NEW RESEARCH FLEET .NL

Update on the new Dutch Research Fleet

Zeynep ERDEM – National Marine Facilities NIOZ

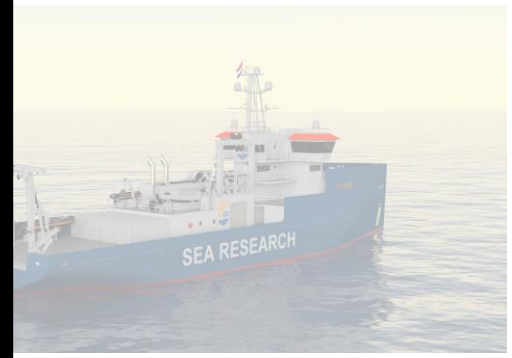
October 2023

IRSO meeting, Brugge

NIOZ

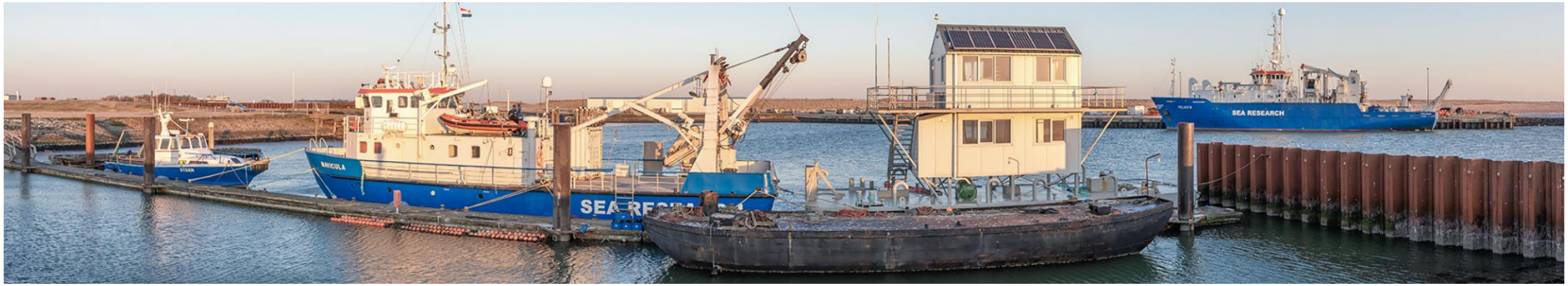
NWO

Dutch research fleet



Dutch research fleet

RV Stern *RV Navicula* *RV Pelagia*



RV Adriaen Coenen

RV Wim Wolff

RV Anna Weber-van Bosse

The new research fleet

RV Adriaen Coenen *has been* in service since the summer of 2022.

RV Adriaen Coenen

RV Navicula will be replaced by ***RV Wim Wolff*** in fall 2023

RV Wim Wolff

RV Pelagia will be replaced by ***RV Anna Weber van Bosse*** in 2025.

RV Anna Weber-van Bosse

RV Stern

Length: 14.6m
Speed: 15 knts
Age: 46 years

RV Adriaen Coenen

In service since August 2022

Length: 19m
Speed: 21 knts

NEW RESEARCH FLEET .NL

Building process at **Next Generation Shipyards** in Lauwersoog, The Netherlands

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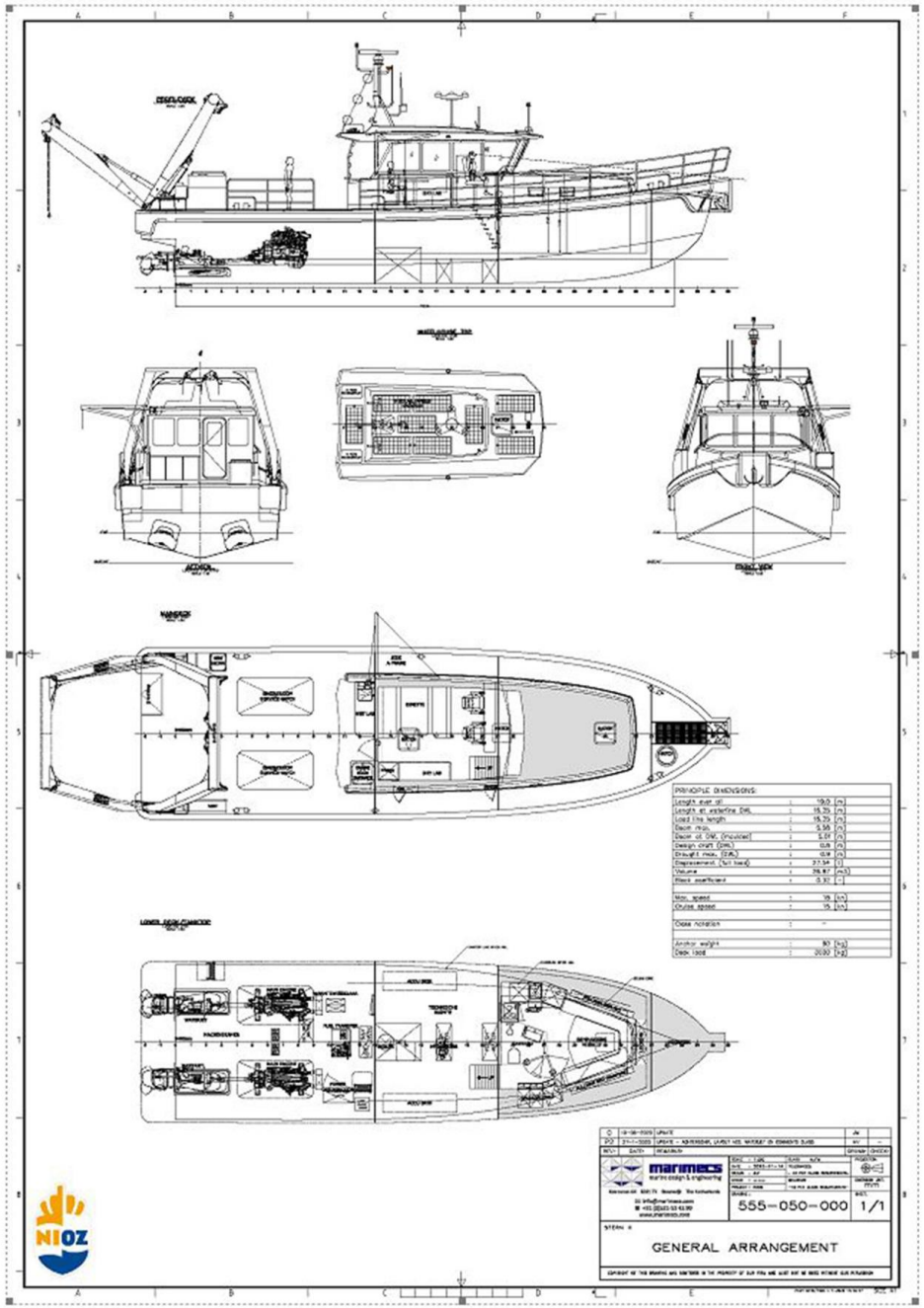
Specifications

- Length overall: 19 m
- Beam: 5 m
- Draught: 0.8 m
- Material: Aluminium
- Speed: 20 knts
- Crew: 2
- Max # people: 12
- Features: A-frame, side frame, ADCP & Multibeam deployment, wet lab, dry lab, towing arrangement



RV Adriaen Coenen

Technical information

- Engines: Scania (Stage V)
- Water jets: Hamilton

- Energy during cruising: HVO diesel engines
  Anchored/grounded: solar panels and battery pack
  Energy back up by a small generator

RV Navicula

- A 41-year-old, 23 m vessel
- Beam: 7m
- Draft: 1m
- Speed: 7 knts
- 3 crew + up to 8 scientists
- operates in **the Wadden Sea, Zeeland Delta, and near-coastal North Sea**.

RV Wim Wolff

- shallow draught of 1m, specifically for overnight trips for research in coastal NL

- being built by **Thecla Bodewes Shipyards (TBSY)** in Harlingen, The Netherlands

- The expected delivery is by the end of 2023.

- Launched on September 26th

RV Wim Wolff

On 26 September 2023 *RV Wim Wolff* was launched in Harlingen.

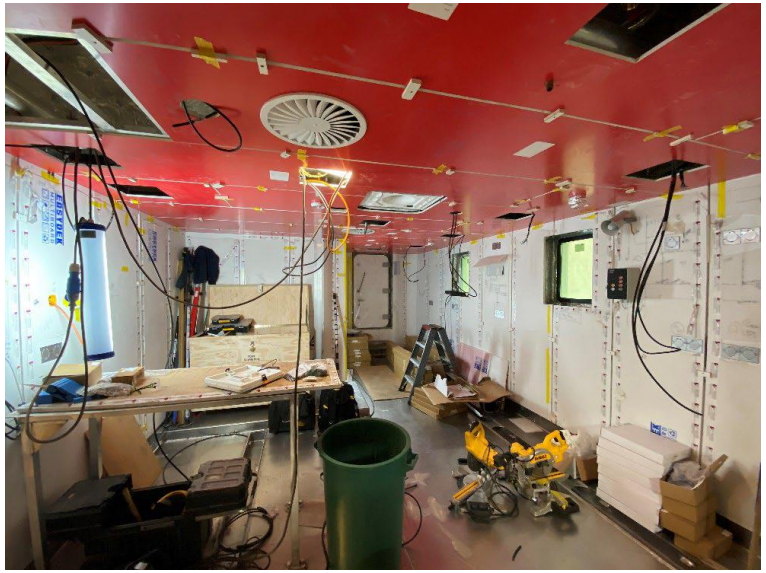
For more information, please visit:
http://www.NewResearchFleet.nl

RV Wim Wolff

Update from August 2023

Building process photos were taken from newsletters ©FH

RV Wim Wolff

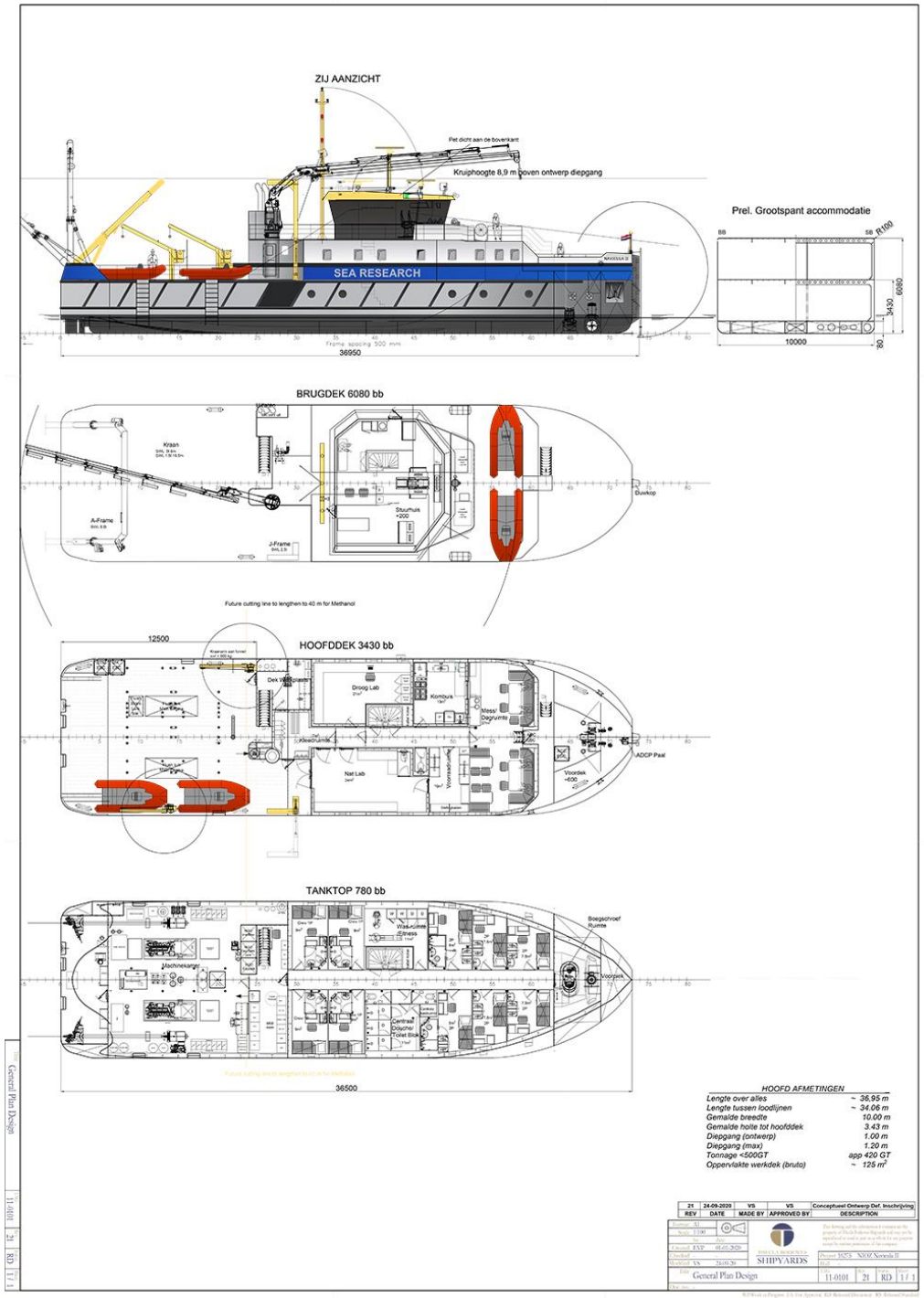


Building process photos were taken from newsletters ©FH

RV Wim Wolff

Specifications

- Length overall: 36 m
- Beam: 10 m
- Draught design: 1 m
- Draught max.: 1.20m
- Working deck area approx.: ~125m^2
- Speed: 12 knts
- 4 crew + 12 passengers
- dry and wet lab
- 2 container space on the working deck



RV Pelagia

Length: 66m
Age: 32 years

Berths: 25

12 scientists + 2 tech support + 11 crew (single berth).

Container capacity :
3 + 1 - on D-deck aft
1 - in hold on D-deck
4 - in hold on tanktop

RV Pelagia

Specifications

- Length overall: 66 m
- Beam: 12.80m
- Draught: 4.20m
- Cruising speed / Maximum speed: 9knts / 11knts
- Diesel
- Fuel consumption at cruising speed: ~4.5 m^3 per day
- No DP

RV Pelagia operating year-round in all oceans and seas except for the polar regions.

Marine Facilities Planning (MFP)
Sea Location Analysis of *RV Pelagia*
between 2017 and September 2023

The *RV Anna Weber-van Bosse* will be built by **Astilleros Armon A.S.** in Vigo, Spain.

Delivery is scheduled for the **3rd quarter of 2025.**

RV Anna Weber-van Bosse

Specifications

- Length overall 80m
- Breadth molded 17m
- Depth to main deck 8.70m
- Summer draught 5m
- Scantling draught 5.50m
- Accommodation 46

(16 crew and 30 scientists)

RV Anna Weber-van Bosse

- Ice-class 1C
- Longer periods at sea with more people onboard
- Capable handling equipment; AUV, MEBO, ROCKDRILL
- Piston cores up to 30m
- Main-, dry-, wet- and geolab
- Room for 12 laboratory containers (max 17)
- Dynamic Positioning (DP2)
- Methanol ready
- Aim for ‘zero emission’ after 10 years refit

RV Anna Weber-van Bosse

Situation 1: Only MDO (Tender requirement)
Situation 2: MDO + Change to Methanol in some tanks
Situation 3: MDO + Change to Methanol in some tanks + fit new tanks for Methanol
Situation 4: No longer use of MDO only Methanol

Transit condition 10 knots						
	Margin	Situation1	Situation 2	Situation 3	Situation 4	
Total distance	0%	24886	14901	17947	9676	[nm]
Total distance	10%	22624	13547	16316	8797	[nm]
Total distance	20%	20738	12418	14956	8064	[nm]
Total amount of days	0%	104	62	75	40	[days]
Total amount of days	10%	94	56	68	37	[days]
Total amount of days	20%	86	52	62	34	[days]
Max. Speed condition 12 knots						
	Margin	Situation 1	Situation 2	Situation 3	Situation 4	
Total distance	0%	18633	11166	13383	7254	[nm]
Total distance	10%	16939	10151	12166	6594	[nm]
Total distance	20%	15527	9305	11152	6045	[nm]
Total amount of days	0%	65	39	46	25	[days]
Total amount of days	10%	59	35	42	23	[days]
Total amount of days	20%	54	32	39	21	[days]

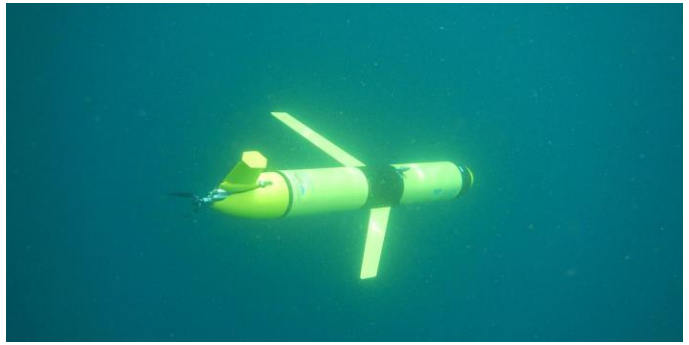
Notes:
-Transit condition 10 Knots calm water (contrat condition) demands 1019 kW (including 15% reserve) which corresponds with the 85% of the smallest gen generator set (1200 kW)
-The maximun power of main engine 1700 kw is based on the Ice Class IC.
-In the Armon proposal the ship will comply with the specification of 40 days 10 knots (9600 miles) calm waters in all the conditions including no longer use MDO

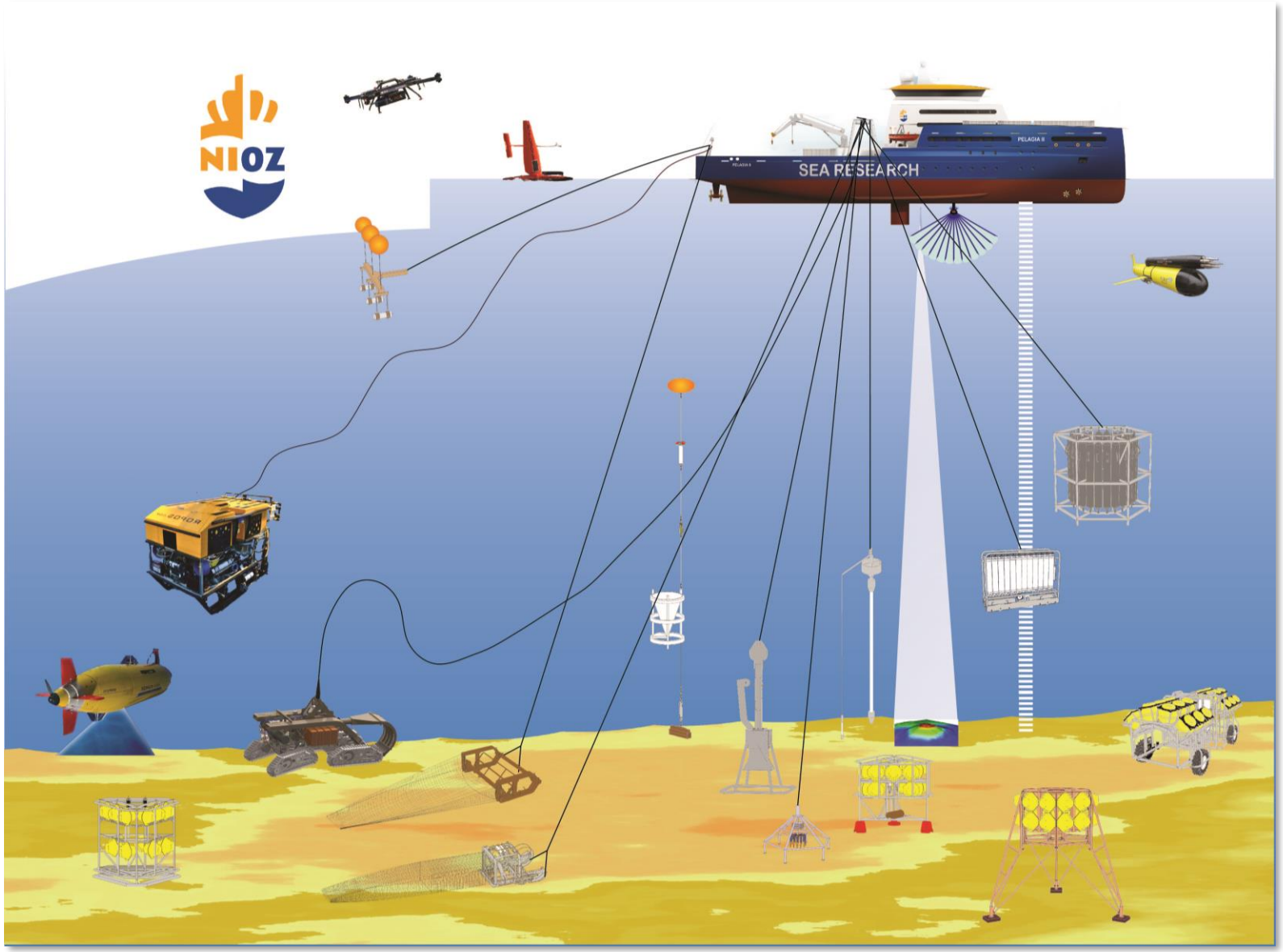
RV Anna Weber-van Bosse

Working area: World wide, and near polar regions

Coming years large scale infrastructure

- 3 gliders
- 1 AUV
- Working class ROV





Thank you

Follow the project at: www.newresearchfleet.nl

Royal NIOZ National Marine research Facilities (NMF) manage and operate the national research vessels and equipment for the benefit of the marine and maritime research community