**EXHIBIT VI**

**DIRECTIVES FOR PLANNING AND CONTROL**

**FPSO PETROBRAS XX (P-XX)**

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#

# OBJECTIVE

* 1. This document aims to establish guidelines, roles, responsibilities and requirements to be adopted by SELLER in the Planning, Monitoring and Control of the Scope of Work under this Agreement in order to ensure its implementation and due performance, as well as the information traceability.

# REFERENCE DOCUMENT

1. I-ET-3000.00-1350-94P-P4X-002 – Digital Engineering Technical Requirements for Detailed Design
2. Exhibit III – Directives for Product Development
3. Exhibit IV – Directives for Product Fabrication
4. Exhibit V – Directives for Acquisitions
5. Exhibit VIII – Directives for Commissioning
6. Exhibit XI – Lump Sum Price Distribution and Measurement Criteria
7. Exhibit XVI – Computational Tools and Integrated Management System.

# DEFINITIONS

* 1. For the purposes of this document, the definitions contained in the Agreement shall apply, as well as its Exhibits and the following definitions:
1. PBS: Project Breakdown Structure
2. Physical PBS Dictionary: It is a document that provide detailed information about deliverables, activity and physical progress criteria of each component in the Project Breakdown Structure
3. Detailed Project Schedule: Agreement Schedule detailed by SELLER and approved by BUYER
4. Rolling Planning Wave: It is the process of project planning in waves as the project proceeds and later details become clearer
5. CRITICAL PATH: Includes activities with total float less than or equal to 0 days.
6. SUBCRITICAL PATH: Includes activities with total float less than fifteen (15) days.
7. EDM (Electronic Document Management): Tool for management technical and administrative documents between the SELLER and BUYER.
8. Local Content: is a Brazilian policy tool which aims to increase the participation of the national goods and services industry.
9. WBS: Work Project Breakdown Structure
10. KPI: Key Performance indicator
11. EHS: Environment, health and safety
12. SOP: Operational System
13. SSOP: Operational Subsystem

# GENERAL PROVISIONS

* 1. SELLER shall prepare and submit Planning, Scheduling, Monitoring and Control documents required in Table 1. SELLER shall comply with deadlines, updating periodicity, formats and software defined for documents execution.
	2. Deadlines for the first type of document to be submitted to BUYER shall be calculated from the Agreement Effective Date, unless indicated otherwise. Deadline for correction by SELLER of non-compliances shall be calculated from the receipt by SELLER of BUYER’s comments.

 ***Erro! Indicador não definido.****: Planning, Scheduling, Monitoring and Agreement Control Documents*

| **Document** | **Deadlines (calendar days or as indicated)** | **Periodicity of update** | **Electronic format** | **Item** |
| --- | --- | --- | --- | --- |
| **1st Receipt** | **Non-compliance** **correction**  |
| Contract Management Plan | 2 business days before the Contract Kick off Meeting | 5 days | At each issued wave planning, strategy changes, Baseline revision, or other Plan Change. | Adobe (.pdf) and MS Word (.doc) | 5.5 |
| Physical PBS  | 45 days | 5 days | At each issued wave planning, strategy changes, Baseline revision, Physical PBS Dictionary or other Plan Change. | MS Excel (.xls) | 6 |
| Detailed Project Schedule | 60 days | 5 days | Fortnightly (1st business day of the week) | Primavera P6 16.2 or higher version (.xer), adobe (.pdf) and MS Excel (.xls)  | 8 |
| Resource Histograms (including calculation report) | 1st wave planning | 2 days | Monthly (up to the 5th business day) | MS Excel (.xls) | 9 |
| Table of KPIs | 2nd wave planning | 5 days | Monthly (up to the 5th business day) | MS Excel (.xls) | 9.4 |
| Activities Scheduling | A week before the start of Construction and Assembly activities | 2 days | Weekly (1st business day of the week) | MS Excel (.xls) | 10 |
| Financial S-Curve | 1st wave planning | 5 days | Monthly (up to the 5th business day) | MS Excel (.xls) | 11.5 |
| Follow-up Report | 1st wave planning | 3 days | Monthly (up to the 5th business day) |  MS Excel (.xls) and Adobe (.pdf) | 13.1 |
| Physical S-Curve | 1st wave planning | 2 days |  Weekly (1st business day of the week) | MS Excel (.xls) | 8.8 |
| Physical S-Curve Action Plan | Beginning with 1st wave planning, receipt according to deviation | 2 days | According to deviation | MS Excel (.xls) | 8.8.1 |
| Rundown Curves | 1st wave planning | 2 days |  Weekly (1st working day of the week) | MS Excel (.xls) | 8.9 |

* 1. SELLER shall submit the documents through BUYER’s EDM system (Electronic Document Management).
	2. Changes, in format and/or content of any document issued by SELLER shall be approved by BUYER.
	3. BUYER may reject the content, form and deadlines of the documents in the event that the document is non-compliant with contractual requirements, have inconsistency or divergence with other documents established in Table 1 or between these and other documents produced under the Agreement, the absence of documents that enable consistency analysis of the declared data (such as calculation report/log or schedules, for example) or the absence of the editable version of the document.
	4. In the event that any of documents issued by SELLER present non-compliances, SELLER shall make the necessary corrections within the deadlines established in Table 1.
	5. SELLER shall update the documents in accordance with the periodicity established in Table 1, and also in case of changes in the execution strategy, review of the baseline or changes in the Agreement, formalized by Change Orders.
	6. SELLER shall detail the changes made in documents issued through specific revision control per document, and file all documents in compliance with the Agreement requirements, so as to provide easy consult. For changes that may impact the Baseline, such adjustments shall be approved by BUYER.
	7. SELLER shall submit Physical S-curves, as indicated in table 1, containing the scope of supply until the Handover Milestone and also Physical S-curves containing the whole scope of supply until the end of the Agreement. Each of those S-Curves shall contain a Baseline, Actual/Foreseen and projections of realization for the whole scope of supply presented on them.
	8. The Projected data shall be presented at each document review and shall be based on historical performance results, actual KPIs, likely scenarios, goals to be achieved and existing action plans.
	9. SELLER shall implement, manage and operate all the hardware, software and any other tools necessary to meet the Agreement requirements, as described in Exhibit XVI – Computational Tools and Integrated Management System.
	10. BUYER may perform periodic checks on Planning, Activities Scheduling and Control through the application of checklists, in order to ensure the consistency of the documents issued by SELLER, compliance with the Agreement requirements and consistency with the status of activities in their respective places of execution.

# IMPLEMENTATION OF CONTRACT PLANNING, SCHEDULING, MONITORING AND CONTROL

* 1. An Agreement Kick-off Meeting shall be held within 30 days from the Agreement signature, including all the SELLER’s managers and the BUYER team.
	2. SELLER shall address in the Agreement Kick off Meeting, at least, the content of the Contract Management Plan, in accordance with item 5.5.
	3. SELLER shall also plan and hold specific Kick-off Meeting for Planning and Control within 60 days from the Agreement Effective Date. This meeting shall not occur simultaneously with other Kick-off Meeting, in order to maximize the attendance by BUYER and SELLER’S main parties involved.
	4. SELLER shall indicate the team involved in the planning, scheduling, monitoring and control activities, as well as the respective assignment matrix at the specific Kick-off Meeting for Planning and Control.
	5. SELLER shall prepare and implement the Contract Management Plan. This document shall be submitted to BUYER in accordance with the deadlines and periodicity defined in Table 1 and contain at least the following information:
1. SELLER’S team organization chart and the Attributions and Responsibilities Matrix for all disciplines (detailed engineering design, procurement, construction and assembly; planning, etc.).
2. Estimated deadlines for the Payment Milestones, in accordance with Exhibit XI, and for the Control Milestones, in accordance with Appendix 02 – List of Control Milestones, respecting the contractual deadlines when applicable;
3. Strategies for the execution of the detailed engineering design;
4. Strategies for the main acquisitions of equipment and materials;
5. Strategies for Construction and Assembly phase;
6. Strategies for Commissioning (onshore and offshore);
7. Strategies for compliance with the Brazilian local content requirement;
8. Subcontracting Plan, listing at least the activities to be subcontracted during the contractual execution, their scopes and deadlines;
9. Communication Management, containing at least:
10. Communication Matrix (including periodicities);
11. Forms and control of communication;
12. Document submittal and approval procedures;
13. Regular meetings (attending at least the meetings listed in item 12);
14. Risk management;
15. Interface Management (internal);
16. Planning team.

# PROJECT BREAKDOWN STRUCTURE (PBS)

* 1. SELLER shall prepare, update, and control the Project Breakdown Structure (PBS), which shall:
1. Break down and detail the entirety of the contractual scope, in accordance with Appendix 01 - Project Breakdown Structure, and with the specific instructions issued by BUYER.
2. Define weights, to each PBS level, as well as reflect the physical measurement criteria for the detailed work packages broken down by mutual agreement with BUYER. The weights of the Detailed PBS shall be elaborated based on quantities, performance indexes or manpower allocated, or other criteria to be proposed by SELLER and validate by BUYER.
3. Assign to each work package, at the last PBS level, an exclusive identifier equivalent to the codes of the Physical Execution Schedules, absolute and relative weights and percentages regarding contribution for the physical progress of the Agreement.

# ROLLING WAVE PLANNING

* 1. SELLER shall implement a Rolling Wave Planning process, in order to progressively detail, with greater density detail, the scope necessary for the complete execution of the Agreement, in accordance with PBS, as shown in Figure 1.
	2. All Construction, Assembly and Commissioning activities included in detailed schedule in the current wave shall have a maximum duration of 15 days. Exceptional cases shall be justified by the SELLER and approved by BUYER.
	3. When requested by BUYER, SELLER shall increase the activities detail level of the Detailed Project Schedule, regardless if it is within or outside the current planning wave.
	4. Changes in the size of the planning horizon of any specific wave shall be requested by the SELLER and validated by BUYER.

**Sail away from integration site**

**180 days**

**Agreement Effective Date**

**Final Completion**

**Onshore commissioning**

**60 days**

**180 days**

**Offshore Commissioning**

**60 days**

**30 days**

**90 days**

Delivery of Rolling Wave Planning

Start of Rolling Planning Waves activities

**n**

Number of waves according to the contract term

1st Planning Wave

2nd Planning Wave

n-1 Planning Wave ¹

n Planning Waves ²

**n**

**3**

**2**

**2**

**1**

**n-1**

**3**

**n**

**n-1**

**60 days**

**TechnicalProposal**

**0**

1 - The Onshore commissioning Wave will have three issuances at different times as explained in item 7.11.1

 2 - The Offshore Commissioning Wave will have six issuances at different times as explained in item 7.11.2

Figure 1: Rolling Wave Planning Process

* 1. SELLER shall issue the First Planning Wave within 60 days from Agreement Effective Date, for comments and validation by BUYER. The schedule presented shall contain a high density of detailing of the first 240 days of the Agreement, i.e. the 60 days passed until the delivery of the schedule and following 180 days, and the execution of the entire detailed engineering design and procurement activities for all the critical supply items.
		1. For the planning of Detailed Design, in addition to Exhibit III – Directives for Product Development, the SELLER shall follow:
1. Precedence diagram between the main deliveries of Detailed Design;
2. Document List;
3. Design Automation Execution Plan, according to I-ET-3000.00-1350-94P-P4X-002 – Digital Engineering Technical Requirements for Detailed Design
	* 1. In the first planning wave, the remaining scope (after the first 240 days) of the Agreement shall have the minimum detailing as defined below, in accordance with Appendix 01 – Project Breakdown Structure Appendix of Exhibit VI:
* Engineering activities other than detailed engineering design – Level 3 of the PBS;
* Hull non-critical procurement items –level 4 of the PBS;
* Hull Construction and Assembly –level 4 of the PBS;
* Topsides non-critical procurement items –level 5 of the PBS;
* Topsides Construction and Assembly –level 5 of the PBS;
* Commissioning – Level 3 of the PBS.
	1. Planning Waves shall be prepared in compliance with the Contractual Milestones planned dates (including payment and control milestones) in agreement between SELLER and BUYER. In the event that control milestones are not feasible on the planned dates, the proposal for new dates shall be formally requested by SELLER for BUYER evaluation.
	2. SELLER shall issue Planning Waves subsequent to the first Wave. The documents referring to the Planning Waves shall be submitted to BUYER at least 60 days before planned date for the commencement of the activities detailed by the respective wave and shall contain the detailing of activities of each horizon of 180 days of the time period of the Agreement, taking into account the current schedule logic.
		1. Between Planning Wave submittal and its effective start; as schedule is updated, the activities planned dates of the Wave shall be updated even if they exceed the Wave detailed planning horizon, under BUYER evaluation.
		2. Activities that enter the 180-day wave planning horizon due to schedule updates shall be included in the schedule even after the wave planning is submitted for approval.
	3. The Agreement remaining scope of every Planning Wave, other than the first one, shall have the minimum detailing as defined below:
* Hull non-critical procurement items – level 5 of the PBS;
* Topsides non-critical procurement items – level 5 of the PBS;
* Engineering activities other than detailed engineering design – level 2 of the PBS;
* Hull construction and assembly activities – level of the PBS that represents the construction disciplines (piping, structure, electrical, etc.);
* Topsides construction and assembly activities - level of the PBS that represents the construction disciplines (piping, structure, electrical, etc.);
* Commissioning – Level 3 of the PBS.
	1. SELLER shall, for each Planning Wave, ensure the detailing level of the entire activity that is included in the wave horizon, be the same of the current wave planning, even if the activity end date exceeds the period of the current Wave.
	2. Each Planning Wave will generate a complementary and wave specific baseline and shall be the input to evaluate the wave performance, not replacing the Agreement Baseline defined in the second Planning Wave.
	3. Specific groups of Planning Waves (Onshore and Offshore Commissioning)
		1. Three (3) specific planning waves shall be issued no later than 90 days before the planned start of the onshore commissioning for each of this activities/phase: Hull Commissioning, Modules Commissioning and Integration Commissioning phase, and shall contain high detailing density (at least but not limited to: loop tests, leak tests, blank tests, performance acceptance test (TAP), subsystem acceptance transfer term (TTAS), deliver of systems to operation, etc.) of all onshore commissioning execution.
		2. Six (6) specific planning waves shall be issued no later than 30 days before the planned start of the offshore commissioning for each of this activities/phase: FPSO customs clearance and Legal Compliance in Brazil, 1st Oil activities, 1st Injection Gas Activities, 1st Water activities, 1st Gas Exportation (including Gas Treatment and Gas Lift Activities) and Final Completion and shall contain high detailing density of all offshore commissioning execution.
		3. The detailed activities of these two groups of Planning Waves shall be associated with the related operating system and subsystem (SOPs and SSOPs) through the Activity Code of the Primavera Software, in accordance with Appendix 04 – Primavera P6 Settings. The logical relationship of the activities shall be in accordance with detailed precedence networks approved at the level of Operating Systems and Subsystems.
		4. SELLER shall ensure the logical relationship between construction and assembly activities and commissioning activities detailing in the schedule the predecessor activities that might impact the beginning or the ending dates of commissioning activities.
		5. Construction and Assembly activities to be executed during the offshore phase shall be detailed in the specific offshore group Planning Wave schedule and shall be associated with the Operating System and Subsystem through the Activity Code of the Primavera software in accordance with the Appendix 04 – Primavera P6 Settings.
		6. SELLER shall present, for the offshore Planning Wave, the calculation report/log considered for the planning of the respective wave. The calculation report/log shall contain at least:
1. Productivity considered for offshore activities;
2. Work shifts considered;
3. Direct manpower calculated.

# SCHEDULE PLANNING AND CONTROL

* 1. SELLER shall prepare, control and update the Detailed Project Schedule based on the PBS and item 7 (Rolling Planning Waves) of this document, in compliance with the deadlines established in the Agreement.
	2. SELLER shall increase detailing level of the activities in the Detailed Project Schedule, regardless if the activity is within or outside the current planning wave horizon, whenever requested by BUYER.
	3. SELLER shall plan and control the Milestones, considering its description, its planned, actual and estimated dates and its status, being the Milestones classified as:
1. Contractual Milestones, defined in the Article 11 of the Agreement
2. Payment Milestones, in accordance with Exhibit XI – – Lump Sum Price Distribution and Measurement Criteria
3. Control Milestones, in accordance with Appendix 02 – List of Control Milestones
4. Interface Milestones, which define BUYER commitments to SELLER (e.g., anchoring and pull-in activities by BUYER) within the agreed deadlines between the parties.
	1. SELLER shall record the Baseline of the Detailed Project Schedule in Primavera P6.
		1. First baseline of the contract will be the detailed schedule delivered in the first Planning Wave (no later than 60 days after Agreement Effective Date). Until this moment, the schedule submitted with the Technical Proposal will be considered as preliminary Baseline.
		2. Any deviations from the current baseline can only be reviewed at the baseline of the next wave after BUYER’ evaluation and agreement.
		3. The second Planning Wave (starting 240 days after Agreement Effective Date) shall define the definitive Baseline for control and evaluation of the Agreement performance, thus updating the baselines of the first planning wave. The definitive baseline of the Agreement shall be defined upon the approval of the second planning wave schedule, delivered 180 days after Agreement Effective Date to be evaluated and considered as definitive Baseline.
		4. Baseline of the Detailed Project Schedule shall include the contractual Milestones, control Milestones and interface Milestones.
		5. Baseline of the Detailed Project Schedule shall contain all durations of the activities of the entire contractual execution. Those activities shall be planned in accordance with the quantities estimated in the detailed engineering design and the Productivity KPIs declared by the SELLER as baseline, where applicable.
		6. A baseline can be revised only with the approval of BUYER, except for the provisions in the Agreement and its Exhibits, with emphasis on the Exhibit XIV - Change Orders.
		7. BUYER’s approval of a baseline revision does not imply the waiver of BUYER’s right to apply the applicable penalties, if such a revision is considered as contractual non-compliance and occurs due to SELLER’s fault.
		8. Baseline updates of each Planning Wave does not allow the change of actual values (dates and activities weightings) until the date of the revision issuance.
		9. Detailed Project Schedule in Primavera Software shall follow the configuration, coding and structure requirements contained in Appendix 4 – Primavera P6 Settings.
	2. SELLER shall prepare and control the Detailed Project Schedule of each Planning Wave, respecting the following guidelines:
5. All activities shall have the respective planned, actual and projected start and finish dates, the criteria for physical progress appropriation and, if applicable, weighting.
6. All activities shall contain the respective direct resources (direct manpower) planned, actual and projected.
7. All activities shall have at least one predecessor, except for the first, keeping in mind that the activities having only predecessors with a finish-finish (FF) type connection are considered as activities without predecessor;
8. All activities shall have at least one successor, except for the last, keep in mind that activities having only successors with a start-start (SS) type connection are considered as activities without successor;
9. The relationship between start-finish (SF) type activities shall not be used;
10. In the case that is necessary to use lags in the schedule, it shall have its premises documented in the Primavera P6, identifying the reasons for its use. If it is possible to represent the lag as an activity, SELLER shall do so;
11. Leads (negative lags) shall not be used;
12. Date restrictions, including Milestones, shall not be used, except when approved by BUYER;
13. Sequencing of activities using start-start (SS) or finish-finish (FF) type connections shall have its premises documented in Primavera P6;
14. No activities out of sequence of actual physical progress shall exist (logic brake);
15. No activities with actual date later than the current date of the schedule shall exist;
16. No activities with negative total float shall exist;
17. Routine activities (management, approval of plans, issuance of reports, etc.) shall not be included in the schedule;
18. Activities that do not add value to the scope execution and support activities (preservation, mobilization, demobilization, scaffolding assembly) shall not be included in the schedule, except when approved by BUYER;
19. No milestones with weighting shall exist;
20. Critical and subcritical path(s) shall be emphasized (Item 3.3 - Appendix 05 – Follow-up Report Model).
	1. SELLER shall prepare the Detailed Project Schedule in accordance with the information of the detailed engineering design, procurement, construction and assembly and commissioning documents.
	2. SELLER shall perform simulations of the Detailed Project Schedule in accordance with the criteria, assumptions and restrictions defined by BUYER. Such simulations shall be executed in accordance with BUYER demand.
	3. SELLER shall prepare Earlier and Later Physical S-Curves (Baseline, Actual and Foreseen), in accordance with Appendix 13 of Exhibit XVI – Computational Tools and Integrated Management System and periodicity defined in Table 1. SELLER shall submit physical S-Curves, containing the scope of supply until the Handover Milestone, one curve for each level, from the first to the fourth level of the PBS (Appendix 01 of Exhibit VI). SELLER shall submit physical S-Curves, containing the scope of supply until the end of the Agreement, one curve for each level, of the first and second levels of the PBS (Appendix 01 of Exhibit VI).
		1. SELLER shall analyze monthly the results of physical progress achieved, comparing with the planning data and, in case of physical progress deviation, breaking down the evaluation to lower levels of the PBS/schedule until identify the root causes of the deviations.
			1. In the event that the physical progress deviation impacts in the critical or subcritical paths of the schedule, SELLER shall prepare and submit to BUYER an action plan, based upon the deviation root causes, in order to recover any delay. SELLER shall calculate specific critical paths for the milestones foreseen in article 11 of the Agreement upon request by BUYER and any deviation on those critical and subcritical paths shall also result in an action plan to recover any delay.
			2. In the event that the actual physical progress result, is worse than 50% of the distance between the earlier and the later curves (example in figure 2), SELLER shall prepare and submit to BUYER an action plan, based upon the deviation root causes, in order to recover the deviation.
			3. The action plan shall be prepared in accordance with Appendix 21 of Exhibit XVI – Computational Tools and Integrated Management System.



Figure 2 – Early and late progress curves

* 1. SELLER shall prepare Rundown Curves (Baseline, Actual and Foreseen) by disciplines and activities, by Hull and Topside, by Modules and by Onshore and Offshore phase, based on production and resources, in accordance with the template of Appendix 12 of Exhibit XVI – Computational Tools and Integrated Management System., SELLER shall issue Curves for, at least but not limited to, the activities listed below:
1. Piping fabrication;
2. Piping assembly;
3. Cargo tank painting;
4. Structures fabrication;
5. Structures assembly;
6. Outfitting fabrication;
7. Outfitting erection;
8. Cable trays assembly;
9. Cables pulling;
10. Connections (Electrical, Instrumentation and Telecom)
11. Instruments assembly;
12. Hydrotests execution;
13. Piping cleaning/ reinstatement;
14. Leakage tests execution;
15. Blank/Loop tests execution;
16. Equipment Assembly;
17. Painting;
18. Cause and effect matrix;
19. HVAC - Duct Fabrication;
20. HVAC - Duct Assembly;
21. MCC - Mechanical Completion Certificate;
22. TAP - Acceptance and Performance Test;
23. TTAS - Subsystem Acceptance and Transfer Term.
	* 1. SELLER shall analyze the results of the rundown performance achieved comparing with the detailed Schedule in order to justify deviations and clearly identify when an action plan is needed as per 8.8.1.
	1. SELLER shall prepare and implement actions plans whenever required by BUYER, without any additional cost to BUYER. The requested action plans may be, due to identified risks or deviations, in the S-Curves, as per item 8.8.1, in productivity measurement during the offshore phase, project and material pending items, schedule activities, performance indicators, non-conformities, incidents etc.
	2. In the event that an action plan is required, in accordance with this Exhibit, SELLER shall submit it to BUYER within 15 days after the issuance of the schedule update (as provided in Table 1).

# RESOURCES AND PRODUCTIVITY

* 1. SELLER shall plan and control histograms of Labor resources (direct and indirect labor work force), by differentiating subcontractors and activities execution locations, in accordance with the Detailed Project Schedule.
		1. SELLER shall prepare Resource Histogram (Baseline, Actual and Foreseen), in accordance with the template of Appendix 15 of Exhibit XVI – Computational Tools and Integrated Management System and periodicity defined in Table 1.
	2. SELLER shall evidence the correlation between resources allocated in hours in the Detailed Project Schedule and the amount of resources declared in the Histograms through calculation reports/logs, considering the adopted calendars.
	3. SELLER shall submit to BUYER a KPI (Key Performance Indicator) containing the planned and executed indexes in accordance with the deadlines and periodicity specified in Table 1. The KPIs shall be presented with their assumptions, including unproductivity. The first KPI table issued shall be considered as the Baseline.
	4. Table of KPIs shall consist of at least the following items:
* Steel Structure: man-hour per ton of manufactured steel structure;
* Steel Structure: man-hour per ton of assembled steel structure;
* Steel Structure: man-hour per ton of erected steel structure;
* Outfitting: man-hour per ton of manufactured outfitting;
* Outfitting: man-hour per ton of assembled outfitting;
* Piping: man-hour per ton of manufactured piping;
* Piping: man-hour per ton of assembled piping;
* Structure Painting: man-hour per square meter of painted steel structure;
* Pipe Painting: man-hour per square meter of painted pipe;
* Electrical Cables: man-hour per meter of laid cable;
* Instrumentation and Automation Cables: man-hour per meter of laid cable;
* Telecommunications cables: man-hour per meter of installed cable;
* Cable tray: man-hour per meter of assembled cable tray;
* Instrumentation and Automation Cables tray: man-hour per meter of assembled cable tray;
* Telecom Cables Tray: man-hour per meter of assembled cable tray;
* Electrical Connection: man-hour per connection point;
* Instrumentation and Automation Connection: man-hour per connection point;
* Telecom Connection: man-hour per connection point;
* Loop Test or Blank: man-hour per loop;
* Hydrostatic Test: man-hour per ton of tested pipe.

Note: The KPIs shall be detailed in accordance with the characteristics of the scope of work. For instance: material and diameter range for piping, light and heavy structures, etc.

* + 1. BUYER may request additional KPIs from SELLER
	1. Planned and actual KPIs shall be directly related to the resources dimensioning (direct manpower) and shall represent the productivity considered for resources planning.
	2. SELLER shall compare performed and planned KPIs and perform analysis in order to identify actions of improvement or mitigation necessary to ensure compliance with the contractual deadlines.
	3. BUYER may, at its sole discretion, carry out independent productivity analysis.

# ACTIVITIES SCHEDULING

* 1. SELLER shall prepare and submit to BUYER the activities scheduling, in an editable file, with the daily activities/tasks to be executed in the current and following weeks, specifying for each task:
1. Related activity of the Detailed Project Schedule;
2. Area where the activity will be executed (e.g.: pipe-shop, module/elevation);
3. Scheduled start and finish dates for each activity/task;
4. Scheduled production volumes to executed in the week;
5. Team (Man hour) involved in each activity/task;
6. Sub operating System which the activity is related to, for scheduling issued during the commissioning phase.
	1. During the offshore commissioning phase, BUYER may, at its sole discretion, request the reduction of the issuance periodicity and the planning period in the activities scheduling.
	2. The activities scheduling shall be prepared in accordance with the template in Appendix 17 of Exhibit XVI – Computational Toots and Integrated Management System and in accordance with the deadlines and periodicity provided in Table 1.
		1. The activities scheduling shall contain, in addition to the current week and the following week, the performance of previous week for BUYER evaluation.
	3. SELLER shall calculate and submit weekly to BUYER the activities scheduling performance indicators as defined below:
		1. Iprog = Nprog/Nsch
7. Iprog – Programming Indicator
8. Nprog – Number of tasks effectively scheduled based on activities scheduling
9. Nsch – Number of tasks planned for activities scheduling based on the Detail Project Schedule
	* 1. Icprog= Nactual/Nprog
10. Icprog - Programming Compliance Indicator
11. Nactual= Number of tasks performed based on activities scheduling
12. Nprog = Number of tasks scheduled based on activities scheduling
	1. The execution of the tasks planned in the activity scheduling shall serve as the input for updating the Detailed Project Schedule.

# FINANCIAL PLANNING AND CONTROL

* 1. Financial Milestones defined in Exhibit XI – Lump Sum Price Distribution and Measurement Criteria shall be identified in the detailed schedule.
	2. SELLER shall prepare and control a Financial Schedule with the Milestone completion forecast that are part of the Agreement measurement criteria (Exhibit XI – Lump Sum Price Distribution and Measurement Criteria). The planned Milestones completion dates in the financial schedule shall be the same as in the Detailed Project Schedule. This document shall be delivered in accordance with the deadlines and periodicity defined in Table 1.
	3. The financial baseline shall be approved by BUYER together with the detailed Schedule baseline approval.
	4. SELLER shall update the financial schedule in accordance with the results obtained from Detailed Project Schedule updates.
	5. SELLER shall prepare the Financial S-Curves, (Baseline, Actual and Foreseen), in accordance with the Appendix 14 of Exhibit XVI – Computational Tools and Integrated Management System and periodicity defined in Table 1.
	6. All the information necessary for the approval of the payment Milestones shall be planned, monitored and controlled in the measurement management software.

# MEETINGS

* 1. Coordination meetings shall be held, monthly, or whenever requested by the parties, in order to analyze the scope execution progress. SELLER’s Project Manager and BUYER’s representatives shall attend such meetings, besides other professionals involved with the issues to be discussed in such meetings. The meeting will address, at least, the following agenda:
1. scope execution performance, estimates and trends regarding physical and financial planning;
2. Estimate to achieve control and contractual Milestones;
3. Analysis of the causes and impacts of deviations in requirements of scope, deadlines and cost;
4. Pending issues, of previous meetings, of detailed engineering design, procurement, construction and assembly, commissioning, etc.;
5. Performance analysis of the last period activities scheduling and its respective indicators (Iprog and Icprog), evaluating last period and accumulated planned and executed quantities (piping, structure, electrical, etc.), identifying and stratifying the deviation causes.
6. Action plans when applicable;
7. Changes in SELLER’s Staff;
8. Requests for scope changes;
9. HSE Results.
	* 1. SELLER shall resolve any pending issues raised in meetings with BUYER, in accordance with the established deadlines.
		2. Documents listed in Table 1 shall be the input for the meeting and shall always be updated in accordance with the defined frequency.
	1. Specific weekly meetings shall be held in the sites where the scope of supply is being executed in order to analyze the performance, of the detailed engineering design, procurement, construction and assembly, and commissioning activities. The meetings shall address, at least, the following subjects:
10. Analysis of achievements through S curves and Rundowns Curves;
11. Analysis of the activities scheduling of the last period and of the next activities;
12. Analysis of non-compliance incidents;
13. Verification of pending items of detailed engineering design, procurement, construction and assembly, commissioning, etc.
	1. Daily meetings shall be held in the sites where the scope of supply is being executed in order to analyze the piping activities performance.

# REPORTS

* 1. SELLER shall prepare and submit to BUYER the Follow-up Report, in accordance with deadlines and periodicity defined in Table 1, in accordance with the report model in Appendix 05 – Follow-up Report Model.
	2. SELLER shall provide an information panel at the place where the activities are executed, including the main information of the Follow-up Report.
	3. SELLER shall issue a Final Report no later than 60 days before the end of the Agreement. This report shall contain the historical record of the activities performed, including the consolidated information provided in the monthly reports and the following information:
1. Record of critical points that impacted the progress of activities, such as productivity, equipment and material supply difficulties, scope changes, difficulty in labor recruitment, strikes, adverse weather conditions, interference with third parties, etc.;
2. Record of the most important changes in the critical and subcritical path of the detailed schedule;
3. Suggestions, points of attention, good practices and lessons learned;
4. Registration of the main parameters of scope, term and cost of each delivery (general characteristics of the deliveries, dates made, quantitative, etc.).

# PHOTOGRAPHY RECORD

* 1. Since the start of Hull. Modules and Topsides construction and assembly activities, SELLER shall prepare a weekly high-resolution photographic record of the construction main events.
	2. SELLER shall prepare a high-resolution time-lapse video related to hull construction, topside and integration construction and assembly and submit to BUYER every 3 months.
	3. Since the start of hull and Topsides construction and assembly activities, SELLER shall prepare monthly high-resolution photographic records from the top view of the constructions, using drone.
	4. Photographic and video records shall be made available by the SELLER in BUYER’ document management system in accordance with the periodicity defined in items 14.1 to 14.3.
	5. SELLER shall allow BUYER representatives to take pictures of the construction/integration yard areas where the construction/integration of the module/hull/integration are being executed and inside and outside the module/hull/FPSO at any time.

# PERFORMANCE DASHBOARD

* 1. In the case of a portion of the scope is critical for achieving the schedule deadlines, BUYER may request the implantation of a Performance Board for closer monitoring.
	2. BUYER may request SELLER to install performance dashboards during construction and integration phase next to the location where the scope is being executed.
	3. In the case that an action plan is needed to recover the deadlines, as defined in item 8.8.1, BUYER may adopt the Performance Dashboards for greater control of the action plan critical scope.
	4. The performance Dashboard shall contain the goals, performance monitoring, work safety index and identify SELLER and BUYER’s responsible of the direct supervision of the activities being executed, in accordance with the model defined in Appendix 03 – Performance Dashboards.
	5. Some examples of locations to install the performance boards:
		1. Topsides: one per module;
		2. Hull: Building on dry dock; engine room; accommodation; tank release;
		3. Integration: cable pulling and connection cable;
		4. Tie-ins Connection;
		5. Full Load Test;
		6. Air Running;
		7. Plant Simulation.

# APPENDICES

* 1. Following appendices are part of this agreement Guideline:
1. Appendix 01 – Project Breakdown Structure
2. Appendix 02 – List of Control Milestones
3. Appendix 03 – Performance Boards
4. Appendix 04 – Primavera P6 Settings
5. Appendix 05 – Follow-up Report Model