NSR Logistic Mobility Module (LMM)

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| 1 | Account Management | Creation of new supplier in KT   1. Append from NSR SAP by interface for new supplier. 2. To be used as dropdown listing for selection during Transport Order creation. 3. Allow creation of temporary new supplier to be created in Web module and later manually map to update/overwrite from SAP. System will generate email to target user when such temporary supplier was created. Management report can be generated for all temporary suppliers pending for mapping. 4. Allow creation/enabling/disabling of Supplier’s Administrator BY NSH Administrator. 5. Allow creation/enabling/disabling of authorized users by Supplier’s Administrator |
| Creation of new Pickup point in KT linking to supplier.   1. Append from NSR SAP by interface for new Pickup points 2. To be used as dropdown listing for selection during Transport Orders creation. Pickup point shown in dropdown listing should be limited to those Pickup points under the selected supplier. 3. Allow options for creation of temporary naming of new Pickup point and later manually map to update/overwrite from SAP. System will generate email to target user when such temporary Pickup point was created. Management report can be generated for all temporary Pickup points pending for mapping. Temporary Pickup point will allow NSR user to enter Transport remarks manually, select any of the allowable Transport Order type, allowable Resource type. No Zone and indicative type of scrap will be required. 4. Under such option of new temporary Pickup point, user will be given the options to    1. Enter address manually.    2. Entering the postal code to retrieve the location.    3. Upload a photo with location tag to retrieve the longitude and latitude of the location. (to consider update user current position) 5. Only Supplier’s Administrator can create new Pickup point in Web. 6. Ability to read location tag from photo submitted by Suppliers’ Administrators. 7. Allow Transport remarks such as external remarks/description/Contacts to be attached for each Pickup point and such details will be shown in each Transport Order. NSR administrator will be able to edit such Transport remarks. 8. Allow assignment and updates of a single default and list of allowable Transport Order types each with default estimated timing by NSR Administrator using dropdown listing. Therefore, Transport Order Type is a master data table to be maintained. 9. Allow assignment and updates of a single default and list of allowable Resource type by NSR Administrator using dropdown listing. 10. Allow assignment and updates of an indicative type of scrap for each Pickup point by NSR Administrator using dropdown listing. Therefore, Type of Scrap is a master data table to be maintained 11. **Allow assignment and editing of zoning of Pickup points by NSR Administrator using drop list. All changes in Zoning will have audit trail.** 12. Allow updates of internal remarks by NSR administrator to be shown during Transport Order assignment to Resources. 13. **Pickup points for internal Job type shall be allowed to enter manually.** 14. A list of recipient(s) with the details such as hand phone number/email address/Mobile Apps ID shall be maintained in KT to receive SMS or email or mobile apps message triggered by the different process status captured. |
| 2 | Resource Management | Vehicle Resource Type in KT   1. Creation / Edit / Disabling of individual Vehicle Resource type as in a master data table 2. To be used as dropdown listing for alternate selection during Transport Orders creation.   Manage Individual Vehicle Resource under each Vehicle Resource Type   1. Create KT of individual Vehicle Resource ID using Vehicle Number and it Resource owner from drop down listing where Resource owner is maintain in a separate KT table. 2. Allow individual Resource ID to be enabled and disabled within dates/period with selectable dropdown listing of reasons and additional remarks. All changes in status will have audit trail. 3. Individual Resource ID will be mapped against the list of allowable and allowed Zones with reason/remarks. All changes in status will have audit trail. 4. To be used as dropdown listing for alternate selection during assignment of Transport Orders to Resources ID upon selection of the Resource type. 5. Disabled resources will not be selectable during assignment of Jobs to Resources ID. 6. Management reports and overview screen showing utilization of individual Resource ID or by Resources Type, Resource ID under each resource type / each segment / each suppler / each type of scrap / etc. 7. The list of Resource ID will be the primary source and need to in sync downwards to the optimizer with the use of interface table.   Managing individual Bin ID under different Bin type in KT.   1. Create KT of individual Bin Type and under each Bin Type will be list of Bin ID.      1. Allow individual Bin ID to be enabled and disabled within dates/period with selectable dropdown lists of reasons and additional remarks. All changes in status will have audit trail. 2. Each Bin ID with mapping against a list of allowable Job Types. 3. To be used as dropdown listing for alternate selection during assignment of Bin Type and Bin ID during assignment of Transport Orders. 4. Disabled resources will not be selectable during assignment of Bin ID to Transport Order. 5. Management reports and overview screen showing utilization of each Bin Type or individual Bin ID. 6. The list of Bin ID will be the primary source and need to in sync downwards to the optimizer with the use of interface table.   Resource Type as in Drivers in KT   1. Create KT of individual Driver with necessary particular and details required for Mobile apps.      1. Allow individual Driver to be enabled and disabled within dates/period with selectable dropdown lists of reasons and additional remarks. All changes in status will have audit trail. 2. To be used as dropdown listing for alternate assignment of Drivers to Vehicle Resource. 3. Disabled Driver will not be selectable during assignment of Drivers to Vehicle Resource. 4. Management reports and overview screen showing Drivers Job assigned and taken within selected period. |
| 3 | Zoning Management | Creation of Zone Code in KT   1. Create Zone code with description by NSR Administrator. 2. Each Zone should consist of one or few Postal Code. 3. All changes in status will have audit trail. |
| 4. | Unloading points Management | Creation of Unloading points in KT.   1. To be used as dropdown listing for selection during assignment of Jobs to transporters with one set as default. 2. Allow enabling and periodic disabling of individual points by NSR Administrator. All changes in status will have audit trail. 3. Disabled unloading points will not be selectable during assignment of Jobs to transporters. 4. Each Unloading point shall be assigned with a Zone Code for determine the default minimum duration. |
| 5 | Job Type Management | Creation of Job Type in KT   1. To be used as dropdown listing for selection during assignment of default Job type in Pickup point setting and alternate selection during assigning of Transport Orders. 2. Each Job Type will have a default Resource types to be used. Such default Resource type will be shown but changeable during creation of new Pickup point upon by NSR Administrator when selecting the Job Type. 3. Individual Job Type will be have an indicator to use the start date/time and end date/time as the allowable time slot to execute or the duration of the execution.    1. Job type such as internal transfer, support import/export shipment or transfer to/from workshop for maintenance will be assigned as duration of execution.    2. Job type such as sending bin, exchange bin, spot collection etc shall use allowable time slot for execution. 4. Each Job type shall have a minimum task window value in hours set for checking again during Transport Order creation. |
| 6 | Default Minimum Duration Management | 1. Under those Job Types using allowable time slot, a default minimum duration can be defined from one zone to another zone and such value will be used during manual assignment or adjustment.  |  |  |  |  | | --- | --- | --- | --- | | Job Type | from zone | to zone | Duration | |  |  |  |  | |  |  |  |  | |
| 6xx | Booking Time slot and Calendar Management  (To be confirmed) | Creation of Job Waves in KT   1. Define Job waves and the time period under each job wave. 2. Define default allowable number of Transport Orders for each Job Type of each day under each wave within each day of one week under each Job wave from specific period. 3. Transport Order slots in Calendar view can be edited by NSR Administrator before releasing by date(s) for actual booking. Editing before releasing is necessary to allow possible changes for holidays, maintenance of resources and special event such as supporting import, etc. 4. Under each Calendar date, NSR Administrator will be allowed to enter remarks or reason for changes for future reference. |
| 7a | Transport Order Creation– by internal NSR user in Web/Desktop | Creation of Transport Order for Scrap Collection – by internal NSR user in Web/Desktop.   1. User selects Supplier and the list of Pickup points under the selected Supplier will be shown for selection upon receiving request from suppliers.      1. Details of default Job type and default Vehicle Resource type, Bin Resource type under selected pickup point will be shown will option to change. 2. External remarks / internal remarks / description / Contacts / type of scrap shall also be retrieved against the Pickup point and display to user. 3. **Amending or additional info added to the External remarks / internal remarks / description / Contacts / type of scrap for this specific Transport Order will be allowed by user without changing the default value set against the Pickup point but kept in an audit table with 2 types of indicators (NSR temporary and NSR permanent) as reminder for NSR administrator to filter these records on screen and change the remember type to another category after changes done in KT.** 4. **A separate field shall be provided for user to indicate as reminder for informing changes required in the default value setting by the NSR administrator. External remarks will be retrieved from the KT for existing Pickup point and display to user with option to change as temporary or permanent. However, any changes shall not update the KT directly** 5. An option will be available for NSR administrator to filter those records on screen with the change reminder screen and change the remember type to another category after changes done. 6. User shall select a Job allowed start date / time and end date / time as request. A backend check to ensure a minimum time different allowed between the start and end timing given. Such minimum value shall be checked again the minimum task window set in KT against the Job Type. The request shall be later processed by optimization and confirmation shall be sent by system generated SMS or email selected by user. 7. A calendar view shall show all requests in bar chart form with their status such as released/confirmed in different colors. 8. Each new Transport Order will be assigned will a Transport Order ID of format SXXXXXXX where S is the prefix representing Supplier and the 7 digit XXXXXXX will be a running number under the S series. 9. Time and date stamp will be kept under each new entry and audit trail will be kept for any changes. 10. If temporary supplier or temporary pickup point for current or temporary supplier is required, NSR use will have a separate option to trigger the popup entry screen for both temporary supplier’s and temporary pickup point’s details. Such temporary details shall be first kept in a temporary record before confirmed and appended in the KT with indicator marking this as temporary. 11. For those with temporary pickup point resulting to no default value for Job Type / Resource type / External remarks / internal remarks / description / Contacts / type of scrap, System shall prompt user to enter. Only Job Type and Resource type are not optional.   Creation of Transport Order for Scrap Transfer/Bin Movement/Shipment – by internal NSR user in Web/Desktop.   1. User selects from the Internal Job Type from dropdown list maintained in KT and the list of Pickup points and Unloading points under internal Job Type shall be available for selection.      1. Details of default Job type and default Vehicle Resource type, Bin Resource type under selected Internal Job Type will be shown will option to change. 2. External remarks / internal remarks / description / Contacts / type of scrap shall also be retrieved against the Pickup point and display to user. 3. Amending or additional info added to the External remarks / internal remarks / description / Contacts / type of scrap for this specific Transport Order will be allowed by user without changing the default value set against the Pickup point but kept in an audit table with 2 types of indicators (NSR temporary and NSR permanent) as reminder for NSR administrator to filter these records on screen and change the remember type to another category after changes done in KT. 4. A separate field shall be provided for user to indicate as reminder for informing changes required in the default value setting by the NSR administrator. External remarks will be retrieved from the KT for existing Pickup point and display to user with option to change as temporary or permanent. However, any changes shall not update the KT directly 5. An option will be available for NSR administrator to filter those records on screen with the change reminder screen and change the remember type to another category after changes done. 6. User shall select a Job allowed start date / time and end date / time as request. A backend check to ensure a minimum time different allowed between the start and end timing given. Such minimum value shall be checked again the minimum task window set in KT against the Job Type. ~~The request shall be later processed by optimization and confirmation shall be sent by system generated SMS or email selected by user.~~ 7. A calendar view shall show all requests in bar chart form with their status such as released/confirmed in different colors. 8. Each new Transport Order will be assigned will a Transport Order ID of format SXXXXXXX where S is the prefix representing Supplier and the 7 digit XXXXXXX will be a running number under the S series. 9. Time and date stamp will be kept under each new entry and audit trail will be kept for any changes. 10. If temporary supplier or temporary pickup point for current or temporary supplier is required, NSR use will have a separate option to trigger the popup entry screen for both temporary supplier’s and temporary pickup point’s details. Such temporary details shall be first kept in a temporary record before confirmed and appended in the KT with indicator marking this as temporary. 11. For those with temporary pickup point resulting to no default value for Job Type / Resource type / External remarks / internal remarks / description / Contacts / type of scrap, System shall prompt user to enter. Only Job Type and Resource type are not optional.   Transport Order created under Auto Periodic Job creation.   1. During creation of Transport Order, user can trigger the option of auto periodic Job creation by allowing repeating the same Transport Order by X number of days or each specific date monthly or specific day within the week till specific date entered or validity of the PO/Contract with the supplier whichever is earlier. 2. Each Transport Order created under such method will have a different class or special indicator to be check against the validity of the Supplier/Jobsite and trigger reminder in SMS/email to supplier and NSR user X days before for date of Transport Order creation. 3. Slots booked by auto periodic creation during Transport Order Creation before the release for booking will be assigned under the reserve list and booked under first priority upon releasing of date. |
| 7b | Transport Order Creation - by supplier in Web. | Creation of Transport Order – by supplier in Web.   1. System retrieve Supplier’s details using user’s login ID for mapping and allow the authorized user to select Pickup points under the selected Supplier using dropdown listing with selectable option to create new temporary Pickup point. Any temporary pickup points shall be first entered in a temporary record before confirming in the popup screen and append into the KT. 2. Details of default Job type will be shown will option to change. Default Vehicle Resource type shall be shown but not allowed to change. 3. External remarks will be retrieved from the KT for existing Pickup point and display to user with option to change as temporary or permanent. However, any changes shall not update the KT directly but kept in an audit table with 2 types of indicators (customer temporary and customer permanent) as reminder for NSR administrator to filter these records on screen and change the remember type to another category after changes done in KT. Such changes by supplier shall have a different category from those changes by NSR user. 4. User shall enter Job allowed start date / time and end date / time as request. A backend check to ensure a minimum time different allowed between the start and end timing given. Such minimum value shall be checked again the minimum task window set in KT against the Job Type. The request shall be later processed by optimization and confirmation shall be sent by system generated SMS or email selected by user. 5. Each new Transport Order will be assigned will a Transport Order ID of format SXXXXXXX where S is the prefix representing Supplier and the 7 digit XXXXXXX will be a running number under the S series. 6. Time and date stamp will be kept under each new entry and audit trail will be kept for any changes. |
| 7c | Transport Order Creation - by supplier in Mobile App. | Creation of Transport Order – by supplier in Mobile App.   1. Method 1 - System retrieve Supplier’s details using user’s login ID for mapping and allow the authorized user to select Pickup points under the selected Supplier using dropdown listing with selectable option to create new temporary Pickup point. Any temporary pickup points shall be first entered in a temporary record before confirming in the popup screen and append into the KT. 2. Method 2 - User login the mobile apps account and activate the option to take a photo of the pickup point. System retrieve Supplier’s details using user’s login ID and uses the location tag to map approximately against the know location tag of this supplier and suggest the pickup point for confirmation by user through mobile apps. Such option of using the photo for pickup point can be used for new temporary pickup point where system can’t determine an approximate match of location and prompt message for user to confirm the pickup point is new or existing. 3. If mobile apps detected setting of device does not permit the location tag function isn’t switch on, message will be shown to mobile apps user that the option for photo taking for location is not allow with the reason why. 4. Details of default Job type will be shown will option to change. Default Vehicle resource type shall be shown but not allowed to change. 5. External remarks will be retrieved from the KT for existing Pickup point and display to user with option to change as temporary or permanent. However, any changes shall not update the KT directly but kept in an audit table with 2 types of indicators (customer temporary and customer permanent) as reminder for NSR administrator to filter these records on screen and change the remember type to another category after changes done in KT. Such changes by supplier shall have a different category from those changes by NSR user. 6. User shall enter Job allowed start date / time and end date / time as request. A backend check to ensure a minimum time different allowed between the start and end timing given. Such minimum value shall be checked again the minimum task window set in KT against the Job Type. The request shall be later processed by optimization and confirmation shall be sent by system generated Mobile Apps message to mobile apps user. 7. Each new Transport Order will be assigned will a Transport Order ID of format SXXXXXXX where S is the prefix representing Supplier and the 7 digit XXXXXXX will be a running number under the S series. 8. Time and date stamp will be kept under each new entry and audit trail will be kept for any changes. |
| 8 | Interfacing with optimizer | 1. All Transport Orders with necessary data including their status shall be available for Quintiq Logistic Planner NSR optimizer through data interfaces where user could manually set the date range for such data to be made available for the optimizer to process. Data which flow to optimizer shall kept the last time stamp of flow and last time stamp of assignment received back from optimizer. 2. KT for vehicle and drivers and available Bin shall be synchronic downwards to Quintiq Logistic Planner NSR optimizer through interfaces where KT 3. Quintiq Logistic Planner NSR optimizer shall run the optimization and assign Transport Orders to form Transport Jobs where optimizer shall assign each Transport Job in sequence of delivery to each Resource ID. Each Transport Job shall have a ID of format YYMMDDQXXXX where XXXX will be the running number (to be reset at each date), Q as prefix representing Job assigned from Quintiq and YYMMDD will be the date of Transport Jobs required to be executed. 4. In the event of manual assignment or manual adjustment in this module, the Transport Job shall have a ID of format YYMMDDUXXXX where XXXX will be the running number (to be reset at each date), U as prefix representing Job assigned by User and YYMMDD will be the date of Transport Jobs required to be executed. 5. The results of optimization shall be synchronic back and update accordingly. However, if there is any attempt of overwriting any released Transport Job, some form of error indicator shall be activated with options for user to deactivate. |
| 9 | Transport Jobs assignment to Vehicle/Driver | 1. While the assignment of Transport order(s) to Transport Job and the assignment of Transport Jobs to Resource IDs are done in Quintiq Logistic Planner NSE optimization, manual assignment or adjustment will still be allowed in this module by drag and drop the selected Transport Order(s) to the a selected Resource ID directly forming a Transport Job. Duration of such manual assigned/adjusted job shall use the estimated duration value set in the KT table against the Job type and from/to zones. 2. If more than one Transport Orders are manually assigned to a Transport Job manually, user will be allowed to manually drag and move the sequence of these Transport Jobs within the Transport Order.      1. The sequence of the Transport Jobs assigned to a Resource ID shall be allowed to re-sequence by drag and move. 2. Those released transport Jobs affected by the re-sequencing shall require to be unreleased before any re-sequencing be allowed. 3. Any un-releasing action of Transport Job shall require user to enter a reason and such reason shall be from a dropdown list maintain in KT. Audit trail will be captured with user name, time stamp, Transport Job ID. 4. More than one released Transport Job can be selected together for unreleased process and only one entry of reason will be required. 5. Transport Jobs assignment received back from optimizer shall be tabulated on screen in calendar view format with date of Job and individual vehicle in the sequence of delivery in timeline from left to right. 6. NSR Controller will have options to release the Job(s) to driver(s) by selecting single/multiple Job(s) to release or all Jobs within single/multiple vehicle(s) to release. |
| 10 | Driver Feedback | 1. Upon receiving the Transport Job(s) assigned by NSR Controller from the Mobile App, driver will require to acknowledge the Job(s). 2. During execution the Transport Order(s) within a Transport Job, driver will trigger the start of the job where SMS/Email or Mobile Apps message shall be triggered to user defined in KT. If necessary, driver could trigger GPS navigation with turn by turn guiding to the destination using the location tag captured during Transport Order Creation. 3. Depending on the Job Type assigned, additional information such as Bin ID sending shall be entered as per request. 4. Upon reaching the destined location, driver shall trigger the reach destination status of the job. 5. At this stage, driver shall approach and attempt to perform the Transport Order assigned and update the status of the Transport Order. The available status shall be a selectable from dropdown listing with the followings:    1. Failed to execute - If the Transport Order assigned could not be executed due to cancellation or other issues such as overweight, obstruction, over height etc, driver shall be given an option to feedback failure to execute with selectable reason and prompt to take a photo for record. Depending on the reason selected for failed to execute and the sequence of such Transport Order(s) in the Transport Job, following respond shall be possible:       1. A request of re-assignment might be triggered for controller to assign and release a new Transport Order       2. Skip and proceed to next Transport Order within the Transport Job   Different type of request shall be shown as different colors on the calendar view of the Transport Order assignment screen to attract Controller attention.   * 1. Executed – Completion of execution and depending on the Job type executed, additional information such as the Bin ID collected, Job Chit number given to customer or the weight collected shall be entered as per request and update the system. Upon completion for all Transport Job(s) in the entire Transport order, system shall change the color on the calendar view of the Transport Order assignment screen to attract Controller attention for releasing the next Transport Order.  1. For collected scrap delivered to assigned NSR yard, driver shall either trigger the start of the next assigned Transport Order as the end of the previous assignment or select and update the completion status of the Transport Order. Acknowledge of the next assigned Transport Order shall not be taken as the completion of the previous Transport Order. 2. If vehicle broke down at any stage of the Job, driver shall have an option to feedback and form a request to stop any new assignment to the specific vehicle. 3. All feedback from Drivers shall be captured with timestamp of event. |
| 11 | Transport Orders management | 1. Dash board view for controller to manage the Transport Orders in hand, Transport Jobs created and Transport Jobs assigned with options to search, sort, filter and export of the detail available in the view. 2. Summary overview of Transport Orders in hand by date according by hour without individual vehicle in dashboard view. 3. Selectable range of event details and timestamp from Transport Order Created, Transport Order assignment, Drivers’ Feedback, Audit of changes shall be downloadable by authorized user as external file in selectable format such as Excel or CSV for future usage. |
| 12 | Others | 1. Historical data shall be kept live for 6 months before allow user to trigger removal. |