

nulistice2018:

2nd Africa – EU Renewable Energy Research & Innovation Symposium (RERIS)

HOW TO TRANSLATE RESEARCH INTO PRACTICE!

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Agenda: *How to Translate Research into Practice*



- The role of research in a university
- The interaction between academia – industry – government
- The “products” of research
- The transfer of knowledge from universities
- Some examples



CENTRE FOR RENEWABLE AND SUSTAINABLE ENERGY STUDIES





The Role of Research in a University



- Train postgraduate students with research based degrees, M.Sc.'s and Ph.D.'s
- Maintain the relevance of teaching, even at the undergraduate level, as science and technology advance at a rapid pace
- Develop academics to the level of associate and full professors
- Establish regional and international networks
- Produce research outputs, theses and dissertations, conference papers, peer-reviewed journal articles and patents to prove the relevance and quality of the institution
- Generate additional income to support the academic project

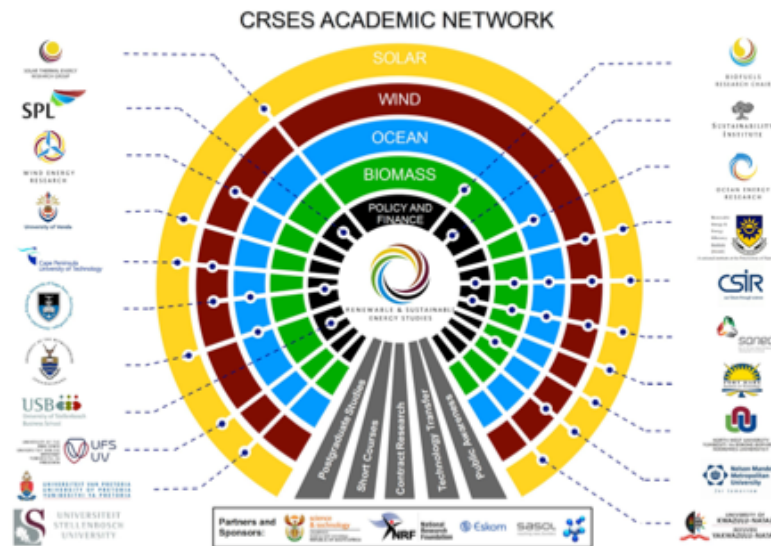




The interaction between academia – industry – government



- Ensure the relevance of the research and teaching to support the private and public sectors of the country
- Provide expertise and facilities that can not usually not be afforded by smaller, independent companies
- Support policy decisions of government departments and agencies by making expertise and capacity available to conduct studies and reviews





The “products” of research



- Most important is the **Human Capital**: well-qualified scientists and engineers with postgraduate qualifications that can support a developing economy
- Postgraduate **theses** and **dissertations**
- **Conference papers** that open up the possibility to attend conferences, network and build relationships (also to verify the relevance and quality of the research)
- **Peer-reviewed journal articles** required to establish the quality of the programme and the standing of the academics
- **Patents, methods, software and artefacts** to demonstrate and prove the innovation





The transfer of knowledge from universities to industry



- Best mechanism is through people, postgraduate students, researchers and even academic staff who leave universities to join the public and private sectors
- Seminars, short courses, “coursework” postgraduate diplomas and degrees available to employed scientists and engineers
- Patents, methods and software taken up by industry and applied in practice
- Consulting activities of academics and research staff
- Spin-off companies



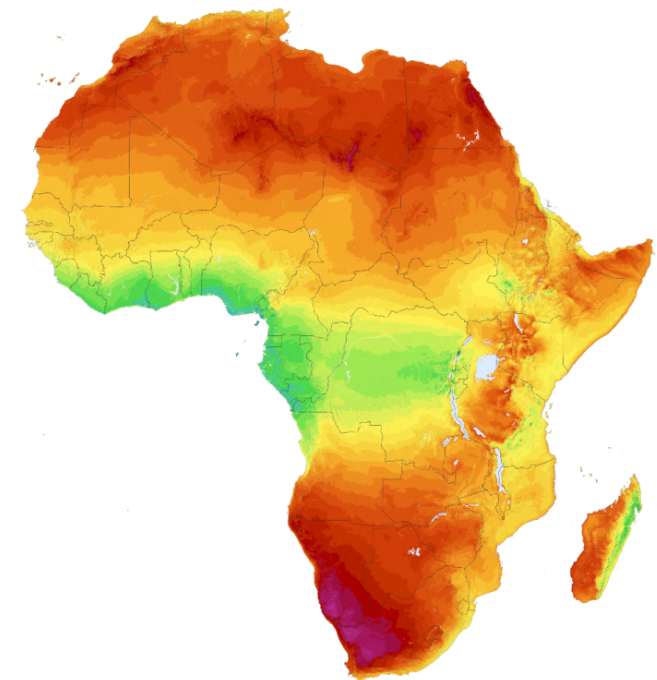


GeoSUN Africa (Pty) Ltd

Spin-off company with GeoModel Solar (SolarGIS) a key shareholder

SERVICES – anything to do with solar resource

- Site selection studies
- Supply of satellite derived data time series including P50 and P90 Typical Meteorological Year (TMY) files
- Onsite solar measurements – the specification, procurement, installation, monitoring and maintenance of these stations including data download and quality checks
- Bankable solar resource reports for utility scale solar plants (PV, CPV and CSP) plants. This is also provided for rooftop PV projects.
- Bankable generation forecast (yield) reports as required for a RE-IPPPP bid submission (PV only)
- Independent review of solar resource or yield reports (PV, CPV and CPS)
- Bankable solar data for solar plants in operation (PV, CPV and CSP)
- Monitoring services for smaller PV plants (roof or ground mounted)
- Various solar maps (poster maps, GIS or Google Earth layers)





Helio 100



Project funded by the Technology Innovation Agency of South Africa to develop a small heliostat



South African team may have solved solar puzzle even Google couldn't crack

Pioneering technology to deliver the cheapest, small-scale concentrated solar power plants in the world could revolutionise the renewable energy market





Graduates



Thank You • **Dankie** • **Enkosi**

