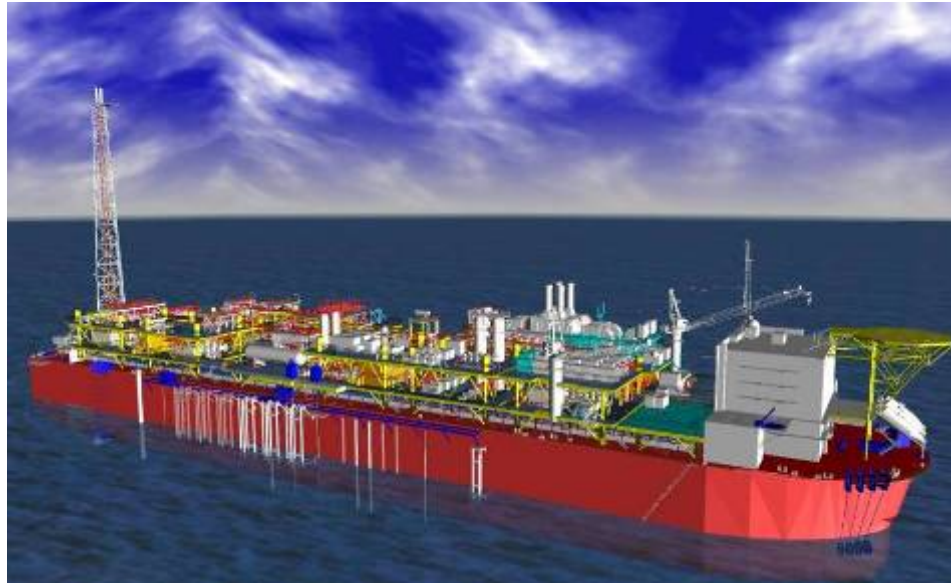




# Facilities Specification



<b>Oil Rate</b>	<b>220 / 200 (peak/av)</b>
<b>SRP ( seawater )</b>	<b>400 mbd</b>
<b>Power</b>	<b>4 GTs (103 MW)</b>
<b>Gas Compression</b>	<b>330 mmscf/d</b>
<b>FPSO length</b>	<b>310m</b>
<b>Gas Injectors</b>	<b>3 available</b>
<b>Initial Wells</b>	<b>43</b>
<b>Spare well slots</b>	<b>25</b>

- FPSO with subsea wells, flowlines and risers
- Initial production from 5 fields
- Oil exported to tanker via remote offloading
- Gas will be re-injected into the reservoir until Angola LNG is available

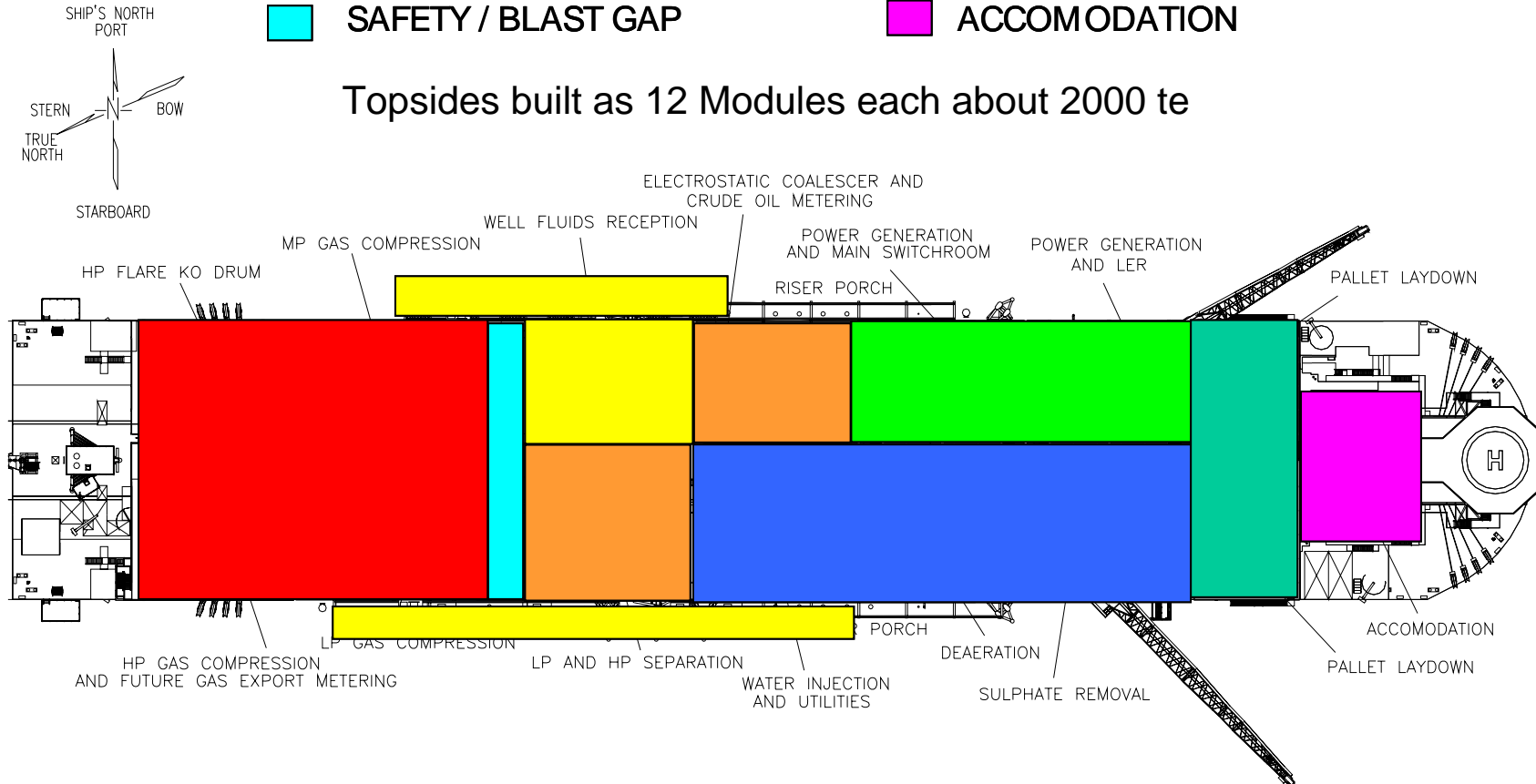
# Project Overview

# FPSO Layout



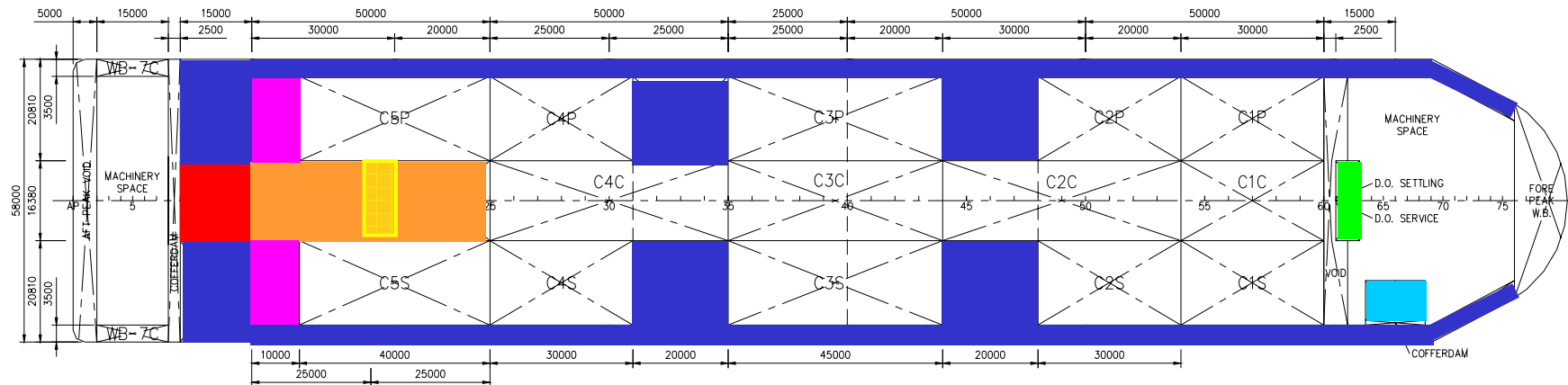
- RISERS & RECEPTION
- OIL SEPARATION
- GAS COMPRESSION AND FLARE
- SAFETY / BLAST GAP
- SEA WATER TREATMENT AND UTILITY
- POWER GENERATION
- LAYDOWN AREA
- ACCOMODATION

Topsides built as 12 Modules each about 2000 te



# Project Overview

# Hull Design



**Cargo (14 tanks) :**

Off-spec Oil/ water:

Slop Tanks:

Ballast:

Potable water:

Methanol:

Diesel:

Flowline displacement Fluid:

1,727,000 bbls (98%)

128,000 bbls (98%)

65,000 bbls (98%)

935,000 bbls (100%)

8,430 bbls (100%)

26,000 bbls (98%)

14,000 bbls (98%)

32,000 bbls (98%)



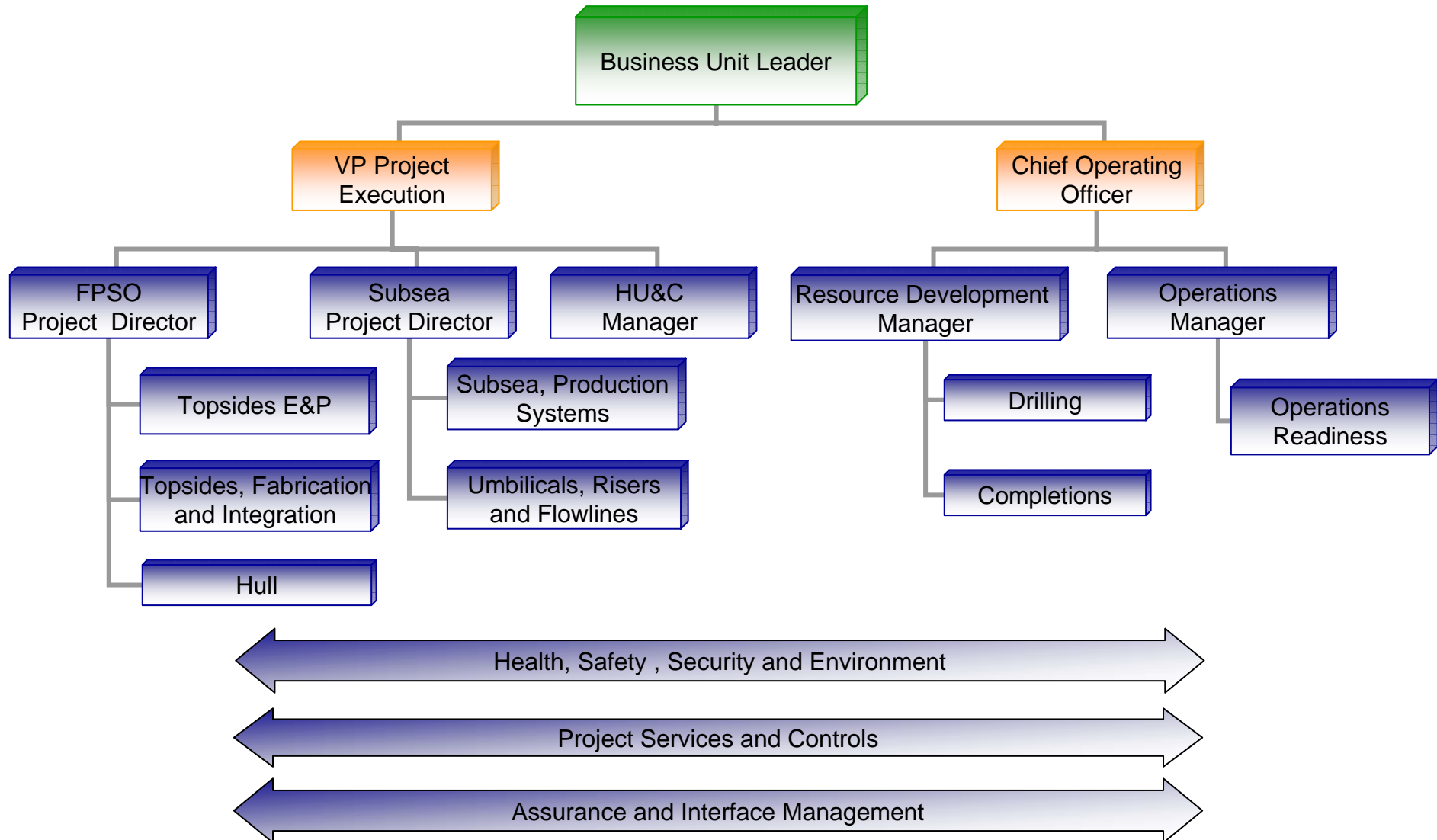


# Facilities Contracting Strategy

	FPSO			UMBILICALS RISERS & FLOWLINES				SUBSEA PRODUCTION SYSTEM		
	Hull	Topsides	Mooring / on Vessel	Flowlines	Transfer Lines	Riser / Mooring off Vessel	Offloading buoy	Umbilicals	Manifolds / Jumpers	Trees
PROJECT MANAGEMENT										
DETAILED ENGINEERING										
PROCUREMENT										
FABRICATION										
TRANSPORT HULL TO INTEGRATION SITE										
INTEGRATION										
TRANSPORT TO FIELD										
INSTALL										
HOOK-UP										
COMMISSIONING / START-UP										

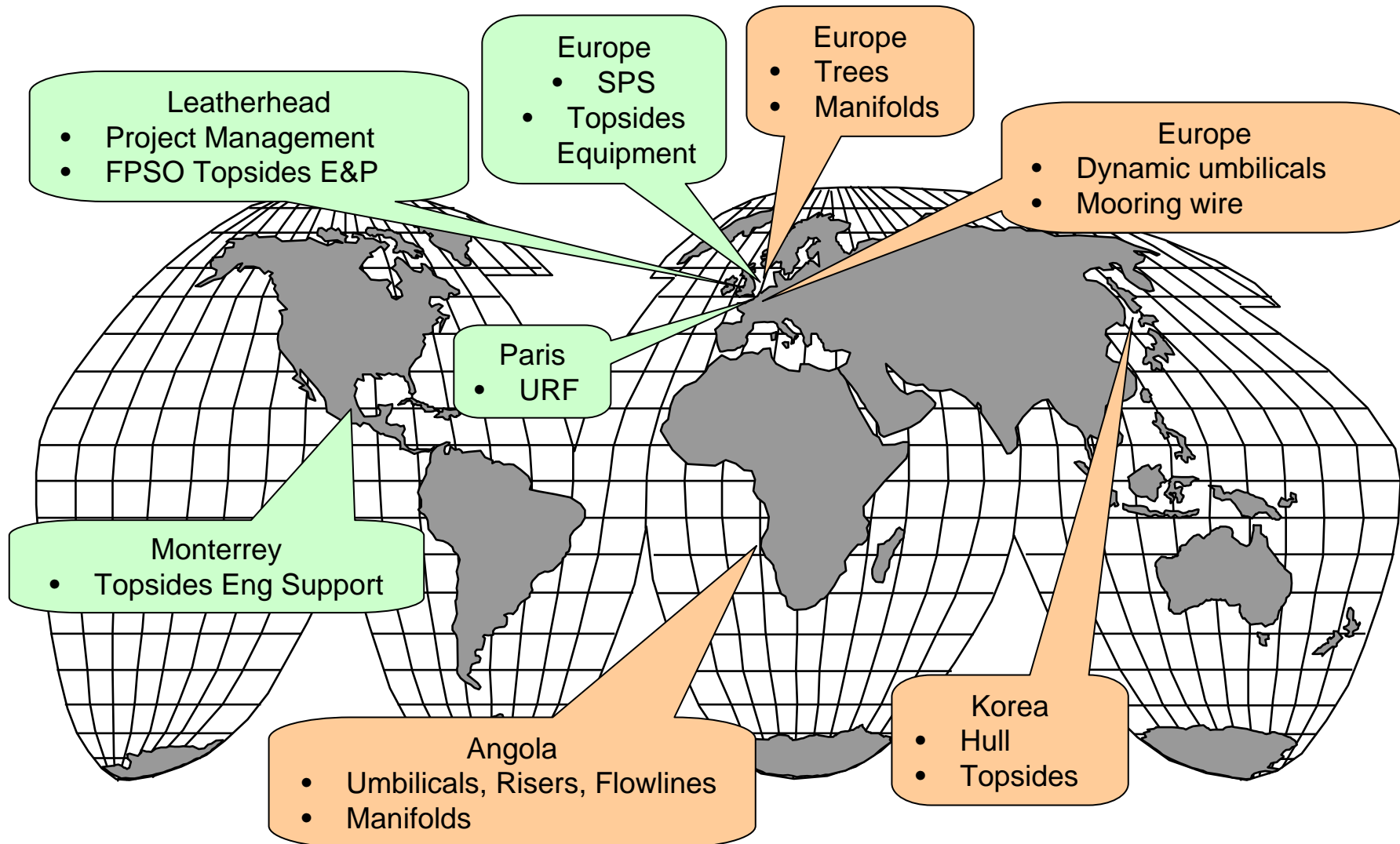
TYPICAL EXAMPLE

# Project Organisation

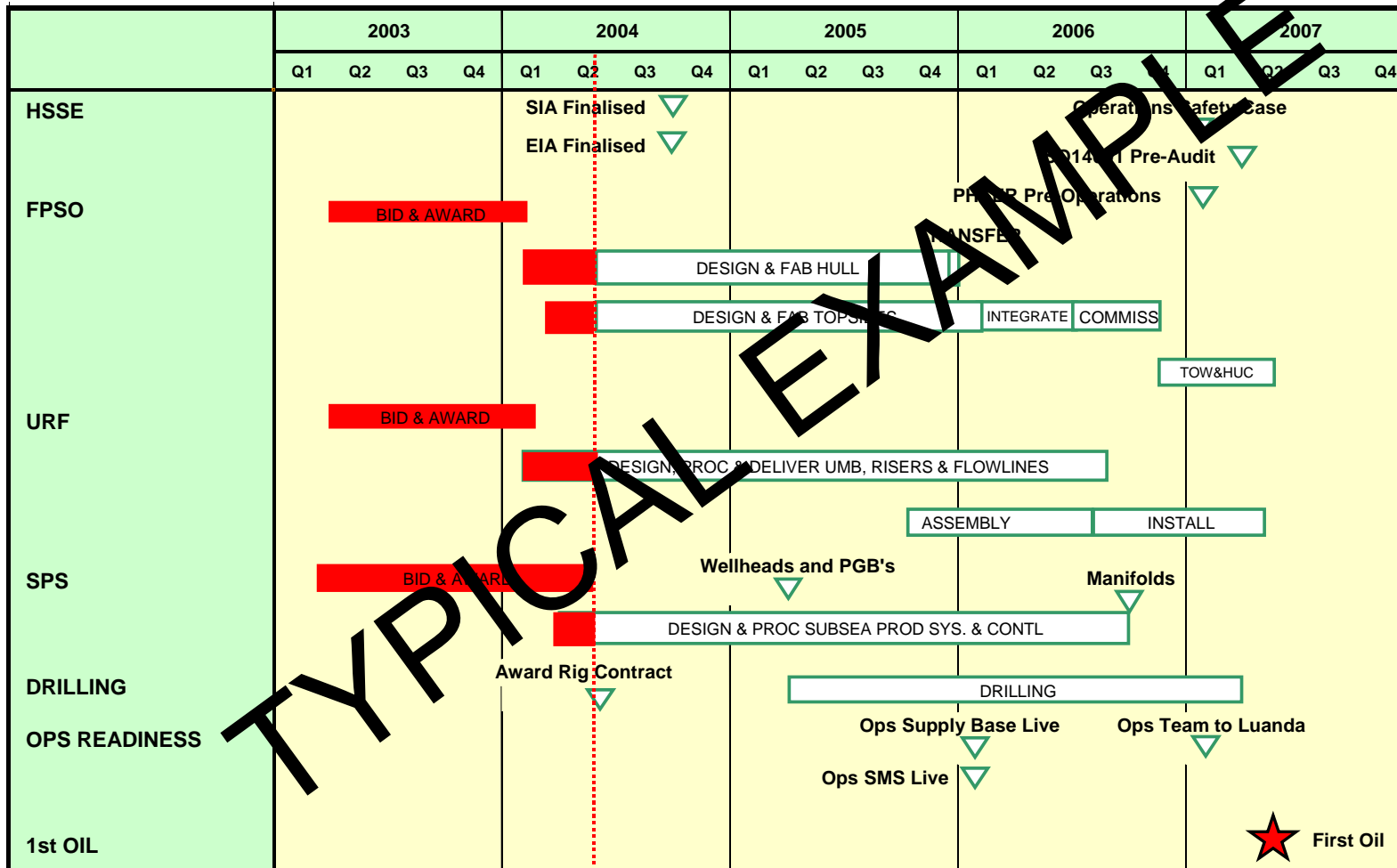




# Engineering and Fabrication Sites



# Project Schedule





# Assurance Framework

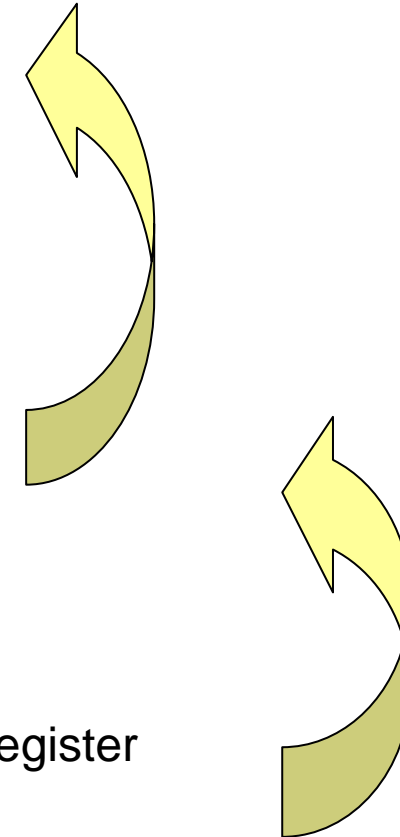
Level	Objectives	Scope	Activities and Processes
0	High level assurance for and by BP management and partners	Block 18	<ul style="list-style-type: none"> <li>• Capital Value Process</li> <li>• BP management and third party reviews</li> <li>• External Benchmarking</li> <li>• GHSER Audits</li> <li>• Project Risk Review</li> </ul>
1	Project assurance and risk mitigation	Greater Plutonio Facilities	<ul style="list-style-type: none"> <li>• Project HSE Reviews</li> <li>• Quantitative and Qualitative Risk Assessment</li> <li>• Independent Project Reviews (i.e. Peer Reviews)</li> <li>• Interface Management</li> <li>• Management of Change</li> <li>• Regulatory Compliance</li> </ul>
2 & 3	Detailed design verification and quality control	FPSO, SPS, URF	<ul style="list-style-type: none"> <li>• Contractor Management Audits</li> <li>• Design checks</li> <li>• Verification and classification</li> <li>• QA/QC plans including factory acceptance testing</li> </ul>





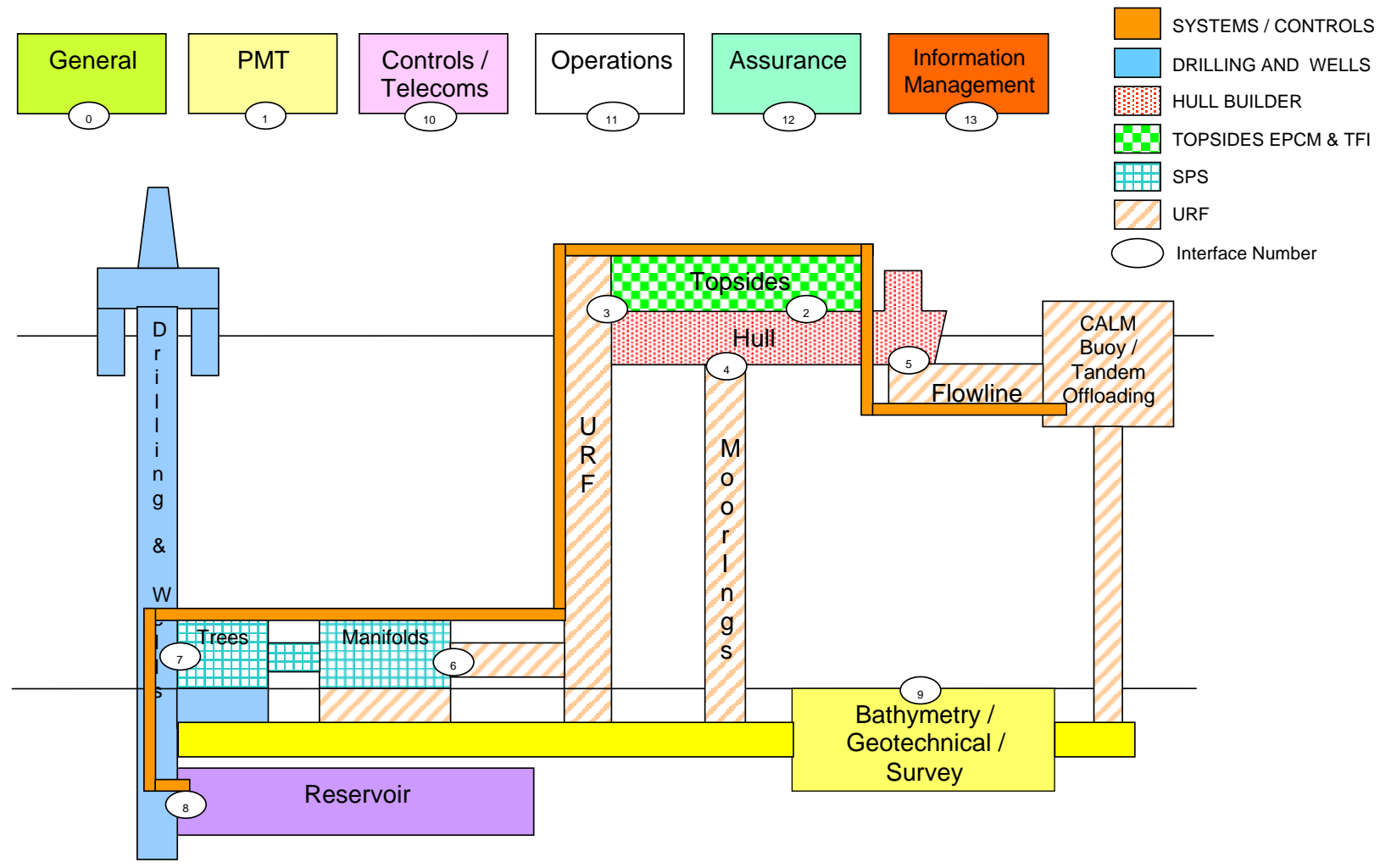
# Risk Management System

- Level 1
  - “No Project Wrecks” assessment
- Level 2
  - project HSE reviews
  - schedule risk analysis (PREDICT)
  - cost risk analysis (BRISK)
  - roll-up of level 3 risk matrices
- Level 3
  - design HAZOPs, HAZIDs etc.
  - qualitative risk management process (risk register and mitigation plans)
  - technology risk assessment process (TRAP)





# Interface Management

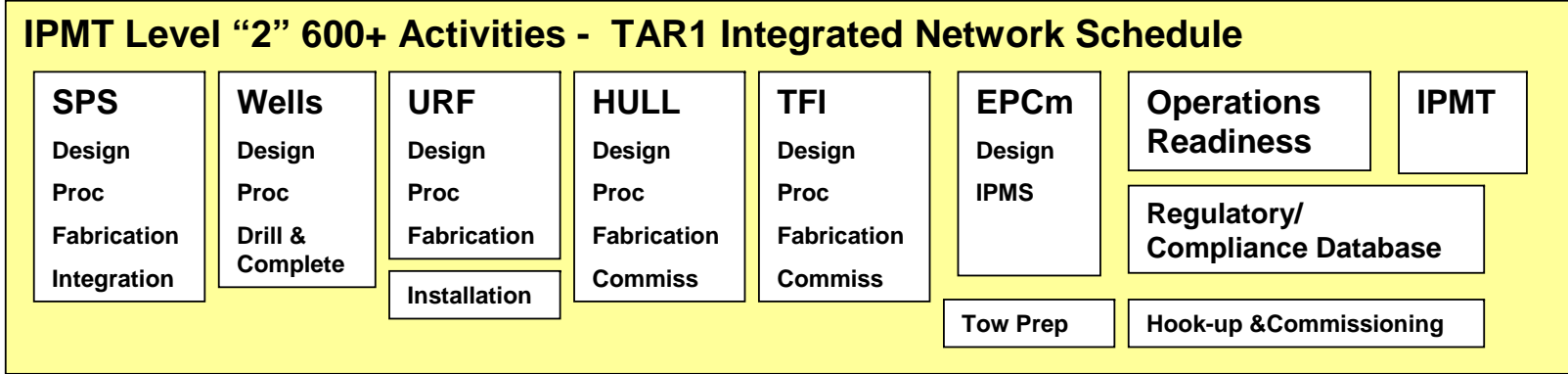
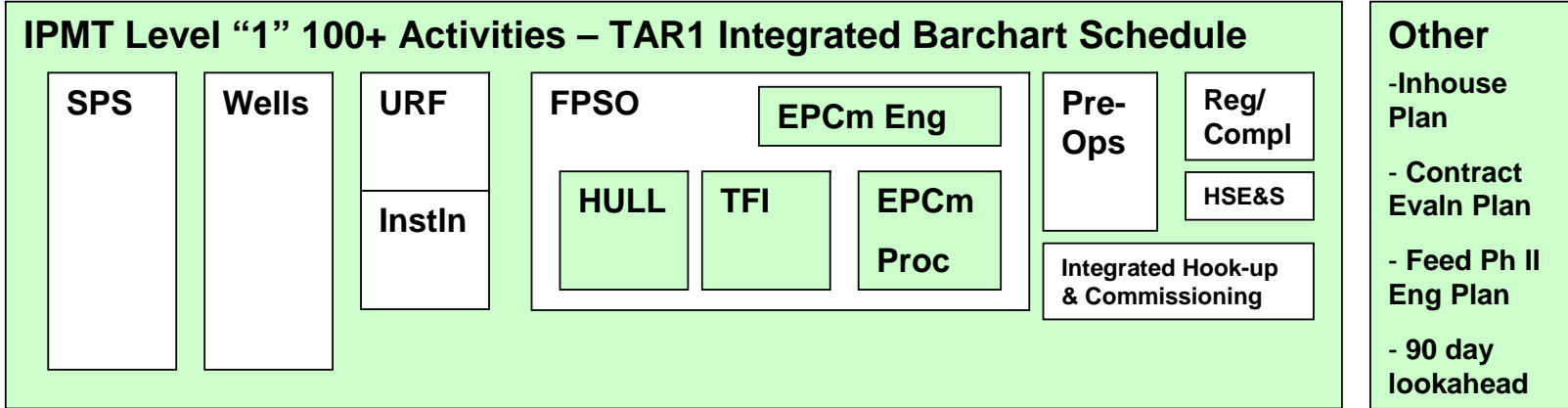




# Planning Structure - Level 0 to 5

**IPMT Level "0" 25 Activities Summary Barchart**

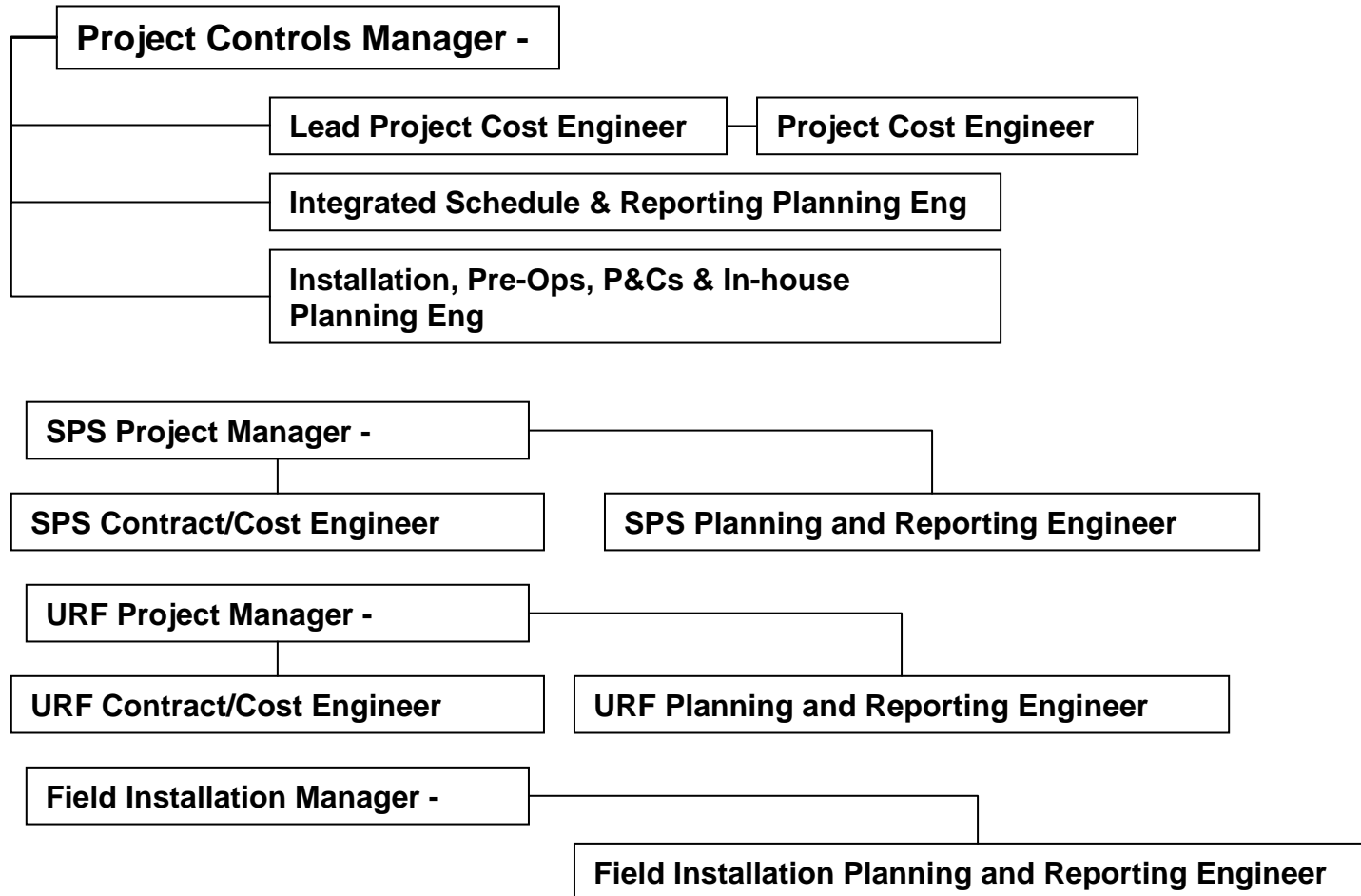
**Sanction Schedule Dec '02**



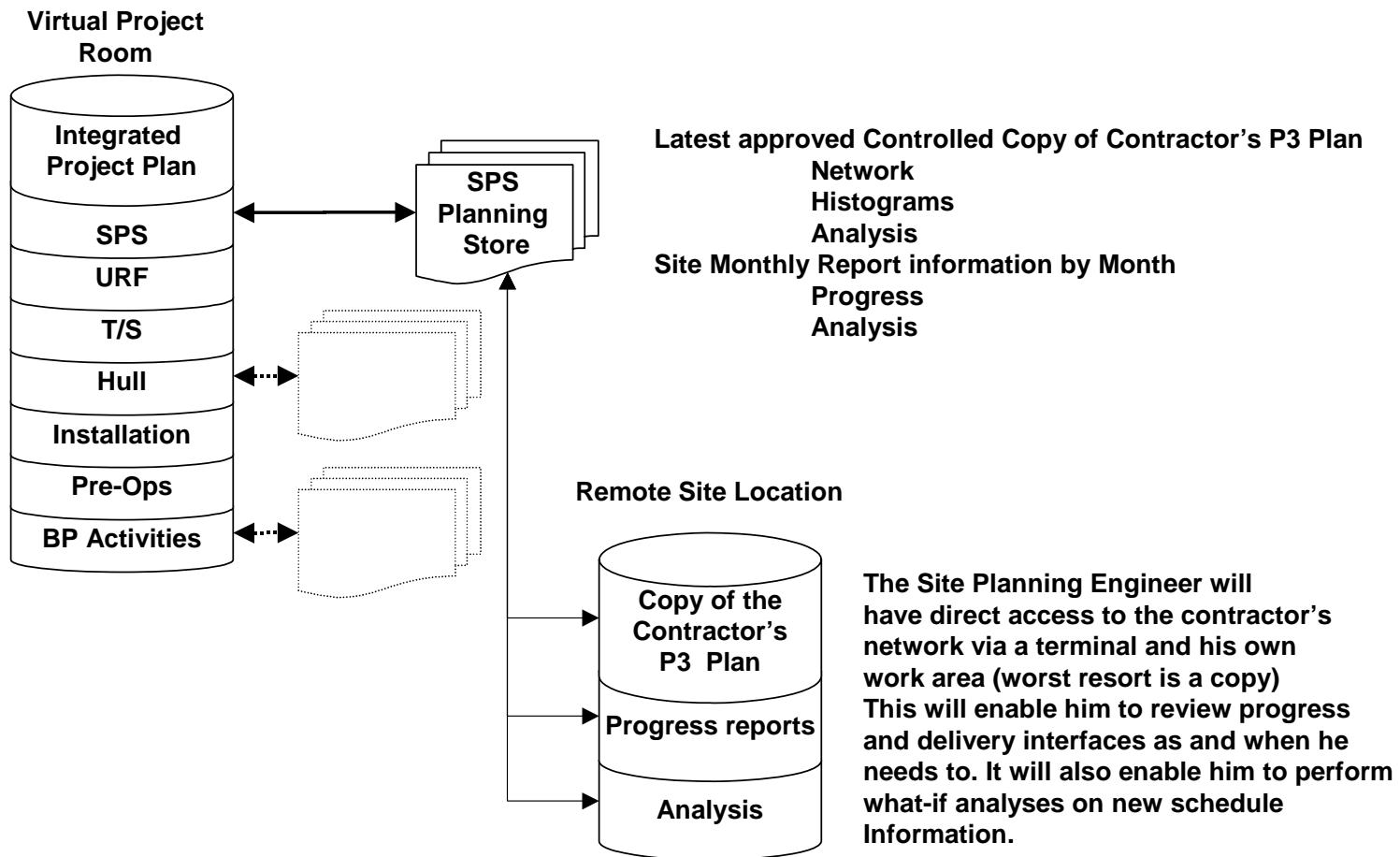
**Contractor Level 3/4 Schedules and Level 5 Progress measures which must rollup to progress in the Level 3 Contract Approved Schedule**



# Planning Organisation



# Access and Storage



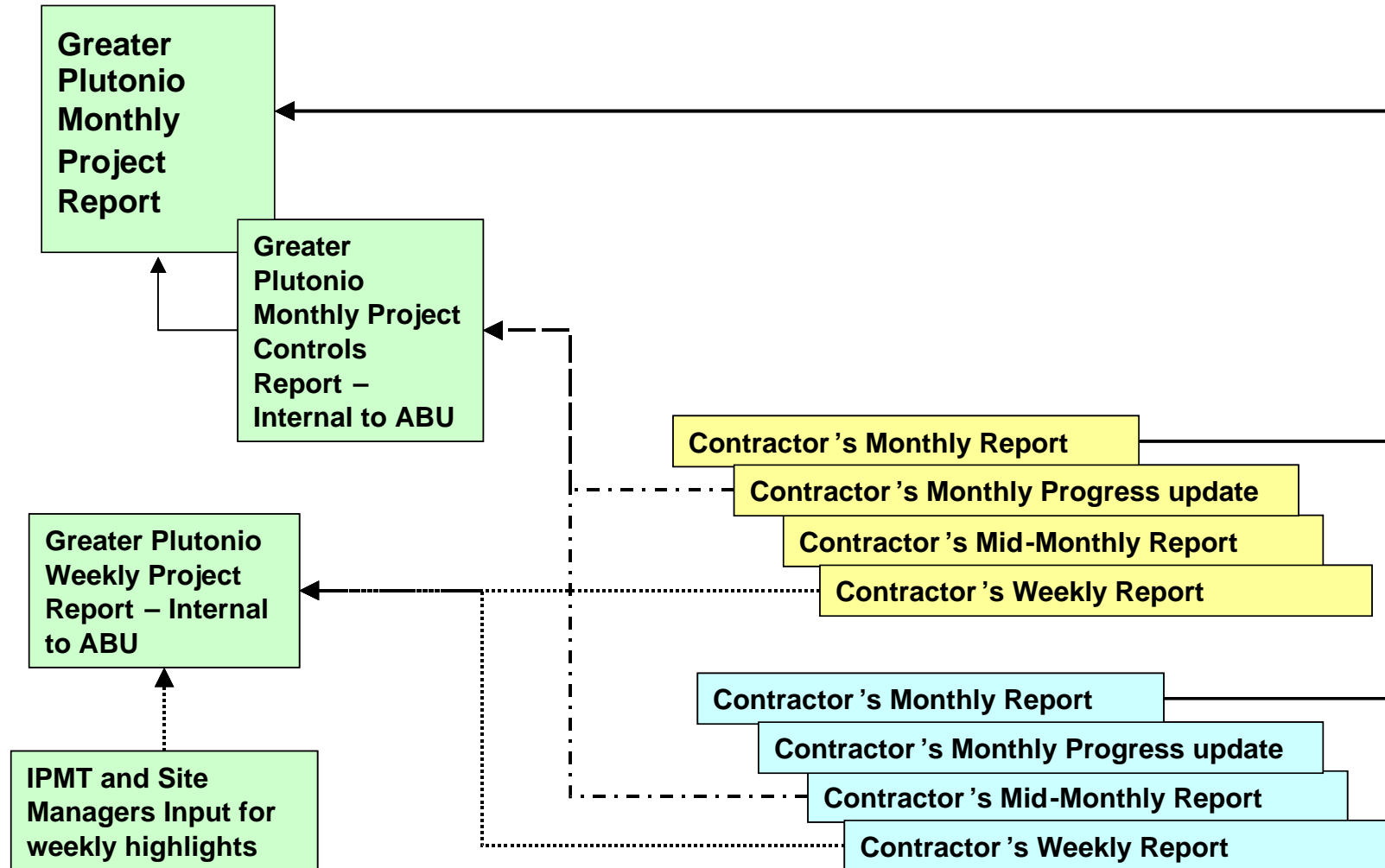
# Schedule Change Control



- The approved FPSO, SPS, Wells, URF Schedules will be frozen and rolled directly into the Integrated Schedule
- A major change in scope and schedule will be handled by the Management of Change (MOC) process. On approval of the MOC the Integrated schedule will be revised and schedule revision number increased.
- The original Integrated schedule will be stored for comparison with the latest revision.
- Each month the progress for each activity will be updated and the critical path analysed. On the latest approved Integrated Schedule including the changes.



# Greater Plutonio Reporting Hierarchy





# Project Progress Weightings

Overall Project Weighting for Progress to 1st Oil							Facilities Total	Project Total	
<b>T/S Design</b>		<b>T/S Procurement</b>		<b>HULL</b>		<b>TFI</b>			
<b>Facilities Wtg</b>	<b>Project Wtg</b>	<b>Facilities Wtg</b>	<b>Project Wtg</b>	<b>Facilities Wtg</b>	<b>Project Wtg</b>	<b>Facilities Wtg</b>	<b>Project Wtg</b>	39%	30%
7%	5%	9%	7%	10%	8%	13%	10%		
Detailed Design	80%	Procurement Effort	10%	Initial Deliverables	10%	Initial Deliverables	15%		
Follow-on Eng	20%	LLI	50%	Design	15%	Shop drawings	2%		
		Packages	40%	Procurement	32%	Procurement	2%		
				Fabrication	43%	Fabrication	38%		
						Integration	17%		
	100%		100%		100%		100%		
<b>SPS</b>		<b>URF</b>		<b>Tow, Hook-Up &amp; Commiss</b>				57%	43%
<b>Facilities Wtg</b>	<b>Project Wtg</b>	<b>Facilities Wtg</b>	<b>Project Wtg</b>	<b>Facilities Wtg</b>	<b>Project Wtg</b>				
22%	17%	25%	19%	10%	7%				
International Build	70%	Initial Deliverables	3%	Tow	7%				
Manifold Build In-Country	9%	Design	10%	Hull Onshore Commissioning	30%				
In-Country Build	21%	Procurement	36%	TFI Onshore Commissioning	36%				
		Fabrication	20%	Offshore Hook-up	5%				
		Installation	26%	Offshore commissioning	18%				
		Testing & Comm	5%						
	100%		100%		100%				
<b>Management</b>								4%	3%
<b>Facilities Wtg</b>	<b>Project Wtg</b>								
4%	3%								
Interfaces	25%								
Assurance	25%								
Permits & Consents	25%								
HSSE	25%								
	100%								
						<b>Facilities Overall Weighting</b>		100%	76%
<b>Wells to 1st Oil</b>		<b>Ops Readiness</b>							24%
	14%		10%						
Well Design	5%	Recruit/Train/Competency	20%						
Well Procurement	5%	Logistics/Infrastructure	10%						
Cobalto	26%	Operations Contracting	10%						
Plutonio	51%	Data Management Systems	15%						
Gallio	13%	Procedures/Documentation	10%						
Cromio	0%	Integrity Management	10%						
Paladio	0%	Performance Management	10%						
		Proj/Start-up/Comm Support	10%						
		Post First Oil Tie-ins	5%						
	100%		100%						
						<b>Total Project Weightings</b>			100%