Deployment of MEBO from Pourquoi pas? R/V
Sea trials in octobre 2011, cruise Guineco-MEBO november 2011

Different aspects:
• Feasibility conducted in 2008
• On-board installation, oct 2011
• Harbour and sea trials, oct 2011
• Cruise GUINECO-MEBO, nov 2011

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Mebo system

- **Vehicle**
  - Dim: 2.3 * 2.6 * 6.6m
  - Weight in air: 10t
  - Weight in water: 7.5t
  - Depth: 2000 m

- **Winch**: 20’ – 29t
- **LARS**
- **Containers**: 6 * 20’

<table>
<thead>
<tr>
<th>MEBO</th>
<th>Containers</th>
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<tbody>
<tr>
<td>M1</td>
<td>1x20’ SPECIAL MEBO</td>
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<tr>
<td>M2</td>
<td>1x20’ SPECIAL WINCH</td>
</tr>
<tr>
<td>M3</td>
<td>1x20’ OFFSHORE CONTROL</td>
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<tr>
<td>M4</td>
<td>1x20’ WORK SHOP</td>
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<tr>
<td>M5</td>
<td>1x20’ DRILL TOOL</td>
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<tr>
<td>M6</td>
<td>1x20’ TRANSPORT LARS</td>
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<td>M7</td>
<td>1x20’ LARS HPU</td>
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Installation on *Pourquoi pas?*
Deployment

In 2007, studies confirms that the A-Frame is able to deploy MEBO and support maximum load of:

- 18 T - static when unroot the MEBO,
- 15 T - on line when vehicle in water + dynamic loads

**In air:**
- Mébo weight in air : 10t
- Deep sea pulley : 1t
- On line : 11t + dynamic load

**In water:**
- Mébo + cable : 14t
- Pulley : 1t
- On line : 15t + dynamic

A frame not fully out-boarded when MEBO is in operation
Adaptation frames

Need 2 adaptation frames:

- **For winch**
  - To support winch weight on deck
  - To support static and dynamic load from winch on deck

- **For LARS**
  - To install LARS on board with its rails
Several connexions

Power connexion with board:
- 2 connections 380V, 150 A, 3 phases
- 2 connections 380V, 63A, single phase
- 1 connection 380V, 63A, 1CEE
- 1 connection 380V, 250A, 3 phases

Networking connexion:
- Integrated navigation
- Ultra Short Base Line data to acoustic positioning MEBO
Handling procedure

- **Launching procedure**
  - LARS used to drive MEBO from horizontal to vertical position
  - When A frame slightly out-boarded, deep sea cable handles MEBO, disengages it from LARS
  - A frame is still slightly over-boarded and cable is paid out – floats are fitted
Harbour trials

- Harbour trial
  - After 5 days of installation, an Harbour Trial was efficient
    - tests of connection and power alimentation
    - trial of outreach

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Sea trials

- **Sea trials**
  
  After Harbour test, sea trial was done at 70 m depth.

  **Objective**: crew need to practise MEBO handling and recovery with the use of floats on cable.
Thank you for your attention