# CWFM Auto Bill Generation

# Functional Requirements Specification

# 1    Document Revisions

| Date | Version Number | Document Changes |
|------|----------------|------------------|
| 23/08/2021 | 1.0 | Initial Draft |
| 25/08/2021 | 1.1 | Changes made in document and flow of system |
| 28/08/2021 | 1.2 | Changes made in TO-BE flow diagram |
| 01/09/2021 | 1.3 | New features added in the flow |
| 14/09/2021 | 1.5 | Added UKSC changes for identification of invoice type & supporting documents needs. |

# 2    Table of Contents

# 3   Introduction

## 3.1   Project Summary

### 3.1.1   Objectives

*CWFM – Billing Automation solution is being designed to automate the Invoice Generation and Billing process between UTCL and the Third-Party Contractors. The solution will be designed to interact with the existing KRONOS, SAP and UKSC systems. Few of the functionalities for the new system to be developed are mentioned below:*

- Deliver an Admin module for managing all Administrative Tasks through Assigned User(s).
- Maintain Approval Workflow of Bill.
- Maintain Dispute Management between Departments and Contractor.
- Integration with KRONOS, SAP and UKSC for fetching Invoice details, Service Entry posting, MIRO posting and Final Bill Amount disbursal.
- Maintain Reports based on Contractors, Units and Cluster Levels.

### 3.1.2   Background

*The Invoice Generation and Bill Processing is currently being done manually. Currently Invoice generation is being done manually through the concerned department using the details through the KRONOS and SAP system. Service Entry and MIRO postings are being done in SAP manually. After the Manual approvals take place, it is followed by the posting of the Bill to UKSC Mailroom.*

## 3.2   Project Scope

*The development of Integrated Automated solution for CWFM – Billing process. Following modules have been decided upon to cater to the Objectives:*

### 3.2.1   In-Scope Functionality

- Administration Module
- Automated Invoice Generation
- Contractor Dispute Management
- Contractor Digital Signature provision
- Bill Approval Workflow
- Auto Service Entry Posting and MIRO posting
- Final Bill posting to UKSC
- Reports and Dashboard Generation

# 4   Business Process Overview

*This section describes the Current Business Process(i.e.AS-IS) and the Proposed Business Process (i.e., TO-BE).*

## 4.1   Current Business Process (As-Is)

1. Purchase Requisition being created by User department.
2. Work Order is created and flows to KRONOS.
3. Section Head generates Labor Requisition in KRONOS.
4. DH approves the LR and scheduler schedules the resource (Workman) against the LR.
5. Attendance capturing and Bill verification on Monthly basis.
6. Contractor submits Invoice to the respective departments.
7. Invoice receiving Department approves the bill and creates Service Entry and goes to ER for Compliance Verification.
8. Mailroom format is being followed to submit hard copy of Invoice and approvals.
9. The Mailroom Employee scans the hard copy of the bill and creates a Case into Case manager.
10. The Account executive at UKSC verifies the bill (amount, Advance, Credit/Debit settlement) and forwards it to the UKSC Supervisor.
11. The UKSC Account Executive does a 3-way match and submits to UKSC Supervisor for approval.
12. The UKSC Supervisor verifies and approves the bill.
13. Steps 10, 11 and 12 takes 3-4 business days.
14. The Payment releases according to the due date according to the PO terms.
15. Payment must be processed by 6$^{th}$ day of every of month for the previous month invoice.

### 4.1.1   Challenges in AS-IS Process

1. Manual Bill Singing requires additional efforts and delays the overall bill approval process.
2. Currently, there is no fixed TAT (Turnaround time) for payment.
3. No SLAs for invoice signoff and clearances.

## 4.2   Requirements Understanding (TO BE)

### 4.2.1   Invoice Generation and Bill Processing Flow

Import WO Details and Bill verification data from KRONOS (Every fourth day worked hours will be pulled from Kronos). Plants to regularize the attendance within 3 days of punching.

1. Integration will be done with KRONOS for WO details and Bill verification data
2. Invoice / Bill will be generated based WO Types and Plant wise billing cycle maintained.
3. Invoice will also include following components
   a. PPE Calculation (Yearly) (for BSR only). – to be handled through debit/cr.
   b. PF Calculation Invoice (Monthly), Yearly PL, CL quota to be uploaded plant wise, Monthly availed leaves, for applicable plants (Only HCW Follows)
   c. ESI Calculation Invoice (Monthly).
   d. Bonus Calculation Invoice (Yearly) + Ex gratia (for applicable plant only, Formula and logic to be shared).
   e. Leave encashment (Yearly). (I.e., 200 Attendance then divide by 20 earned leave is 10, for every 20 attendances 1 earned leave is eligible), payout will be based on earned – availed from earned. Minimum works in a year to be configured plant (State of plant).

f.  CESS Calculations per person (Every 6 Months), Plant wise configuration.

g.  Insurance Premiums payout (Employee compensations i.e., EC/WC more than 21K Wage employees)– Excel file to be uploaded and bill to generated on demand.

4.  #3 to be handled through Non-PO Invoice posting without SE (Approval from HO HR required.), GL Code & Cost Center to be picked from Contractor work order.

5.  Invoice will be generated as draft bill till contractor signs the same digitally.

6.  In March month bills will be generated twice one for regular billing period and another on first date of April for the period on remain days in March.

7.  Invoice due date by default will be 7th day of every month. It will be configurable in the billing cycle Master.

8.  BSR and Supply Invoice to be generated according to respective formulas.

9.  Below formulas to be used to calculate invoice amount for each line item:

For Service:

Line-Item value = Wage Rate(/hr) * Work hours of workmen + OT + Margin

For BSR:

Line-Item Total = JOB Qty * Rate.

Taxes will be applicable on total invoice amount:

Applicable Taxes will only be referred from WO. i.e., CGST, IGST, SGST.

10. The Bill will be generated according to the proposed format:

**Service Invoice Format.**

| PAN: AJQXXXX1R<br>GSTIN:23AJQXXXXX1R2ZE | XYZ ABC Electricals<br>155, SRGGGGG COLONEY, NAYAGOAN, TEHSIL: JAWAD, DISTT: NEEMUCH, MADHYAPRADESH – 458468<br>TEL: +919425922757, +9198XXXXXXXX, EMAIL: SINGHSUNDER75@YAHOO.COM | | | | | State /Code: MP / 23 Vendor Code: 8XX602 | |
|---|---|---|---|---|---|---|---|
| | **TAX INVOICE** | | | | | | |
| Invoice No: | **20-21/10/001** | Invoice Date: | **01/10/2020** | Due Date | **01/10/2020** | Order No | **3010514703** | Order Valid Till | **30/09/2020** |
| SES No: | | Taxable Under RCM | **No** | Reverse Charge: | **No** | Billing Period | **01/09/20 – 30/09/20** | GL Code | **0000707050** |
| Department: | **Instrumentation** | Section: | IRM | Section Desc: | | Service ID | MEXXXX9684 | | |
| Service Description: | KHALASI 1 W/O SAFETY TOOL | | | | | Job Description: | **SUPPLY MANPOWER FOR L1 COALMILL WAGON TI** | | |

| **Bill to Party** | **Ship to Party** |
|---|---|
| UltraTech Cement Limited<br>Unit – Aditya Cement Works<br>Sewa Kesarpura, District: Chittorgarh – 312612<br>Rajasthan<br>GSTIN: 08AAXXXXXXS42L1ZA<br>PAN: AXXXXXXX442L | UltraTech Cement Limited<br>Unit – Aditya Cement Works<br>Sewa Kesarpura, District: Chittorgarh – 312612<br>Rajasthan<br>GSTIN: 08AAXXXX42L1ZA<br>PAN: AAAXXX42L |

| Sr# | Workman Name | Category | Trade | Skill | Rate | Regular (Days) | Paid Holidays | OT (Hours) | Wage (₹) | OT (₹) | Margin (₹) | Total (₹) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | APCW29SS5910 - SURESH C | BSR | KHALASHI | Skilled | 559.22 | 21 | 2 | 10.5 | 11743.62 | 1467.95 | 939.49 | 14151.06 |
| 2 | APCW294XXX5913 - HUSSEN VALI BAAIKAATI | BSR | KHALASHI | Skilled | 559.22 | 20 | 0 | 3 | 11184.40 | 419.42 | 894.80 | 12498.62 |

| 3 | APCWXXX006114 - HABEEBU RAHMAN KUTTASSERI. | BSR | KHALASHI | Skilled | 559.22 | 20 | 0 | 0 | 11184.40 | 0 | 894.80 | 12070.20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | Totals | | | | | | | | 34112.42 | 1887.37 | 2729.09 | 38719.88 |
| | | | | | | | | | | Taxable Value | | 38719.88 |
| | | | | | | | | | | SGST @9% | | 3484.79 |
| | | | | | | | | | | CGST @9% | | 3484.79 |
| | | | | | | | | | | IGST@0% | | 0 |
| | | | | | | | | | | Amount Payable | | ₹45689.50 |
| | Amount Payable In Words: ₹ Fourty Five Thousand Six Hundred eighty-nine and fifty paise. | | | | | | | | | | | |

| Payment Instructions | For Shree Durga Electricals | Department Head / FH (Conditional) | Accounts / UKSC |
|---|---|---|---|
| | Digital Sign Shree Durga | Approval Stamp | Approval Stamp |

## BSR Invoice Format.

| PAN: AJQXXXX1R GSTIN:23AJQXXXXX1R2ZE | **XYZ ABC Electricals** 155, SRGGGGG COLONEY, NAYAGOAN, TEHSIL: JAWAD, DISTT: NEEMUCH, MADHYAPRADESH – 458468 TEL: +919425922757, +9198XXXXXXXX, EMAIL: SINGHSUNDER75@YAHOO.COM | State /Code: MP / 23 Vendor Code: 8XX602 |
|---|---|---|

**TAX INVOICE**

| Invoice No: | **20-21/10/001** | Invoice Date: | **01/10/2020** | Due Date | **01/10/2020** | Order No | 3010514703 | Order Valid Till | **30/09/2020** |
|---|---|---|---|---|---|---|---|---|---|
| SAC Code: | | Taxable Under RCM | **No** | Reverse Charge: | **No** | Billing Period | **01/09/20 – 30/09/20** | GL Code | **0000707050** |
| Department: | **Instrumentation** | Section: | IRM | Section Desc: | | Service ID | | | |

| Bill to Party | Ship to Party |
|---|---|
| UltraTech Cement Limited Unit – Aditya Cement Works Sewa Kesarpura, District: Chittorgarh – 312612 Rajasthan GSTIN: 08AAXXXXXXS42L1ZA PAN: AXXXXXXX442L | UltraTech Cement Limited Unit – Aditya Cement Works Sewa Kesarpura, District: Chittorgarh – 312612 Rajasthan GSTIN: 08AAXXXX42L1ZA PAN: AAAXXX42L |

| Sr# | Description of Service | Rate | Qty | Unit (UOM) | Total (₹) |
|---|---|---|---|---|---|
| 1 | Charges Towards Raw mill fan casting | 58750 | 10 | Nos | 587500 |
| | | | | | |
| | | | | | |
| **Totals** | | **58750** | **10** | | **587500.00** |
| | | | | Taxable Value | 587500.00 |
| | | | | SGST @9% | 52875.00 |
| | | | | CGST @9% | 52875.00 |
| | | | | IGST@0% | 0 |
| | | | | Amount Payable | ₹693250.00 |

| Amount Payable in Words: ₹ Six Lacs Ninety-Three Thousand Two Hundred Fifty and Zero paise. |
|---|

| Payment Instructions | For Shree Durga Electricals | Department Head / FH (Conditional) | Accounts / UKSC |
|---|---|---|---|
| | Digital Sign Shree Durga | Approval Stamp | Approval Stamp |

11. For BSR Supporting documents to be uploaded for work done and upload on FTP with Ref. to invoice no & case id.
12. Bill will be generated according to WO number and Jobwise/line item (There can be multiple jobs in one WO) + Non-PO Invoices will be handed separately with applicable taxes & supporting documents upload.
13. Service Account Code to be added in Invoice format. This value will be provided by the Contractor.
14. Financial Year expense provisioning will be handled using any of below two approaches.
    a. Fixing billing cycle from 1$^{st}$ to 31$^{st}$ of every month, subject to approval.
    b. Second approach: On April 1st, pending days invoice will be generated and SE will be posted first without functions approval (While march month invoice signing Contractors to provide their invoice number for March twice), SE Posting to be posted before 2 day of April for previous FY but posting date to 31$^{st}$ March of previous FY.
15. System will have Manual excel upload option for Plants where CWFM module is not available/extended.

Below pointers will be taken up in Phase – 2 as a part of change request.
    1. System should have the provision to configure the OT and Margin from Contractor. Contractor will not be given to manipulate any figure by their own.

## 4.2.2   Dispute Management

An online dispute resolution module will be designed in system for contractors to raise issues in invoice generated.

1. On the review screen, the Contractor will have an option to raise dispute on the Invoice.
2. A form/option will be provided for the current invoice and with all supporting data from the Invoice.
3. Contractor only needs to enter issue against the dispute, rest other supporting data, system will automatically capture.
4. Based on the department, the dispute will be sent to respective department of Invoice for dispute resolution.
5. Receiving department of this dispute will take corrective action to regularize data mismatch (if any) and revert to the Contractor.
6. Issue can be re-assigned to other departments SPOCs.
7. Necessary email alters to be sent to all stakeholders.
8. HR/ER Department will be overall responsible for any dispute and ensure closure (SLA Adherence only).

*Validations:*

1. Once dispute is raised, contractors will not be able to forward the Invoice to Departments till dispute is closed and invoice is refreshed from Kronos/CWFM.
2. Financial end to be taken care, yearly end dispute report to be sent to Commercial and UKSC.
3. Dispute resolution to be cleared in two days.

## Approval Process for Bill within UTCL

1. Approval Matrix(position-wise) will be maintained for the different type of WO /Invoice.
2. Invoice will be sent for approval according to the approval matrix.
3. Approval matrix starts from SH (Section Head) position and so on for higher positions.
4. DH will be given the option to hold the amount (absolute and %) with reason of holding amount.
5. If Invoice value is >=------- and <=-----, it will be sent to FH for Approval. FH will have the option of overriding the amount held by the DH. (Should be configurable)
6. If Invoice value is >=------- and <=-----, it will be sent to UH for Approval. (Should be configurable)
7. Based on the workflow completion status, Auto SE and MIRO posting will be done.
8. Default SLA is of 1 day at each level.
9. SLA can be configured at any point of time using the Admin module.
10. Post all the Approvals, the Invoice will be sent to the Contractor again for Digital Signature

## Digital Signature

1. Digital Signature screen will be given on the system for signing the Invoice.
2. On the screen, the Contractor will be given an option to enter their Invoice number.
3. Contractor will have to plug-in a USB from their system to digitally sign the invoice.
4. Default SLA is of 1 day for Digitally signing the Invoice.

### Validations:

1. Invoice Number entered by Contractor on the screen, will be unique for that Contractor.
2. System will have enough measure to restrict contractor manipulate the invoice before signing.
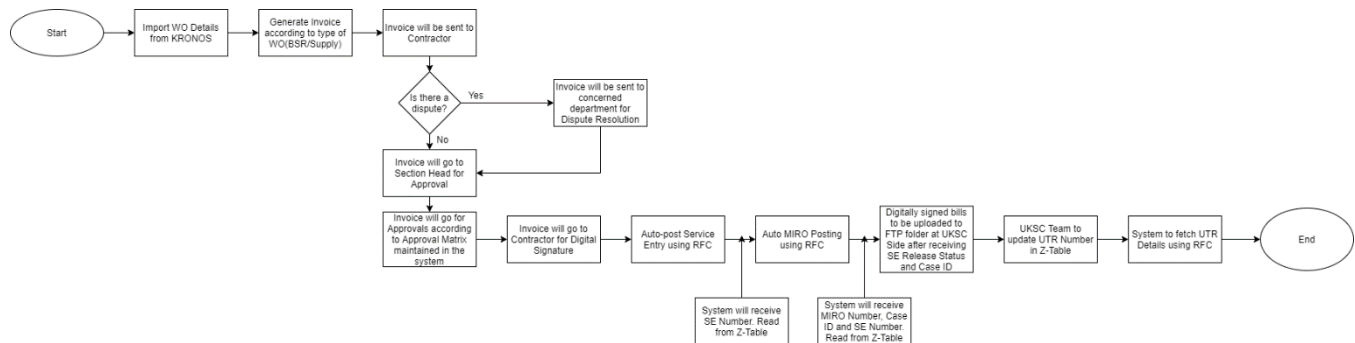


## Service Entry and MIRO Posting – SAP

## WO RFC Change

1. Existing WO RFC to be changed to incorporate below fields needed for MIRO Posting.
   a. Company Code.
   b. Payment Terms.
   c. GL Code.
   d. Cost Center.

## Service Entry

1. SAP MM Team will provide RFC to Auto post SE, SAP MM Team to block Manual Entry of SE for these types of WO.
2. System will receive a response of SE Number after the posting.
3. Billing System will wait for SE to be released and Case ID has been posted in common Z-Table.
4. A common Z-Table to be maintained among MM, FICO & UKSC modules, MM team will update SE related details like SE Number, released date, type of Invoice (BSR/Supply) etc. UKSC Team will create case and update in common table.
5. An RFC to be given to Application team to read the data from Z-table (FI Team).

### MIRO Posting

1. Billing system will read status from Status Read RFC (Provided by FI Team) and when Case ID and SE Release status received against invoice.
   a. Invoice will be uploaded to FTP Folder for Case manager with naming convention as Vendor + Invoice Number (PDF Files).
   b. With File upload time, system will post MIRO with all supporting data required to execute RFC.
2. MIRO Posting will return MIRO No, CASE ID, SE Number and supporting details to track the invoice status.
3. RFC to provide fields to input hold amount & reason.
4. Non-PO Invoice (PPE, PF, EPF etc.) also be submitted without SE, separate RFC to be given.
5. Separate RFC to be given to posting MIRO.
6. SAP FICO Team to block Manual Entry of MIRO for these types of WO.
7. Business place mapping will be done at billing application against SAP Plant code (one to one mapping i.e., AC01 – RAJ1)

### UKSC Bill Posting

1. Digitally signed bill copies to be uploaded on FTP folder after receiving SE Release status and Case ID.
2. For reimbursement for statutory bills SE check to be ignored and direct case id to be updated in common Z-Table.
3. A Separate folder will be created on Existing FTP Server at UKSC, after invoice processing Case manager will remove the bills from FTP folder.
4. Once bill is processed by UKSC Team (AE), Case Manger will update UTR Number in common Z-Table, alternatively billing system will call same RFC UKSC is using to get UTR (RFC details to be shared).
5. Application team will consume same RFC being used by UKSC team to get UTR details, RFC Details to be shared by FICO / UKSC Teams.
6. Basis hold amount in MIRO RFC (Common Z-Table) entry to posted in Case manager.
7. For 13$^{th}$ invoice (FY Closure Days) auto MIRO to be skipped.

*Integration Process Flow*
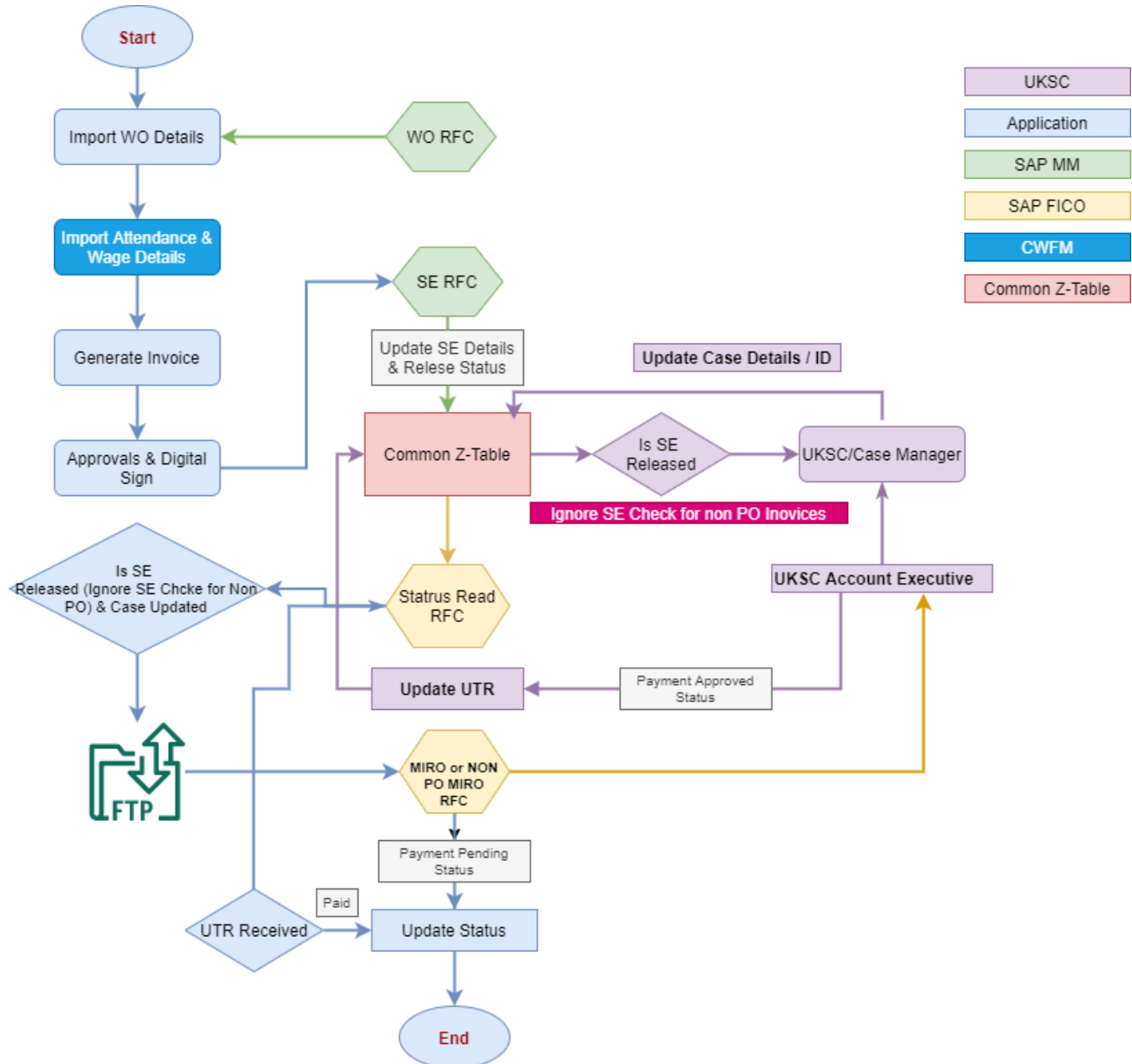


Figure: Integration Flow

### 4.2.3    Billing generation System Flow

*Authentication and Authorization*

1. System will be maintaining 2 types of Users: Internal Users and Third-Party Contractors
2. Login Credentials for Internal Users will be the same as given by their IT team.
3. Login Credentials for Third Party Contractors will be maintained/managed by the system.
4. When an Internal User Will Login, the system will authorize the Login in the Active Directory.
5. When a Third-Party Contractor Will Login, the system will authorize the Login from the system's database.
8. Only the Authorized User can reset the Password of all the Users.
9. When a New User is registered in the system, a welcome Email will be sent to the registered User.

### 4.2.4    Masters

1. The following High-Level Masters will be maintained and will be controlled by Authorized User role:
   a) Functions – This master will contain all the Functions present in the Unit.
   b) Departments – This master will contain all the Departments in the Unit.
   c) Sections – This master will contain all the Sections in the Unit.
   d) Business Units – This master will contain all the Business Units present in the Unit having mapping with Business place needed for MIRO
   e) Clusters – This master will contain a list of all the Clusters
   f) Business Vertical – This master will contain all the Business Verticals
   g) Roles – This master will contain all the Roles for the system.
   h) Users – This master will contain all application Users repositories.
   i) SLA – This master will contain all the SLAs that will be maintained for the system.
   j) WO – Work Order details.
   k) Plant wise Accounting Document Type

### 4.2.5    Reports

The High-Level reports are mentioned below:

1. Bill Verification Report
2. Cluster/Unit Wise Bill Status Report
3. Dashboard for Overall Bill Status/Tracking
4. SLA Breach Report (including Dispute management)
5. Audit Report

Report formats to be provided by HO/HR, Plant team and UKSC Team for tracking.

10-12 tentative reports have been considered for development.

# 5 Appendices

## 5.1 List of Acronyms

| Acronym | Full Form |
|---------|-----------|
| CWFM | Contract Workforce Management |
| UTCL | Ultratech Cement Limited |
| LR | Labor Requisition |
| RFC | Remote Function Call |
| SE | Service Entry |
| SLA | Service Level Agreement |
| UH | Unit Head |
| FH | Financial Head |
| DH | Department Head |
| WO | Work Order |
| BU | Business Unit |

## 5.2 Assumptions

1. The bill/invoice format will be standard across Ultratech.
2. Contractors must procure Type 2/3 Digital Signature key on/before UAT. (HO/HR to ensure)
3. SAP FICO & MM Team to ensure the Manual posting of SE and MIRO is blocked for Contractor Billing.
4. Regularization in Kronos must be done within 3 days of attendance.
5. System is being designed for overall SLA for payments and approvals by 10th of every month.

## 5.3 Out of Scope

- UKSC Case Manager related developments
- SAP side Integration development
- SAP side RFC/Program development

## 6 Sign-Off

| Name | Title | Signature | Date |
|---|---|---|---|
| Kailash Chandra Maheshwari | SAP FICO – Module Lead | | |
| Sanjeev MK | SAP MM – Module Lead | | |
| Chandra S Sahoo | UKSC Head | | |
| George Allu | SPOC HO/HR | | |
| Raj Khetan | SPOC – Vikram (Commercials) | | |
| Ramana Bhogi | SPOC – APCW(HR) | | |
| Jitendra Tanwar | SPOC – Hirmi (ER) | | |
| Dhananjayan MG | SPOC – Reddypalyam (ER) | | |
| Anand Pathak | SPOC – Awarpur(HR) | | |
| Vijay Kumar Singh | PM IT Applications (HO) | | |