

THE PAST, PRESENT, AND FUTURE OF THE SURVEYING PROFESSION THROUGH THE LENS OF THE SCHOOL OF SURVEYING AND LAND STUDIES

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***Theme: Traversing the Future: An evolutionary look at the
survey industry – past, present, and future***

CONTEXT AND PURPOSE

- The surveying profession has evolved alongside PNG's journey — from exploration and land administration to technology and innovation.
- This presentation reflects on that evolution through the institutional lens of the School of Surveying and Land Studies (SSLS).
- **Objective:**
 - To illustrate how education, research, and professional engagement have shaped—and continue to shape—the profession's direction.

THE EARLY FOUNDATIONS (PAST)

- Colonial administration introduced Western surveying systems (late 1800s–1970s).
- Focus: cadastral mapping, land allocation, and infrastructure layout.
- Tools: chains, compasses, plane tables, and theodolites.
- Indigenous land tenure coexisted with new cadastral frameworks.
- Institutional roots: PNG Survey Branch training local assistants.

NATIONALIZATION AND THE BIRTH OF ACADEMIC SURVEYING

- Creation of the Department (now School) of Surveying and Land Studies at PNGUoT in 1967
- Post-Independence: localisation of surveying expertise.
- Establishment of ASPNG, and the Surveyors Board (Surveyors Act).
- Impact: SSLS became the national hub for training, research, and professional formation.

THE FIRST PNG SURVEYING GRADUATES FROM PNGUOT



From left to right: Late Mr. Allan Bale, Late Mr. Kisokau Pochapon, Late Mr. John Saliaeu, and Late Mr. Matthew Papai

Photo Courtesy: PNGUoT, History of Unitech 1965 - 2015

SCHOOL OF SURVEYING AND LAND STUDIES



Sandover Building in 1968

ROLE OF THE SCHOOL OF SURVEYING AND LAND STUDIES

- Mandate: education in surveying, land administration, valuation, and geospatial science.
- Only national institution producing graduate surveyors and land professionals.
- Supports development through research, outreach, and capacity building.

THE PROFESSION IN TRANSITION (2000–2010)

- Expansion of technology: Total Stations, GPS, GIS, digital mapping.
- Curriculum reform aligned with international standards
- Emergence of private firms in mining, oil and gas, and infrastructure.
- PNG94 datum adopted for global compatibility.
Now we have PNG2020 datum currently in line for gazettal next year.
- SSLS integrated GIS and remote sensing in curriculum.

THE CONTEMPORARY LANDSCAPE (2010S–PRESENT)

- Technologies: UAVs, LiDAR, GNSS, BIM, 3D scanning.
- Digital cadastral databases and real-time mapping.
- Legislation such as the Strata Titles Act demands spatial expertise.
- SLS research focuses on land reform, digital cadastre, and strata systems.

THE SCHOOL'S EXPANDING HORIZON

- Beyond measurement: SSLS leads in education of the landed profession, land administration, valuation, geospatial planning, and environmental monitoring.
- Partnerships with DLPP, MRA, ASPNG, PGSC, and FIG.
- Ongoing initiatives: joint research, staff exchanges, and digital land reform.

FUTURE DIRECTIONS

- Embrace emerging technologies - Integration of AI, automation, and 3D visualization in spatial analysis.
- Ethical data governance and customary land integration.
- Surveyors as decision-makers in sustainable land management and climate resilience.
- SSLS Vision: 'To be a leading regional centre of excellence in surveying, geospatial sciences, and land studies for sustainable national development.'

CHALLENGES AND OPPORTUNITIES

- Challenges: limited resources for technology, need for professional upskilling, balancing customary and formal systems.
- Opportunities: digital cadastre transformation, regional collaboration, innovation in education;
- Embracing emerging technology in survey and GIS

KEY MILESTONES OF THE SCHOOL

- 1970s – Founding of Department at PNGUoT: local training and capacity building.
- 1970s – First national graduates : professional identity established.
- 1990s – Surveyors Act and ASPNG growth: regulation and ethics.
- 2000s – GIS integration and modernization: global alignment.
- 2010s–Now – Research & partnerships; Benchmarking and accreditation of academic programs to international standards; actively engaging in land policy and development reforms in PNG

CURRENT – SURVEYING STUDENTS 2025



CONCLUSION

- “Through its commitment to excellence in education, research, and service, the School of Surveying and Land Studies remains the cornerstone of the profession’s past, the anchor of its present, and the gateway to its future.”

– Dr. Andrew Pai