



Mapping (some of) the Gaps through Philanthropy

...and telling the story

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5 YEARS OF SCIENCE ON FALKOR



*Falkor has traveled a distance greater than circling
the globe 7.5 times*



42
RESEARCH
CRUISES



940
SCIENCE
DAYS



160
INSTITUTIONS FROM
27 COUNTRIES



565
SCIENTISTS



216
STUDENTS



628
CTD CASTS



38
AUV DIVES



580,257 KM²
(an area the size of Kenya)
MAPPED BY FALKOR'S MULTIBEAM
AND ECHO SOUNDER SYSTEM



14
DISCOVERED AND NAMED
UNDERWATER FEATURES

2017 OUTREACH



**LIVE GOOGLE
HANGOUTS ON AIR**
had 260,581 views
from 174 countries



**715
PEOPLE**
on Falkor tours



**3,130
STUDENTS**
reached through 44
ship to shore connections



**1048
ARTICLES**
in the press
in 2017



14 Discovered & Named Underwater Seamounts

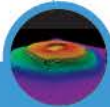
TELL QARQUR

Named after a hill in Syria that looks identical



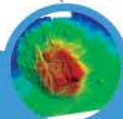
COLOSSEUM GUYOT

Guyot with hole in it looks like the colosseum in Rome



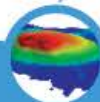
FALKOR SEAMOUNT

Named after R/V Falkor



FFYNNON GARW

Named after the hill in "The Englishman Who Went Up a Hill But Came Down a Mountain"



ENGINEERS RIDGE

Named in honor of Engineers all over the world who help support ships



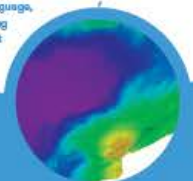
AFA MAOLK CALDERA

(Submitted awaiting confirmation)
Means Cooperation in the Chamorro language, named in honor of collaborative mapping in the area between SOI and NOAA OER



FALKOR DEEP

Named after R/V Falkor



MAPPING



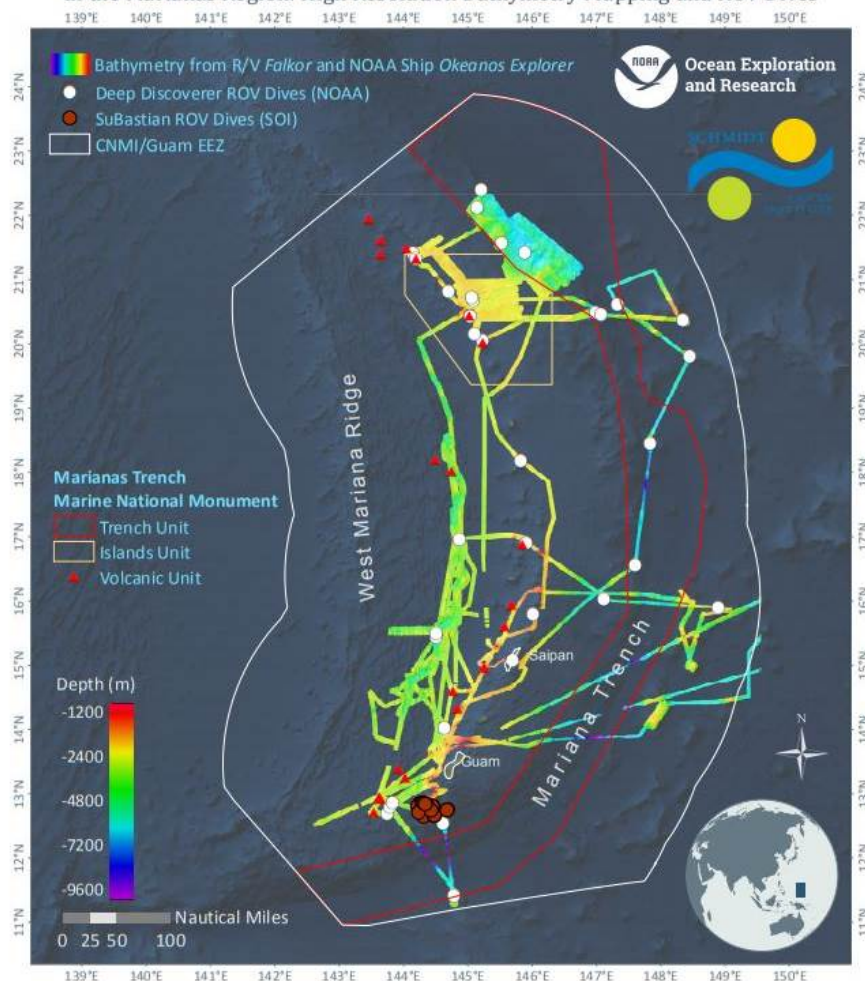
Each Cruise We Collect (example):

FK181005 – EM302

Survey Hours	118.47 hrs
Vessel Speed	9.096 kts
Ping Rate (<i>average</i>)	0.66 h/z
Time Between Pings	1.552 seconds
Distance Travelled Between Pings	7.263 m
Depth (<i>average</i>)	939 m
Swath Width (<i>average</i>)	2,623 m
Resolution (<i>average</i>)	7.263 m (along), 6.07 m (across)
Coverage Area	4,430.8 km²
Distance Travelled Total	1,100,256 nm
Soundings Total	143,737,632



Ocean Exploration Accomplishments of Vessels *Falkor* and *Okeanos Explorer* in the Marianas Region: High Resolution Bathymetry Mapping and ROV Dives



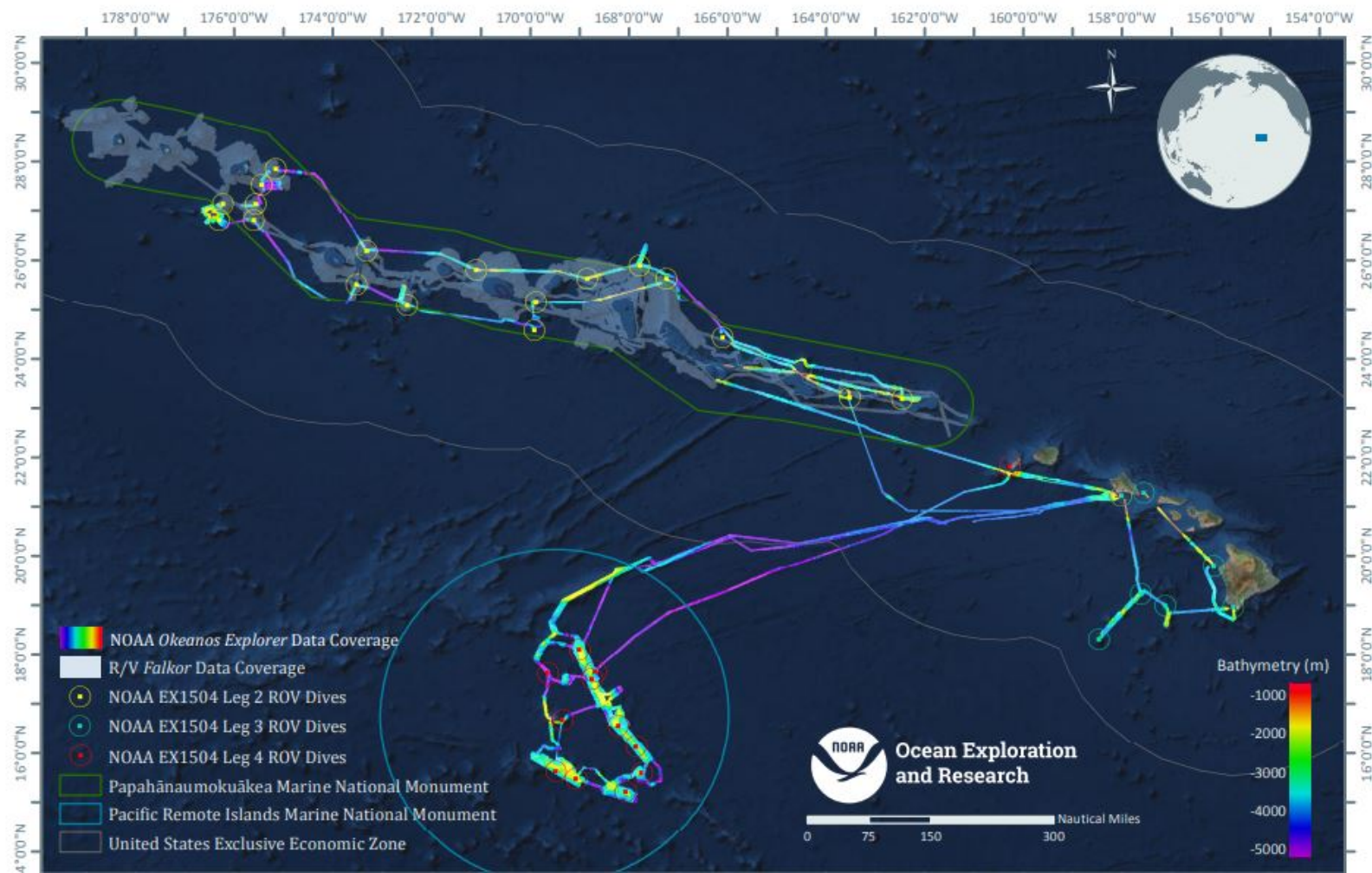
Overview map showing seafloor multibeam bathymetry coverage and remotely operated vehicle (ROV) dive locations completed in the vicinity of the Commonwealth of the Northern Mariana Islands and Marianas Trench Marine National Monument by R/V *Falkor* and NOAA Ship *Okeanos Explorer*. R/V *Falkor* is funded and operated by the Schmidt Ocean Institute (SOI). The *Okeanos Explorer* is operated by NOAA.

Map created by NOAA-OER, 9/12/16. Service Layer Credits/ Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGR, swisstopo, and the GIS User Community



CAPSTONE: 2015 Hohonu Moana: Exploring Deep Waters off Hawai'i

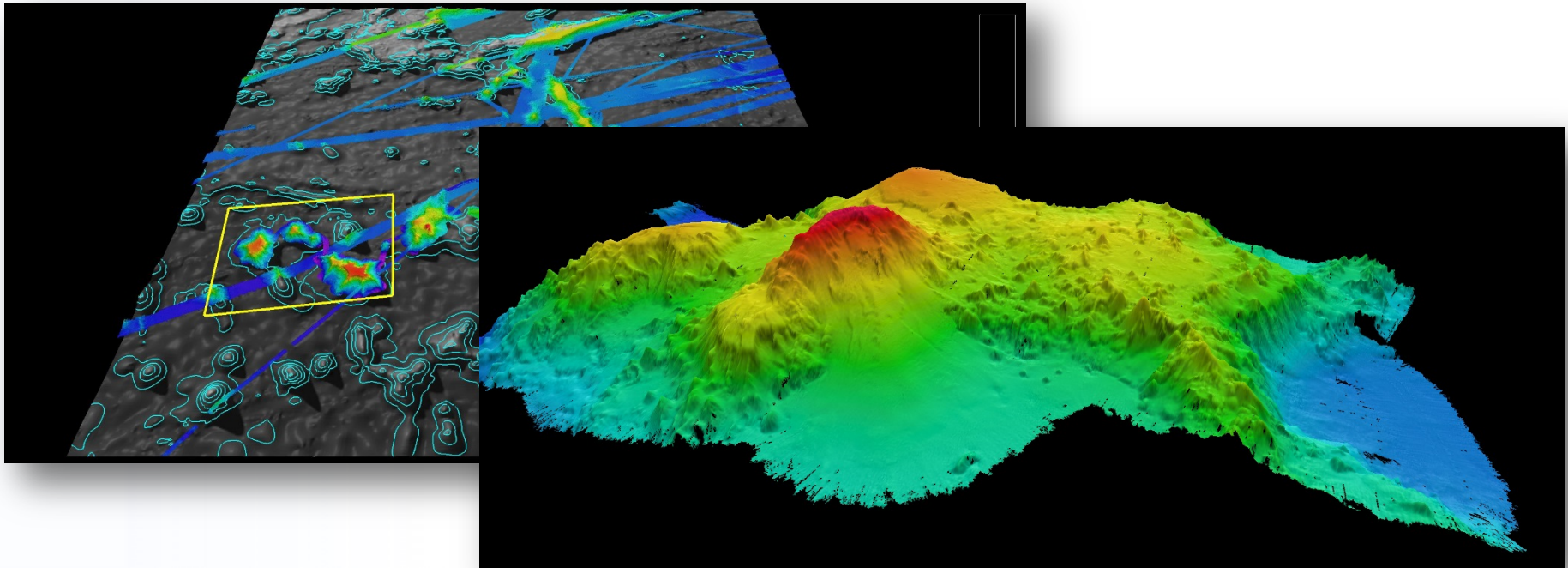
Bathymetry and Remotely Operated Vehicle (ROV) dive locations from four NOAA Ship *Okeanos Explorer* cruises

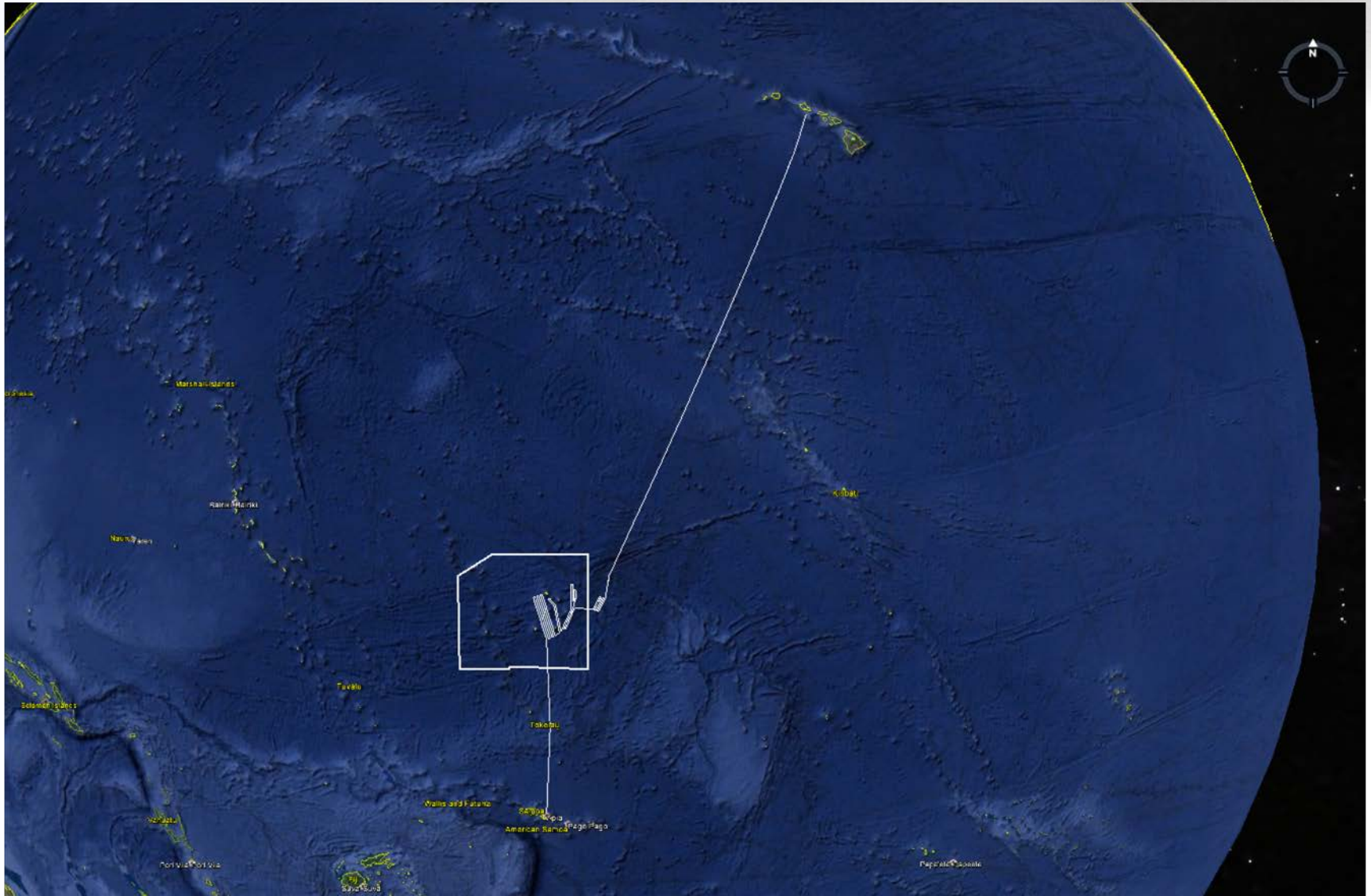


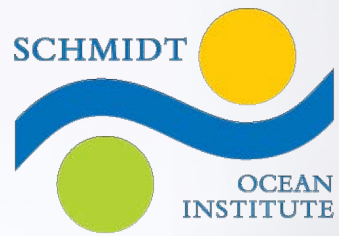


Opportunistic Mapping

- 7,000 km² of Johnston Seamount group in the Pacific Remote Islands Monument
- Maps revealed large seamount dotted with smaller peaks; the geologic implications suggest that four distinct volcanoes, reaching thousands of feet above sea level, merged through eruption and erosion into one large, subsurface mountain.







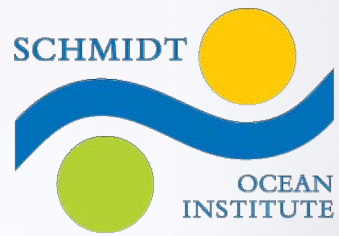
REV Ocean

THE FIVE DEEPS EXPEDITION

ATLANTIC | SOUTHERN | INDIAN | PACIFIC | ARCTIC

OCEAN EXPLORATION TRUST



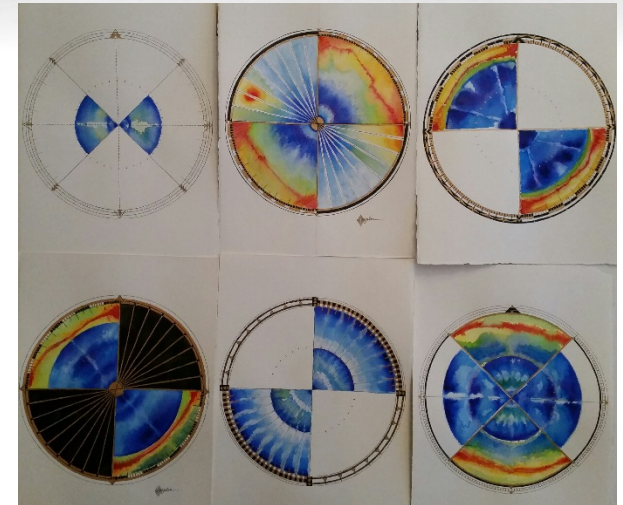


OCEANX

PAUL ALLEN



Mapping with Artists



- Inspire a deep passion for ocean sciences
- Recent cruise where students and artists were trained to stand MBES watches and learned how to clean up the data
- Artwork was representative of the data
- Students gain invaluable skills and at sea experience while working with some of the world's most advanced oceanographic technologies



Artists and Mapping





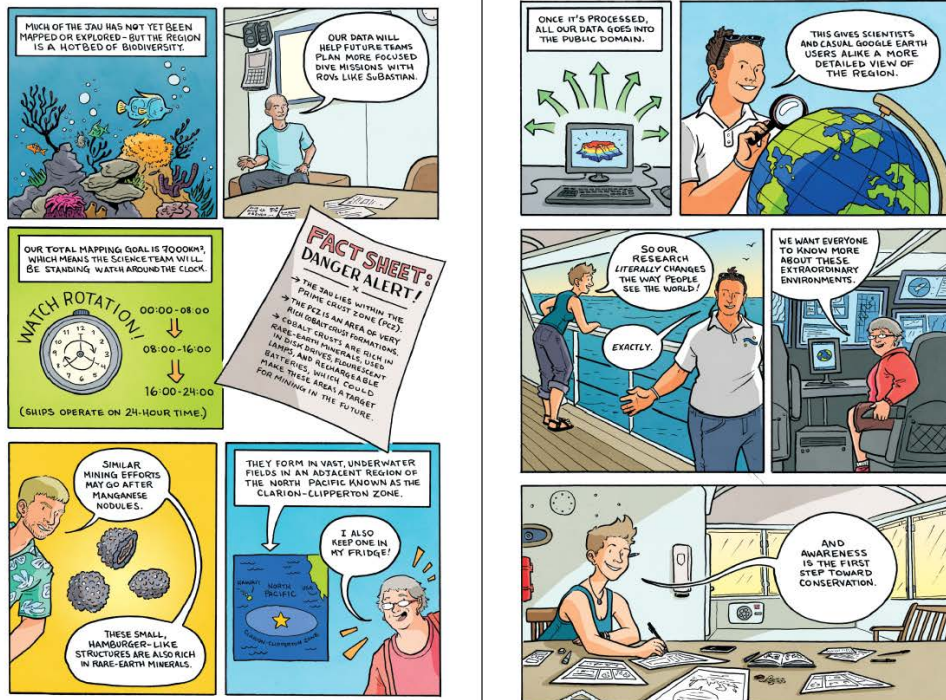
Storytelling





Storytelling - Mapping Comic

Graphic Artist **Lucy Bellwood** - educational comic on multibeam mapping; over 5,000 copies distributed to classrooms in the Pacific Islands.





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Deadline: 28 December 2018

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Questions?

