

CATALOGUE OF SERVICES

Indicate the current services offered by the distributed ICTS

ID	Service name	Service description	Access facilities	Access Service Unit	Access Unit/Service Cost	% Openess
		<i>Brief description of the service offered.</i>	<i>Indicate the facility required to give the service between those declared in sheet "Cat. FACILITIES". Enter the identification for the facilities defined in column C. If several facilities are required to give the service, write all of them in the same cell separated by commas.</i>	<i>Define the service access unit (Eg computing time, night observation, etc.)</i>		<i>Indicate service openness (%) within the distributed ICTS</i>
S1	S1 - 2D Physical Modelling	Hydraulic wave/current/mean sea level modelling (small and large scale) in 2DV // Analysis of renewable energy wave/current converters (large/small scale) in 2DV // Analysis of hybrid converters (large/small scale) in 2DV // Offshore engineering for: wind turbines (large scale) in 2DV, offshore platforms (large scale) in 2DV, riders (large scale) in 2DV, submarine pipelines (large scale) in 2DV // Hydro-morphodynamic analysis of sedimentary deposits (large/small scale) in 2DV, // Coastal Engineering tests in intermediate/shallow depths (large/small scale) in 2DV, // Breakwater functional and resistance analysis (large/small scale) in 2DV, // Harbor Engineering tests in intermediate/shallow depths (large/small scale) in 2DV	I1a-1, I1a-2, I2a-1, I2a-2	working day	TBD	20%
S2	S2 - 3D Physical Modelling	Hydraulic wave/current/mean sea level modelling (small and large scale) in 3D // Hydraulic wave/current/wind/mean sea level modelling (large scale) in 3D // Analysis of renewable energy wave/current converter (large/small scale) in 3D // Offshore engineering for: wind turbines (large scale) in 3D, offshore platforms (large scale) in 3D, riders (large scale) in 3D, submarine pipelines (large scale) in 3D // Hydro-morphodynamic analysis of sedimentary deposits (large/small scale) in 3D, // Coastal Engineering tests in intermediate/shallow depths (large/small scale) in 3D, // Breakwater functional and resistance analysis (large/small scale) in 3D, // Harbor Engineering tests in intermediate/shallow depths (large/small scale) in 3D // Analysis of hybrid converters (large/small scale) in 3D	I1a-3, I2a-1, I2a-3	working day	TBD	20%
S3	S3 - 2D/3D Vehicles Hydrodynamic Analysis	Hydrodynamic analysis of autonomous submarine vehicles in 2D/3D	I1a-1, I1a-2, I1a-3, I2a-1, I2a-2	working day	TBD	20%
S4	S4 - Analysis of observational equipment	Analysis of observational equipment (2DV, 3D, small/large scale)	I1a-1, I1a-2, I1a-3, I2a-1, I2a-2	working day	TBD	20%
S5	S5 - Data bases	Data Acquisition on the Facilities for a) Wave/Current data base analyses (shelf) b) Water levels (various drivers) data base analyses (coastal) c) Marine meteo data base analyses (shelf and coastal)	I1c-1, I1c-2	working day	TBD	20%
S6	S6 - Field campaigns	Intensive Field campaigns in nearshore coastal transect hydro/morpho physical and bio-geo-chemical parameters (Pont Petrolí-Coastal Pier) // Field testing (prototype scale) of observational equipment and of energy converters- Pont Petrolí-Coastal Pier // Field testing of harbor instrumentation-instrumented Harbor Section	I1c-2	working day	TBD	20%
S7	S7 - 2D/3D Numerical Modelling	Numerical wave/wave-current flume modelling in 2DV // Numerical wave/wave-current modelling in 3D // Numerical wave-current interaction with structures in 2DV/3D // Numerical wave-current interaction with sediments in 2DV/3D RANSE calculations for ships and propellers. Potential seakeeping calculations.	I1b, I2c, I3c	working day	TBD	20%
S8	S8 - Applied Toolbox	Hydrodynamic (wave/current) tool box for open /shelf works (physical and engineering applications, including renewable energy) // Hydrodynamic (wave-current) tool box for nearshore depths, // Morphodynamic tool box for sea-bed (inner shelf) for beach profiles and for beach plan // Dispersion and water quality tool box for near field (local analyses) and for far field (regional analyses)	I1b, I2b	working day	TBD	20%
S9	S9 - Risk Analysis	Risk analysis framework for individual assessment	I1b, I2b	working day	TBD	20%
S10	S10 - Pre-operational System Assessment	Pre-operational system assessment for meteo-oceanographic fields shelf/coastal	I1b, I2b	working day	TBD	20%
S11	S11 - Model Manufacturing	Building and/or modifying of hydraulic tailored made scale models (rivers, locks, dams, pumping stations, etc) // Manufacturing of models (hull, propellers and appendages) any other fitting, sensoring and instrumentation, dummy model manufacturing for cavitation tunnel	I2a-3, I3a-4	working day	Dependant on model characteristics	20%
S12	S12 - Numerical Mirror and Hybrid Modelling	Numerical Mirror. Numerical GTIM-TSU replication wave-current flume modelling in 2DV // Numerical GTIM-CCOB replication wave-current-wind modelling in 3D // Numerical GTIM-WS replication wave-current-wind modelling in 2D/3D // Interaction with coastal, floating and offshore structures.	I2a-1, I2a-2, I2a-3, I2b, I3c	computing time	TBD	20%
S13	S13 - CWT Measurements	Open water, resistance, self-propulsion, pitot wake (1D or 3D), PIV (3D), wool tuft visualization, rudder forces, any other test performed in calm water tank	I3a-1	working day	TBD	20%
S14	S14 - CT Measurements	Cavitation visualization (stroboscope and/or high speed camera), cavitation inception, pressure fluctuation, wire mesh manufacturing, erosion, any other test performed in the cavitation tunnel	I3a-2	working day	TBD	20%
S15	S15 - SDL Measurements	Regular and irregular seas, seakeeping test, any other test performed in the ship dynamics laboratory or by extension to any floating device in a large basin or flume	I2a-1, I3a-3	working day	TBD	20%
S16	S16 - Maneuverability free model	Zig-zag, Diedonne spiral, turning circle, crash stop, any other test performed in a tank/reservoir	I3a-3, I3b	working day	TBD	20%
S17	S17 - Prototype Hosting with connection to the power grid	a través de las posibles conexiones a la de Red eléctrica de soporte a la experimentación y ensayos de nuevas tecnologías que utilizan los recursos energéticos marinos para generar electricidad y para la conexión de tecnologías para la observación a profundidades crecientes.	I4-a, I5	working day	TBD	20%
S18	S18 - Prototype Hosting without connection to the power grid	(por ej. instalación de dispositivos de acuicultura, sistemas eólicos y undimotrices, lanzamiento de dispositivos al mar, fondeo de dispositivos de observación, etc.). La capacidad está limitada al área y profundidad disponible dentro del área de reserva que gestionan los nodos	I4-a, I5	working day	TBD	