2019 – IHO NF Alumni Seminar

* Provide input for the review of the chart project
* Consideration of the way ahead

(TK / TK / TTK DG / L&G / Dear F & C)

1. Engaging Story
	* In NZ this year, Tuia-Encounters 250 commemorates 250yrs of the 1st onshore meeting in 1769 between Maori (tangata whenua) and Pakeha (Europeans). Specifically the arrival of Capt James Cook and the voyaging heritage of the Pacific people that led to the settlement of Aotearoa NZ. Many years before that:
	* Skilled feast of navigation and cartography
		+ Polynesian stick charts
		+ Charts of Captain Cook
	* Produced in 1770 – Cooks circumnavigation of NZ
	* Still in use 1950’s “Cook’s legacy” a legacy to aspire to for us all
	* Foundation of our modern nautical chart production to this day and the subject of which we are gathered her today to discuss.
2. Purpose of my speech – I wish to share with you:
	* Some of the challenges we face in society and across the IHO and our global maritime community;
	* How we are responding to these challenges in NZ and across the SW Pacific region;
	* Introduce you to the new IBSC Standards framework and the new S-5B Standard for nautical cartographers – at the core of the future CHART project, delivered by the UKHO.
3. Challenges – future of paper chart?
	* Society
		+ Climate change
		+ SLR
		+ Natural hazards
	* Technology
		+ Data volumes (Tonga 30tb)
		+ Processing AI and ML
		+ Management - AWS
		+ Sensor collection – sensor navigation
	* Standards
		+ S-100 era – D1DC
		+ S-10x products
	* E-navigation
		+ Autonomous vessles
		+ Protection of environment
	* SW Pacific Region
		+ Maritime safety SOLAS
		+ Trade and cruise tourism
	* Climate change (+SLR)
		+ Modelling – prediction and adaptation
		+ Natural disaster – cyclone
	* Declining budget
		+ More with less
4. Responding
	* LINZ – Mapping NZ 2025 programme to answer the “where” questions. Climate change + SLR + hazards. Seamless mapping. Baseline data and products model across land and sea
		+ NZVD2016
		+ JLAS – NIWA
		+ Topo lidar
		+ Coastal mapping
		+ GNSS tide stations
* S-100 era / e-navigation
	+ - hdENC – Napier prototype
		- Project Janus – systems, processes, automation, single source database, agnostic
* SWP – MFAT NZ Aid Programme (donor) – PRNI: Tonga, Niue, Cook Islands, Tokelau, Samoa (NZ5 – PCA)
	+ - SDB/ ALB/ MBES (+UKHO CME programme)
		- Data from ridge to reef and beyond (IHO + SWPHC CB strategy + Partner + Donor)
	+ LINZ/ MDC Partnership
		- 70yrs – Cook 1770 Queen Charlotte/Totoranu Ship Cove/Meretoto
		- $ win win
		- Safety of navigation + marine science – traditional products and marine habitiat
		- More activities and outcomes
		- Aquaculture (blue economy)
	+ LINZ – NZ MG WG
		- Facilitating MSDI
		- Open, accessible, usable
1. IBSC Standards Framework
	* To adapt to these new challenges, methodologies, technologies and software a new standards framework was introduced. Programmes such as the CHART project build capability whist adhering to international standards and aim for best practice. The new S-5B Standard introduces subjects from the practical level for nautical cartographers and contains the fundamental cartographic principles to meet the needs of CB training programmes today and in the future
	* Looking to the future, the standards have now been updated to reflect and incorporate the new trends, technologies and expectations of the profession., as required by a more diverse, demanding and knowledgeable stakeholder community.
		+ 10 courses
		+ 10 years
		+ Future?
2. Call to action
	* So, finally, thinking about Tuia-Encounters 250 and our changing context and the challenges we face…
	* Q. What is your legacy going to be?
		+ I encourage you to look and think in a different way.
		+ To be energised and collaborative as we share our lessons learnt to nagivate our way ahead

(No R / TK / TK / TTK)