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18TH SAIHC, MAPUTO

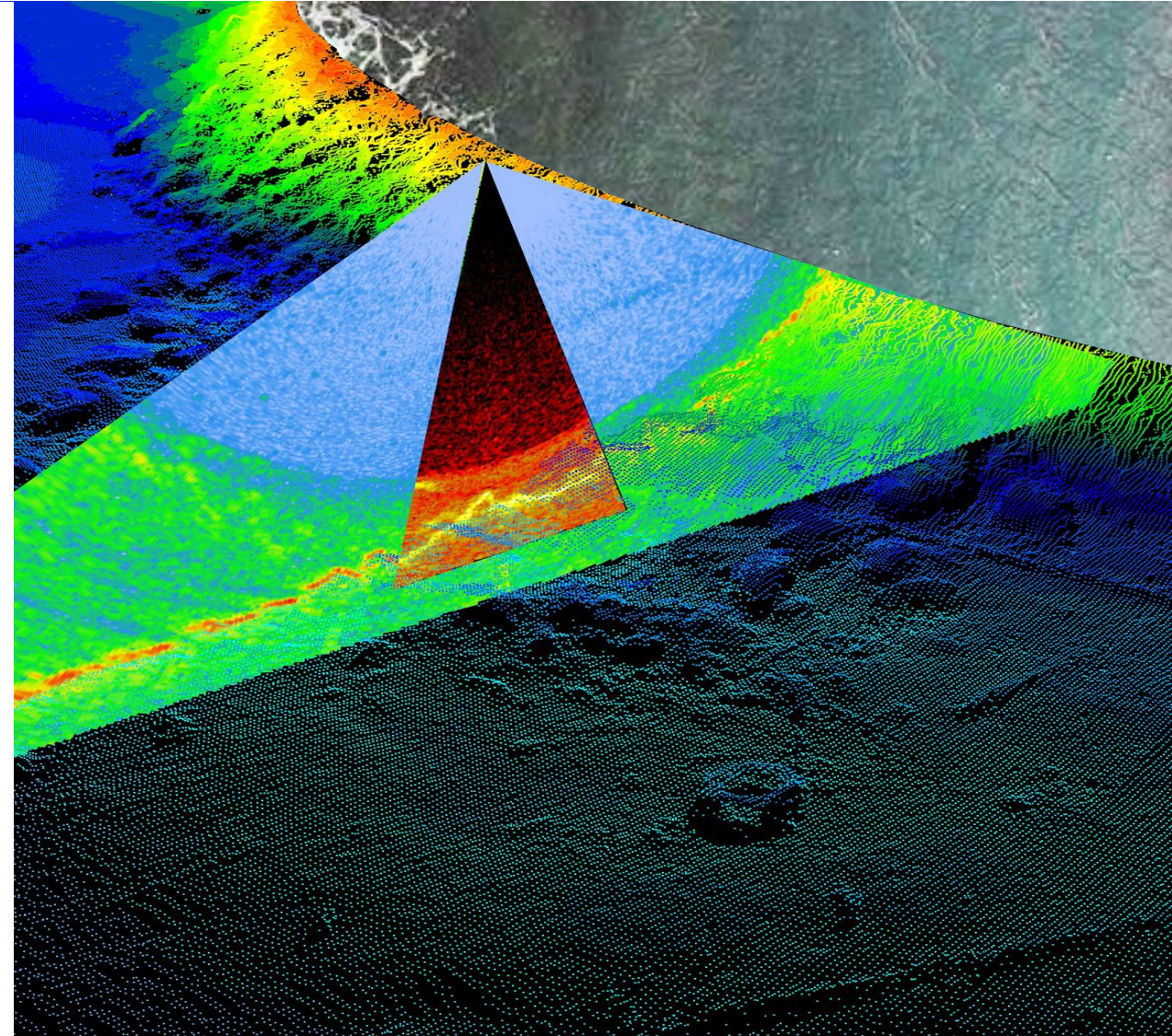
# Kongsberg Maritime Company Presentation

10TH MAY 2022

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Senior Sales Manager Europe Africa and Russia

Kongsberg Maritime – Sensors & Robotics





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# 3 Key Business Areas

KONGSBERG is a global technology powerhouse

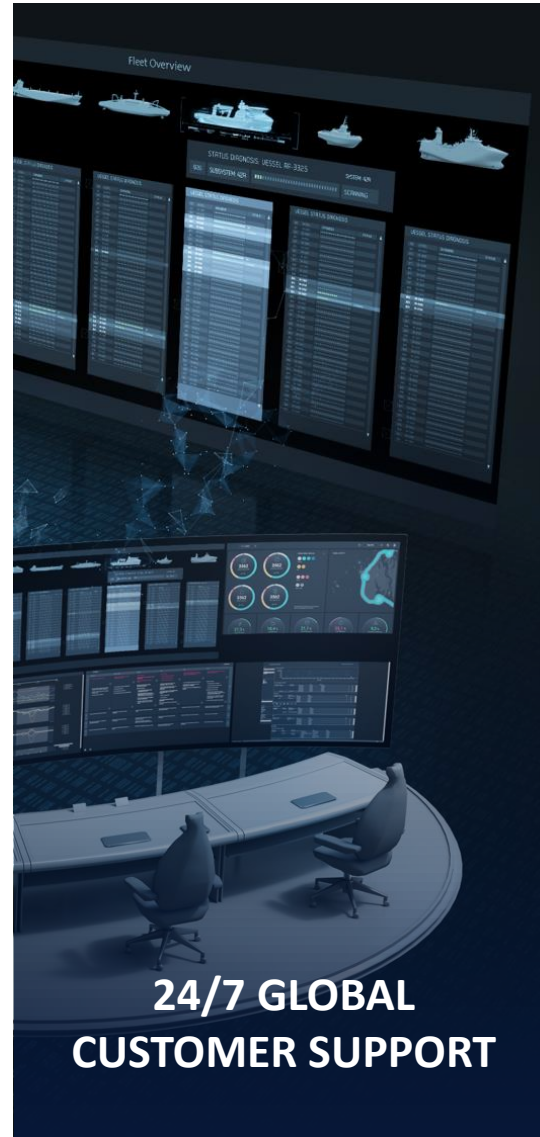




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# Kongsberg Maritime

BROADEST PORTFOLIO OF  
PRODUCTS  
FOR THE MARITIME  
INDUSTRY





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INDUSTRY



RV BELGICA

# The KONGSBERG Global Reach



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# Multibeam Echo Sounders – The Full Range



From the shallowest waters to full ocean depth, we've got it covered.

M3° .....	150 m
EM° 2040C MKII .....	500 m
EM° 2040P MKII .....	550 m
EM° 2040 MKII .....	600 m
EM° 712 .....	3500 m
EM° 304 MKII.....	11000 m
EM° 124 .....	11000 m



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# Multibeam Echo Sounders

## Transducer Size vs Frequency and Beam Width

EM<sup>®</sup> 2040C MKII (1 x 1 degree)  
Ø 0.3m



200 – 400 kHz

Range 0.5m – 500m

Option: 700 kHz

EM<sup>®</sup> 2040P MKII (1 x 1 degree)  
482 x 298 x 166 mm



200 – 400 kHz

Range 0.5m – 550m

Option: 600 and 700 kHz

EM<sup>®</sup> 2040-07 MKII (0.7 x 0.7 degree)  
~0.4m x 0.4m



200 – 400 kHz

Range 0.5m – 600m

Option: 600 and 700 kHz



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# Multibeam Echo Sounders

## Transducer Size vs Frequency and Beam Width

EM<sup>®</sup> 712 (2 x 2 degree)  
~0.5m x 0.5m



40 – 100 kHz

Range 3m – 3500m

EM<sup>®</sup> 304 MKII (0.5 x 0.5 degree)  
~6.8m x 6.5m



20 – 32 kHz

Range 10m – Full ocean depth

EM<sup>®</sup> 124 (1 x 1 degree)  
~8m x 7m



12 kHz

Range 20m – Full ocean depth



# EM<sup>®</sup> 2040C MKII/EM<sup>®</sup> 2040 MKII – Installation

## Very high resolution Multibeam Echo Sounder



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Applications from very high-resolution inspection to shallow water surveys.

# EM<sup>®</sup> 2040P MKII – Installation

## Very high resolution Multibeam Echo Sounder



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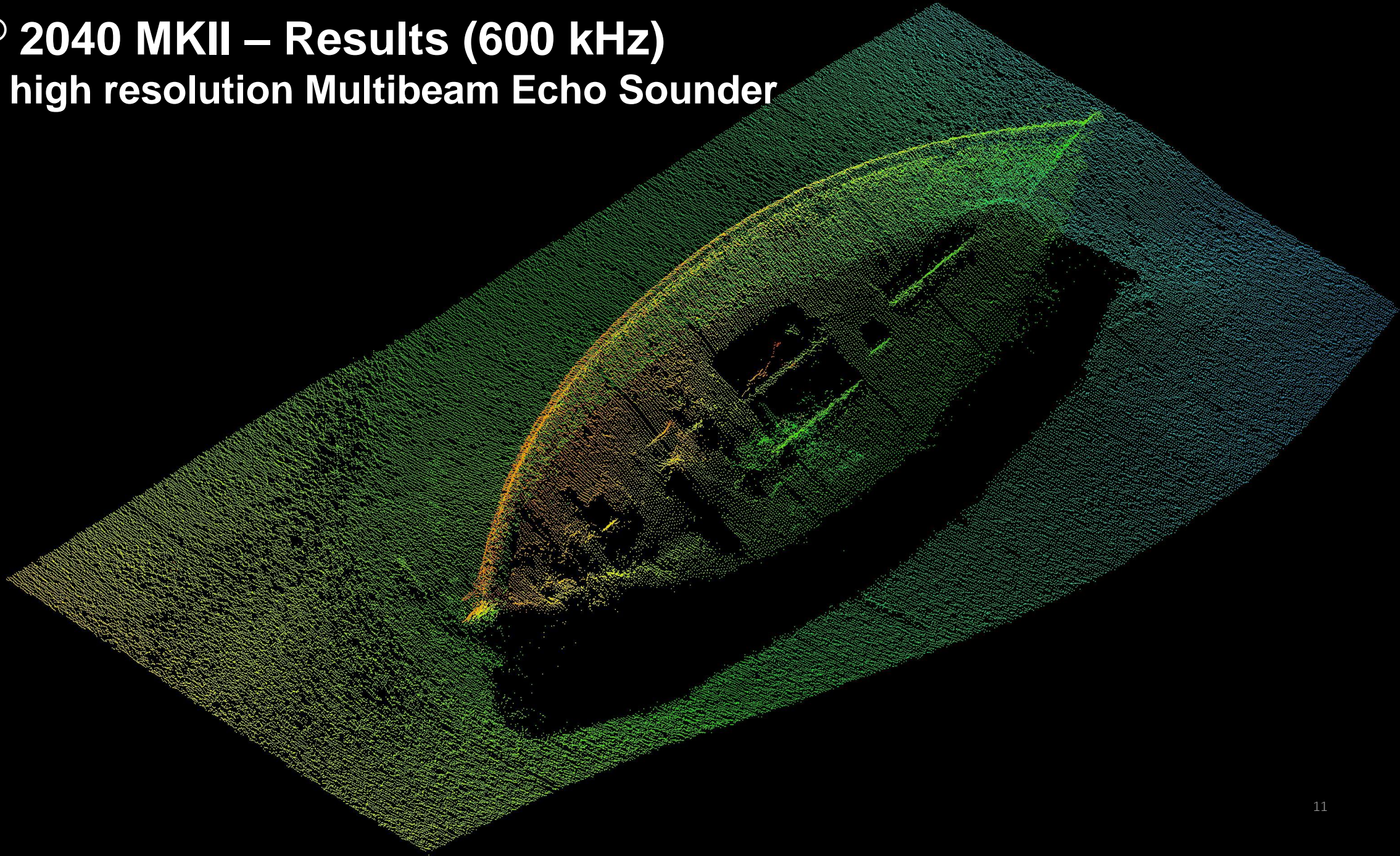


Images courtesy of SHOM @  
Noumea, New Caledonia

Applications from very high-resolution inspection to shallow water surveys.

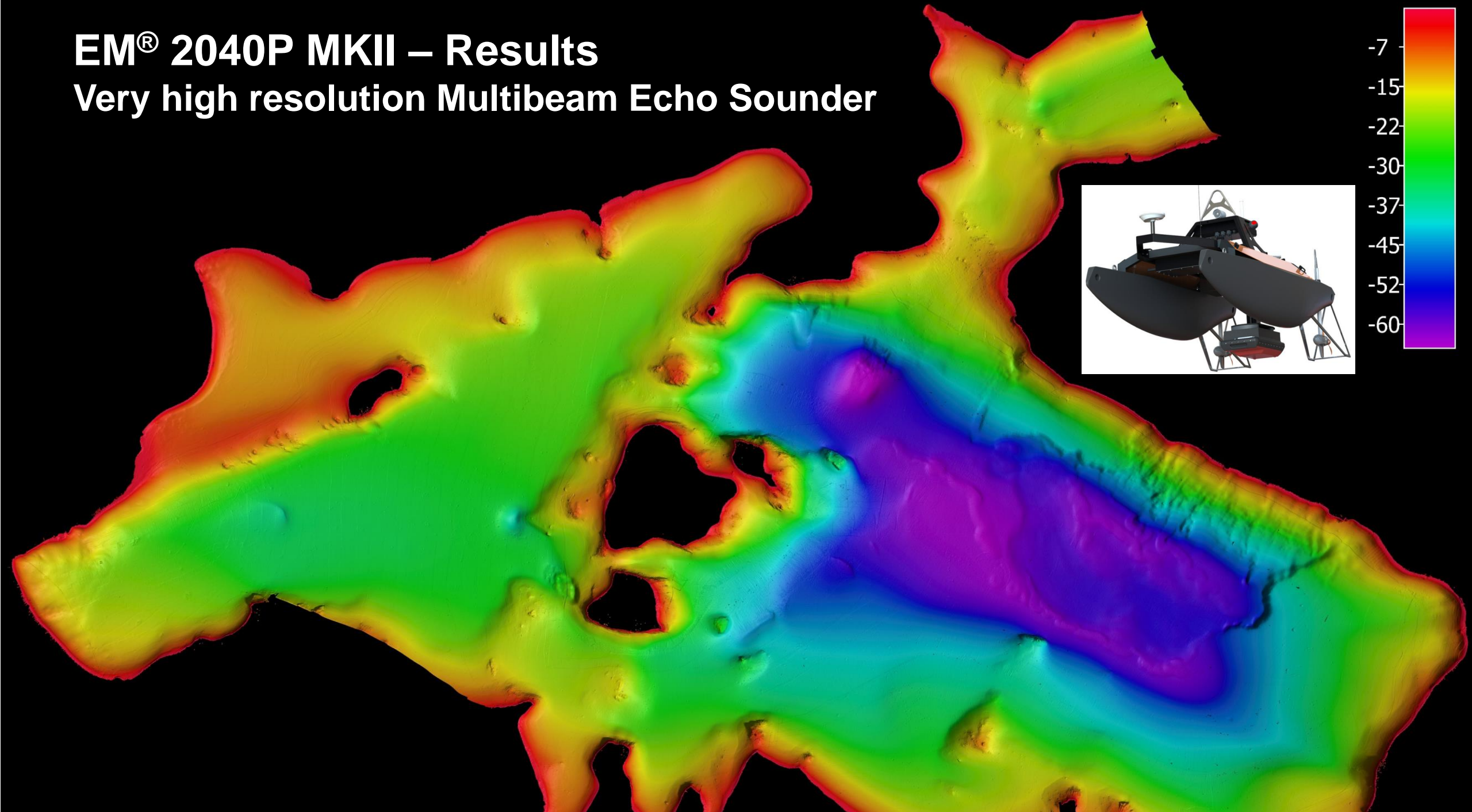
# EM<sup>®</sup> 2040 MKII – Results (600 kHz)

## Very high resolution Multibeam Echo Sounder



# EM<sup>®</sup> 2040P MKII – Results

Very high resolution Multibeam Echo Sounder

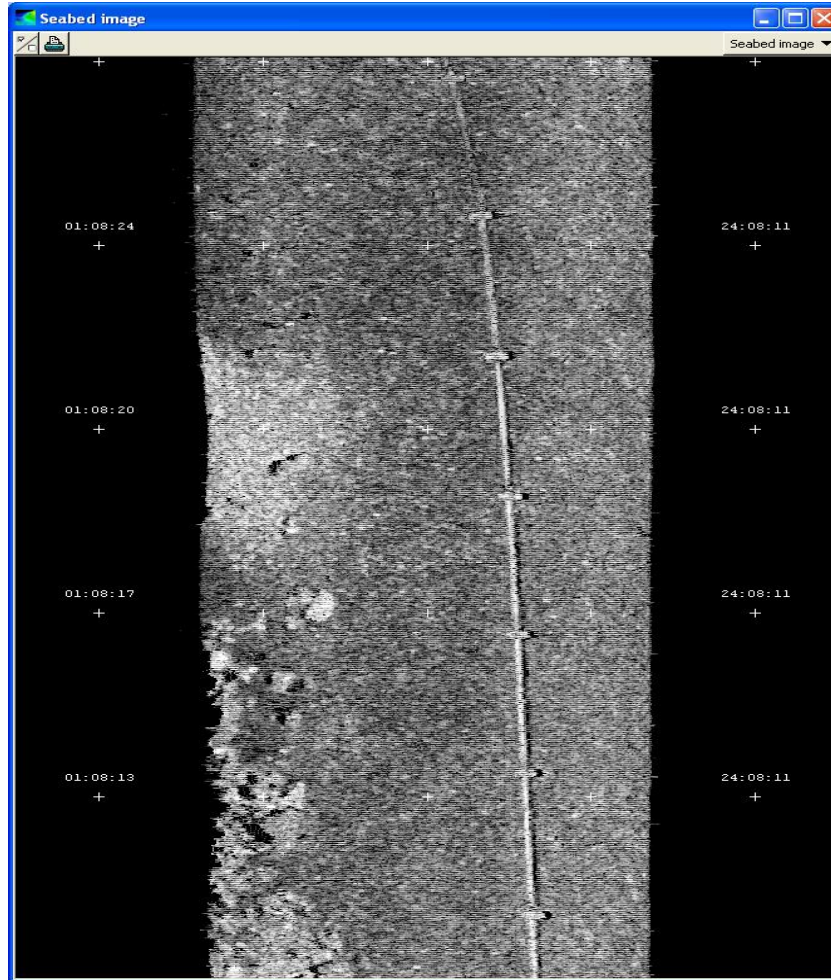




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# EM<sup>®</sup> 2040C MKII – Results

## Very high resolution Multibeam Echo Sounder



Pipeline – Sydney Marina, 400 kHz / 50us



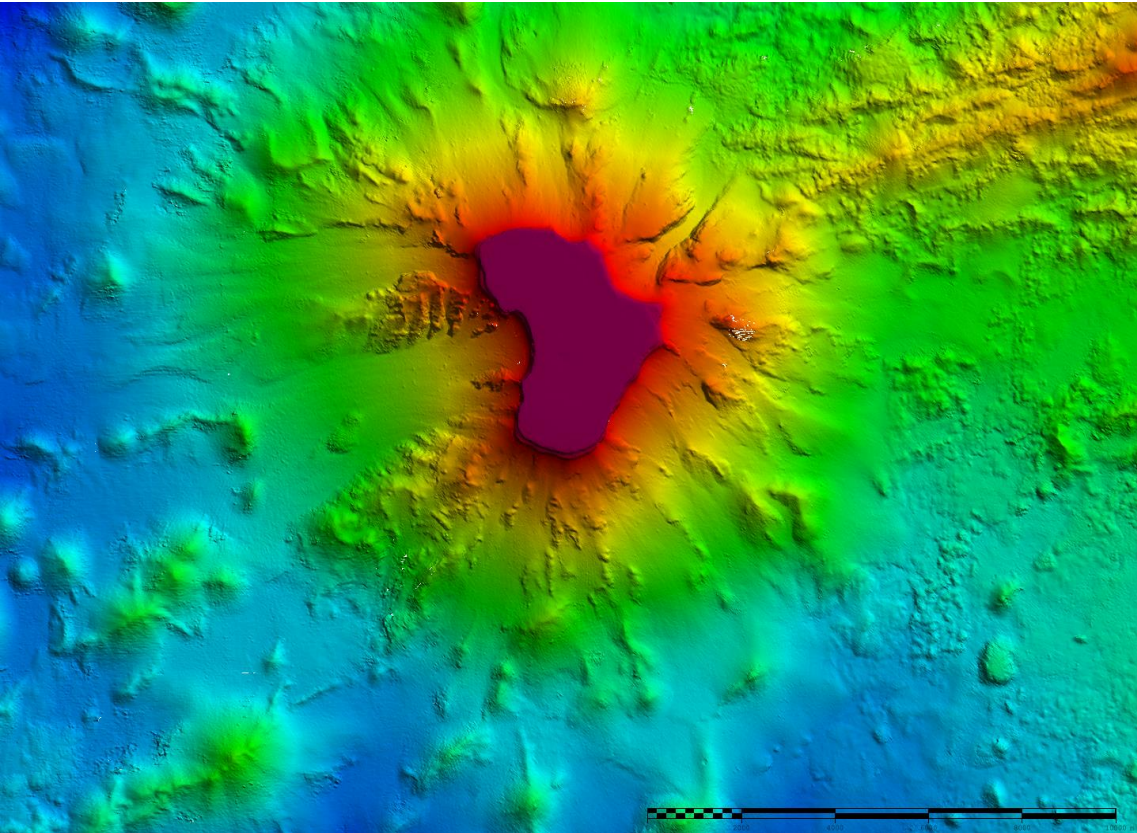
Sandwaves, 90 - 100m depth, 300 kHz / 70us



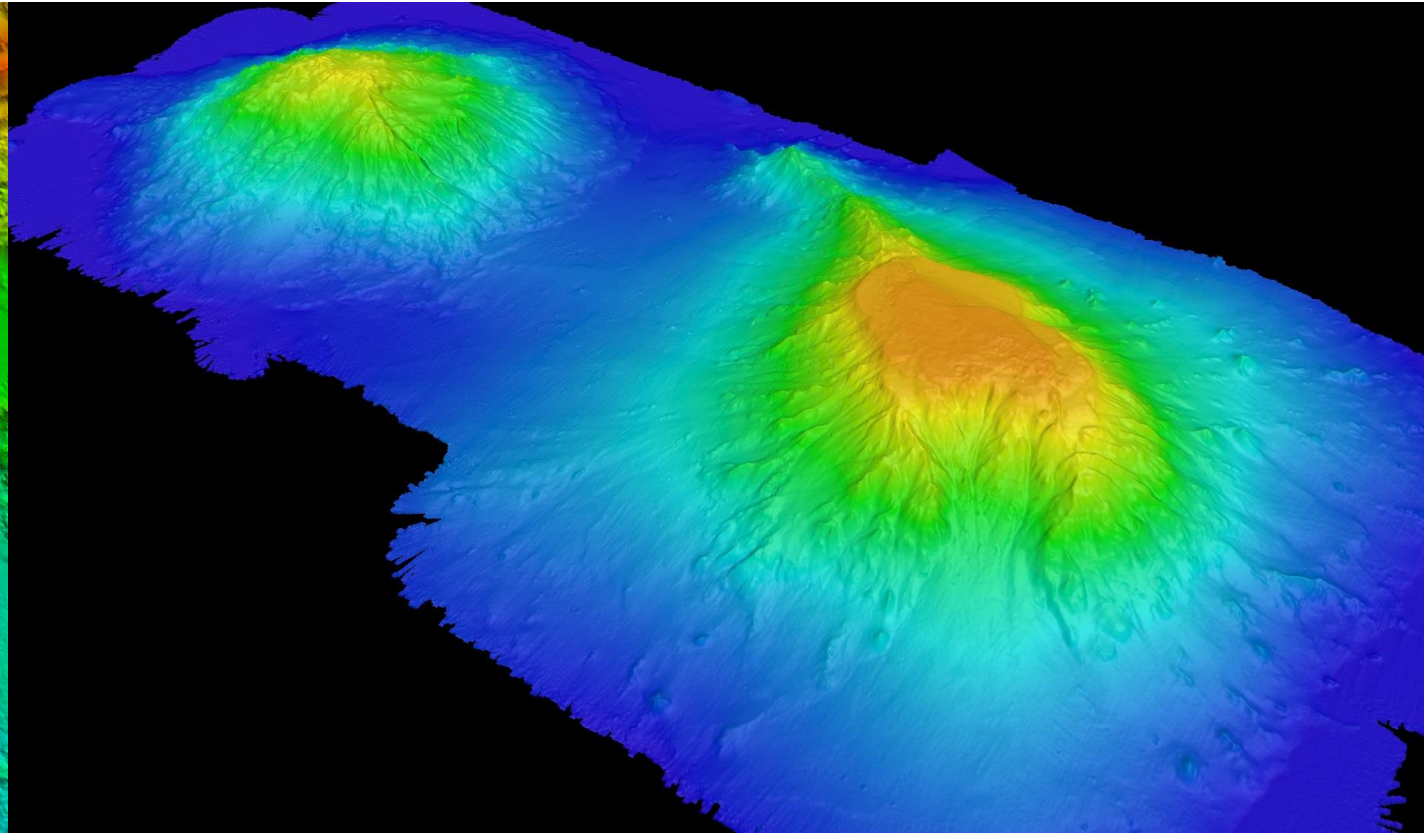
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# Full Ocean Depth Systems

## High Resolution Multibeam Echo Sounders



EM<sup>®</sup> 122, 1 x 1 degree – courtesy of SHOM and BHO «Beautemps Beupre»



EM<sup>®</sup> 302, 0.5 x 1 degree – courtesy of NOAA and RV «Okeanos Explorer»

# Hydrographic Survey Vessels/RVs on the African Continent

RV "El Masseh", Algeria



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BHO2M "Dar Al Baida", Morocco



RV "Al Hassan Al Marrakchi", Morocco



RV "Baia Farta", Angola



OSV 115, Nigeria (OCEA)

NNS LANA (A499), Nigeria



RV "Mirabilis", Namibia



Replacement SAS "Protea", South Africa





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**Thank you for your  
attention!**

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