‘SEEING STUDENTS AS PEOPLE IN THE WORLD’

UNIVERSITY OF THE WITWATERSRAND – SIYAPHUMELELA (WE SUCCEED)

Siyaphumelela
we succeed

UNIVERSITY OF THE
WITWATERSRAND,
JOHANNESBURG

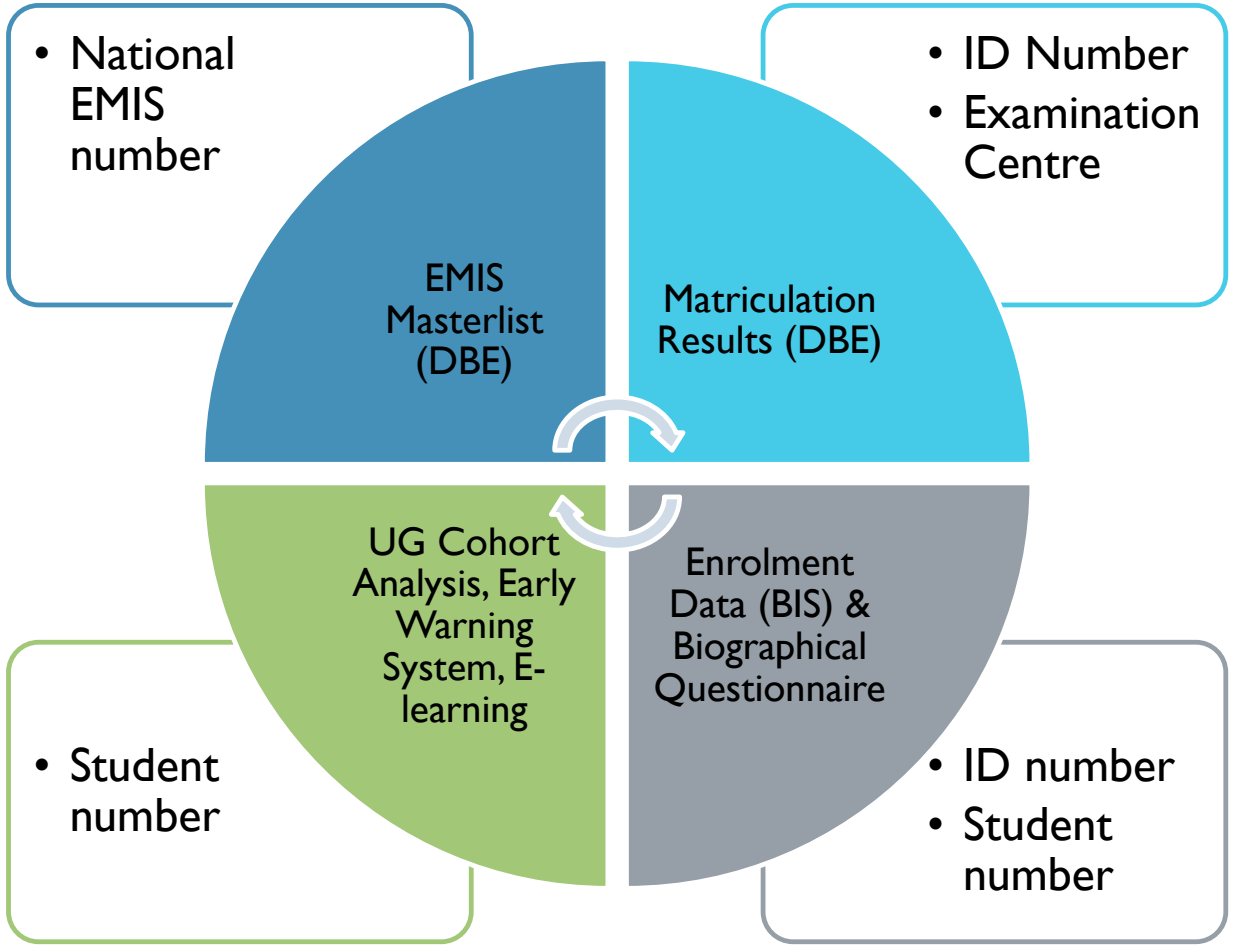
PROJECT OVERVIEW

- develop *new tools and models*,
- implement research-led interventions and gain insights into, and act upon, challenges concerning the *transition of students from high school to university*,
- and understand *throughput challenges facing underprepared students* pursuing undergraduate education

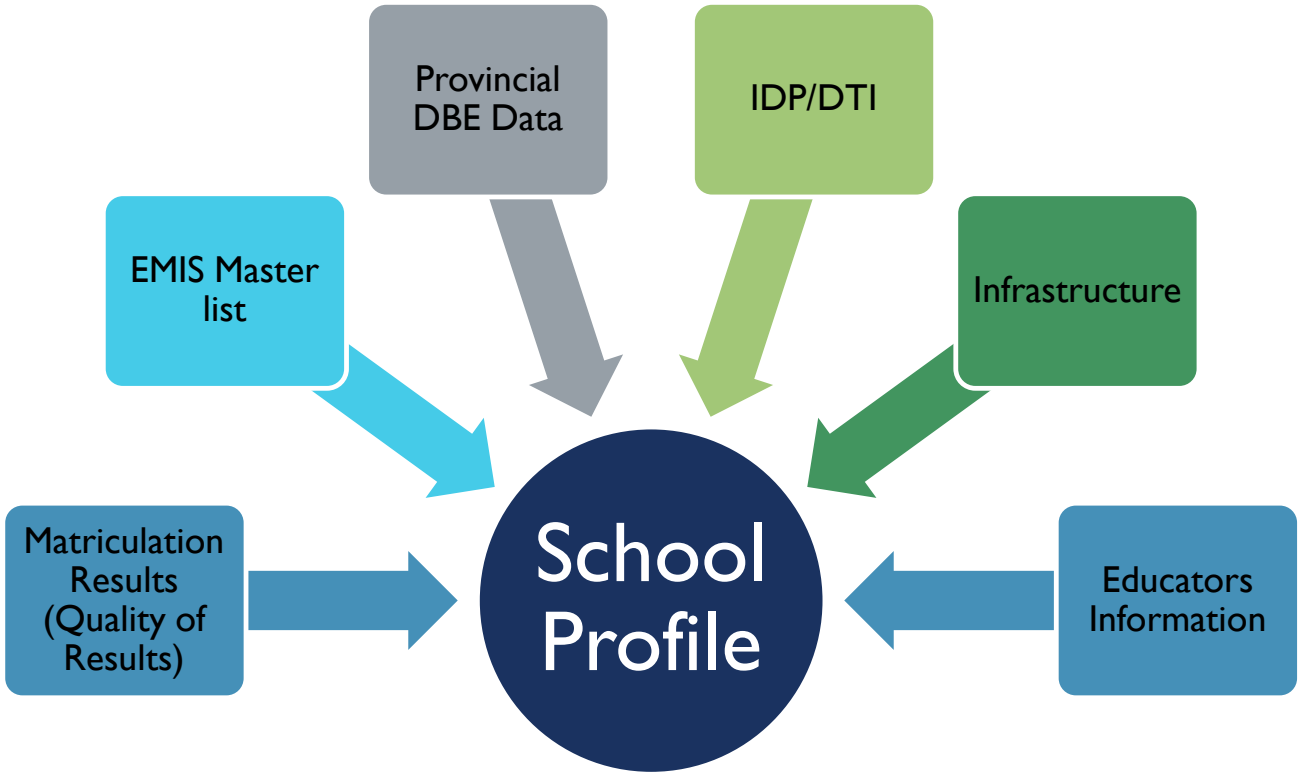
PROJECT GOALS AND OBJECTIVES

- **Area 1: Understanding university readiness among undergraduate students (systems related)**
  - **collect data on student performance and experience, and make this systemically available**
  - **institutionalise a culture of evidence-based student-support interventions across the University**
- **Area 2: Establishing integrated data on university student support programmes (data warehousing and coordination).**
  - **create data-collection platforms and systems that provide the University with comprehensive student (client) data**
- **Area 3: Institutional capacity-building on data analytics (capacity development)**
  - **develop business analytics capacity across the University**
  - **develop models to predict student success, especially at undergraduate levels**

UNDERSTANDING STUDENT SUCCESS THROUGH ANALYTICS



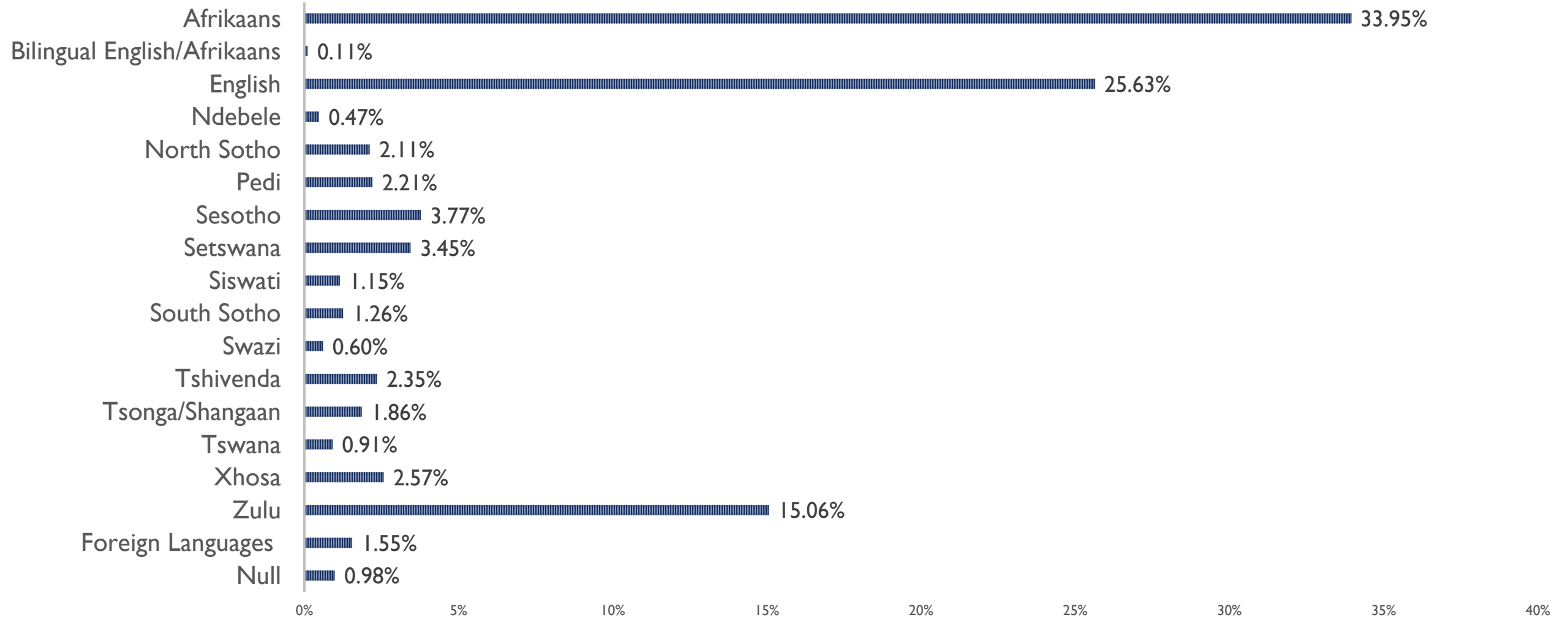
FEEDER SCHOOLS PROFILE



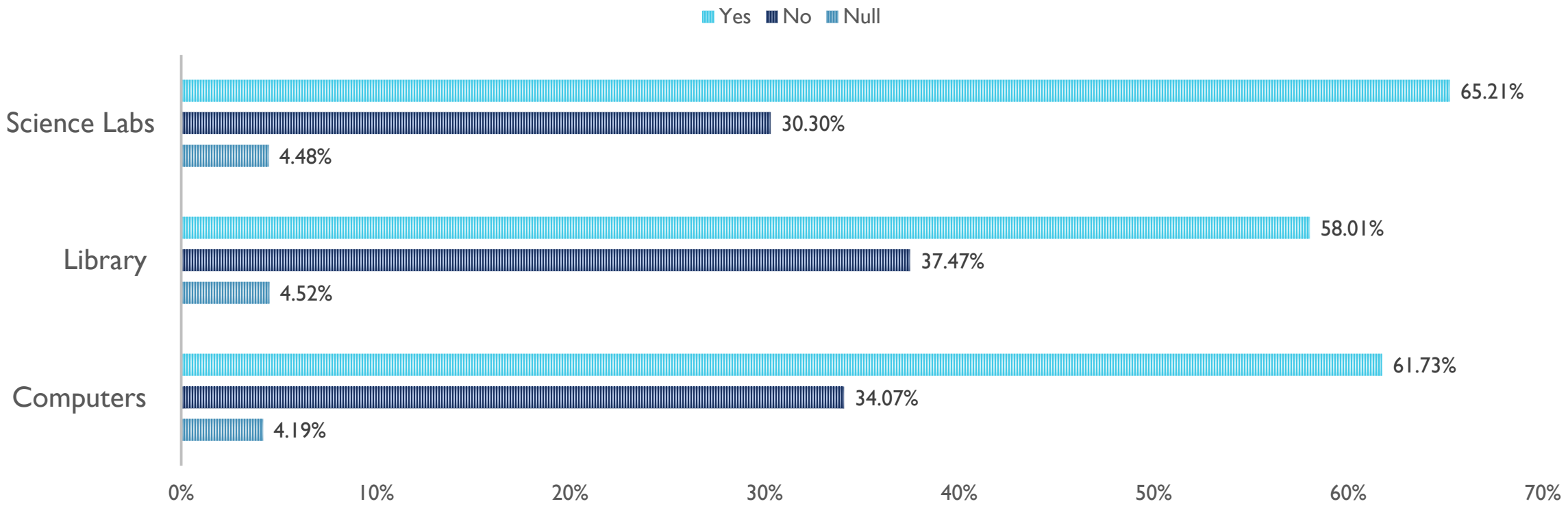
ACHIEVEMENTS

- Provide a wide range of information and analyses in support of planning and policy making including:
  - Report on financial readiness of students at Wits
  - Report on the student home and school background – academic readiness
  - Prepared the tool for the First-Year student experience at Wits, Univen and UL
- Collaboration with key functional areas of the University on analytical projects in support of decision making, including the following:
  - BIS
  - AISU
  - Research Office
  - Deans' Office

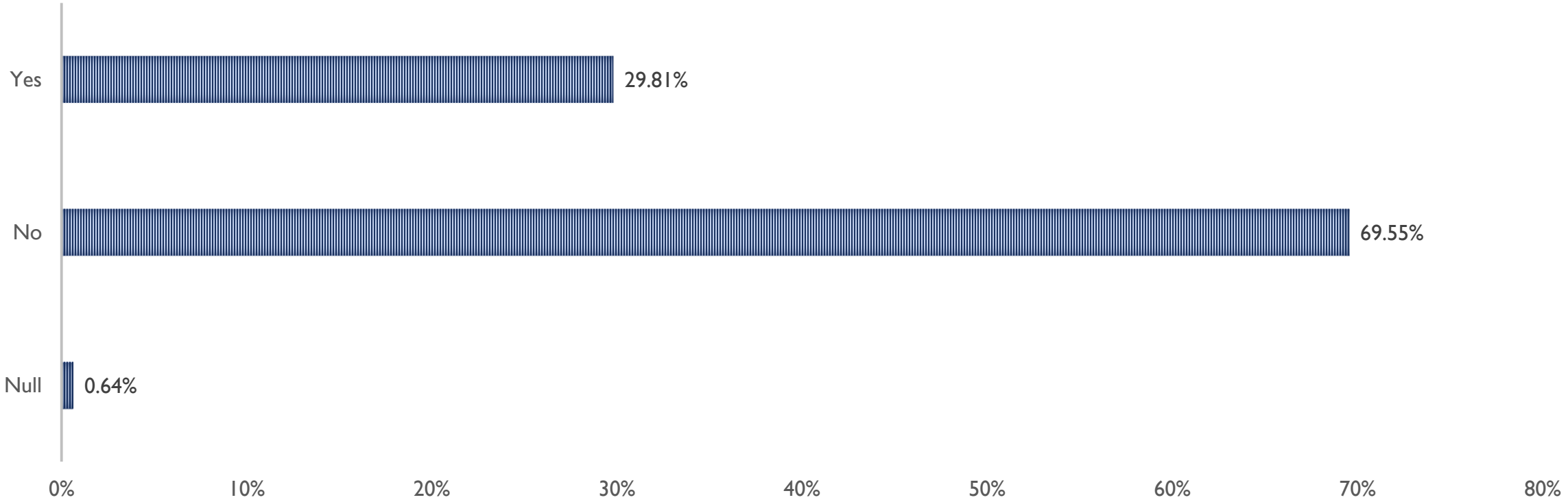
LANGUAGE AS A BARRIER



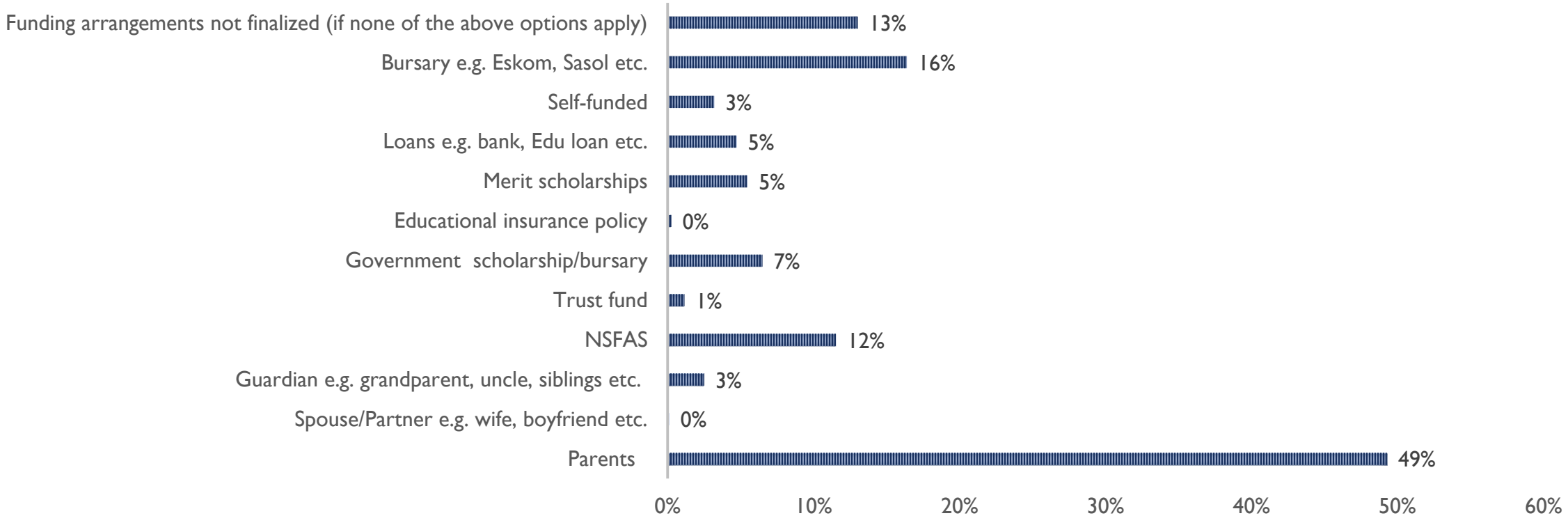
LEARNING SKILLS AS A BARRIER



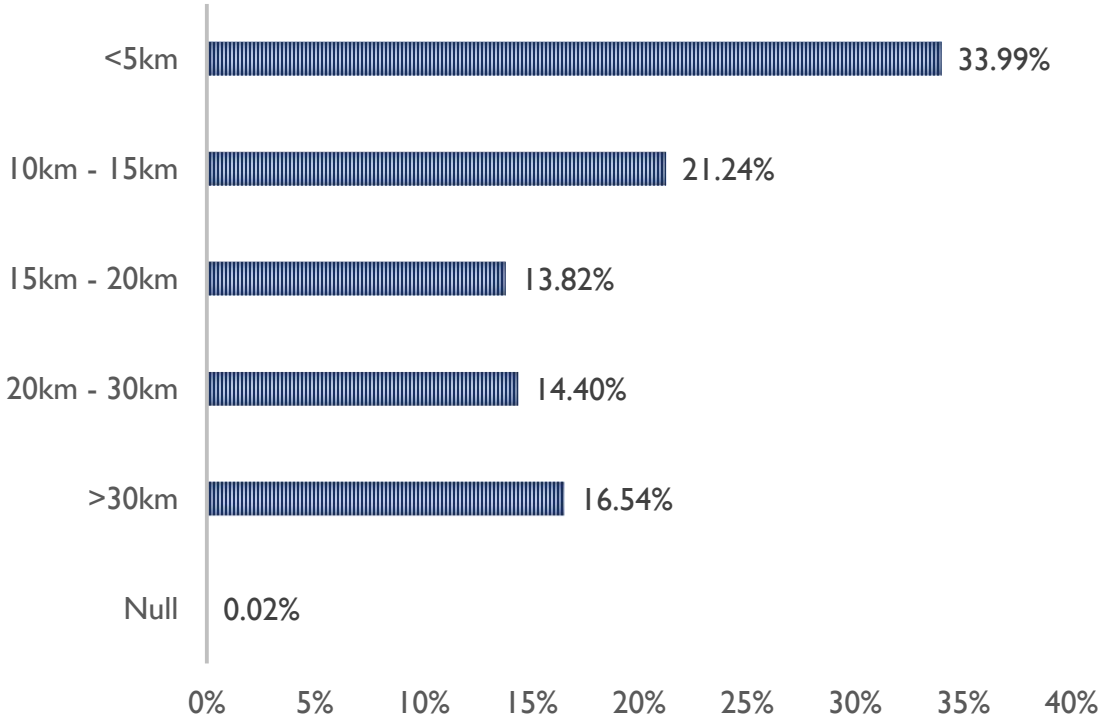
TIME AS A BARRIER – PART-TIME WORK

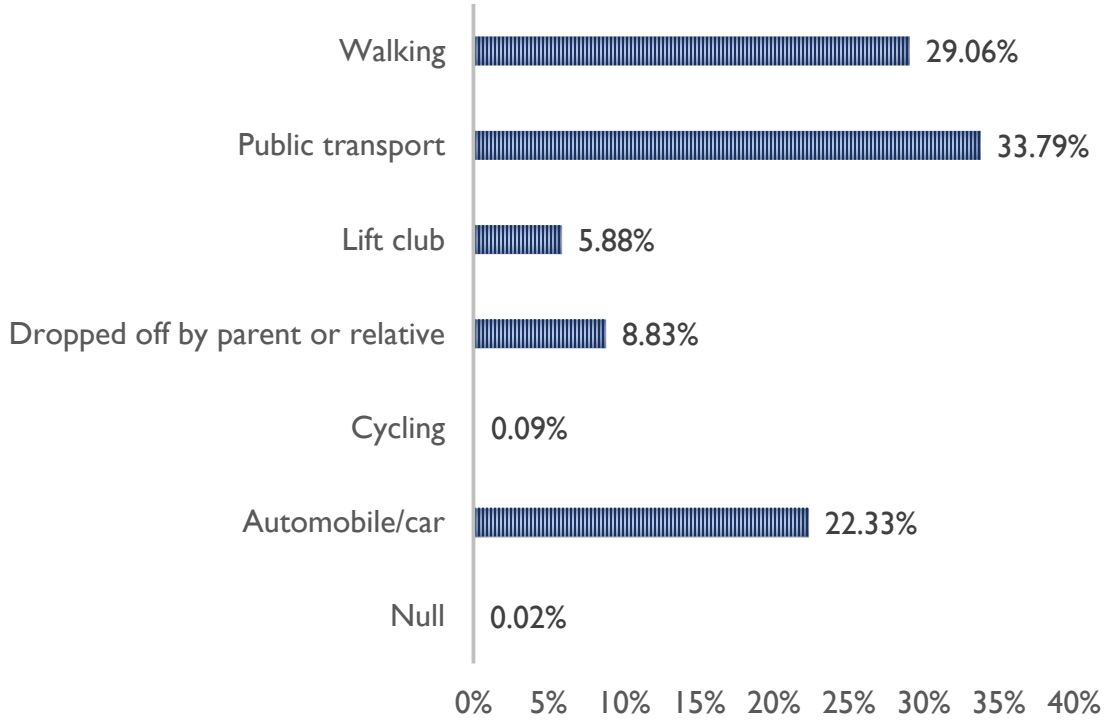


FUNDING AS A BARRIER



TIME AS A BARRIER – TRAVELLING TIME





SUMMARY


At Risk Coordinators in Faculties
Partnerships (internal & External Stakeholders)
Biographic Data & Enrolment Data
Student Success
Interventions
Early Warning System & Cohort Analysis
Dashboards

QUESTIONS

THE FUTURE OF STUDENT ANALYTICS AT WITS

AREAS THAT WILL CONTRIBUTE TO THE SUCCESS OF THE PROJECT

- Approaches to link the high school data to the existing data
- Methods to predict student preparedness, performance and success by using student background information and high school profiles
- Mathematical and statistical knowledge that underpins predictive analytics and modelling. Mathematical and statistical techniques and skills used to formulate and build 'good' tailor-made predictive models
- Methods and tools to assess and manage data quality. Methods of data cleaning and missing data treatment and imputation
- Methods used for the capturing, storage and accessibility of data. Best data architecture practices
- Fundamental principles of data integrity, consistency and ethics

MENTIONED AREAS WILL ASSIST US IN OR IMPACT ON THE PROJECT IN THE FOLLOWING WAYS:

- Identifying the Best Opportunities for the 'Early Warning System' and the Interventions Thereof
  - Accuracy in forecasting or predicting high-risk students is essential since the faculties have limited resources. It follows then that knowing which students are at the highest risk in specific courses, which allows for early intervention to prevent or mitigate the risk, benefits the students as well as the Siyaphumelela project.

- Evaluation of the Predictive Models –
  - Ensuring that the predictions are as accurate as they can possibly be. Accurate predictions allows for interventions to be evaluated per individual student's needs. This is important for resources allocation and the success of students.

MENTIONED AREAS WILL ASSIST US IN OR IMPACT ON THE PROJECT IN THE FOLLOWING WAYS CONTD.:

- Identifying the Drivers of 'At Risk Students'
  - In addition to predicting students who are at risk, most predictive models identify the root cause of the risk. These root causes are the drivers that underlie the predictions. The knowledge of these key drivers will enable the faculty 'At Risk' coordinators to channel their resources into specific drivers that most impact on the success of students.

- Profiling and Benchmarking
  - The student success and intervention data should be profiled in order to understand the relationship between the success of students and the implemented interventions. Profiling can be done per course, identified risk, faculty, applied interventions, etc. By using Tableau Software—this can achieved through standard reporting or visual reporting, which allows for ad hoc analysis and the ability to drill down to individual students.

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