Looking astern to chart our way forward

Emily Tidey

Te Kura Kairūri, Te Whare Wānaga o Otāgo, Aotearoa
National School of Surveying, University of Otago, New Zealand
Tuia 250

• “In 2019, Aotearoa New Zealand will acknowledge 250 years since the first onshore meetings between Māori and Europeans. Tuia – Encounters 250 (Tuia 250) is the national commemoration that recognises this milestone in our history.” (Ministry for Culture and Heritage)

• @ Otago: “Tuia: 250 years of navigation, map making and belonging.” Considering the development of hydrography, nautical charting and hydrographers over the last 250 years in New Zealand.
Tuia 250 projects

• People

• Technology

• Hydrographic investigations elsewhere...
Tuia 250 project findings – people

• Sent to S+SNZ, AHS members and contacts.
• 51 responses over the month THANK YOU!
  • 43 male, 8 female
• 82% NZ European, 2% Māori, 2% Samoan, 16% other
• Where have you done hydrographic surveying:
  • 76% in NZ
  • 86% overseas
• 37% see themselves on a continuum from early explorer/ surveyors like Cook or Tupaia (“same thing” is being done with newer technology).
Tuia 250 project findings – people

• Range of experiences locally and internationally

• Best parts:
  • Sea, places, seeing, commute, office, money, different

• Hardest bits:
  • Away, family

• Freedoms in project design, measurements, reporting

• Wide variety of tools used:
  • 51% used a leadline
  • 60% collected data in “unsurveyed area”

Hydrography as a profession:
Hydrographers Questionnaire – the 3 biggest challenges faced by hydrography today
Tuia 250 project findings – technology

• Data at richer densities, increasingly higher accuracies and in more environments (deeper and shallower)

• Charting
  • Not using all of this data
  • Change from exploration to risk-based

• Support of science, environmental and engineering

• Growth in autonomy
Charting our way forward – Insights

- Technology change
- Experiences, methods and procedures
- Growth in type of operations:
  - Port Management and Coastal Engineering
  - Inland Waters
  - Environmental and Oceanographic
  - Scientific
  - UN Development Goal 14: Life Below Water
  - Nippon Foundation GEBCO Seabed 2030 Project
- 'Smart Surveyors'
  - Link land and sea
  - Automation challenges
  - Work on isolation and mental health of surveyors
- Public understanding
Charting our way forward - Representation

- Tuia 250 different to previous commemorations
- Ethnicity
- Gender
- Education/training
- Age
- Public understanding
Special Edition of the NZ Surveyor Journal

• For those interested in the full text of the Tuia 250 papers referenced here, an online copy of the Special Edition of the New Zealand Surveyor journal 2019 is available at:
  https://www.surveyspatialnz.org/members/Publications/nz_surveyor_journal

Cook: Our Professional Ancestor - Tidey, E. J., Jurgens, K. M., & Morrison, J-L. B.

Charting Our History - Tidey, E. J., Morrison, J-L. B., & Jurgens, K. M.
THANK YOU

- **Generous chart donation:** Personal donation from Ron Tyson (of NZ Ocean Technology Ltd)

- **Amazing student sponsorship and support:** Australasian Hydrographic Society (AHS)

- **Digital chart records and multibeam:** LINZ (particularly James Ford)

- **Library materials and support:** Karen Craw from the Hocken Library

- **Education and research software licensing:** ESRI ArcGIS