



OFEG
OCEAN FACILITIES EXCHANGE
GROUP

The Ocean Facilities Exchange Group

A bottom up approach to research fleet coordination and harmonisation

Colin Day
Chair OFEG.
Programme Manager,
National Marine Facilities, National Oceanography Centre UK



What is the Ocean Facilities Exchange Group?

History of OFEG

- In 1996 NERC (UK), IFREMER (France) and BMBF (Germany) developed collaboration to 'barter' ship time and equipment without the need to charter or exchange money.
- Between 2002 and 2006, the NIOZ (Netherlands), CSIC (Spain) and IMR (Norway) became members.
- With these expansions, the group became the Ocean Facilities Exchange Group (OFEG).



Ships and equipment!

OFEG & OFEG-TECH - what is it and why is it important?

- As the OFEG matured and expanded, opportunities to exchange major equipment increased.....
- Effective integration of portable equipment is critical for effective science delivery.....
- To develop equipment barter within OFEG the right people at the right level in each organization needed to be engaged.
- **OFEG-TECH** was set up to develop communication and networking supporting equipment exchange and improving cooperation between OFEG partners;
 - Improve understanding of each others organizations
 - develop opportunities to exchange of knowledge and experience
 - Promote ‘bilateral training’ and technician exchange



Benefits of OFEG

Greater access for scientists to ships, equipment and location:

- OFEG provides scientists wider access to ships and equipment than is possible from their home national capabilities.
 - OFEG includes 20 high spec. Global/Ocean class ships & associated equipment such as;
 - Remotely operated vehicles,
 - Autonomous vehicles
 - Multichannel seismic systems
 - Sea bed coring and sampling systems
 - Shipboard, towed and vertical profiling and surveying systems
- (Around a further 30 regional research ships also operated by European institutes which are not included within the OFEG exchange framework)
- The collective global OFEG footprint increases efficiency of fleet deployment, reduces passage times, reduces costs, and allows scientists access to a wider range of geographical areas and research equipment in a given year.



RV Kronprins Haakon
(artist impression)



BIO Hesperides



RV Sarmiento de Gamboa



NERC polar ship
(artist impression)



Ship Capability

RV Maria S Merian



RRS Discovery



RV Pourquoi pas?



RV G.O Sars



RV Sonne



RRS James Cook



Ships included in the OFEG exchange agreement

RV Johan Hjort



RV Alkor



RV Pelagia



RV Poseidon



RV Garci del Cid



RV Thalassa



RV Kristine Bonnevie



RV Heincke



RV L'Atalante



RRS James Clark Ross

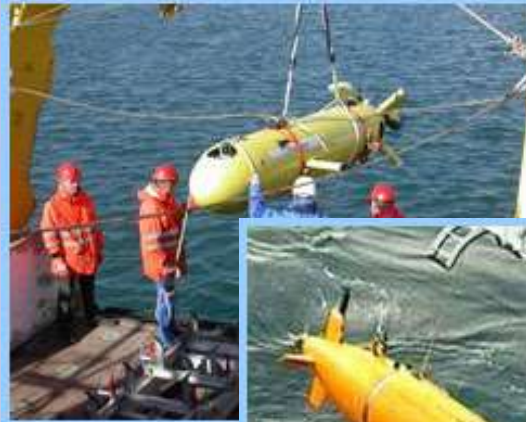


RV Meteor



Equipment capability in the OFEG exchange agreement

Clean CTD sampling



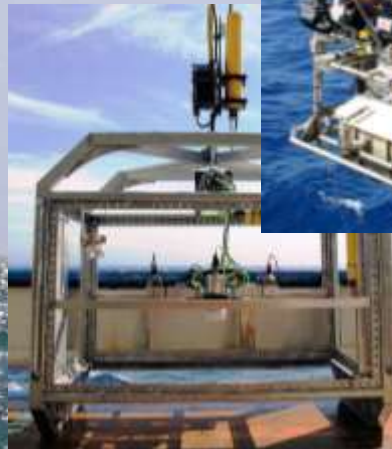
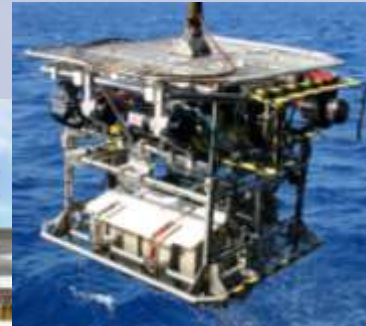
**AUV
systems**



Sea bed sediment coring



**Camera
systems**



Research Equipment included in exchange agreement



**ROV
systems**



**Mobile
seismic
systems**



Barter cruises
2009 -2016

Transnational North
Atlantic mooring
programme (OSNAP)

OFEG Ship & Equipment operations

Piston coring training /
trials / technology
exchange

RRS James Cook &
RV Sonne 2 ship
geophysics cruise

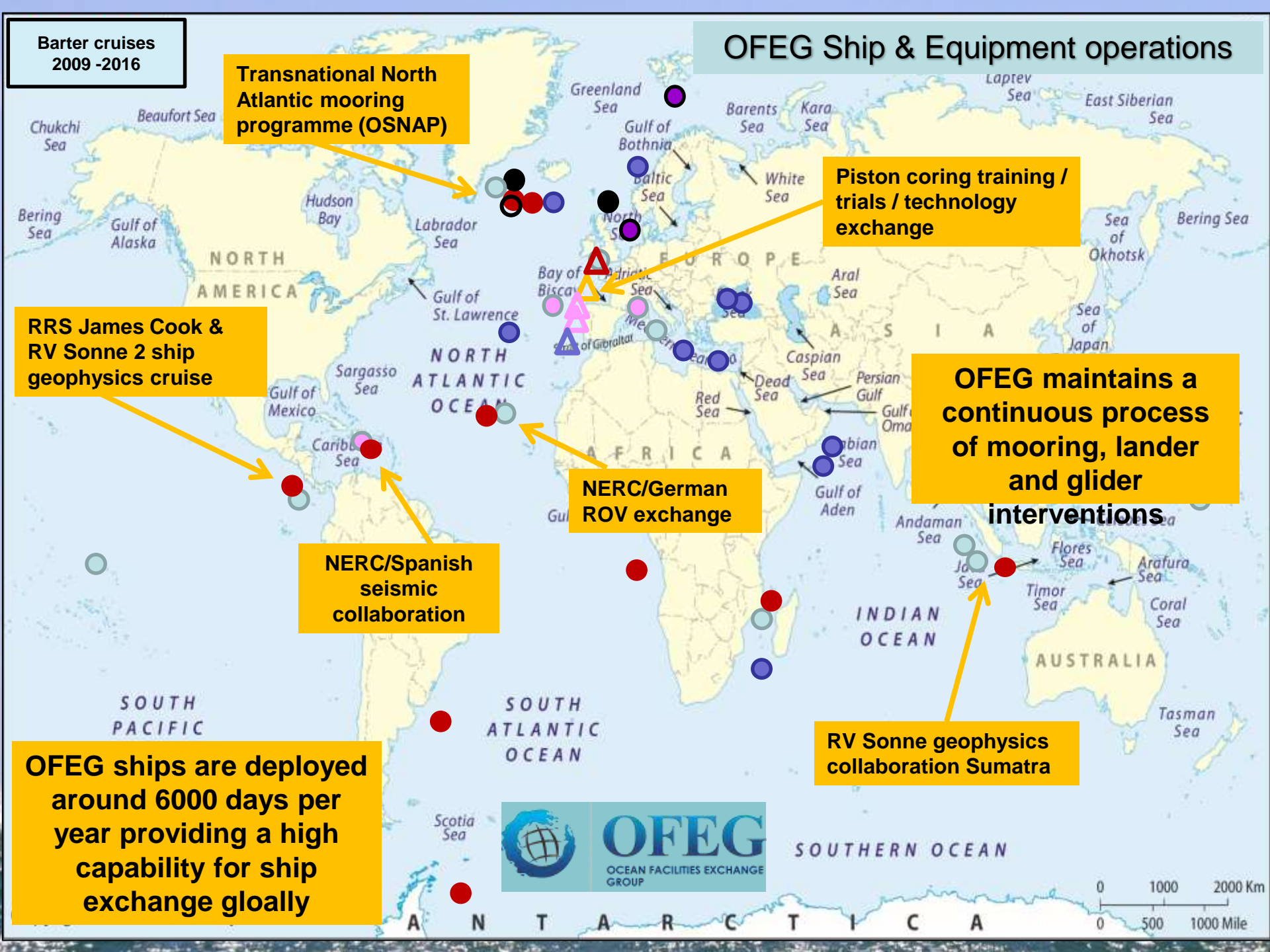
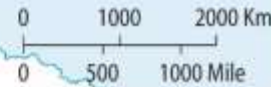
OFEG maintains a
continuous process
of mooring, lander
and glider
interventions

NERC/German
ROV exchange

NERC/Spanish
seismic
collaboration

RV Sonne geophysics
collaboration Sumatra

OFEG ships are deployed
around 6000 days per
year providing a high
capability for ship
exchange globally



Benefits of OFEG

Activity No.	Activity	Days transit saved (k€10)	Days saved on commercial charter (k€20)	Total savings (k€)
1, 2005	NL cruise on Discovery (UK)		19	380
2, 2006	NL cruise on Discovery (UK)		21	420
3, 2006	NERC intervention for NIOZ (Discovery)	20		150
4, 2007	NL cruise on Poseidon (D)		7	140
5, 2008	NERC intervention for NIOZ (James Clark Ross)	20		200
6, 2008	NL cruise on METEOR (D)		16	320
7, 2008	NERC intervention for NIOZ (Discovery)	20		200
8, 2010	SCIC intervention for NIOZ near Mallorca		3	60
9, 2010-2011	4 NL science teams on Meteor (D)	15		165
10, 2011	NL cruise on James Cook (UK)	50		500
total				k€2,585

Cost saving of a selection of ship barterers assessing relative passage or charter costs to deliver an equivalent capability





How (and why) does OFEG work, and how may it work in the future?

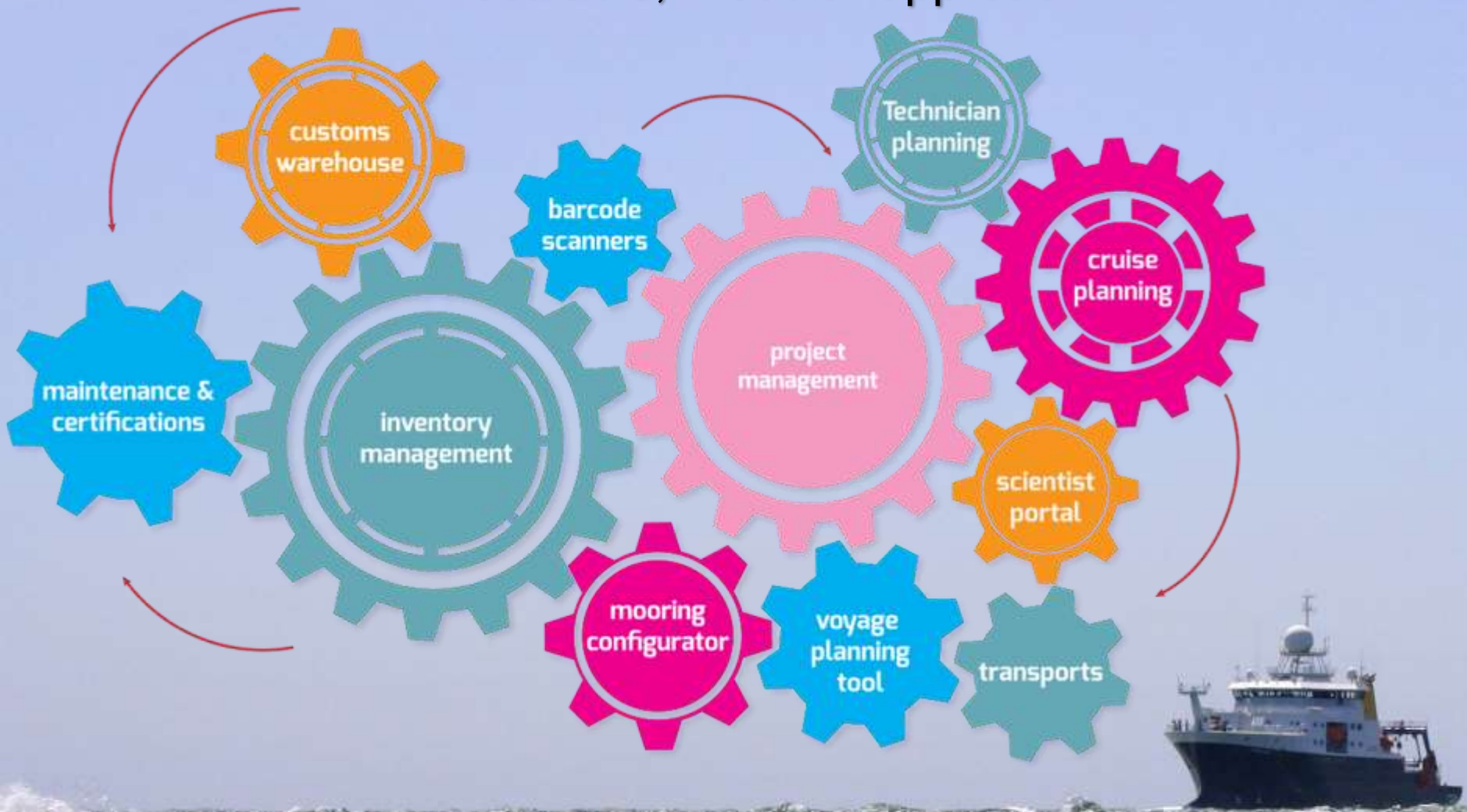
- We meet twice per year and exchange details of each others forthcoming ships programmes
- We *actively* seek to fill programme gaps and exchange ship time if mutually beneficial
- We make ourselves available throughout the year via email and telephone and *actively* seek to support intervention for unplanned equipment recovery or ship support requests
- In the future we may be able to share programmes using common planning systems
 - **Voyage planning system**
www.marinefacilitiesplanning.com/





OFEG
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GROUP

Web based 'Voyage Planning System': A scalable, modular approach





Marine Facilities Planning

Login

Welcome to the Marine Facilities Planning Page

This website allows Scientists to apply to use marine facilities in support of marine science from both the Natural Environment Research Council (NERC) and the Netherlands Instituut voor Onderzoek der Zee (NIOZ).

It is possible to view parts of this webpage including the published research voyage programmes for the NERC and NIOZ Marine Facilities by selecting the 'Public Page' below.

In order to apply to use these marine facilities you must be a registered user of the Marine Facilities Planning Website. Please request an account or login above.

[Request an account](#)



- PROGRAMME
- ABOUT

The NIOZ Royal Netherlands Institute for Sea Research is the national oceanographic institution for the Netherlands. Our mission is to gain and communicate scientific knowledge on seas and oceans for the understanding and sustainability of our planet.

The Natural Environment Research Council is the UK's largest funder of independent environmental science, training and innovation, delivered through universities and research centres.

MFP modules: Overview



PROGRAMME



- Six modules currently in use at NERC
- Designed for additional functionality as required



Programme: Timeline view

Ships ▾

◀ Today ▶

Period: 01/06/2016 - 01/06/2017

📅 12 MONTHS

2016

JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY

22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22



<p>A NUTRIENT AND CARBON PUMP...</p> <p>JR16-01 16-04</p> <p>Days 45 TPOS 21/05/2016 CBMM 10/07/2016 Jon Short</p>	<p>RECEIPT/REFIT</p> <p>Days 28 DPOH 16/07/2016 DPOH 13/08/2016</p>	<p>TRIALS</p> <p>Days 26 DPOH 15/08/2016 DPOH 08/09/2016</p>	<p>ALONGSIDE</p> <p>Days 10 CBMM 10/08/2016 CBMM 20/08/2016</p>	<p>ATLANTIC MERIDIONAL TRANSECT...</p> <p>JR16-001 16-042</p> <p>Days 48 CBMM 20/08/2016 FKPSY 04/11/2016 Matt Tiahlo</p>	<p>NMFSS UNSUPPORTED</p> <p>JR16-002 Days 21 FKPSY 08/11/2016 FKPSY 28/11/2016</p>	<p>GEOLOGICAL AND GEOPHYSICAL...</p> <p>JR16-003 16-005</p> <p>Days 33 FKPSY 02/12/2016 FKPSY 04/01/2017 Matt Tiahlo</p>	<p>NMFSS UNSUPPORTED</p> <p>JR16-004 Days 31 FKPSY 08/01/2017 CLRUQ 01/03/2017</p>	<p>DYNAMICS OF THE ORRNEY PASSAGE...</p> <p>JR16-005 16-000</p> <p>Days 55 CLRUQ 01/03/2017 UKMWD 25/04/2017 Jon Short</p>
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▼ Cruise - Atlantic Meridional Transect (AMT)

code **JR16-001**

20/09/2016 Immingham (North East Lincolnshire) - United Kingdom

04/11/2016 Port Stanley - Falkland Islands (Malvinas)

Matt Tiahlo

[Cruise overview](#)

[Cruise Application](#) Technicians

TITLE OF PROJECT

Atlantic Meridional Transect (AMT)

Last modified 14/01/2016 System...

Submitted N/A

SCIENTIST INFORMATION

Name Mr Matt Tiahlo
 Organisation NERC
 Email m.tiahlo@noc.ac.uk
 Telephone 02380596208
 Mobile phone 07968623062

DESCRIPTION OF RESEARCH PROJECT

DESCRIPTION

Strategic Context:

The Atlantic Meridional Transect programme (AMT; www.amt-uk.org) is a NERC National Capability project which will provide a sustained open ocean in situ observing system to enable early warning of any fundamental change in ecosystem

Programme: Hybrid Map view

MFP PROGRAMME

MAP

PROGRAMME

HYBRID

Ships

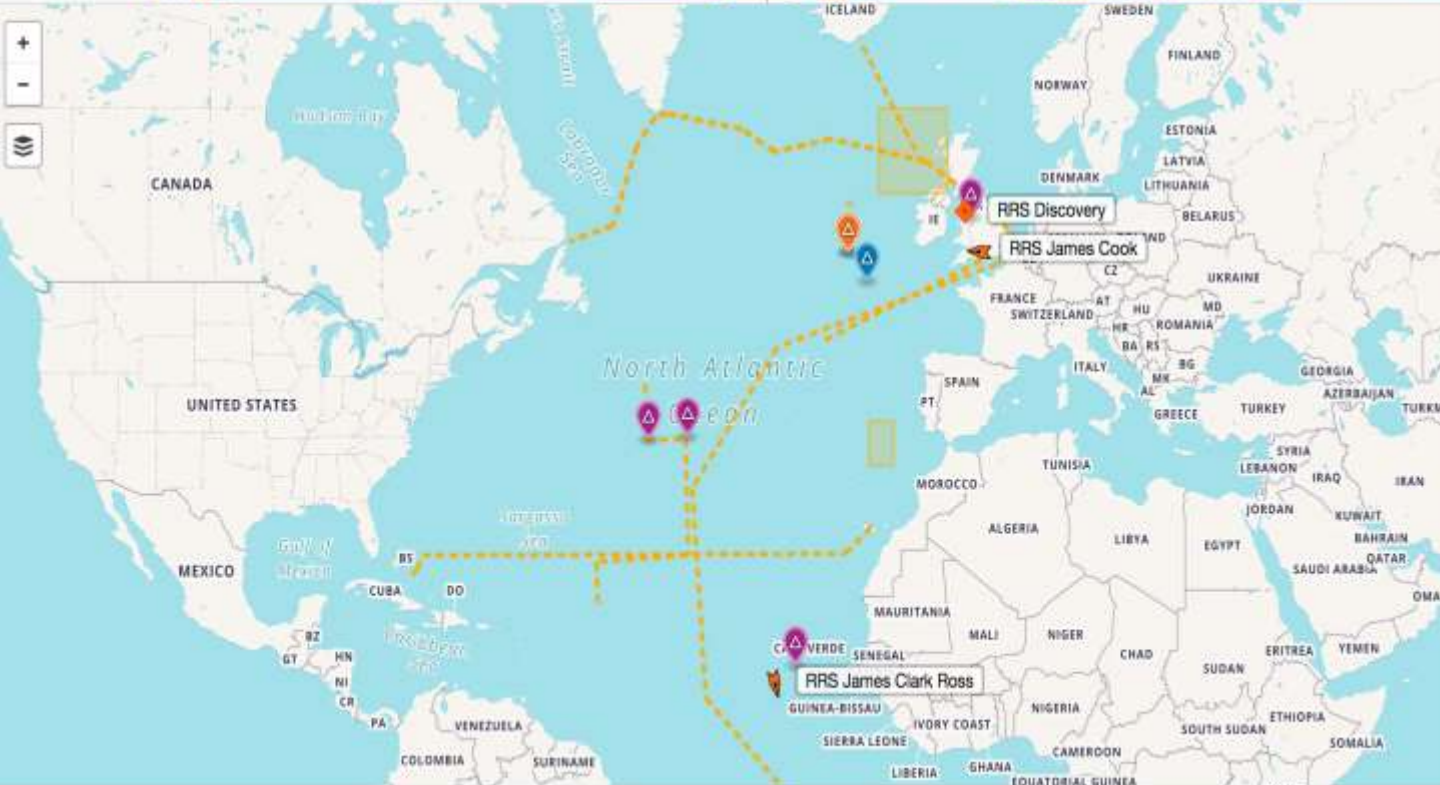
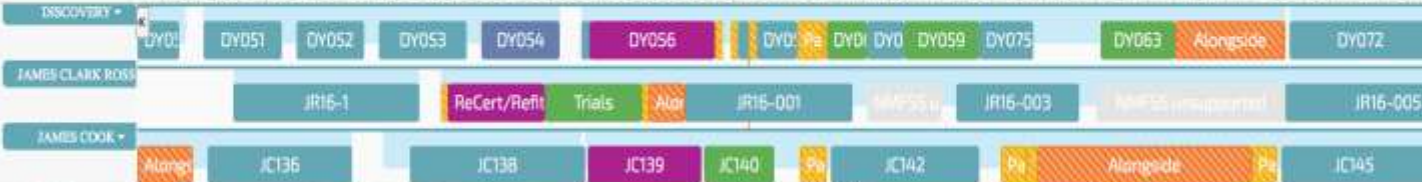
Today

Period: 01/05/2016 - 01/05/2017

12 MONTHS

2016

A MAY JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH
 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 1 2 3 4 5 6 7 8 9 10 11 12 13 14



Legend

- Trials
- Barter
- Alongside
- ReCert/Refit
- Passage
- NMF55 unsupported
- Science Cruise

Cruise Filters

EQUIPMENT USAGE

more

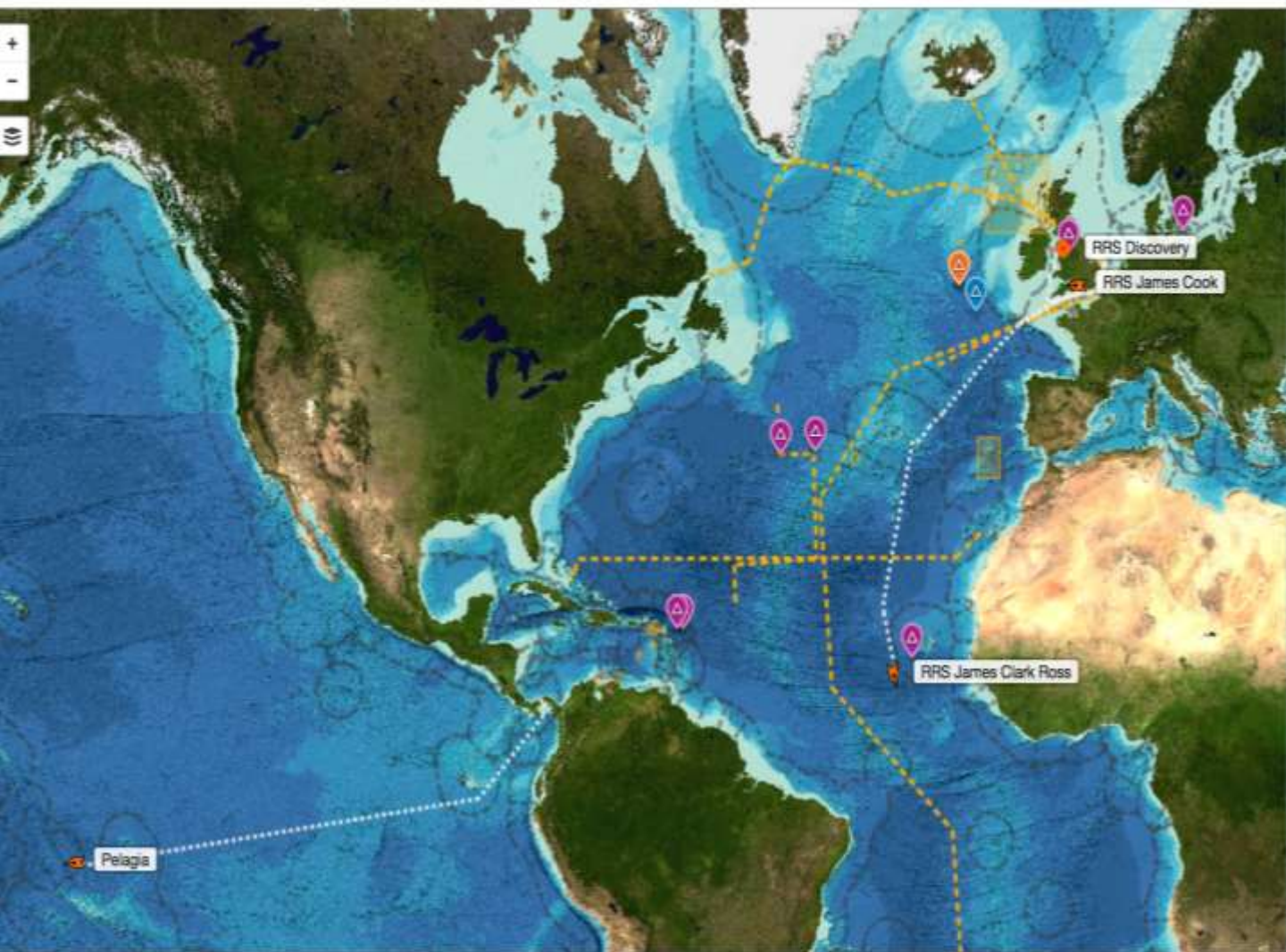
Current Cruises



MFP PROGRAMME

MAP PROGRAMME HYBRID

Ships ▾ < < Today > > Period: 01/05/2016 - 01/05/2017 12 MONTHS



Legend


- Sampling Station
- AUV
- Glider Station
- Mooring
- Lander

Cruise Filters

EQUIPMENT USAGE

more

Current Cruises



PASSAGE



Inventory
Management

Personnel
Planning

Programme
Construction

Project
Management

Scientist Portal

Programme Construction features

- Ability to create multiple drafts prior to publication
- Cruises can be provisional or confirmed
- Date preferences and vessel capabilities are taken into account



Programme

2017 Pre-publish draft

cdy test draft

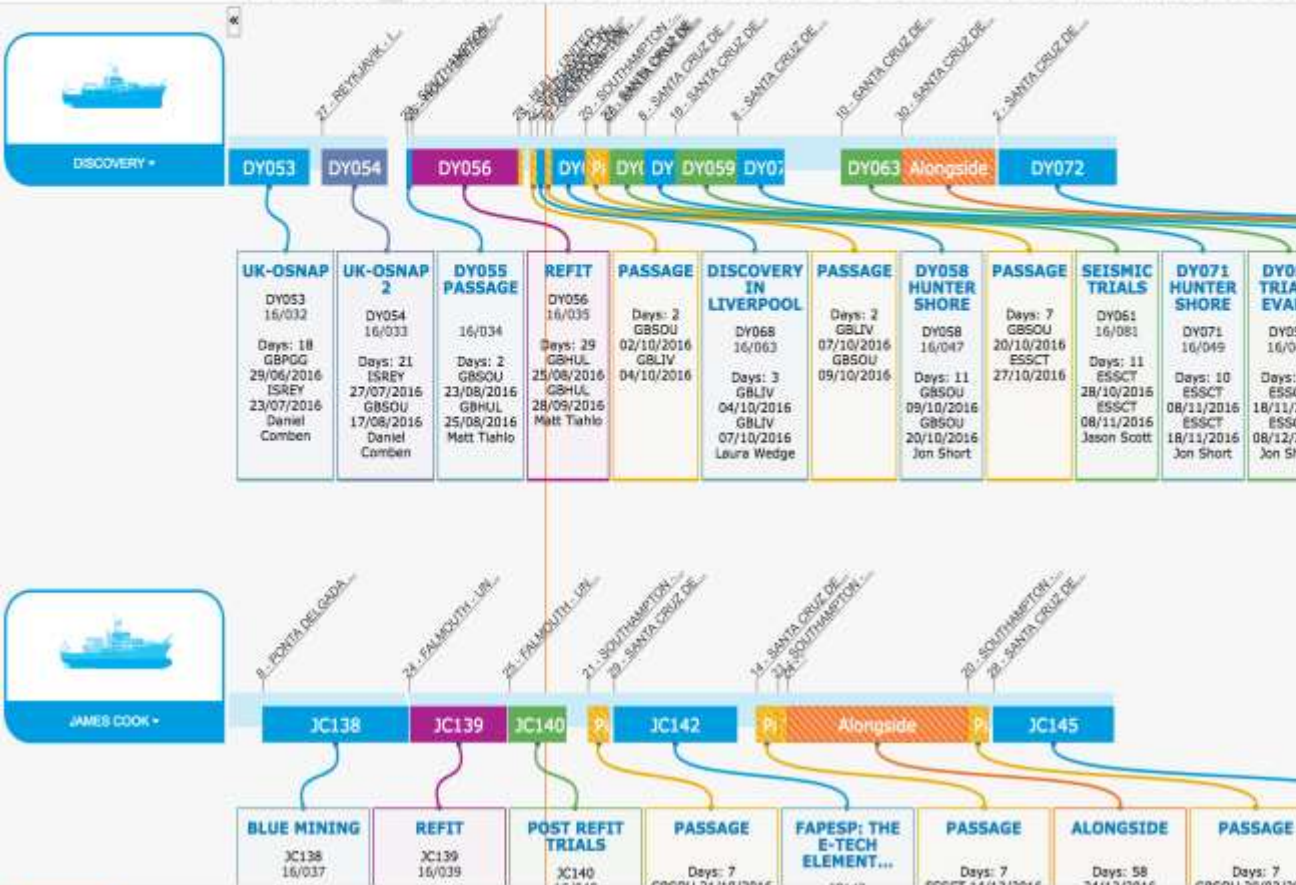
CDY test draft3

Draft 2017

Ships   Today   Period: 01/07/2016 - 31/07/2017

2016

JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY
262728293031323334353637383940414243444546474849505152 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23



Available Cruise Applications



Characterising leakage ...

 Tim Minshull
 North Sea
 10 days (10)
 01/07/2017 - 30/09/2017

COMMISSION

 Jon Short
 PAP
 19 days (19)
 07/03/2017 - 07/03/2017

Extended Ellett Line

 Penny Holliday
 Eastern North Atlantic
 16 days (14)
 01/06/2017 - 31/08/2017





ICY-LAB: Isotope CYcl...

 Kate Hendry
 North Atlantic/Labrador Sea
 25 days (19)
 01/04/2017 - 01/09/2017




Laura SME test 1

 Sally Scientist
 North Atlantic/ east greenland
 45 days (40)
 01/07/2017 - 21/07/2017




Penny Holiday

 Colin Day
 North Atlantic
 16 days (14)
 01/06/2016 - 31/08/2016

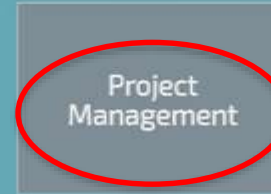
Seismics Trials

 Laura Wedge
 PAP
 20 days (20)

Studies at the PAP open...

 Richard Lampitt
 Northeast Atlantic
 10 days (7)

MFP modules: Project Management



Project Management features

- Customisable workflow
- Integration of automated email alerts
- Online document repository
- Coupled to scientist's workflow



Project Initiator Jon Short [change](#)

Project Co-Editor n.a.

Project Manager Matt Tiahlo [change](#)

Project Administrator Colin Day

Marine Planning Officer Colin Day

Logistics Manager Michael McCarthy

Scientific Engineering Manager n.a.

IMS equipment located at stores quarantine area 25/04/2016

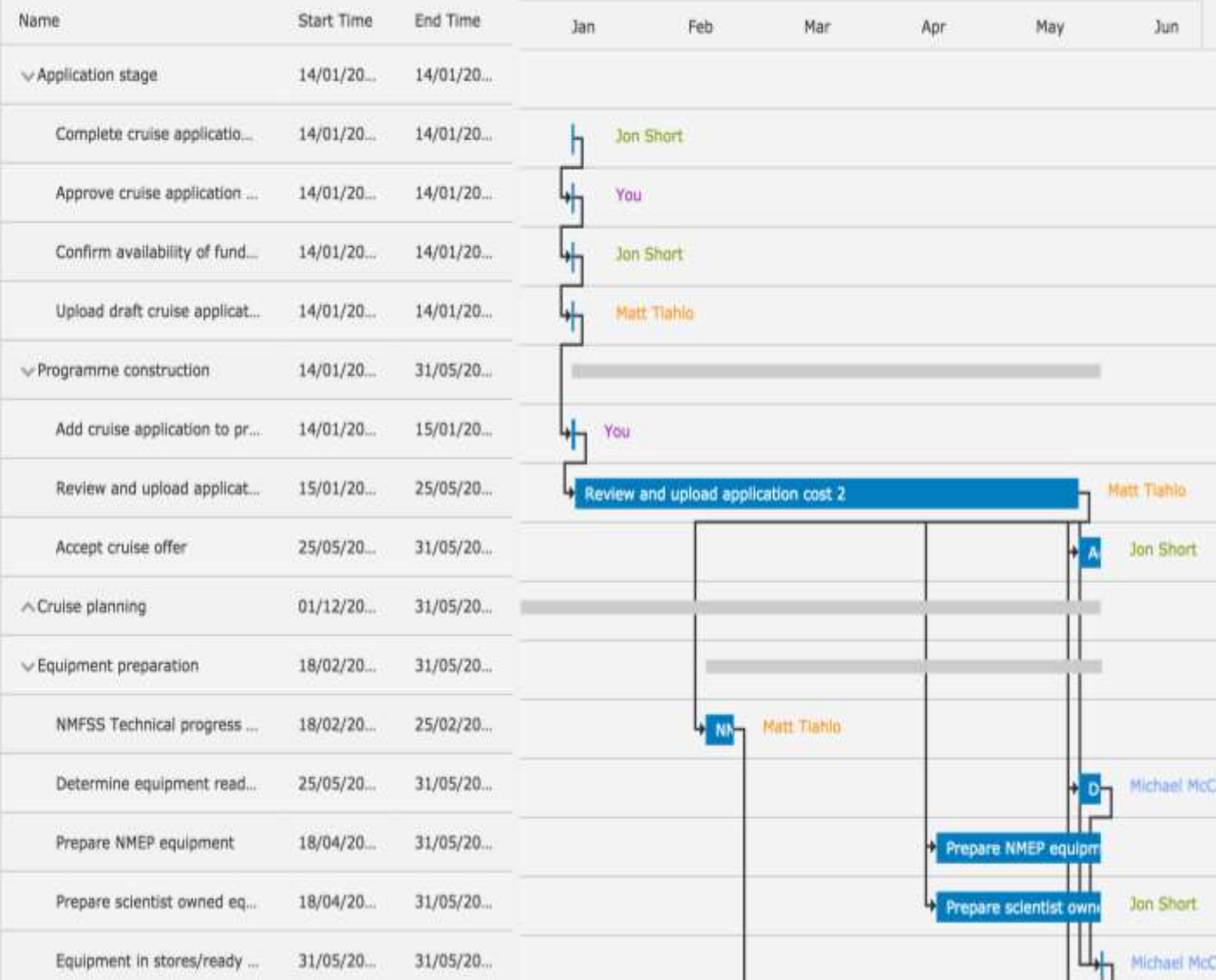
IMS dispatch date 14/05/2016

planned mobilisation date n.a.

planned sail date 14/05/2016

planned docking date 23/06/2016

planned demobilisation date n.a.

 13


16/031 - Project Management

Table 📄 Gantt 📅 Read Only 📄

Project Management > Cruise Project Management - NC Extended Elliott Line

Overview



Project Initiator Laura Wedge
[change](#)

Project Co-Editor n.a.

Project Manager Laura Wedge
[change](#)

Project Administrator Colin Day

Marine Planning Officer Colin Day

Logistics Manager Michael McCarthy

Scientific Engineering Manager n.a.



IMS equipment located at stores quarantine area 31/05/2016

IMS dispatch date 15/06/2016

planned mobilisation date 05/06/2016

planned sail date 07/06/2016

planned docking date 25/06/2016

planned demobilisation date 26/06/2016



Documents

Upload ▾ Bulk Edit ▾ Sort ▾

Diplomatic Clearance Papers

	<input type="checkbox"/>	Dipclear for note 133 - Discovery DY052.pdf	01/06/2016	Laura Wedge	▾
	<input type="checkbox"/>	DY052_dipcl_Discovery - Iceland Final.doc	01/06/2016	Laura Wedge	▾

Inline Images

		Cruise Application			
	<input type="checkbox"/>	EEL_track_map.pdf	14/01/2016	Matt Tiahlo	▾

Cruise Plan

NMFSS Technical Reports

	<input type="checkbox"/>	DY052_handover.pdf	02/09/2016	Laura Wedge	▾
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Post Cruise Assessment

		Post Cruise Cost Assessment 4			
		Upload Post Cruise Assessment			
	<input type="checkbox"/>	PCA_DY052.pdf	02/09/2016	Laura Wedge	▾

Upload Post Cruise Assessment and review

Scientist Documents

Cruise Report Summary

MFP modules: Personnel Planning

MFP Cruise Management

PROGRAMME ▾




Personnel Planning features

- Linked to cruise programme dates
- Viewable to all personnel
- Customisable
- Reporting: tables & graphics



Personnel Planning: Pivot Reporting

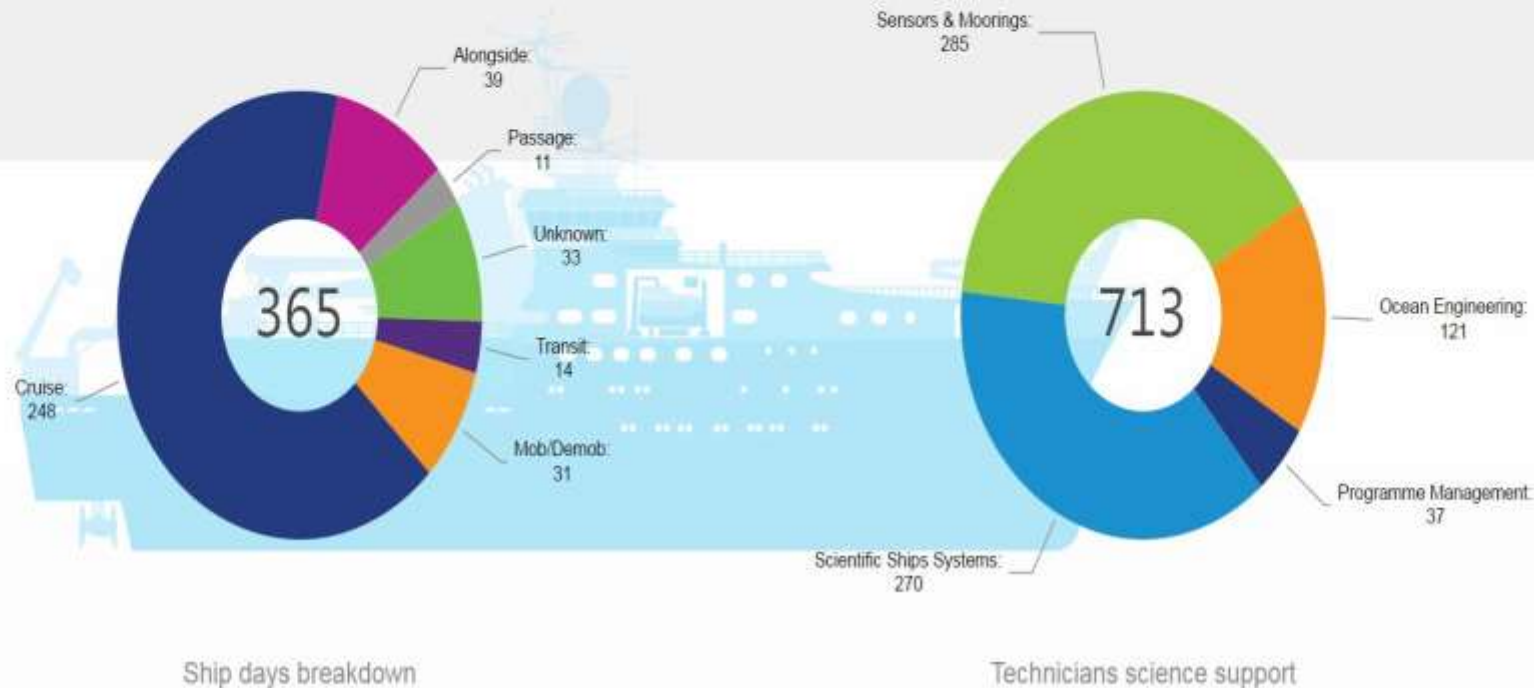
 2016/17 MFP ▾  Export to Excel Configuration

 Scheduler Pivot Graph

		Cruise Support Days		Days on Ship		FlexLocation	
Group Name		RRS James Clark Ross		RRS Discovery		RRS James Cook	
		Cruise Support Days	Days on Ship	Cruise Support Days	Days on Ship	Cruise Support Days	Days on Ship
▼ All Groups	Programme Management	49	49	17	17		
	Sensors & Moorings	278	278	285	285	311	311
	Scientific Ships Systems			244	270	327	329
	Ocean Engineering	73	73	83	88	237	237
	ROV					645	645
	AUV					231	231
	Gliders	98	98				
All Groups		498	498	629	660	1,751	1,753

RRS DISCOVERY

📄 download





Inventory Management features

- Equipment overview
- Maintenance, test and calibration records
- Equipment scheduling
- Deployment overview (moorings, gliders...)
- Moving equipment
- Customs warehouse





Inventory Management



EQUIPMENT ACTIONS


 OVERVIEW


 NEW EQUIPMENT


 WORK HISTORY


 TESTS & CERTIFICATION


 GENERIC EQUIPMENT


 SEARCH

YOUR PLANLISTS


 OVERVIEW


 NEW PLANLIST

VOYAGES, CRUISES AND TRANSPORTS


 OVERVIEW


 NEW TRANSPORT


 NEW VOYAGE



 TRACKING


 CONTACTS




HELPPFILES


A guide to using Generic Equipment.




A guide to using the NOC Barcode Scanners




Conventions for using IMS by SBIM - naming conventions and working practices.




Creating a planlist when a transport event is created




Detailed Inventory Management System User Guide




Form to be completed when notification of a bug or requesting a change



How to report problems and instigate changes to IMS



NOC Asset Disposal issued January 2016



NOTIFICATION OVERVIEW

Agenda

Calendar

Today ◀ ▶ 06 September 2016-13 March 2017

Date	Event
Overdue	<ul style="list-style-type: none"> The step Submit diplomatic clearance application within 'Dynamics of the Orkney Passage Outflow (DynORO)' is overdue, deadline was on: 09/07/2016 The step Confirm data submission to BODC within 'Influence of population connectivity on depth-dependent diversity of deep-sea marine benthic biota' is overdue, deadline was on: 07/07/2016 The step Post cruise cost assessment 4 within 'Influence of population connectivity on depth-dependent diversity of deep-sea marine benthic biota' is overdue, deadline

RECENT ACTIVITY

ITEM	AT	BY	LOCATION
250002229 ROV4 Camera Atlas 3 Chip	20/09/2016 11:15	Allan Davies	250008465 ROV6 Z ROV LUVU Transportation container 2 20ft

Inventory Management: Moorings

NIOS | INVENTORY MANAGEMENT





Scientist Portal features

- Customised cruise request form / questionnaire
- Questions specific to vessel
- Workflow view similar to Project Management module
- Upload and share supporting documentation



NERC Scientist Portal

[Home](#)[My Equipment](#)[Voyages And Cruises](#)[My Profile](#)[Help](#)

Hello Matt Tiahlo,

Welcome to your personal NERC portal. Via this website you can apply for ship time and equipment belonging to the National Pool of Equipment. You can also manage your personal equipment.

To see an overview of the scheduled cruises have a look at the [NERC Programme](#)

You have 10 active applications:

16/079 - New Application

[view workflow](#)

The following requires your action:

- > [Complete cruise application form](#)

Cruise Request

16/080 Project Management > New Application > Application Note

Application Note

Scientist Information

Funding Information

Cruise Location

Embedded Images

Cruise Dates

Ship Selection

Ship Fitted Equipment

Marine Pool Equipment

User Supplied Equipment

Summary

Ship-time & Marine Equipment Application Form (SME)

NOTES:

1. NERC's Marine Facilities Planning programme is planned on the basis of the financial year i.e. 1st April to 31st March. Each Cruise Request must confirm it is funded (by associated NERC grant or otherwise) by the 1st April in order for it to be considered for inclusion in the following years programme (e.g. 1st April 2016 for inclusion in 17/18 programme).
2. Cruise requests that confirm their funding after this point will be carried forward to the subsequent year, unless they can be satisfied on an opportunistic basis.
3. This form is NOT an application for funding, which must be applied for or obtained separately. The NERC policy for the allocation of 'superstructure' costs to grant proposals can be found in the guidance notes. Please check the NERC deadlines for SME submission dates at the [applying for marine facilities](#) page.
4. All applications for access to NERC's marine facilities must be submitted electronically via this web site. As the Profile progresses the Principal Investigator will be notified of the progress by automatically generated email alerts.

If you have any enquires concerning details contained within these online forms please contact the following people:

Beth Woodward
Marine Planning Officer
Tel: 01793 442597
Fax: 01793 411545
E-mail: [Beth Woodward](mailto:Beth.Woodward@nerc.ac.uk)

Colin Day
NMFSS Programme Manager
Tel: 023 80596109
Fax: 023 80596267
E-mail: [Colin Day](mailto:Colin.Day@nerc.ac.uk)

Randolph Sliester
Ships programme & Ops
Manager
Tel: 01223 221456
Fax: 01223 362616
E-mail: [Randolph Sliester](mailto:Randolph.Sliester@nerc.ac.uk)

Sally Heath
NMFSS Programme Support
Officer
Tel: 023 80599238
Fax: 023 80596149
E-mail: [Sally Heath](mailto:Sally.Heath@nerc.ac.uk)

Cancel

Previous

Save and Continue

Water samplers > CTD frame

CTD Frame Stainless Steel 24x10L (round)

AUV

Geophysics

Laboratory infrastructure

Mooring systems

ROV

Samplers and profilers

Sea containers

Expected number of casts:

80

Maximum cast depth (m):

5,000

24 hour operations

Required

Sensors required

- Seabird 911 CTD
- Transmissometer
- Fluorimeter
- Oxygen sensor
- Light scatter sensor
- PAR sensor
- Pinger
- Altimeter
- Other

Do you require 10L or 20L bottles?

- 10L
- 20L

Any other requirements?

Most deployments limited to 500m. Full-depth cast to test acoustic release for SAG mooring



- Enhanced reporting tools
- Moorings module (in use by NIOZ)
- Autonomous vehicle / glider piloting dashboard
- Planned maintenance functionality
- Integrated cruise costings
- Vessel operations: manning, passages, AIS
- Post cruise assessments
-What's your innovation.....?





OFEG
OCEAN FACILITIES EXCHANGE
GROUP

A bottom up approach to research fleet coordination and harmonisation

Ships Delivery Communication
Equipment Capability People
Collaboration Planning

