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Service Master Specification Development

1 Key principles of service master standardization

Five key principles need to be met in creating a standard service master and implementation through SAP

1. All contract package definitions to be structured (as much as possible) in alignment with the BICS standard that will drive our Operations (Design, Cost and Procurement). Only single owner (to be identified) will be allowed to make changes in the structure or content
2. CMD team will use the standard contract definitions across all projects to define scope, quantity of work" and payment terms. Additionally, we will still include consultant drawings / specifications / work-statements as part of the attachment
3. Cost Mgmt should not attach any BOQs which does not reflect a Design decision – Const mgmt, Procurement, HFM (for handover related costs) decisions are to be input into system by the said teams themselves (e.g. CM contingency, site establishment, etc).
4. The structure of specifying contracts in SAP should allow
    I. Ability to select relevant activities (linked to payment milestones) for the project from a "standard service master table"
    II. Procurement to have the necessary flexibility in procurement strategy (e.g. Material and Labor or Labor only) or project-wise payment terms (e.g. by slabs with different percentages)
    III. For works that are directly controlled by non-CMD teams, the necessary delegation needs to be defined in SAP
    IV. Budget controls from CMD to continue at the WBS header levels by package (L2)

2 Proposed structure for Service Master - Guidelines

2.1 Proposed structure

1. There will be 4 levels for users in the
    a. L1 - Package type
    b. L2 - Sub Package : Budget Control would be at L2 level
    c. L3 - Contract Package: L3 will be the "lowest level contract" that can be awarded today. We will try and retain the BCIS definition, but if required the L3 may be broken into smaller "contracts" – e.g. Wall finishing (BCIS – L3) will be divided into Gypsum, Internal Paint, Cladding, etc
    d. L4 – Payment Item : L4 is the actual activity to be completed by the contractor and links to the 'payment items' (in case of a full material labor contract)
        i. L4 items will be those that are likely to appear as a line item on a contractor's bill (SIC / IC)
        ii. The L4 item chosen in a given circumstance (combination of Plant and SR) should be based on the 'best knowledge' as on date of budgeting, of the relevant procurement strategy for that SR
    e. L5 – Payment Milestones: L5 will be used only by procurement when a L4 payment line item has multiple payment milestones (e.g. supply / installation / commissioning for MEP)
2. The WBS will have Level 1 and Level 2 and L3 will be mapped to relevant WBS L2 (where budget is controlled)

Example of the breakdown

L1 (Package)	L2 (Sub Package))	L3 Contract Name (In Service Master)	L4 Payment Items (in Service Master)
Civil	Substructure	Standard Foundation	Dry rubble packing

			PCC in Foundation Plum Concrete in Foundation Cement concrete in Footings, Pile Caps Cement concrete in Raft Cement concrete in plinth beams formwork for Footing, Pile Caps formwork for Raft formwork for Plinth Beams Bituminious paint
		Specialist Foundation	...

Details for L1, L2, L3 and L4 for building and infra included in the file Updated_WBS_Structure.xls, Service Master with L2-L3 Mapping



Updated WBS Structure.xlsx

3. The system will be set up on item-rate basis for all contracts. However, flexibility will exist to allow the contract to be awarded on varying on the procurement strategies (e.g. Material and Labor, Labor only, payment stages, etc)

Example of specifying quantities and payment terms at L4 Level –

L3 Contract name	L4 Payment Items	CMD - parameter as per drawings / specification	BOQ as per billing units by CMD/ Procurement	Procurement Rate contracting type	CMD / Procurement as per scope of work - Free Text for key areas only	Procurement Key Inclusions/ Exclusion	Material details in case of Mat_Lab or SIC contracts
Frame (super-structure)	Non-item rate contracts		SQM				
	Concrete in columns, shear walls		CUM	Mat_Lab		Pumps included	From Lodha Material Master
	Steel reinforcement	Grade	MT	Lab only			From Lodha Material Master

The above structure will allow for flexibility in quantity specification as per drawing that may be different than procurement contracting terms. For e.g in Civil contracts

- All L3 contract packages will have one default at L4 level – "Non-item rate contract" that will allow contracting to be done on a lumpsum basis (e.g. civil – labor contract on sqm basis or plumbing contract on per toilet basis). If non-item rate contract activity is selected, then associated quantity and rate will be used for the package and not the detailed break-up. CMD will still provide the detailed quantity break-up for the package to facilitate procurement in vendor negotiations. CMD needs to do quantification at both item rate and non-item rate L4s. Target rates can also be specified at these levels.
- Additionally, service master will be linked to Lodha Material Master that allows CMD to attach the material (specifications) to be used by contractor if in his scope

2.2 Process for Attachment

- Each attachment will map to a single L3 (one is to one relationship) and quantity and scope of work defined for all L4 items
- Every attachment needs to be linked to the DMS – To be determined by IT team as part of DMS roll-out
- **Attachment creation by CMD** – In this case, CMD will create attachment along with parameter details, quantities, budgeted rates, inclusions, exclusions and materials in scope of contract for each L4 in the corresponding L3. Attachment can have additional details such as drawings, consultant specs etc. CM can raise request (SR) for contractors against this attachment. Procurement can independently start tendering process against this attachment.
- **Attachment release by CMD for WOs** – Once the attachment gets finalized, CMD will review and release the attachment. No further changes to the attachment will be allowed post release, unless work order amendment requires change in attachment (refer WO amendment process). Procurement can then release WOs against this attachment provided CM.
- **Naming convention:** Each attachment name will be L1_L2_L3 and automatically created by SAP on creation of an attachment

2.3 Changes and administration Management of Service Master

- Any additions/deletions in the WBS or Service Master structure shall be controlled solely by 'Designated Controller (DC)', who shall form part of the COO office or Cost Management – to be appointed with confirmation of Director- Operations.
- Goal is to have minimal changes in the defined structure of L1, L2 and L3
- A new L4 should be generated if and only if -
    - It offers a clearly different functionality from any of the existing heads
    - It offers a highly differentiated level of service within the same functionality
- No new L1, L2 (can be created post this change)
- Only when a new set of L4 are identified and does not map to existing L3 (contracts), then only a new L3 can be created

2.4 Responsibility of contracts under Infra (L1- Contingency and Common Project Expenses)

To ensure consistency with the business process for creating procurement requests, any contract for activities under "Contingency and Common Project Expenses" will not require an attachment from CMD team

- There will be no attachment done by CMD teams

- Overall budget at WBS level will be defined by CMD and will be the primary owner responsibility to ensure expenses across all work orders and material spend are within the budget
- Each of the contracts under WBS heads will map to contracts at L3 level in service master. None of these contracts will have further L4 level details
- Designated users will be able to select a contract (L3 level) from the service master while creating the SR without attachment. There will be remarks field for adding text details.
- Similarly for WOs without SRs, designated users will be able to select a contract (L3 level) code in the WO. There will be remarks field for adding text details.
- Only designated users will be able to create SRs and WOs.

WBS - L2	Managed by	SR	WO
Site Establishment	CM	CM	Proc
CM Discretionary Budget*	CM	None	CM
Water and Electricity	CM	None	CM
Safety	CM	CM	Proc
HFM Budget	HFM	None	Central HFM
Capital Equipment**	CMD	CM	Proc
Consultant Fees	Proc	None	Proc
Contingencies	CMD	NA	NA

*Under CM Discretionary Budget - Other construction enablement / temporary works, expenses related to spares, repairs, replacement for damaged / stolen parts will be captured.

** CMD to create attachment for capital equipment

Details are included in attached Excel file – "Details for Contingency and Common Project Expenses.xlsx"



14.03.2013 Details for Contingency and

3 Business process needed for success – Attachment, Service Requests and Work-order generation

Cost Management

a. CMD to ensure concept budget is closed at time of marketing launch.
b. CMD to ensure value engineering is done prior to concept budget closure.
c. Design/CMD to ensure that DD drawings are received and contracts & quantities thereto updated.

Procurement

a. Procurement to ensure that 'Comprehensive Activity list' is finalized prior to Concept Budget closure. It is assumed that the Procurement Strategy covering Nature (FLO v. PMFL v. FML) and packaging of sub-packages into tenders is known prior to the FDD finalization. This is a critical element to make this process successful. If there is any relevant change in this strategy, linked changes in form of modification/addition/deletion of activities and materials shall have to done by Cost Management – this will require a "new attachment" to be made by CMD followed by a new service request.

b. Pre-tendering work to start on attachment creation. Tendering to start on release of a service request and resulting changes in the BOQ to be communicated to CMD. Procurement to ensure these changes are made in the attachment by CMD.
c. Each item of the BOQ should be payable – Further breakdown to reflect milestones needs to be captured in SAP that allows for verification of bills against WO payment terms
d. End performance acceptance criteria should be clear (and give clarity on how these are to be measured/tested).
e. If materials from multiple equal performance brands are stated in the PS for a given activity but their pricing has major differentiation, Procurement should ensure that the tenders/RFPs for such activities should state the name of the brand(s) with the lowest costs.
f. Procurement can combine multiple attachments for one work order, alternatively it can break up one attachment into multiple work order by splitting quantities against each L4 into separate WO
g. No Work order can be created by further sub dividing L3 contract package.

4 Work Order (WO) Amendment Process

4.1 Reasons for Amendment

a. **Design Change**: Design to Intimate the changes to CMD (link with DMS), CMD to amend Attachment and Budget if required and Procurement to amend Work Order
b. **Quantity change due to site conditions**: CM to communicate changes to CMD, CMD to amend attachment and budget if required, Procurement to amend work order
c. **Rate change with Vendor :** Procurement to Amend Work order
d. **Tax changes**: Procurement to amend work order

4.2 Change Impact

1. Attachment used by CMD – BOQ using service master, drawings
2. Work Order used by procurement
3. Service Entry Sheet used by CM

4.3 WO Change Scenarios

Following are the scenarios that can lead to an amendment and needs to be handled by the system.

1. Rate
    a. Rate change for full quantity
    b. Rate change for partial quantity
2. Quantity change
3. L4 – Payment Line item change
    a. Creation of new L4 item for attachment
    b. Change of L4 line item from one contract to another contract
4. Change in inclusion/exclusion field
5. Change in Parameter/ scope of work field
6. Payment terms in lump sum contract
7. Payment terms in SIC/IC at SG5 level
8. Tax Change

For each change, the IT system must ensure the following principles

- **There must be an appropriate work-flow that covers change request, necessary approval for allowing the change and updating the stakeholders once the change is done. All this must be done in a SAP work-flow and not through off-line email / phone communication**
- **The linkage between the attachment to work-order must be maintained and does not require CM to create a new SR**
- **Reporting capabilities to be provided in SAP on the number of amendments in a single work-order, time taken for work-order amendment from request to completion etc.**

4.4 Budget Control Rules

1. Definitions:
    a. L 0 – Construction budget of a Plant
    b. L 1 – Package
    c. L2 – Sub-Packages at which level budget is controlled
    d. L3 – Contracts
    e. L4 – Payment items
    f. L5 – Payment milestones/terms
2. CMD will enter scope of work and linked qty/estimated rate at L3 level at DD budget.
3. Once the L3 contract is entered into the system by CMD, its estimated value will be 'locked' from the linked L2 budget.
4. Any amendments to an SG3 contract's value or qty or unit rate can be requested by Const Mgmt (to Procurement) or initiated by Procurement itself:
    i. Following amendments can be done by Procurement themselves:
        1. Increase of upto 5% in quantity or 5% in unit rate of any L4 item (subject to what is stated in 4.ii. herein)
        2. Increase of upto 2% in quantity or 5% in unit rate of any contractor-supplied material (subject to what is stated in 4.ii. herein)
    ii. Amendments resulting in any of the following are required to be done by CMD:
        1. Increase >5% in quantity or unit rate of any L4 items
        2. Increase >2% in quantity or 5% in unit rate of any contractor supplied material
        3. SG3 contract's estimated value is exceeded by >3% of the original estimate for that SG3.
        4. L2 budget is exceeded*
        5. Any change in scope requiring addition/modification of L4 items
5. No amendments shall be done post-facto by CMD viz. after WO/PO/LOI/equivalent has been finalized/issued. To support this, all amendment requests to CMD shall be completed in max of 7 days.
6. Authorization Limits for budget changes / amendments:
    i. Amendments authorized to be done by CM shall be done with authorization of Level 2 or higher of CM or Materials Mgmt.
    ii. Amendments authorized to be done by Procurement shall be done with authorization of Level 2 or higher of Procurement.
    iii. Within CMD, all approvals which result in original L2 budget being exceeded by max of 4% shall be granted by Project Lead (Level 2). Any approvals which result in original L2 budget being exceeded by > 4% shall be granted by Level 1 – Cost Mgmt (Estimation or Budgeting), subject to such increases not resulting in overall plant budget being exceeded beyond what has been approved.
    iv. Irrespective of what is stated above, any amendment(s) which leads to an (cumulative) increase > 25% of the original award value of any contract (SG3 or combination of SG3s) will require approval of COO or Director-Operations. This applies to all contracts which have an original award value of Rs. 1 crore or greater.
    v. Any approvals which result in approved Plant budget getting exceeded requires approval of Director-Operations.

7. These controls do not apply to Sales Office & Sample Flat Plant and Construction Discretionary Budget & FM Discretionary Budget L2 items, for which no attachments are required.

The following table outlines the business process flow for each of the above identified scenarios.

		WO Amendment Request Type	Budget Change Scenarios	Changed by	Affected Documents	Email Triggers to	Business Process	IT implication
1	Rate change	Rate change for whole quantity in an L4 item	NO	Only Procurement	1. WO	NA	1. CM to request Procurement or Procurement to self-initiate process 2. Procurement to amend WO	1. Work-order rate to be updated in SAP
			Yes	Requires CMD approval	1. WO, 2. Attachment	NA	1.CM to request Procurement or Procurement to self-initiate process 2.Procurement to communicate budget error to CMD 3.CMD to release budget 4. Procurement to amend WO	1. Work-order rate to be updated in SAP and attachment updated in SAP
		Rate change for partial quantity in an L4 item	No	Only Procurement	1. WO,	NA	1. CM to request Procurement or Procurement to self-initiate process 2. Procurement to amend WO	1. Work-order rate to be updated in SAP 2. Provide ability to capture the different rates for different quantities and reflected in Service entry sheet against which contractor will bill
			Yes	Requires CMD approval	1. WO, 2. Attachment	NA	1. Rate change requirement is communicated by CM to procurement, 2. Procurement to request budget release to CMD 3. CMD to release budget and change attachment 4. Procurement to be intimated of budget release and change of attachment 5. Procurement to process WO amendment	1. Work-order rate to be updated in SAP and attachment updated in SAP 2. Provide ability to capture the different rates for different quantities and reflected in Service entry sheet against which contractor will bill

2	Quantity change	Quantity change	No	Procurement	1. Attachment 2. Work Order 3. Service Entry Sheet	1. CM on work-order change	1. Quantity change requirement is communicated by CM procurement 2. Procurement to process WO amendment	1. Communication of quantity change against the original SR raised by CM to procurement 2. Attachment quantity to be updated automatically by the system 3. Work-order quantity to be updated in SAP and same reflected in Service Entry sheet
			Yes	CMD & Procurement	1. Attachment 2. Work Order 3. Service Entry Sheet	1. CM + Procurement on attachment change 2. CM on work-order change	1. Quantity change requirement is communicated by CM to procurement, 2. Procurement to request budget release to CMD 3. CMD to release budget and change attachment 4. Procurement to be intimated of budget release and change of attachment 5. Procurement to process WO amendment	1. Communication of quantity change against the original SR raised by CM to procurement 2. Attachment quantity to be updated, but not require SR to be created once again 3. Work-order quantity to be updated in SAP and same reflected in Service Entry sheet
3	L4 - Payment line item change	"Creation of new L4" for the attachment (did not exist in current attachment)	No	CMD & Procurement	1. Attachment 2. Work Order 3. Service Entry Sheet	1. CM + Procurement on attachment change 2. CM on work-order change	Change requirement is **communicated by CM to CMD and procurement**, CMD makes appropriate changes in consultation with procurement. Change will be one of two - Create new L4 in the Service Master and includes in attachment or simply adds existing L4 from service master. Procurement to process WO amendment	

			Yes	CMD& Procurement				System to check if budget is violated , if yes then CMD to initiate Budget release process
		Change of L4 line item from one contract into another contract	No	Procurement only	1. Work Order 2. Service Entry Sheet	CM	If the L4 has already been included in another WO, then the same needs to be adjusted first by procurement and then added into the other contractors WO	Removal or adjustment of quantity in one work order and addition of L4 into another work order
4	Changes in parameter / scope of work, etc		No	CMD & Procurement	1. Attachment 2. Work Order 3. Service Entry Sheet	1. CM + Procurement on attachment change 2. CM on work-order change	1. Change requirement is **communicated by CM to CMD and procurement**, CMD makes appropriate changes in consultation with procurement. 2.Procurement to process WO amendment including any rate change if within budget 3.System to check if budget is violated , if yes then CMD to initiate Budget release process	1.Scope of work and parameter fields can only be updated by CMD 2. Budget Check
5	Inclusion/Exclusion		No	Procurement	1. WO, 2. Attachment	NA	1. Change requirement is communicated by CM to procurement. 2. Procurement to amend WO	
6	Payment term in lump sum contract		No	Procurement	1. WO, 2. Attachment	NA	1. Change requirement is initiated by procurement. 2. Procurement to amend WO	
7	Payment term in SIC/IC contract at SG5 level		No	Procurement	1. WO, 2. Attachment	NA	1. Change requirement is initiated by procurement. 2. Procurement to amend WO Procurement to amend WO	
8	Tax change		No	Procurement	1. WO, 2. Attachment	NA	1. Change requirement is initiated by procurement 2. Procurement to amend WO Procurement to amend WO	