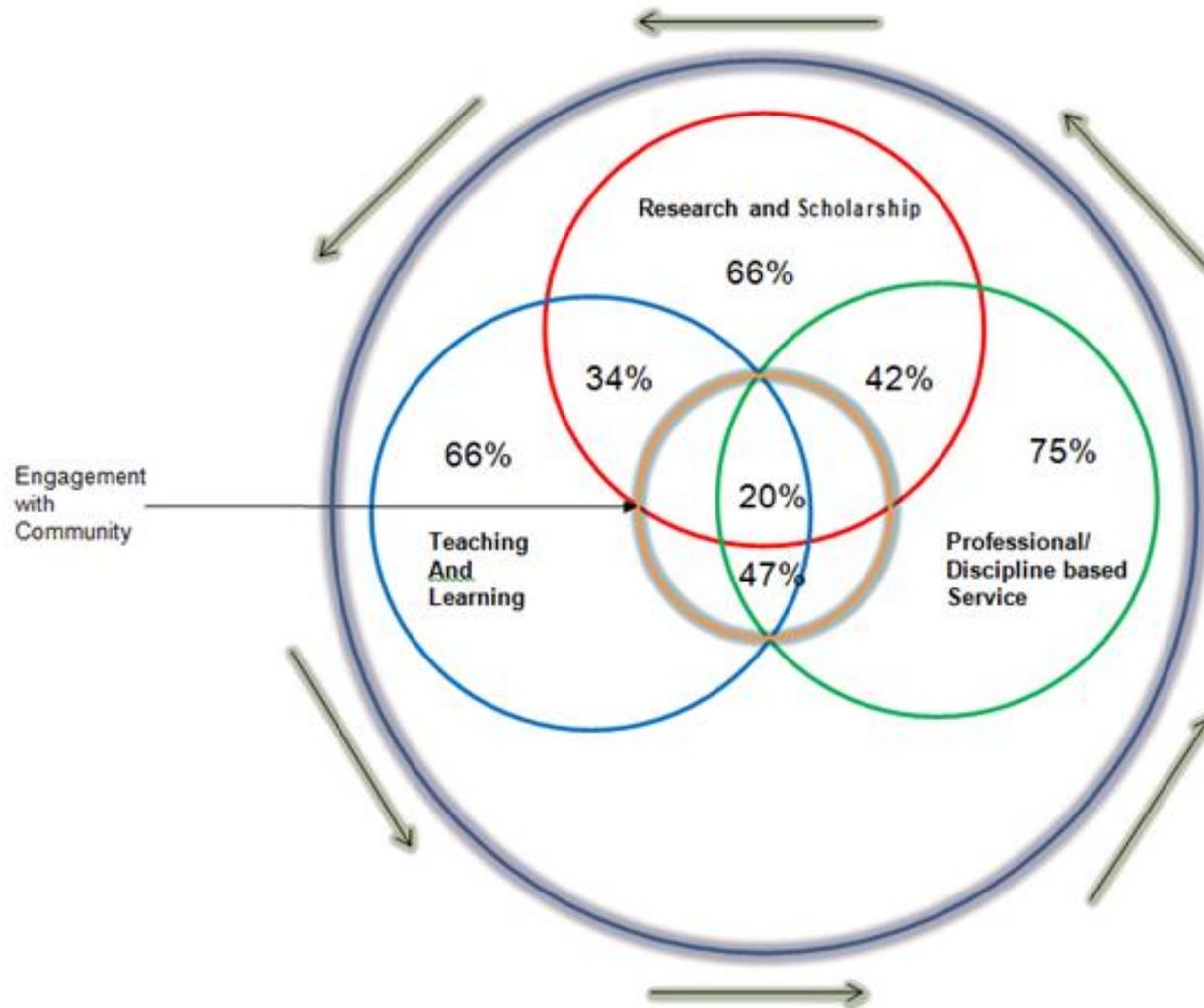
- The NMMU engagement recognition and reward criteria places emphasis on engagement activities being of scholarly nature (integration into t/l and research). One would therefore expect engagement activities that are of a scholarly nature to have an **interconnectedness score of more than 4.5.**(SG:1&3)
- The shaded area in the second figure (rectangular distribution) is suggestive rather than prescriptive. It suggests an interconnectedness score of between **2.5 and 8** - based on the understanding that at the NMMU, certain engagement activities are of an Outreach and Community Service nature and may never exhibit strong links to the core functions and will continue to be part of its engagement landscape. (SG: 4)

Engagement Typology and Characteristics

- Engagement activities occur along a **continuum** – with some projects straddling the **four categories** of the NMMU Engagement Conceptual Framework
- Staff are encouraged to **integrate the engagement categories** aimed at developing the scholarship of engagement
- Data on the **categories in which the projects fell** was collected to determine the most prevalent institutional, faculty and entity engagement typology

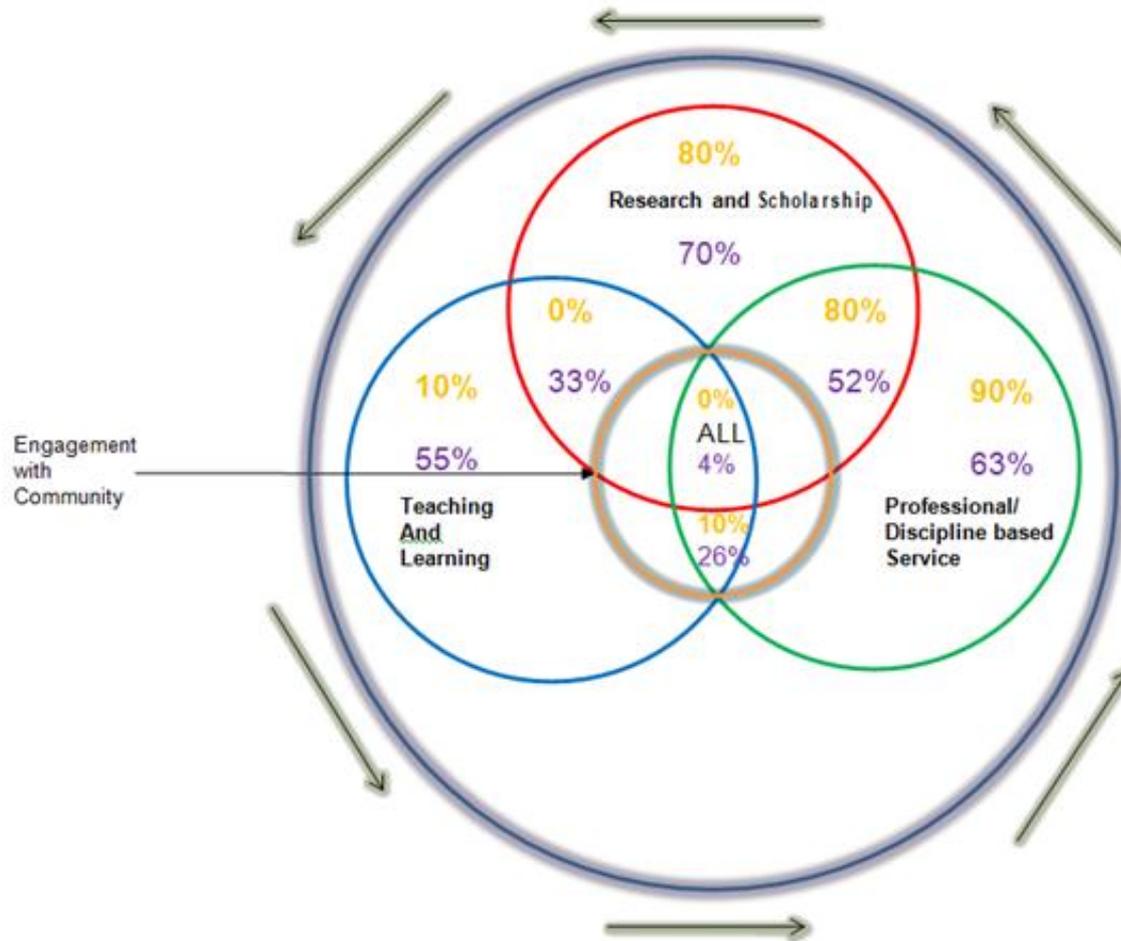


Engagement Continuum and Integration of Engagement Categories

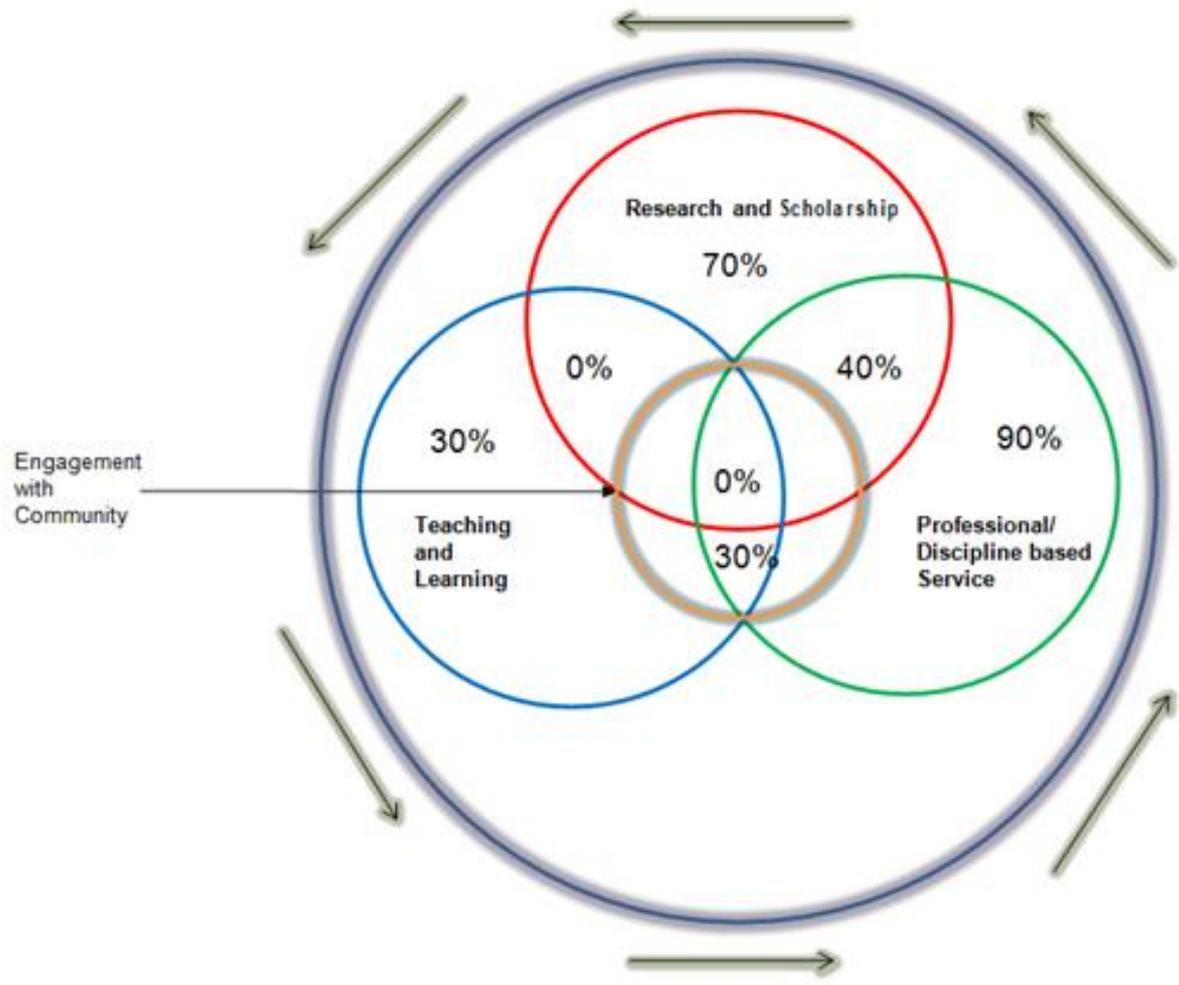


NMMU ENGAGEMENT PROJECT TYPOLOGY (77 PROJECTS)

EBEIT
ENTSA



EBEIT AND ENTSA PROJECTS



Engagement with Community



INNOVENTON PROJECTS

Responses to open questions on NMMU Engagement activities

1. What do you think the specific goals of NMMU Engagement are?

“ To enrich and add quality to teaching and Learning and Research and to provide real-life T/L and R experiences to staff and students” (43%).

2. How does the NMMU support your Engagement activities?

“ Through the provision of infrastructure, equipment, time and enabling structures (entities)” (43%)

3. What barriers exist within the NMMU which hinder Engagement activities?

“Time , the workload model does not give recognition to engagement activities and its importance is not fully understood and supported within department/faculty” (46%)

4. What are views on the future of Engagement activities at the NMMU?

“Engagement and its scholarly outputs will continue to grow in importance as it is integral to the effective offering of specific disciplines and the type of research undertaken by an engaged and comprehensive university” (56%)