



# **Autonomous shipping and data quality**

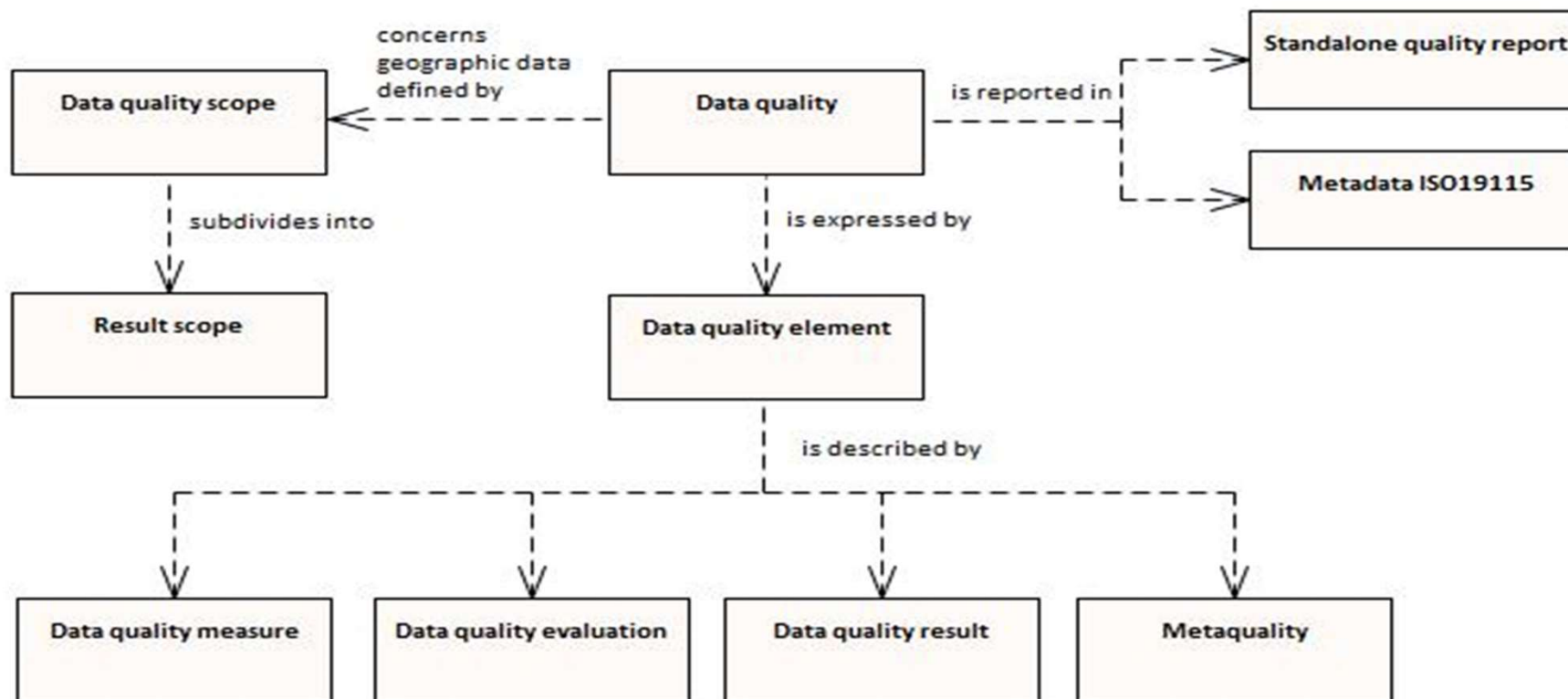
Mindmap



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# CONCEPT OF DATA QUALITY

International  
Hydrographic  
Organization

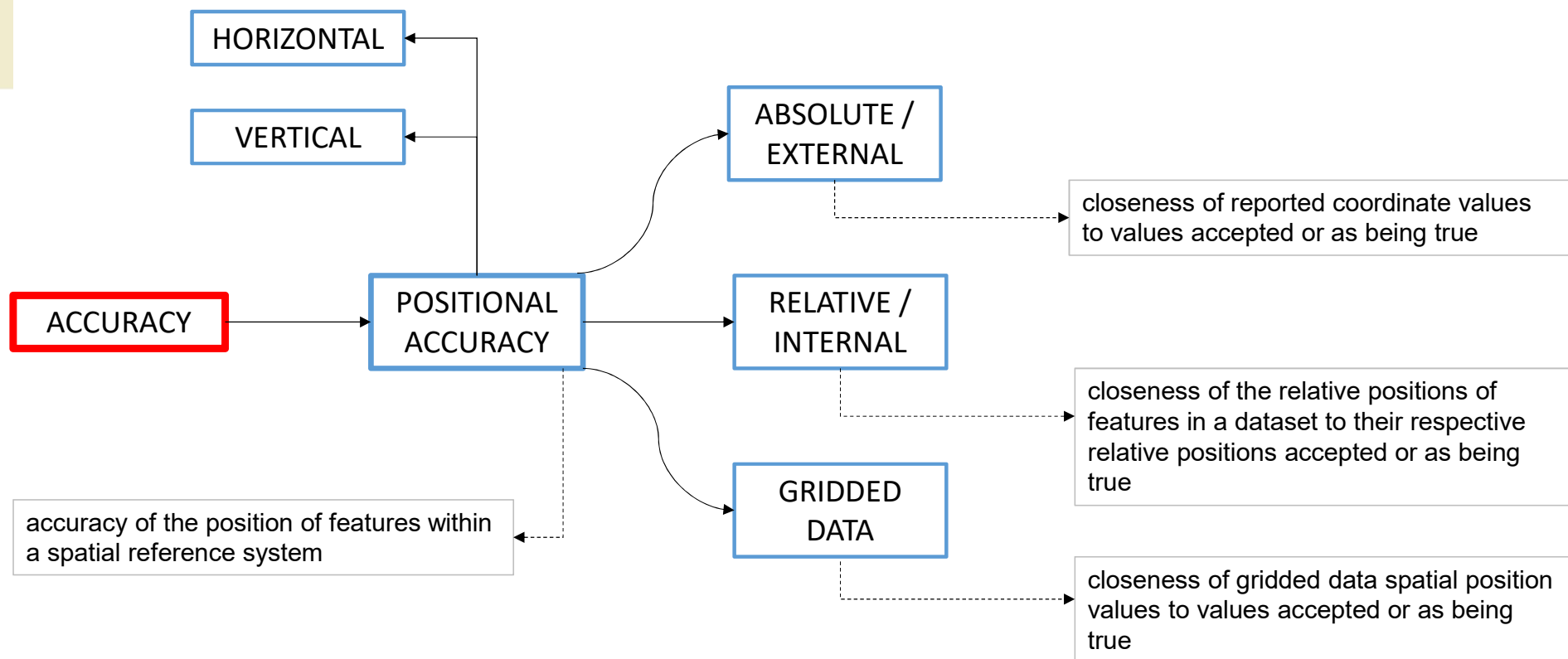




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# ACCURACY

International  
Hydrographic  
Organization

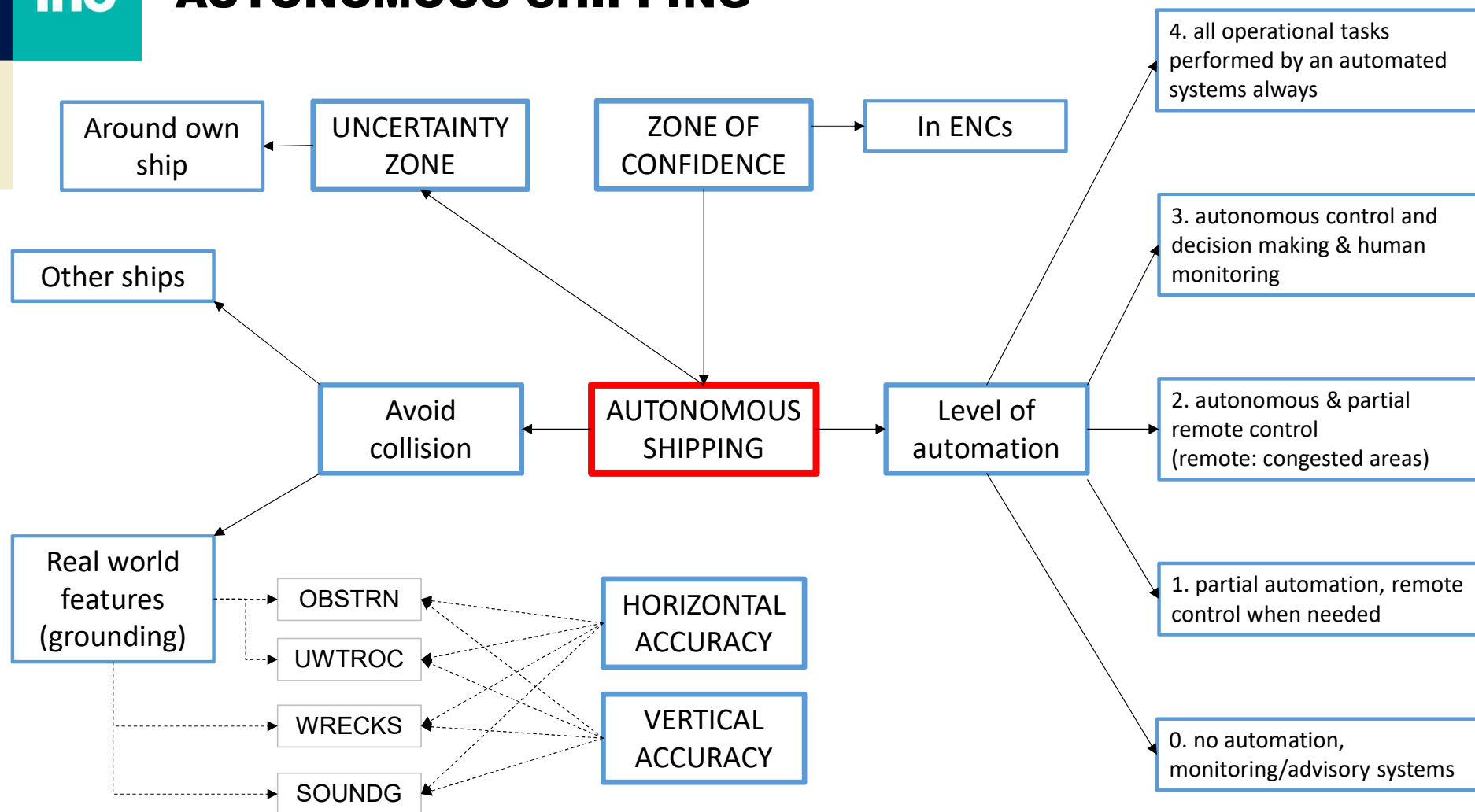




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# AUTONOMOUS SHIPPING

International  
Hydrographic  
Organization



DQWG16, 9/10 February 2021, VTC



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# UNCERTAINTY ZONE

International  
Hydrographic  
Organization

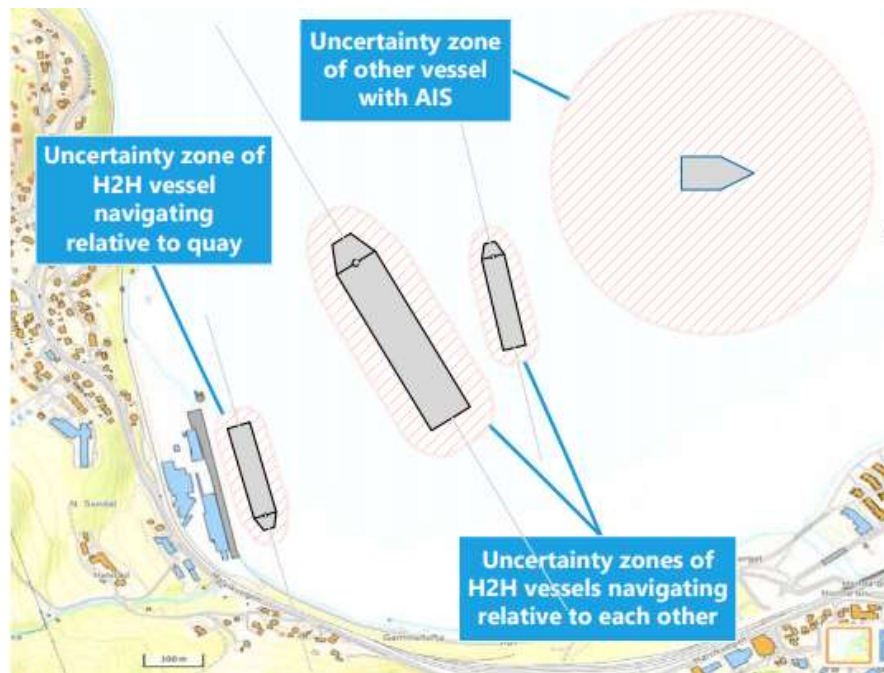


Image from S-100WG5-04.3 (SINTEF)

UNCERTAINTY  
ZONE

Presentation  
95% or  $2\sigma$

3D -> volume

2D -> area

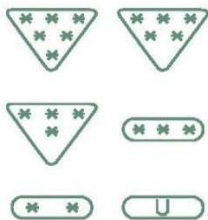
1D -> circular area



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# ZONE OF CONFIDENCE (CATZOC)

International  
Hydrographic  
Organization



Screen wide  
presentation

Area

ZONE OF  
CONFIDENCE

2D / 1D  
presentation

Single  
/multiple  
object(s)

Presentation  
95% or  $2\sigma$

3D -> **volume**

2D -> **area**

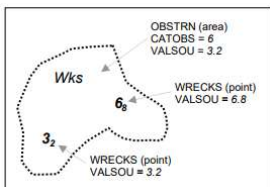
1D -> **circular area**

OBSTRN

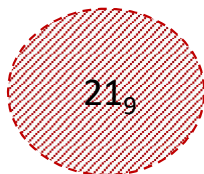
UWTROC

WRECKS

SOUNDG



OBSTRN area around two WRECKS  
Image from S-57 UOC par.6.3.2.

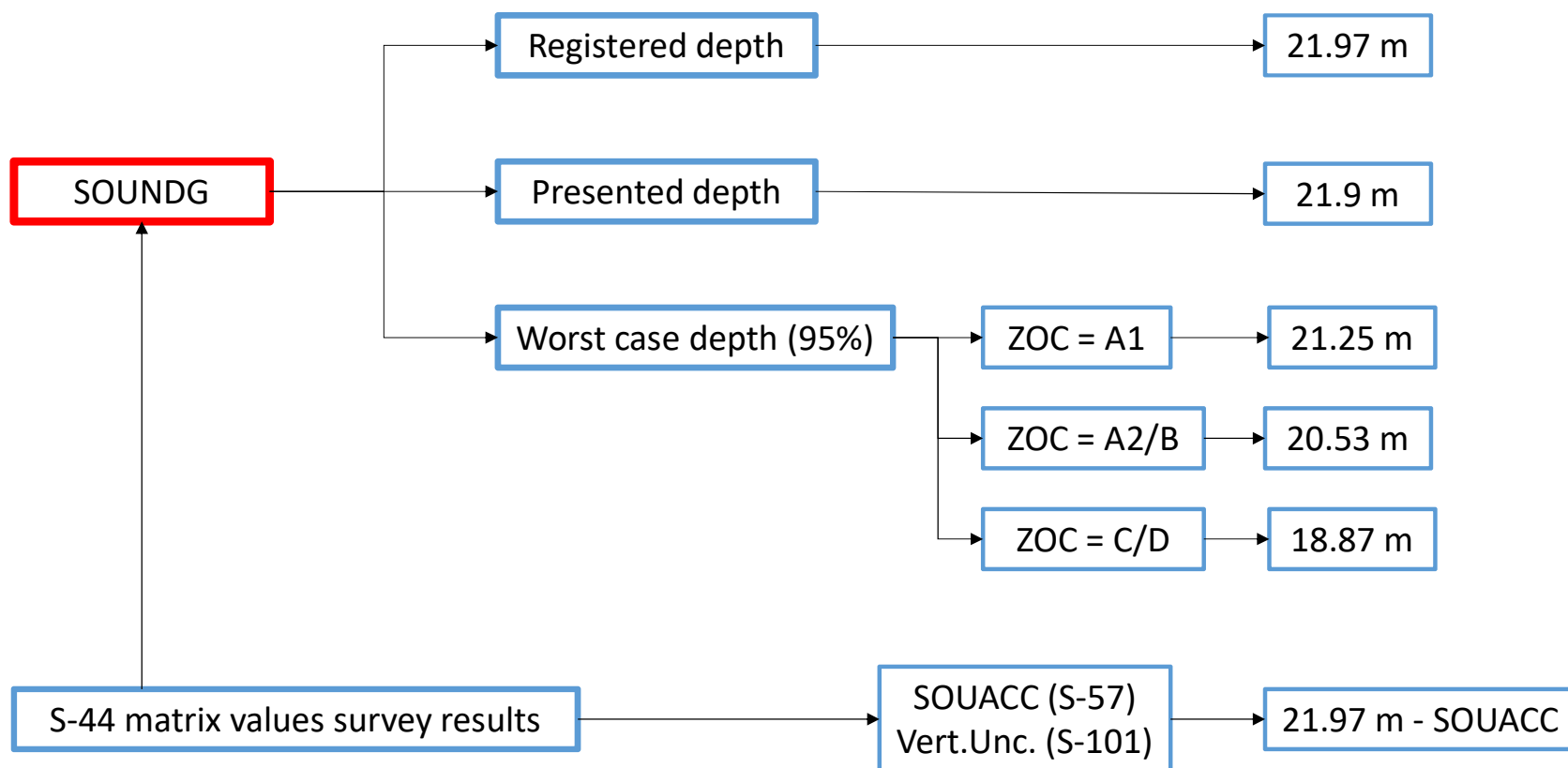


Circular area around a SOUNDG



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## SOUNDING – DIFFERENT DEPTH VALUES

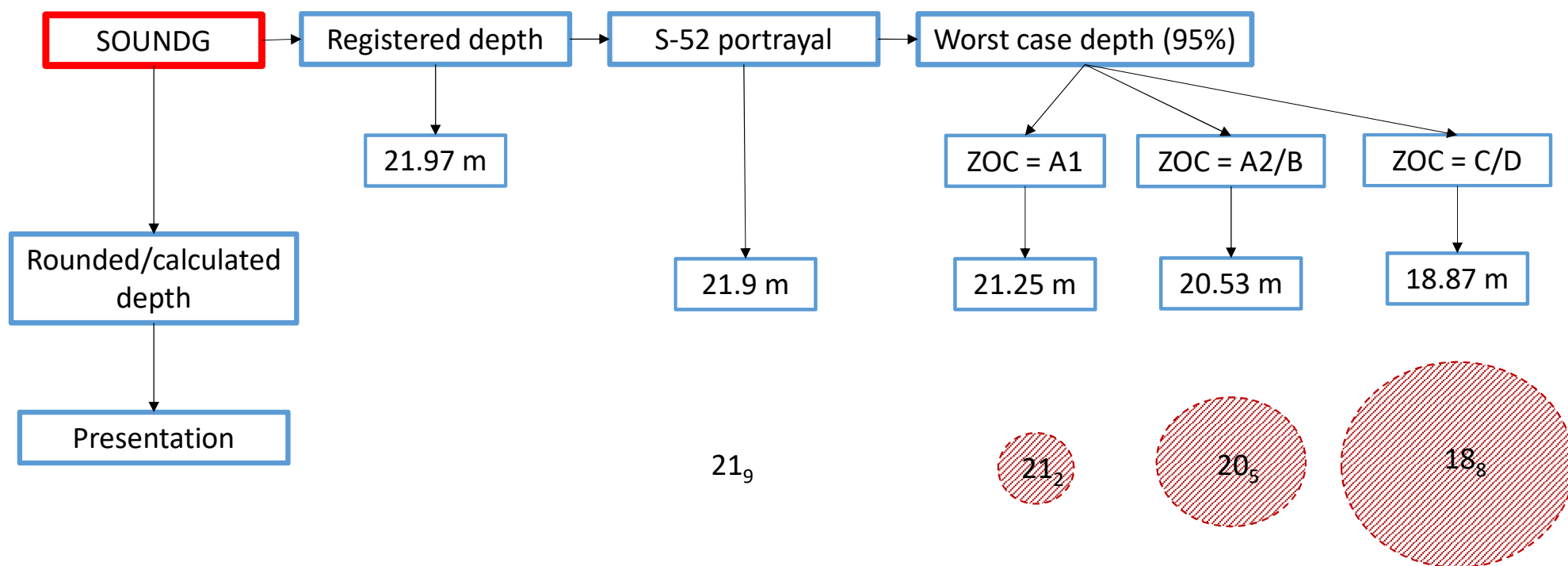




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## SOUNDING – PRESENTING THE WORST CASE

Seafarers are ready to accept new technologies,  
if they are proved to be safer than what we have now







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## DEPTH CONTOURS - VERTICAL UNCERTAINTY?

International  
Hydrographic  
Organization

