

Eurofleets

Task 4.1 Interoperability



 Garcia del Cid



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 OGS-Explora



Task 4.1

Task Leader MI

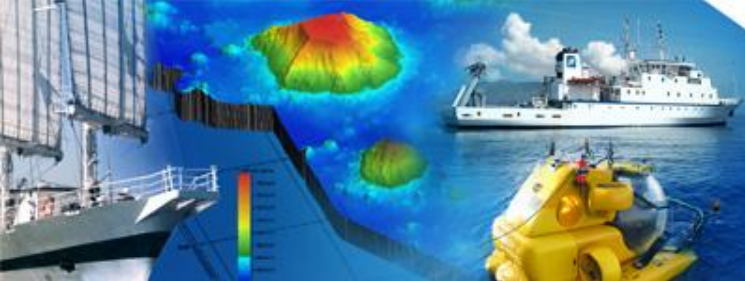
- Task members : MI, FCT, CSIC, IEO, IMR, Ifremer, IMARES
- The main aim of the sub package 4.1 is to examine the potential for interoperability of large scale European equipment on European research vessels under several headings including:
 - ❖ Technical considerations
 - ❖ Technical Support
 - ❖ Insurance
 - ❖ Transport & Logistics
 - ❖ Payloads
 - ❖ Cost



Task 4.1

- Task leaders went beyond what was required in the DoW including all LEXI on the Eurocean database and including all Global and Oceanic class RV's with the potential to exchange equipment
- Technical considerations; Technical Support; Insurance; Transport & Logistics; Payloads; Cost

Equipment Type	NA4 Responsible member
ROV	MI
AUV	MI
Seismic	CSIC
Submersibles	IFREMER & MI
Deepwater drop and towed cameras	IMR
Towed bodies (Sidescan sonar, sub bottom profiler, other)	IFREMER & MI
Deep water Multibeam	IMARES
Corers	MI
Other	MI



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Responses Received

ROV	AUV	Submersible	Seismic	Camera	Corer
– MI	Abyss – IFM Geomar	Nautile - Ifremer		IMR-ROTV	MeBo - Marum
Quest – Marum	Autosub6000 - NOC	Jago – IFM Geomar	CSIC	AWI - OFOS	
Victor 6000 - Ifremer	Autosub3 - NOC		FCT		Towed
Isis - NOC	Seal – IFM- Geomar		AWI		SAR - Ifremer
Liropus - IEO	Bluefin21 - AWI				
Aglantha - IMR	Hugin - IMR				
Max Rover - HCMR					
6000 – IFM Geomar					
Luso - EMEPC					
Phoca – IFM Geomar					



Methodology

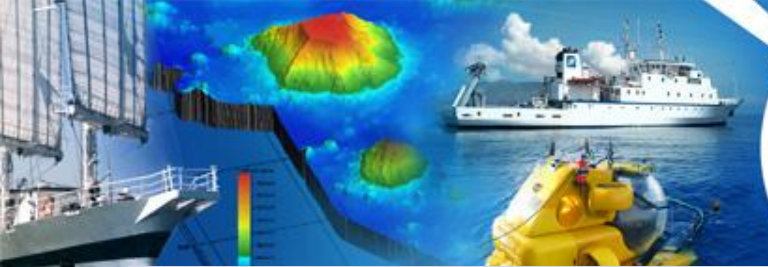
- For each piece of equipment, the owner/operator was asked to complete a set of technical and logistical criteria
- The second phase of the task involved looking at the technical specifications received for the LEXI's and assessing whether they were capable of deployment on the European RV fleet
- The list of appropriate or available RVs for this exercise was whittled down to 39 Global and Ocean class vessels
- Matrix diagram was developed with the RVs owned by Eurofleets partners or Member States on one side and LEXI on the other
- A colour coding was used to identify three categories or designations for each piece of equipment and each of the 39 RVs

Classifications

LEGEND	COMMENT
Green	Capacity to deploy on
Light Green	Possible deployment on with minor modifications
Red	Cannot deploy, vessel not capable e.g. no D.P.

- Once a colour code/designation was initially assigned to each RV, the collated questionnaires for all of the LEXI and the matrix diagram were re-issued to the RV operators to ask them to check our preliminary assessment
- We have confirmed 13 of the 39 RV categories with the vessel operators
- We have made the assumption that these equipment are the primary, or the only, operation on board the vessel at any one time

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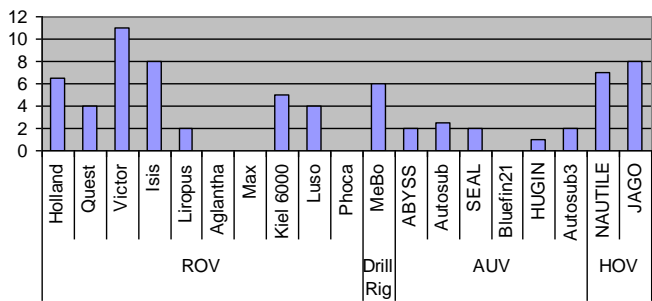


LEGEND			AUV							HOV		SEISMIC SYSTEM		
	Capacity to Deploy on RV		ABYSS	Autosub	SEAL	Bluefin21	HUGIN	Autosub3	NAUTILUS*	JAGO	Bergen	CSIC	FCT	AWI
	Possible deployment on RV with minor modifications		6000m	6000m	5000m	3000m	3000m	1600m	6000m	400m				
	Cannot deploy, vessel not capable, e.g., no D.P.													
* Funded access through TNA1														
RVs	Country	Length	AUV							HOV		SEISMIC SYSTEM		
* Funded access through TNA1			6000m	6000m	5000m	3000m	3000m	1600m	6000m	400m	Bergen	CSIC	FCT	AWI
Pourquoi pas?	France	107.60 m												
Thalassa	France	74.50 m												
Meteor	Germany	97.50 m												
Sarmiento de Gamboa	Spain	70.50 m												
Marion Dufresne*	France	120.50 m												
OGS-Explora*	Italy	72.63 m												
Discovery Replacement	United Kingdom	100 m		Discovery				Discovery	?					
Mare Nigrum	Romania	82.20 m								?				
James Clark Ross	United Kingdom	99.04 m												
Polarstern*	Germany	118.00 m							?					
Hesperides	Spain	82.50 m												
Italica	Italy	130.00 m												
NRP "D. Carlos I"	Portugal	68.70 m								?				
NRP "Almirante Gago Coutinho"	Portugal	68.20 m												
L'Atalante*	France	84.60 m												
James Cook	United Kingdom	89.50 m							?					
Ernest Shackleton	United Kingdom	80.00 m												
Tridens	Netherlands	73.54 m								?				
Beautemps-Beaupré	France	80.64 m								?				
Celtic Explorer*	Republic of Ireland	65.50 m												
G.O. Sars	Norway	77.50 m								?				
Miguel Oliver	Spain	70.00 m												
Cornide de Saavedra	Spain	66.70 m								?	?			
Sonne	Germany	97.94 m												
Maria S. Merian	Germany	94.80 m												
Le Suroit	France	56.34 m												
Urania	Italy	61.30 m								?				
Dr. Fridtjof Nansen	Norway	56.80 m												
Poseidon	Germany	60.70 m												
Pelagia	Netherlands	66.00 m												
Jan Mayen	Norway	63.80 m								?	?			
Johan Hjort	Norway	64.40 m								?	?			
Aegaeo	Greece	61.50 m												
Alkor	Germany	54.59 m									?			
Akademik	Bulgaria	55.50 m									?			
Heincke	Germany	54.59 m									?			
Hakon Mosby	Norway	47.20 m												
Ramon Margalef	Spain IEO	46.70m									?			
Garcia del Cid	Spain	37.2m									?			

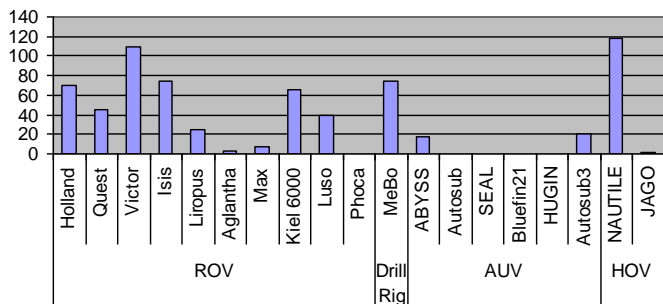
Results

- Task 4.1 within NA4 of Eurofleets has succeeded in completing nearly 900 individual interoperability assessments for Large Exchangeable Instruments across the entire European RV fleet

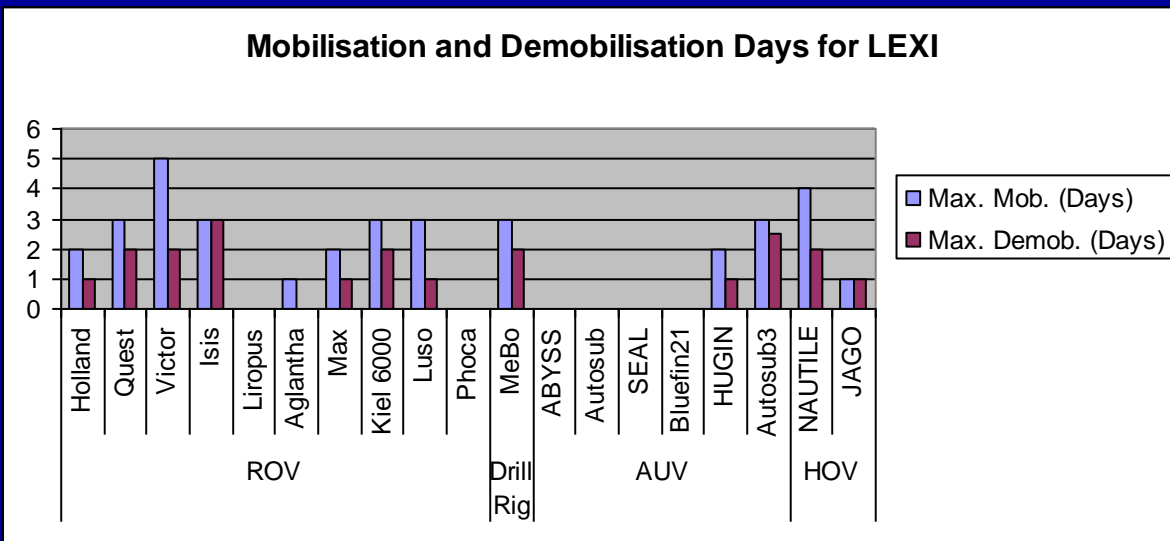
Max. No. Equivalent Containers (20ft)



Max. Weight (Tonnes)



Mobilisation and Demobilisation Days for LEXI





Conclusions

- Structured exchange programme for technicians to facilitate training on other systems
- Eurofleets and/or OFEG could consider group insurance for LEXI's being bartered or chartered through exchanges. Alternative is legal agreement setting out mutual liability regime
- Customs and excise not an issue
- Potential to "pool" high cost spares
- Commonality for items like specialised sampling equipment (suction samplers etc).
- Draft protocol for exchange of instruments been set out
- Recommend specifically identifying in Eurocean database which equipment is available for barter or charter



Thanks

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